School of Public Health

An Exploratory Study of the Measurement of Religion and Spirituality using Scale Content Analysis and Epidemiological Methods

Geoffrey Robert Browne

This thesis is presented for the Degree of
Doctor of Philosophy
of
Curtin University of Technology

December 2006

Declaration

This thesis contains no material that has been accepted for the award of any other degree or diploma in any university.

To the best of my knowledge and belief this thesis contains no material published by any other person except where due acknowledgment has been made.

Signature:..

Date: ....

Acknowledgments

I would like to acknowledge and thank the following people who helped make this thesis a reality.

My wife Roslyn, who shared the vision with unwavering patience and support. Without this, there would have been no thesis.

My sons, Sean, Ben and Logan for their willingness to understand, and my daughter Sinead, whose arrival was a catalyst to continue.

Dr Jay Meddin, who inspired the study, and whose patient guidance brought me to an understanding of the issues involved, and of their solutions. As a friend, Jay left to pursue his own spiritual journey.

Rev Dr Erich von Dietze, who came into the study as my supervisor and helped resolve many theoretical difficulties. His deep philosophical knowledge, clarity of thought, and ability to explain the processes and principles involved, was a major contribution to the completion of this work.

Professor Andy H. Lee, for his guidance and helping to maintain a sense of reality. His encouragement and support in difficult times was invaluable.

To those who offered advice, and shared their expertise; Dr Mark Stevenson, Dr Gary Groth-Marnat, Therese Shaw, and Dr Irit Aitken.

Special thanks to Jan Dillon, who shared the load and became a friend, and Lorraine Rivers, who smoothed the way so many times.

To my friends, who have been waiting for me.

Thanks to all those who participated in the study, and whose cooperation meant there was a study to report.

ABSTRACT

This study arose out of a search for a suitable scale to measure religion and spirituality. The literature suggests that religion and spirituality are potentially powerful explanatory variables in health and social research, but there do not appear to be any instruments that are generally accepted as measures of an individual's religious or spiritual characteristics. While a lack of consensus in such a complex area is probably to be expected, it is the lack of accepted measures or instruments that drives this study.

The literature review describes the historical influence of religion on public health practices, and the most recently reported associations between religion and both physical and mental health. This establishes religion as a potentially useful construct to include in any health study. However, the reported association between religion and health is often unclear, and the measures used differ widely between studies. This study goes beyond the health context and explores the reasons why existing methods have not resulted in broadly accepted measures of religion and spirituality.

The study has two main aims: to identify the possible reasons why existing measures of religion and spirituality have not been more widely used; and to explore suitable alternative measures and methods. For this purpose, an analysis of twenty existing scales purporting to measure different aspects of religion or spirituality, identifies potential difficulties arising from items they contain. Similarly, a comparison of definitions of religion and spirituality assesses the possibility that the ongoing argument about whether they are the same or different concepts might be contributing to the measurement dilemma. The study also tests the hypothesis that religious groups are heterogeneous with respect to their religious beliefs, and not homogeneous as is often implied by the use of the religious affiliation measure in many published studies.

To explore which variables and methods to employ for measurement, a questionnaire was constructed. This was preceded by the creation of a theoretical framework based on the idea that both religion and spirituality are a collection of attitudes, beliefs or values, and that each of these can be described by three constructs; cognition,

conation and affect. These constructs were each incorporated into three separate sections of the questionnaire that measured beliefs, behaviours and feelings respectively. A fourth section of the questionnaire collected physio-socio-demographic data.

The questionnaire was administered to over seven hundred respondents from both religious and non-religious groups. Test-retest reliability was assessed by a second administration to eighty-seven of the same respondents two weeks later. For analysis, the questionnaire items were reorganised into eight groups representing the different types of information obtained. Profiles of religious beliefs were constructed for each respondent. Odds ratios and specially developed interaction terms were used to test the hypothesis that religious groups are not homogeneous with respect to their beliefs. Religious and lifestyle related health behaviours were presented as Likert scales and analysed using frequency data. Affect was measured using semantic differentials applied to a range of concepts that included; parent influence, feelings about the future, the meaning of life, religion and spirituality, the poor and the needy, and feelings about God. Exploratory factor analysis resulted in a number of meaningful factors for each concept. The t-test was used to assess whether religion and spirituality were perceived to be the same or different concepts.

Analysis of individual questions indicated which might be useful for inclusion in the development of measures of personal religious or spiritual characteristics. The findings were used to modify the survey questionnaire, by deleting, adding or changing the concepts and questions used. However, it was beyond the scope of the study to attempt more advanced modelling of the data. An additional modification to the research methodology was the inclusion in the revised questionnaire, of questions representing an idiographic approach, as compared with the nomothetic approach normally used in this type of research. The purpose of the idiographic approach was to collect more detailed information about the why respondents engage in certain behaviours.

Testing the hypothesis that religious groups are not homogeneous in their beliefs revealed that respondents *within* religious groups often exhibit major differences in beliefs, particularly between genders. It was concluded that the variable 'religious

affiliation' may be most useful where a religious group has strong prescriptive beliefs that are held by the majority of group members; for example the health beliefs of Seventh day Adventists. In other words, denominational groupings do not appear to provide sufficient basis for discrimination. The implication of this finding is that alternative homogeneous groups could be created by drawing respondents with similar profiles from across all groups. The validity of such groupings would depend on the power of the measures to discriminate between respondents. The second specific finding was that respondents tended to believe religion and spirituality were different rather than the same concepts. This is not an unexpected finding, but here it has an empirical, and not just a theoretical basis. This finding provided the basis for the development of a definition incorporating both religion and spirituality, in which religion and spirituality are seen as being complementary, and spirituality is the quality of one's religion.

The major conclusions arising from the study draw attention to a number of methodological issues which could be significant contributors to the present uncertainties associated with researching-religion and spirituality. These conclusions are as follows:

- the published scales analysed in this study contain both questions and response options that clearly present difficulties in their interpretation. However, the issue raised is not with the specific problems identified by the analysis, but more with the assumptions or beliefs behind each question and its interpretation. It cannot be expected there will be consensus regarding the design of questions or interpretation of the responses, if there is no corresponding consensus about the beliefs that underpin the content of the scale items. That is to say, the same heterogeneity of beliefs found in the survey responses also exists within the researcher population:

- religious groups are not homogeneous in their beliefs, as is implied by the use of the *religious affiliation* variable. The heterogeneity appears to be largely gender based. For research purposes, creating new groupings based on belief profiles may be more meaningful;

- the question-by-question analysis shows that the beliefs-behaviours-feelings approach adopted for the study does provide a basis for the further development of scales that generate profiles of survey respondents;

- that religion and spirituality are complex multi-dimensional constructs is generally recognised theoretically, yet seldom implemented in the published measures. True multi-dimensionality encompasses not only the variables, but also the use of multiple measurement methods. The beliefs–behaviours–feelings framework used in this study appears to provide a sound basis for further scale development. The framework could be expanded to incorporate an idiographic component that would provide information for a more complete respondent profile;

- the survey results indicate respondents tend to consider religion and spirituality to be different concepts. It is proposed that religion and spirituality are each defined as elements of a complementary model in which spirituality is an individual property, religion is a shared spirituality, and spirituality is the quality of an individual's religion; and

- attempting to quantify religion and spirituality can increase the risk of misclassification of respondents, because it implies that one person's religion is better than another person's. Quantitative measures should be interpreted as nominal categories, with the categories representing different ways of being religious or spiritual, and not different quantities of a single way of being religious or spiritual. This applies equally to measures such as *frequency of church attendance*, where different frequencies indicate different types of religiosity, and not greater or lesser religiosity.

Recommendations arising from the study include:

- ensuring that the embedding of beliefs and values in a question is intentional and appropriate, and not likely to give rise to problems with interpretation of the question or the responses;

- recognising that groups could be heterogeneous with respect to any concept of interest;

- giving consideration to using both nomothetic and idiographic approaches to measurement. The idiographic approach may require the use of interview methods;

- including *intention* as a study variable. This would provide a different perspective to that usually reported, but could require a longitudinal study for adequate evaluation; and

- paying greater attention to gender and age effects. Simply stratifying the survey population may not provide sufficient detail to fully explore these two variables. Specifically targeted questions may also be required.

Table of Contents

CHAPTER 1: Introduction

CHAPTER 2: Establishing a Context for the Study – A Review of the Literature Linking Religion and Spirituality to Health

CHAPTER 4: The Theory and Development of the Survey Questionnaire

CHAPTER 5: Development of the Questionnaire and Associated Analytical Methods

CHAPTER 7: Discussion of the Results and Revision of the Survey Questionnaire

CHAPTER 8: Conclusions and Recommendations

APPENDICES

List of Tables

List of Abbreviations

Ang	Anglican
AoG	Assembly Of God
Bap	Baptist
BP	Belief Profile
Cath	Catholic
GP-NR:	General Population (Non-Religious)
GP-REL	General Population (Religious)
IAR	Indiscriminately Anti-religious
IPR	Indiscriminately Pro-religious
JW	Jehovahs' Witness
Mormon	Church of Jesus Christ of Latter Day Saints
NA	New Age
Pent	Pentecostal
Presb	Presbyterian
ROS-	Religious Orientation Scale
ROS-R	Religious Orientation Scale – Revised
SA	Salvation Army
SDA	Seventh-Day Adventist
Unit	Uniting

CHAPTER 1

Introduction

1.1 Background to the Study

It is clear from the literature that few doubt religion and spirituality are potentially powerful explanatory variables in epidemiological studies and in broader fields of health and social research. It is also clear from the most recent literature that despite the best efforts of many researchers, the development and application of the concepts of religion and spirituality has not met with the success that might be expected from the effort expended.

This study began as an attempt to measure the influence of religious factors on lifestyle practices and health status in a number of defined groups, supported by reports in the literature of a positive association between religious factors and health outcomes. However, in the development of the measures of religiosity, it quickly became apparent that the methods reported in the literature were inadequate for the purpose. As the boundaries of the literature search expanded, an increasingly confused picture emerged, and it became clear that development of the measurement methods was a study in itself. This study reflects the need to identify the reasons for the confusion, and to create a new foundation upon which to approach the measurement of religion and spirituality.

Searching the literature sources reveals many changes to the way religion and spirituality are presented. In particular, there are now so many definitions and opinions expressed in both university and private web sites that any literature review cannot possibly be exhaustive. Because of these advances in the electronic media, some cited references that were published in the early 1960's appear dated. However, they were included because they represent the early development phase of pertinent research into religion and spirituality and address fundamental questions not usually included in the most recent literature. For this reason, they remain relevant today, and represent an important contribution to the literature.

1.2 Objectives of the Study

The aim of the study is to investigate ways in which religion and spirituality can be measured as a step towards their use as explanatory concepts in the health sector. To achieve this goal requires that the study address a number of objectives, including:

- identifying possible reasons why religion and spirituality have not been accepted for general inclusion in epidemiological studies;

- establishing how religion and spirituality have been defined, and whether those definitions are consistent with the goal of measuring them;

- investigating how religion and spirituality have been measured, and whether those measures could be expected to produce meaningful results;

- using existing measures of religion or spirituality, or developing additional measures to investigate which types are best suited for epidemiological purposes; and

- using the results of the measurements obtained to introduce an empirical element into the theoretical understanding of the measurement and interpretation of religion and spirituality, and how it can be enhanced.

1.3 The Significance of the Study

This study contributes to the understanding and measurement of religion and spirituality in the following areas:

- analysis of a range of existing scales purporting to measure religion and/or spirituality, leading to the identification of potential threats to the validity of these scales;

- development of a theoretical framework as the basis for building a series of pilot measures;

- development of techniques to create and analyse individual profiles for selected religious beliefs;

- examining fundamental assumptions regarding the homogeneity of religious groups, and the use of 'religious affiliation' as a study variable;

- providing operational definitions of religion and spirituality that are consistent with the study findings; and

- presenting a modified series of measures derived from analysis of the pilot survey questionnaire.

1.4   Ethics Approval

The Curtin University (Human Research Ethics Committee) Approval Number for the study was 196/95.

1.5   Study Design

The study used a cross-sectional design. There were three principal reasons for this. First, the study is exploratory, aiming to assess possible measures of religion/spirituality rather than identifying any causal mechanisms relating religion/spirituality and health outcomes. It is in effect measuring the prevalence of the beliefs and behaviours. Second, the cross-sectional design is relatively simple and inexpensive to administer, and is suitable for this exploratory study. The third reason is that the survey sample was selected so as to maximise the range or diversity of responses obtained. The outcomes of the study could be used as the basis for more sophisticated study designs assessing causal mechanisms and hypothesis testing.

1.6   Scope and Limitations of the Study

To maximise variability in the sample pool and in the data, approximately equal numbers of respondents were drawn from selected religious or spiritually oriented groups, and from the general population without regard for the proportion of the total population they represent. This limits the application of the results to the general population.

All respondents were volunteers. The study focused primarily on Christian groups with variability of the data being achieved by including respondents from the wider community. Religious groups from outside the Christian context, and those with predominantly ethnic composition were excluded from this exploratory study.

1.7 Use of the Terms Religion and Spirituality

This study is about measuring how a person is religious or spiritual, or both, or neither. The terms religion and spirituality are engaged in different ways as the study proceeds. In the literature review in Chapter 2, most of the works cited refer only to religion. In Chapter 3, which addresses the analysis of scales and reviews the definitions, religion and spirituality are used as separate concepts as they are in the literature. However, in Chapters 4, 5, 6 and 7 which cover the development of the theory, through to the discussion of the results, the composite term religion/spirituality is used to indicate that religion and spirituality are used without any imposed meaning. The terms are again treated separately in the final stages of the discussion in Chapter 7 when the issue of an empirical definition for each is addressed.

1.8 Thesis Outline

Chapter 2 first presents a broad overview of the influence religious factors have had, from ancient times through to the development of modern public health practice. It then reviews the literature reporting on the association between religious and spiritual factors and both mental and subjective well-being, and physical health. Particular attention was paid to identifying the problems encountered by researchers in the area.

Chapter 3 continues the review of the literature, focusing on two specific elements arising out of the literature. The first element examines the fundamental question of how religion and spirituality are, or should be defined. If this question is not adequately addressed, then achieving consensus in the field is unlikely. The second element is an analysis of a selection of scales purporting to measure religious and spiritual factors. The analysis seeks to determine if these scales or their subscales would be suitable for use in the study, and if not, why not?

Chapter 4 first describes the development of the theoretical framework for the study, and of the specific model used to construct the survey questionnaire. The latter part of the chapter provides a detailed description of the items making up the questionnaire.

Chapter 5 describes the study methodology beginning with the response options for the questionnaire items and the specific measurement techniques applied to each item. It then describes the piloting of the survey instrument, the selection of the survey target groups, the recruitment of the respondents, and the administration of the questionnaire. The second part of the chapter addresses the analytical methods, some of which were developed specifically for the study.

Chapter 6 presents the results of the survey. The results highlight empirical evidence showing that a number of important assumptions common to study in the area are questionable, and may contribute to the difficulties evident in the literature.

Chapter 7 first considers the broader impact of the results on the measurement of religion and spirituality. It then discusses methodological shortcomings revealed by the study, and proposes additional theoretical elements to address those shortcomings. The final part of the chapter presents a revised survey questionnaire that incorporates the study findings. This questionnaire is not validated, but still is presented with a focus still on the question of measurement of religion and spirituality.

Chapter 8 reports the conclusions drawn from the survey results, and recommendations that are aimed mainly at improving the validity of the measures used in the survey questionnaire. They also address a number of potentially problematic issues identified in other measures explored in the study.

CHAPTER 2

Establishing the Context for the Study – A Review of the Literature Linking Religion and Spirituality to Health

2.1 Overview

A growing body of evidence attempts to describe the link between religious/spiritual factors and various health related outcomes. For example, Koenig, McCullough & Larson (2001) and Levin (1996) have frequently published on the subject. The literature reporting research into this link clearly and consistently indicates a depth of interest, but is characterised by conclusions that are often controversial, or at best are equivocal, and offer only qualified support for the existence of the link. Doubts about claims for a positive association have only relatively recently appeared in the literature (Sloan & Bagiella 2001).

This chapter presents a review of the literature with the aim of identifying the leading issues responsible for this impasse and showing continued research into the measurement of religion/spirituality is warranted. Section 2.1 presents historical evidence for the influence of religious factors on health in various cultures. Generally ignored by policy makers, religion/spirituality has nonetheless influenced modern health policies and practices. Sections 2.2 and 2.3 look at the contemporary influences of religion/spirituality on health policy, and on the rise of the New Age movement. The current literature reporting on the association between religion/spirituality and both mental and physical health is briefly reviewed in Section 2.4. A comprehensive review of these relationships, and a discussion of such research reported over the last century, was published by Koenig, McCullough & Larson (2001). Section 2.5 describes some of the methodological limitations of some of the research to date. These include issues such as the low rate of inclusion of religion/spirituality in health studies, and bias arising from the use of restricted populations and incorrect interpretation of religious/spiritual concepts. Out of this examination, arise questions about defining the terms 'religion' and 'spirituality', and about the way researchers incorporate religious ideas in the construction and interpretation of the measures they use. These issues are addressed in Chapter 3.

2.2 An Historical and Cultural Perspective of Religion in Public Health

This study is about measurement of religion/spirituality, and as public health is one field of application for any measures developed, demonstrating an association between religion/spirituality and health outcomes provides a vehicle for the study.

Accounts of the history and development of public health practice typically acknowledge religion as a significant influence, either for good or for bad. The Code of Hammurabi from around 1700 B.C. is one of the earliest references to medicine in a public context, and although more a civil document than overtly religious, the code is dedicated to the sun-god Shamash (Gill n.d.). The ancient Greek and Chinese civilizations are also commonly acknowledged for the contributions their philosophers and physicians have made to the body of knowledge about health (Breslow 1990). In both cases, and particularly in the Greek culture, religious belief and practice was intertwined with, and inseparable from other elements of their lifestyle (Hanlon and McHose 1971, p. 24). The Judeo-Christian context presents some of the more thoroughly documented examples of the influence of religion on 'public health, particularly in the context of combating communicable diseases through advances in public hygiene and sanitation (Afifi and Breslow 1994). For example, it is in the Old Testament books of Leviticus and Deuteronomy (from the Jewish Torah) that we find "... probably the world's first written hygienic code" (Hanlon 1974, p. 14. The health principles set down by these books include matters dealing with eating clean and unclean foods (Leviticus Chapter 11), communal sanitation (Deuteronomy 23: 9 – 14), quarantine and disinfection regulations for dealing with contagious diseases (Leviticus Chapters 13 – 15), maternal hygiene (Leviticus Chapter 12), and regulations governing sexual relations. (Leviticus 18: 1-30). According to (Hanlon 1974), the development of modern public health from about the mid-1800's was accompanied by the introduction of these same sanitation principles. Religion in this context is widely acknowledged as a positive influence on public health; but as the following paragraphs show, there is also a negative influence that should be acknowledged.

If modern public health practice is seen as a rediscovery of sanitation principles that had been neglected for centuries; then a question that arises is what factors lead to the loss of those principles for so long? While there are likely to be many

contributing factors, the following illustration shows how prevailing religious beliefs in Europe during the Middle Ages could have contributed to that neglect. In the period between the fifth century and the rise of modern public health in the nineteenth century, Europe experienced pandemics of contagious diseases such as leprosy and bubonic plague. The bubonic plague of the fourteenth century is estimated to have killed 20-35 million people in Europe alone (Goerke & Stebbins 1968, p. 11). Hanlon graphically illustrates the influence of religious factors on the social and environmental conditions existing at the time of these plagues:

> With the dawn of the Christian era there developed a reaction against anything reminiscent of the Roman Empire and its attendant paganism. The early Christian Church, which represented the consensus of the period, took the attitude that the Roman and Athenian lifestyles pampered the body at the expense of the soul. Accordingly, belittlement of worldly and physical matters and "mortification of the flesh" became the preferred patterns of behaviour. This philosophy contributed to the prolonged intermission in the progress of civilization known as the Dark Ages, marked by superstition, mysticism, and the rigorous persecution of free-thinkers ... So intense was the reaction that it even included a significant change in attitude toward sanitation and personal hygiene. It was considered immoral to view even one's own body; therefore the people seldom bathed and wore notoriously dirty garments...Diets in general were apparently poor and consisted of badly prepared or preserved food (Hanlon 1974, p. 14).

The loss of knowledge of the ancient hygienic codes during this period of history was associated with poor sanitary practices in the population centres. Garbage often remained in the streets creating the conditions for the spread of contagious diseases such as leprosy and bubonic plague (Hanlon 1974, p. 14). This loss occurred at a time when religion dominated science, and astrology supplanted knowledge of the Bible and became the primary source of medical knowledge. Physical and mental illness were widely believed to be the result of demon possession or other spiritual forces, and thus not requiring any kind of medical intervention (Koenig,

McCullough & Larson 2001), p. 162). Whether the religious influence of the time is entirely responsible for the conditions giving rise to the plagues is subject to debate, but there appears little doubt in the literature that it was a major influence.

Religious beliefs continue to influence health practices today, for example, the refusal by some Jehovah's Witness' to accept blood transfusions, even if this refusal results in death. This position is based largely on interpretation of portions of Leviticus, Genesis, and Acts (Jehovah's Witnesses Opposition to Blood Transfusions n.d.). Other non-Christian cultures also provide useful illustrations of similar influence. Religious beliefs and practices that assume a role for evil spirits in disease aetiology, for example, are still prevalent amongst some population groups. Tribal African societies, for instance, may have a shaman or witch doctor invoke spirits in the healing process (Fountain 1989, p. 21). This could be instead of, or in conjunction with, contemporary allopathic medicine. Eliade describes a similar role for the medicine man in some Australian aboriginal tribes:

> ... the most specific characteristic of the medicine man is his
> relationship with the Supernatural Beings and the others heroes
> of the tribe's sacred history. He is the only one ... who can do
> what the ancestors did, for instance, fly through the air, ascend
> to heaven, travel underground, disappear and reappear.
> Moreover, only the medicine man can encounter the
> Supernatural Beings and converse with them, and only he can
> see the spirits and the ghosts of the dead. In sum, only the
> medicine man succeeds in surpassing his human condition, and
> consequently he is able to behave like the spiritual beings, or, in
> other words, to partake of the modality of a Spiritual Being.
> (Eliade 1973, p. 129)

The means different cultures use for the disposal of the dead is yet another example of the way in which religious beliefs can influence what is essentially an issue of public hygiene (Hanlon 1974, p.14). For example, sky burial is a Tibetan burial custom in which the corpse is chopped up and the minced flesh placed on a raised platform to be eaten by birds. This ritual is a form of sacrifice intended to show the

close relationship Buddhists have with animals (Celestial Burial in Tibet 2003). In a related example, the custom in one Australian aboriginal tribe, documented in the early 1900's, was to place the corpse on a raised platform until it was decomposed. The bones were then buried, and the camp where the death had occurred was burnt down "...to destroy anything that may be familiar to the spirit, so that it will not follow the tribe and haunt the tribe's people" (Marschall n.d.).

2.3   Religion/Spirituality in Contemporary Public Health Policy and Practice

In 1948, the World Health Organization defined health in terms of the wholistic concepts of physical, mental and social well-being (Abelin 1991), p. 559). This definition was reaffirmed in the *Declaration of Alma-Ata* (1978) (World Health Organization 1978). This was expanded by the *Ottawa Charter for Health Promotion (1986)* (World Health Organization 1986), in which health was considered a personal resource rather than just a desirable objective. More recently, the 1997 *Jakarta Declaration on Health Promotion into the Twenty First Century* (World Health Organization 1997) reaffirmed this position. Each of these declarations has provided a starting point for the establishment of health policy, but none of them makes any *direct* reference to a role for religious or spiritual factors. Modern health promotion practice is strongly linked to the principles of the Ottawa Charter and tends to consider religious/spiritual factors as encompassed by "... mental and social dimensions" (Diaz 1993, p. 324). The absence of any specific mention of a role for religious/spiritual factors in such influential statements of health policy is an indication that a positive role for religious/spiritual factors is considered irrelevant or possibly too divisive. It also cannot be taken for granted, that those formulating these policies are aware of the body of evidence pointing to the influence of religion/spirituality in health behaviours.

Breslow (1990, p. 17) cites the Ottawa Charter as an example of the recent re-appearance of health promotion based around lifestyle choices. Drawing on ancient Greek and Chinese history, he illustrates the point that lifestyle choices in health promotion were an issue in health long before 1948. However, in referring to those historical writings, Breslow makes no reference to the contemporaneous religious writings in the Old Testament that include specific lifestyle prescriptions now found in many modern health promotion lifestyle recommendations, for example, the

restricted use of flesh foods and alcoholic beverages, and the recommended use of fruits, vegetables and grains (Hubbard & Hawley 1983, p. 23).

Taking religious/spiritual beliefs or principles into account could change the way some health issues are viewed. For example, consider the question of life-after-death in the context of the treatment of a terminally ill patient. Where health policies or practices are predicated on the belief that there is no life-after-death, it could reasonably be expected that health professionals would make every effort to preserve life whatever the cost (Illich cited in Calian 1978, p. 46). The patient may also wish this to happen. However, a prevailing belief that there is a life-after-death may result in a lesser tendency for health professionals to seek to preserve life at any cost, or that the patient would seek such treatment. The point underscored here is that whether charters or policies acknowledge it or not, religious/spiritual beliefs are significant factors influencing people's decisions about their health practices.

2.4   Religion/Spirituality in the Holistic Health Movement

Evidence from several surveys, and increasing coverage in the popular press, indicates a trend towards the use of alternative or complementary therapies, in what is known as the 'holistic' health movement. Holistic medicine seeks to treat the individual as a whole rather than as different components to be treated by different health professionals: physicians the physical body, psychologists and psychiatrists the mind, and clergy the soul or spirit (Calian 1978, p. 47). Pelletier, among many, suggests that the mind, body and spirit interact to function as a single unit, and that illness arises when stress and conflict disrupt an otherwise harmonious interaction. Holistic medicine seeks to maintain that harmonious interaction (Pelletier cited in Calian 1978, p. 47).

A 1991 survey in the USA reported that one in three respondents had used at least one unconventional therapy including prayer in the previous year. It concluded that the number of visits to providers of unconventional therapies exceeded the number of visits to all primary care physicians (Eisenberg et al. 1993). Data from the Robert Wood Johnson Foundation's *National Access to Care Survey* showed that in 1994, 10% of the US population, or almost 25 million persons, used at least one alternative therapy such as chiropractic, relaxation techniques, therapeutic massage,

or acupuncture (Berman & Swyers 1998). Most recent comparable data suggests a similar trend has developed in Australia, with some estimates indicating up to 60% of the Australian population have used some alternative therapy, as many as 20% of medical practitioners are trained in alternative therapies, and an increasing number of Australian universities now offer courses in alternative therapies (Head 2002). Suggested reasons for the emergence of this trend have included, increasing value being placed on treating the whole person, concern about iatrogenic illness (illness caused by conventional medical treatment), problems communicating with doctors, and the increasing availability and acceptability of complementary medicine (Illich cited in Calian 1978, p. 47; Spencer n.d.).

Since holism assumes a unity or interdependence between mind and body and spirit, and that this relationship strongly influences an individual's health (Alster 1989), it is not surprising that many of these complementary therapies tend to have a religious/spiritual component (Jones 1993). Examples from the holistic health movement that illustrate this religious/spiritual component include the use of astrology and channelling. Crystals, aura photography, feng shui and tarot card readings can also be seen at markets and health and spirituality expositions. Popular holistic health practitioner, Deepak Chopra, who has established a substantial commercial enterprise based on the holistic health concept, establishes a clear association between the health and the spiritual domain (for example, see (Chopra 2003). Another example that often appears in the mass media is the emphasis placed on an afterlife in which the disembodied spirit of a deceased person is claimed to live. Spirit mediums such as James Van Praagh (*The man who talks to the dead*), and John Edwards (*He's out of this world*), are internationally famous, famed for their claims to be able to communicate with the spirits of the dead. Associated with this belief in an afterlife, is a growing tendency to accept death rather than fear it. By contrast, Illich suggests a fear of death is the reason for some conventional medical practices.

> In the U.S. "...death is the enemy..." and people are kept alive at any
> cost. "The true miracle of modern medicine is diabolical. It
> consists in making not only individuals but whole populations

survive on inhumanly low levels of personal health (Illich cited in Calian 1978, p. 46).

These examples of contrasting views of death and dying presented illustrate the sometimes subtle, but nonetheless significant relationship between religious/spiritual beliefs and health practices. They also highlight the need for a deeper, rather than a simplistic understanding of the influence of religion/spirituality in health outcomes. This echoes a call made more than twenty years ago, for the acceptance of the spiritual dimension as an important determinant of individual well-being (Osman & Russell 1979), a call that appears not to have been heeded by policy makers.

2.5 A Review of the Association between Religion/Spirituality and Health

In reviewing the association between religion/spirituality and health, it is soon apparent there are methodological shortcomings in the current approach to research in the area. For a detailed systematic review on the role of religion/spirituality on health outcomes in over 1200 studies conducted during the last century, see Koenig, McCullough & Larson (2001). Powell, Shahabi & Thoresen (2003, p. 48) reported on a critical analysis of an extensive selection of published works, and concluded that religion or spirituality protects *healthy* subjects who are church attenders, but not *patients*. Protection against cardiovascular disease in healthy subjects was largely due to healthy lifestyle factors.

The literature dealing with the association between religion/spirituality and health appears in three broad categories; literature dealing predominantly with mental health and psychological well-being; literature dealing predominantly with physical health; and literature dealing in a generalised way with both, but focusing on discussion of the possible mechanisms for any effects

2.5.1 The Association between Religion/Spirituality and Mental Health

Some caution is warranted when reviewing this literature, because historically, there has been a competitive and sometimes antagonistic relationship between religion and the mental health professionals (Koenig 1993). For example, Freud described religion as a "... universal obsessional neurosis...that would eventually disappear" (Freud 1927 cited in Koenig 1993, p. 34), while psychologist Albert Ellis made the following statement.

> ... religion, in its usual definition, is not irrational nor disturbance
> creating, but what I call devout religiosity tends to be emotionally
> harmful. I define devout religiosity as a pietistic, rigid, dogmatic
> belief in, and reliance upon, some kind of supernatural, divine, or
> "higher" power and as strict obedience to, and fanatical worship of,
> this hypothesised power. ... I define devout religiosity as the view that
> there absolutely must be a spiritual reality, that there has to be a God
> or divine intelligence, and that the identity, agency, and lifestyle of
> humans must follow the inalterable and uncontradictable rules of this
> God or spirit, or else human life and happiness are meaningless and
> untenable (Ellis 1992, p. 428).

One object of Ellis's derisive statement appears to be to the idea of human subservience to an absolute God. The antagonism in Ellis's view is seen in his defining a strongly held belief in an absolute God as being emotionally harmful, when the idea of an absolute or unchanging God is often central for a religious individual; at least for the Christian. It is not clear from the statement or its context, just how Ellis would decide when a person holds the view there "...absolutely must be a spiritual reality...", or even what he defines 'spiritual' to mean. Similarly, one might ask what would be the point of a God that was not "...inalterable and uncontradictable ..." However, not all negative comments about religion reflect this apparent antagonism; some, based on survey results, are justified. For example, Bergin, (cited in Ellis 1992, p. 428), and Allport & Ross (1968, p. 237) found religiosity to be correlated with poor emotional health when religion was used as a means of advancing one's personal interests, or when experiencing ecstatic emotional states was used as an indicator of their religiosity.

In their introduction to a meta-analysis of over 200 studies of the relationship between religious commitment and psychopathology, Gartner, Larson & Allen (1991) described the literature on research into the relationship between religion and mental health as confusing, even contradictory. Bergin (1983, p. 176) also found survey results were often equivocal, being distributed much as they would be if predicted by chance. He pointed out that 23% of surveys examined reported a negative relationship between religion and mental health, 30% found no relationship, and 47% found a positive relationship. Gartner, Larson & Allen (1991) categorised the articles in their analysis using two main criteria: which aspect of mental health was being measured, and how it was measured. Religion was positively associated with mental health when the measures included physical health, drug use, well-being, divorce and marital satisfaction, mortality, alcohol use, suicide, delinquency, and depression. The association was ambiguous or complex when the measures included anxiety, sexual disorders, psychosis, prejudice, self-esteem, intelligence, or education, and negative when the measures used were authoritarianism, suggestibility, dependence, temporal lobe epilepsy, dogmatism, intolerance of ambiguity, rigidity, or self-actualization. They attributed these disparate findings to a number of methodological shortcomings in the studies, including the failure to control for potential confounders (for example, religious attendance or commitment may be more influenced by physical health, than physical health is influenced by religious attendance or commitment), the predominant use of correlational or cross sectional studies, which would preclude any conclusions regarding causality, and the use of so-called 'soft measures'. Soft measures are those that attempt to determine indirectly an individual's status with respect to a particular theoretical-trait. For example the concepts of self-actualization, authoritarianism, dogmatism, or intolerance of ambiguity, cannot be directly measured, but can only be assessed by inference based on indirect measures. Where a negative association between religion and mental health was reported, soft measures were most often found to have been used.

In contrast to results obtained using soft measures, the studies that found a positive relationship between religion and mental health more often used 'hard' measures, behavioural events that can be directly observed, reliably measured, and are of unquestionable validity. Such measures include physical health, mortality, suicide,

drug use, alcohol abuse, delinquency, and divorce. Hard measures tend to be consensual or generally accepted. For example, few would contest the view that suicide is a negative outcome. On the other hand, 'soft' variables often reflect the values of the researcher. For example, orthodox religion may be interpreted as a negative outcome despite empirical evidence that it could be a positive influence. Similarly, psychological test traits such as self-discipline, altruism, humility, obedience to authority, and conventional morality, are negatively weighted, whereas traits such as self-expression, assertiveness, and a high opinion of oneself are positively weighted. 'Soft' measures are more susceptible to personal interpretation, and bias or confusion can arise where there is the tendency to report correlations that reflect the values of the researcher. These correlations are often strongest with other tests constructed *using the same value judgments* but are weaker against 'hard' measures that are less susceptible to personal interpretation (Gartner, Larson & Allen 1991, p. 15).

The association between religious affiliation and mental health was also examined in several studies conducted on 'baby boomers' (those born between 1945 and 1967). The first of these studies looked at the association between religious affiliation and major depression (Meador et al. 1992, p. 1207). After controlling for psychosocial factors, the likelihood of major depression among Pentecostals was found to be three times that for persons from wider religious groups including mainstream Protestants, conservative Protestants, Catholics, and subjects having no religious affiliation. A second study examined the association between religious affiliation and psychiatric disorder among Protestant baby boomers (Koenig et al. 1994, p. 586). After controlling for race, gender, physical health status and socioeconomic status, and stratifying the sample based on frequency of church attendance, the frequency of psychiatric disorder increased in the order: mainstream Protestants, conservative Protestants, and Pentecostals. Those with infrequent church attendance also reported a higher frequency of psychiatric disorder than those with frequent, regular church attendance

Other reviews of the mental health literature have in general concluded that the association with religion is significant, but differed regarding the magnitude and direction of the association. Chamberlain & Zika (1992) reported the association as

being generally positive, but often equivocal. Others have reported similar findings, and also noted that the outcome depended strongly on factors such as how both religiosity and well-being were measured, the religious affiliation of the subjects surveyed, and the way in which the researcher chose to interpret the findings (Frankel & Hewitt 1994). Williams et al. (1991) found that religious attendance indirectly reduced psychological distress by allowing subjects to cope more effectively with the threat to psychological well-being arising from stressful events, and from physical health problems. These study findings illustrate the point that the relationship between religiosity/spirituality and mental health is difficult to measure, and that the outcomes are often dependent on the way in which the study variables were measured and interpreted. The obvious next question is what the relationship between religion/spirituality and physical health might be.

2.5.2 The Association between Religion/Spirituality and Physical Health Levin & Schiller (1987) reviewed over 200 published studies dating back over a century. The studies covered a wide range of outcome measures including circulatory diseases, cancers, and general indices of health status, morbidity, and mortality. The religious measures used were most commonly religious affiliation and frequency of religious attendance. They concluded that regardless of the religious measure used, the association between religious factors and the physical health measures was a positive one. Dwyer (1988), Jarvis & Northcott (1987), and more recently Koenig, McCullough & Larson (2001), have all drawn similar conclusions, and note that some religious communities (including Jews, Mormons, Seventh-Day Adventists, Buddhists, and Trappist monks) actively promote healthy life-style behaviours that contribute to favourable health outcomes.

A large prospective cohort study conducted from 1960 to 1980 and involving approximately 25,000 Seventh-Day Adventists provides an example of the positive association between religious factors and physical health. The study found that standardised mortality rates for a range of chronic conditions including lung cancer, large bowel cancer, coronary disease , stroke, and diabetes were each less than half those for the general population (Nieman 1988). The Church of Jesus Christ of Latter Day Saints (Mormons) are another example of a religious group identified as having significantly reduced risk factors to chronic disease than for the general

population (Haggerty 1977; Lyon, Gardner & Gress 1994). A second large longitudinal study reporting a positive association between religion and mortality rates was the Alameda County Study. Following over 5,000 respondents for 28 years, the study concluded that both males and females who were frequent church attenders had lower mortality rates than those who attended church infrequently (Strawbridge et al. 1997).

The literature strongly supports the idea of a positive association between religion/spirituality and physical health, with little of the equivocation evident in the mental health studies. The question as to the possible reasons for this association will now be addressed.

2.5.3 Suggesting Mechanisms for the Influence of Religion/Spirituality on Health Outcomes.

Literature in this third category that addresses the issue of the possible mechanisms through which religion/spirituality influences health outcomes, is exemplified in works by Carey (1993), Idler (1987), Koenig, McCullough & Larson (2001), Levin (1996), and Seeman, Dubin & Seeman (2003). Each deals specifically with the association between religion/spirituality and health by reviewing existing works, and then postulating mechanisms for the association. The work of Gartner, Larson & Allen (1991), mentioned in the section on mental health above could also be included in this category. The importance of these works is in the contribution they make to dealing with the many conceptual and methodological issues confronting the study of religion/spirituality and health.

Carey (1993) considered the role or purpose of religion across different societies and noted several common features. First, religion provides answers to worries and anxieties in modern society. Second, it reinforces norms as acceptable or unacceptable by linking them to a supernatural order or structure. This gives those norms more weight. Carey concluded that the benefits of religion to health or well-being come not from any particular spiritual faith, religious belief, or religious experience, but from the way in which religion influences the individual's way of thinking or their lifestyle. Other researchers propose a similar approach to

establishing the mechanisms for the association between religion and health, commenting:

> As religion addresses itself to all of man's major
> uncertainties, it comes as no surprise that many religions
> include rules and activities meant to ward off sickness and
> death (Jarvis & Northcott 1987)

They propose that religion may reduce the risk of sickness or premature death through prescribing preventive health behaviours and efficacious treatment regimes, proscribing behaviours harmful to life, and by providing helpful perspectives for stressful life situations. Koenig, McCullough & Larson (2001), Levin (1996), and Levin and Vanderpool (1989), also suggest that the positive effects of religion on health may be due not so much to religious commitment or devotion, but to its influence on behaviours relating to diet and other lifestyle factors. These factors include the promotion of a healthy lifestyle, hereditary effects within groups, psychological and social factors associated with religious practices, and the beneficial effects of certain beliefs and values held by the individual (including faith and learned optimism). A second group of factors includes super-empirical influences such as the Christian concept of the Holy Spirit, pantheistic forces or energies, and supernatural influences. However, because these influences involve influences from outside the individual, or even outside natural laws, they are far more difficult to subject to detailed scientific scrutiny. The final suggestion is that the positive association is an artefacts arising from a number of methodological factors such as erroneous theoretical assumptions in the measurement and interpretation of religious factors (for example, assuming a unidimensional indicator to be valid for all groups in a study), and problems such as not controlling for confounders(Gartner, Larson & Allen 1991, Levin 1996).

Idler (1987) postulated four avenues through which religion may influence health: the Health Behaviour Hypothesis, the Social Cohesiveness Hypothesis, the Coherence Hypothesis, and the Theodicy Hypothesis. The Health Behaviour Hypothesis proposes that religiously involved individuals behave differently to non-religiously involved individuals with respect to known health risk factors such as

smoking, drinking, meat consumption, multiple sexual partners, rest, and relaxation. The Social Cohesiveness Hypothesis proposes that religious groups provide social and psychological resources, as do other groups. The Coherence Hypothesis assumes religion gives meaning by providing symbols and knowledge in a way that allows individuals to cope with the negative effects associated with some life experiences. The Theodicy Hypothesis suggests religious involvement has the effect of providing meaning to an individual's perception of suffering and distress. These four models together potentially provide the basis for an integrated model addressing a wide range of factors that both directly and indirectly describe the relationship between religion and health. However, the model is a complex one that requires many measures to be integrated to achieve meaningful outcomes.

Other researchers have focused on psychological and social factors as being the principal mechanisms through which religion influences health; for example through coping mechanisms for stress, through social support, social networks, and education (Bradley 1995; Pollner cited in Zika & Chamberlain 1992).

Although there are a number of useful models that attempt to describe the influence of religion/spirituality on health, there is little evidence these ideas have been developed. This may be due in part to the question of what to measure, and how to measure it, remaining unresolved. The following section examines other methodological concerns raised by the review.

2.6 Methodological Limitations in the Study of the Association between Religion/Spirituality and Various Health Outcomes

There are a number of specific areas of concern arising from this review. These include: the low rate of inclusion of religion/spirituality in health related studies, issues of bias or validity such as the use of restricted populations, and researcher bias, and the often ambiguous study outcomes.

In the *first* of these, the low rate of inclusion of religion/spirituality in health related studies, Larson & Larson (1992) reported on several systematic reviews of more than 3000 published works covering the fields of psychiatry, family medicine and public health over the period 1976-1989. They found that only about 3% of the

articles included at least one measure of religious factors. Of these, approximately 85% found the influence of religion on health to be beneficial, 10% found the effect to be neutral, and less than 5% found it to be harmful. There does not appear to be a comparable review of the most recent trends.

In a meta-analysis of the religion and wellbeing literature, Witter et al. (1985) concluded that religious factors are as least as important in predicting subjective well-being as factors such as education, socioeconomic status, marital status, employment status, and social activity, but were rarely included in studies. Ellison (1983), and Vogt (1993), also concluded that the religious factor is largely ignored in the literature. Chapman (1986), and Moberg & Brusek (1978) both identified spirituality as a component missing from health promotion programs, and from quality-of-life research respectively, while Poloma & Pendleton (1990) pointed to the continued failure of researchers to include religious factors in quality-of-life studies. More than a decade later, spirituality, religion and health are still considered by some as "...an emerging research field ...", and that the "... study of spirituality and health is a true frontier for psychology and one with high public interest" (Miller & Thoresen 2003, p. 24).

The omission of religious/spiritual factors from what would seem to be the majority of health studies, occurs against the background of a Gallup Poll showing that in 1996, more than 90% of the population claimed to believe in God, and nearly 60% considered religious beliefs important in their life (Testerman 1997, p1). There is no comparable data for Australia, but approximately 80% of the population claim affiliation with mainstream religious denominations (Australian Bureau of Statistics 2001). The omission of the religion/spirituality variable from epidemiological studies, when a large proportion of the general population reports adherence to religious beliefs, would appear to be a limitation to those studies.

A number of researchers have proposed reasons as to why religious/spiritual factors are so conspicuously absent from epidemiological and related fields. Discussion of these reasons tends to be in the context of spirituality only, or religion only, but generally not both. Goodloe & Arreola (1992) suggest the reasons include:

- the concepts are complex, and the difficulty or even impossibility of defining them for research rule out their being a valid criteria for inclusion in research;

- religious/spiritual issues are included in the psychosocial dimensions such as mental/psychological/emotional health and separate dimension for them is not necessary;

- to include spiritual/religious issues in health education raises the issue of separation of church and state and is best left alone; and

- religiosity/spirituality is highly personal and not appropriately addressed in the public forum. This personal nature makes it difficult to study the concepts and satisfy rigorous scientific criteria.

Similarly, Sherrill & Larson (1994) suggest it is due to:

- the physical orientation of modern medicine shifts spiritual issues into the realm of behavioural science for treatment;

- the anti-tenure factor discourages academic research into religion and spirituality because those who choose to study such concepts often suffer from lack of funding and lack of opportunities for advancement; and

- existing studies of religious factors have conceptual and methodological flaws.

(Koenig 1993) notes that for centuries, the relationship between religion and the mental health profession has been competitive and antagonistic. This would make objective investigation difficult, and potentially lead to problems of researcher bias. (Levin 1994) attributes the problem to the belief that religion is unimportant, is not real, is delusory, or is a personality disorder, and goes against traditional training.

The *second* factor having the potential to affect adversely the validity of any studies into religion/spirituality is the use of restricted populations. When reviewing the literature, and becomes apparent that aging is a major focus of investigation in researching the association between various aspects of health and religion/spirituality. For example, the report titles in the following list are typical of this area of research.

Religious involvement and the health of the elderly (Idler 1987)

Religion and well-being in later life (Koenig, Kvale & Ferrel 1988)

The use of prayer amongst older adults (Bearon & Koenig 1990)

Aged people and the effects of public vs private religiousness (Breen 1992)

Religiosity and adaptation in the oldest-old (Courtenay et al. 1992)

The relationship between Judeo-Christian religion and mental health among middle-aged and older adults (Koenig 1993)

Religion in aging (Ainlay & Smith 1993)

Frequent Attendance at Religious Services and Mortality over 28 Years (Strawbridge et al. 1997)

Religion, Aging and Health: Exploring New Frontiers in Medical Care (Krause 2004)

However, while aged people are a valid group for study, their religious/spirituality experience is likely to be dissimilar to other age groups in society. This is because of their different exposure to situations requiring them to consider the questions of existence and purpose every person inevitably encounters; for example, those who lived through World War II. As a result, the findings of such studies should not simplistically be generalised to the broader population.

While the aged are the focus of research into the way religion/spirituality influence health outcomes in general, it is the younger age groups that are the focus of studies into the development of scales for the measurement of religion/spirituality and related concepts. In a number of cases, specific religious groups, often university students from a particular faculty, were used to test and develop the scales. For example, Francis & Stubbs (1987) measured attitudes towards Christianity and established validity for their scale using a sample of 185 adults from a single church related foundation. Faulkner & De Jong (1966) reported findings on the dimensions of religiosity in a single group of sociology students from one university. Putney & Middleton (1961) examined four potential dimensions of religiosity in a sample of over a thousand social science students from thirteen universities. Kass et al. (1991)

established an association between life purpose and satisfaction, health promoting attitudes, and frequency of medical symptoms from a sample of 83 medical outpatients. Ellison (1983) used data obtained from 206 university students attending one of three religiously-oriented universities as the basis for examining religious and spiritual well-being. The use of restricted samples is a convenient starting point for the development of a scale. However, when the scale is published for use in a broader population, the validity and reliability of those scales may be called into question.

The *third* issue of concern is researcher bias, which can arise when researchers make value judgments about factors including religious/spiritual concepts. These judgments have the potential to distort the true association between religion/spirituality and the measure of interest, and create methodological difficulties such as those discussed in Chapter 2. These judgments most commonly involve religious beliefs or doctrines that underlie specific questions in the scales. They manifest themselves in value-laden questions. Researcher bias can also appear where there is a lack of consensus regarding the value and weight applied to various concepts and traits, and may also be evident in contention over the interpretation of findings (Gartner, Larson & Allen (1991). Either of these situations could contribute to the uncertainty that pervades the study of religious/spiritual issues.

The *fourth* factor is the ambiguity factor. This factor is probably more an outcome than a causal factor, but it could influence the direction subsequent studies take. The literature agrees that an association between religion/spirituality and health exists. For the church attendance – mortality association, the consensus is strong and positive. However, it is weaker for other associations between religion and health status. A number of researchers have concluded the association is equivocal (Ellison & George 1994; Frankel & Hewitt 1994), but perhaps the most lucid statement to this effect was by Bergin et al. (1988, p. 91 who concluded:

> Many studies have been done, [in this area] but the overall picture of the phenomenon and the principles operating therein are ambiguous and inconclusive. Debates over the role of religion in mental health have therefore been difficult to resolve (Bergin et al. 1988, p. 91).

It is clear from the literature that ambiguous study outcomes are relatively common. This suggests the measures used may be flawed. For example, they may lack the power to discriminate between different aspects of religion/spirituality, or the underlying basis for the questions and the interpretation of the responses is incorrect. This latter issue is addressed in Chapter 3.

2.7 Chapter Summary

Since ancient times, religion/spirituality has influenced public and personal health outcomes. Today, the literature continues to report that an association exists between religious/spiritual factors and both mental and physical health outcomes, but the magnitude and direction of the association is unclear. Research to date has not been successful in resolving this issue, with recent dissenting reports claiming any health advantage associated with religious involvement was often weak and inconclusive (Bayne 2002), or flawed by methodological short comings (Sloan & Bagiella 2001).

It is evident that the need to address issues of conceptualization and interpretation of religion and spirituality is restricting research into their influence on health. How to define and measure religion and spirituality remain vitally important questions that are yet to be resolved, and which are the focus of the next chapter

CHAPTER 3

Analysis of the Content of Selected Scales, and a Review of the Definitions of Religion and Spirituality.

3.1 Overview

The previous chapter showed that the association between religion/spirituality and health is at best uncertain. A number of difficulties arising from attempts to measure the impact of religion/spirituality on health outcomes could be attributed to issues of methodology and interpretation. Put simply there is uncertainty about what to measure, and how to measure it. This chapter examines possible reasons why these difficulties have arisen. Section 3.1 describes the analysis of a selection of published scales that have been used as measures of religion/spirituality. It describes potential threats to the validity of the scales, and shows how these could be contributing to that uncertainty. Sections 3.2 to 3.4 present an overview of definitions of religion and spirituality, the purpose of which is to show how diverse and convoluted some of these definitions are, and how difficult it can be to incorporate them into a measurement regime.

3.2 Analysis of a Selection of Published Scales

Each scale in some way reflects the philosophical, religious, or spiritual beliefs of its author(s). Different scales are used in different settings and for different purposes, so simple comparisons of scales are inappropriate. A selection of scales purporting to measure religion or spirituality in the Christian context, were analysed with the aim of identifying possible errors in the construction and interpretation that might explain the largely equivocal outcomes reported in the literature.

3.2.1 Selection of Scales for Analysis

All of the scales included in the analysis were available in the published literature, and were selected using the following criteria.

Availability: A significant obstacle to the use of measures of religion/spirituality in epidemiological studies has been their poor availability in the mainstream literature. Typically, journals or other publications presenting peer reviewed

studies, even when widely available, did not make the scales used publicly available. Others in the field have also drawn attention to this issue (Hood et al. 1996, p. 3). Scales chosen for this analysis, thus, had to be publicly available in their entirety.

Citation in the literature: The extent to which the scales were cited in the mainstream literature was used as a guide to the most up-to-date developments in the field, regarding the extent to which particular scales were accepted and adopted.

Relevance: Initially, only scales specifically relevant to epidemiological studies or other health issues were selected. However, the restricted availability and content of such scales meant a more diverse range of scales would need to be collected for comparative purposes.

Methodological or Historical Significance: Some scales have been included in this study because the methodology used in their development is particularly relevant, or the scale has some historical significance. For example, the Five Dimension Scale of Religiosity (Faulkner & De Jong 1966) and the Spiritual Well-Being Scale (Ellison 1983) were each included because they were part of early studies that recognised religion/spirituality as important variables.

Representative: The scales selected should collectively be reasonably representative of the scales available. Twenty scales were selected, but as there were relatively few scales available in the literature, these twenty were the majority of those available at the time the selections were made. Comparison of the selected scales against those in the compilation by Hill and Hood (1999) showed the twenty scales selected were sufficient to illustrate the point of the analysis.

The twenty scales selected for analysis are listed below.

> *1968 Questionnaire* (Hilty, Morgan & Burns 1984)
> *Adventist Family Survey (Items 61-77)* (Strahan & Craig 1995)
> *Attitude Toward Christianity Scale* (Francis & Stubbs 1987)
> *Diabolical Experiences Scale* (Source Unknown)

Dimensions of Religious Ideology (Putney & Middleton 1961)

Duke Religion Index (Koenig, Parkerson & Meador 1997)

Five Dimension Scale of Religiosity (Faulkner & De Jong 1966)

God Image Inventory (Lawrence 1997)

Inspirit (Kass et al. 1991)

National Church Life Survey-Attender Survey (National Church Life
Survey 2001)

Quality of Life (Poloma & Pendleton 1990)

Quest (Batson & Schoenrade 1991)

Religious Orientation Scale (Allport & Ross, cited in Hill and Hood
1999, p. 144)

Religious Orientation Scale-Revised (ROS-R) (Gorsuch & McPherson
1989)

Religiousness Scale (Strayhorn, Weidman & Larson 1990)

Royal Free Interview (King, Speck & Thomas 1995)

Shepherd Scale (Bassett et al. 1991)

Short Christian Orthodoxy Scale (Hunsberger 1989)

Spiritual Well-being Scale (Ellison 1983)

Subjective Measures of Spiritual Well-being (Moberg 1984)

3.2.2 Analytical Criteria and Details of the Analysis.

The analysis of the scale items aimed to identify the central concept or dimension the item was attempting to measure, and any issues that could threaten the validity of the instrument and possibly preclude its use for the measurement of religion/spirituality. Details of the analysis are presented in the following sections.

3.2.2.1 Criterion 1: Identifying The Central Concept of each Item.

For each scale, items were grouped according to the concept the item addressed. Examples of these groupings include frequency of church attendance, financial contributions, and beliefs about God. Where an item contained references to more than one concept, the one appearing to be the most central was used to group the item. Due to the complexity of the analysis, these categories are not exhaustive, but rather, provide a broad overview of the content of each scale. The eighteen main ideas identified are as follows. They are presented in the same order as in Table 3.1.

A. **God, Relationship with God:** These items ask about the respondent's belief in God, the nature or character of God, and about their relationship with God. This also includes any references to other gods or to atheism, as each position directly or indirectly implies a view about God.

B. **Bible/Prayer:** This category deals with the relevance or inspiration of the Bible, Bible study, and all items addressing the frequency and perceived efficacy of prayer.

C. **Satisfaction (Religious):** These items deal with issues such as the respondent's self-reported religiosity, perceived importance of religion, and satisfaction with religious directions, as compared with 'spirituality'.

D. **Church/Group Attendance:** Items in this category relate to frequency and duration of church or other group attendance.

E. **Philosophy:** This category of items was included to deal with concepts that fall outside what would normally be termed religion/spirituality, but which relate to the individual's existential beliefs, or to a philosophy of life that provides the individual with a framework for decision making.

F. **Church/Group Involvement:** These items deal with respondent involvement within the church or group, in activities such leadership, teaching, or administration.

G. **Jesus:** This category of items deal specifically with issues such as the existence, character and deity of Jesus.

H. **Helping Others, Evangelism:** Included in this category are all items relating to helping others as a personal effort, rather than through institutional programs, and any tendency to share religious/spiritual material or ideas with others in an evangelistic sense.

I. **Sin/Salvation:** The items in this category include those having the concepts of sin or salvation as their central theme.

J. **Other Personal Beliefs:** This category collects a small number of items not readily included in the other categories.

K. **Life Meaning, Satisfaction, Purpose, Peace, Happiness:** These items ask the respondent to rate how satisfied they are with their life, whether or not they are at

peace with themselves or others, and whether they are generally happy or sad. They ask about the respondent's beliefs about the meaning and purpose of life, and the reasons for human existence, but they do not include satisfaction with religious/spiritual matters.

L. **Church/Group Organization:** This category groups general questions about the way the respondent's church or group operates, and specific doctrinal or other positions adopted.

M. **Spirituality:** These category items specifically address personal spiritual matters or practices, as distinct from more formal religious doctrines or beliefs.

N. **Physio-socio-demographics:** These items ask about the respondents, physical characteristics, age, gender, education, marital status, income, and so on.

O. **Financial Contributions:** This category includes factors such as, frequency and amount of donations (e.g. tithing), and respondent's feelings about making donations.

P. **Death, Soul, Heaven, and Hell:** This category includes all references to beliefs about life after death, heaven and hell, and to the question of evil.

Q. **Religious/Spiritual Affiliation:** This category refers to the respondent's membership with a religious/spiritual group.

R. **Holy Spirit:** This category was included as a separate item to 'God', as there are various Christian interpretations about who or what the Holy Spirit is.

Results of the analysis of item contents using these categories are presented in Appendix B and are summarised in Tables 3.1 and 3.2. Table 3.1 shows the distribution of scale items into the categories listed above, whereas Table 3.2 shows for each scale analysed, the proportion of items collected by each categories.

Table 3.1 shows the most common items were: God, and the individual's relationship with God (found in 90% of scales), the Bible and Prayer (in 81% of scales), Religious Satisfaction (in 61% of scales), and Church Attendance (in 53% of scales). Some categories such as Religious Affiliation, which were expected to be prevalent, were represented in only 5% of scales. As is discussed later in this thesis, this item was an important indicator of individual health and lifestyle practices, and its

omission from the majority of the scales analysed could point to an inherent weakness in the research paradigm represented by those scales.

Table 3.2 shows that only three of the twenty scales analysed included at least half the eighteen categories of items. Those three instruments, the *1968 Questionnaire* (Hilty, Morgan & Burns 1984), *Subjective Measures of Spiritual Well-being* (Moberg 1984), and the *Royal Free Interview* (King, Speck & Thomas 1995), are larger instruments containing a number of sub-scales. The remaining scales tended to be smaller (for example, the *Duke Religion Index* (Koenig, Parkerson & Meador 1997) which has five items) or more narrowly focused (for example, the *God Image Inventory* (Lawrence 1997) which uses 72 items in only three categories.)

3.2.2.2 Criterion 2: Identifying Possible Issues Affecting the Validity of the Items

This second analytical criterion aimed to identify problems that might threaten the validity of the item or ultimately, the scale. The problems identified were grouped according to the type of problem; some items dealt with more than one issue and presented more than one problem type. Examples of the types of problems identified and the potential threat they pose to the validity of the scale, are presented in the following section. Again, the analysis is illustrative and not intended to be exhaustive. The complete analysis is presented in Appendix B, but examples of problems revealed include; items assuming a certain doctrinal stance , items that require certain assumptions to be made when interpreted, or that are difficult to interpret because of negative wording.,

3.2.3 Examples of Threats to Validity

The validity being considered here is not simply the face, content, criterion, or construct validity per se, but refers to a broader meaning. Regardless of which type of validity is referred to, if the item in question is incorrect, or produces incorrect or illogical outcomes, then that question does not have face validity. In the strict usage of the term, the items and/or the scale that contains the item does not have content, criterion, or construct validity.

The *first* group of item types posing a threat to the validity of a scale includes those items that assume a particular interpretation of religious issues or behaviour is correct or desirable; those that give rise to uncertainty about the weighting of responses, and those that present difficulties with the interpretation of negatively worded items.

An example of such a value laden item is *How often have you personally tried to convert someone to faith in God?* (Hilty, Morgan & Burns 1984). In this example, '...personally trying to convert someone to faith in God' is presented as a religiously oriented behaviour that can be used to discriminate between respondents. The respondent is asked to assume that converting someone to faith is desirable behaviour. In other words, value assumptions are embedded into the item about the consequences of religious belief and affiliation. Similarly, the use of Likert response options suggests that greater response value appears intended to indicate a 'more religious' individual. This may not necessarily be the case, as not all 'religious' people consciously set out to convert someone, and not all believers equally value this behaviour. Respondents who return a negative response to this item could be judged as being 'less' religious, an erroneous judgment in many cases. An item such as this could at best be used in an environment where the embedded values are accepted.

Similarly, the item *'I believe there is a physical Hell where men are punished after death for the sins of their lives'* (Putney & Middleton 1961) appears to assume both the concepts of a physical Hell and of an immortal soul that lives on after death (and is punished). The truth or otherwise of the two concepts contained in the items is in this case less important than the problem of interpreting the result. If the response is to be interpreted using an ordinal response structure, then the interpretation can be strongly influenced by the researcher's beliefs. For example, if the researcher believes the statement to be true, then a positive response is likely to be considered positively, and a negative response weighted negatively. From another perspective, the researcher may believe the statement to false, in which case a positive response could be weighted negatively. In both instances a value judgment is contained in the

Table 3.1: Distribution of survey scale items into the eighteen concept categories

Category Description	% of Scales Containing this Category
God, Relationship with God	90
Bible/Prayer	81
Satisfaction (Religious)	61
Church/Group Attendance	53
Philosophy	38
Church/Group Involvement	33
Jesus	29
Helping Others, Evangelism	28
Sin/Salvation	24
Other Personal Beliefs	24
Life Meaning, Satisfaction, Purpose, Peace, Happiness	21
Church/Group Organization	15
Spirituality	14
Physio-socio-demographics	10
Financial Contributions	10
Death, Soul, Heaven, and Hell	9
Religious/Spiritual Affiliation	5
Holy Spirit	5

Table 3.2: Representation of concept categories in each scale

Scale Title (Author)	No of Items In Scale	% of Item Categories Represented (Max: 18=100%)
1968 Questionnaire	75	61
Subjective Measures of Spiritual Well-being	43	56
Royal Free Interview	35	50
Five Dimension Scale of Religiosity	21	44
National Church Life Survey-Attender Survey	51	44
Quality of Life	31	44
Religiousness Scale	12	44
Religious Orientation Scale	20	39
Shepherd Scale	43	39
Dimensions of Religious Ideology	18	33
Duke Religion Index	5	28
Attitude Toward Christianity Scale	24	28
Religious Orientation Scale-Revised	14	28
Adventist Family Survey (Items 61-77)	17	28
Quest	34	22
Inspirit	21	22
God Image Inventory	72	22
Short Christian Orthodoxy Scale	6	17
Diabolical Experiences Scale	16	12
Spiritual Well-being Scale	20	11

item and another value judgment being applied to the response. This may render the item flawed.

A further example of the potential problems with weighting of a response is '*The truly religious person is sure his beliefs are correct*' (King 1967). On its own, the item may appear reasonable but as it is used in a scale measuring 'dogmatism', the question arises as to how the responses would be interpreted. Is a positive response interpreted as being dogmatic? If so, the implication may be that a person who is sure about their beliefs is being dogmatic, but that being unsure about one's beliefs is a less dogmatic but more acceptable response. While a person who is dogmatic about their religious/spiritual beliefs undoubtedly considers those beliefs to be correct, it is not necessarily the case that every person who considers their beliefs to be correct is dogmatic.

Another methodological issue in this category is the assumption that a negative response to a positively worded item is the same as a positive response to negatively worded item. For example, the Francis Scale of Attitude toward Christianity (Francis & Stubbs 1987) includes the item '*I know that God helps me.*' In this example, does a 'Strongly Disagree' response mean 'I do not know that God helps me', or 'I know that God does not help me'. These two possible interpretations have very different meanings. Similarly, in the same instrument, two items about the Bible are both worded negatively *('I find it boring to listen to the Bible', 'I think the Bible is out of date'*). In neither case is the respondent given the opportunity to respond positively about the Bible, except to respond negatively to the negatively worded items. The potential for misinterpretation of the responses and drawing incorrect conclusions is obvious.

The *Spiritual Well-being Scale* (Ellison 1983) similarly contains examples of problems arising from the use of negatively worded items. An 'Agree' response to the item '*I feel that life is full of conflict and unhappiness*' indicates the respondent feels their life is full of conflict and unhappiness. However, it is not clear whether a negative response indicates a lack of conflict and unhappiness, or conflicts and

unhappiness that are resolved. Similarly, a negative response to the item, *'I don't have a personally satisfying relationship with God'* does not indicate whether the respondent does have a satisfying relationship with God as is probably assumed, or no relationship at all with God. The embedded values of items in many of these scales produce issues of interpretation of responses that while not unique, are nevertheless complex.

The *second* group of items posing a threat to the validity of a scale are those specific to believers, and which non-believers cannot readily answer. These items commonly have a narrow focus, and are intended for a restricted population, for example those who are familiar with or engage in 'religious' practices, or who are regular church attendees. The items do not readily allow non-attenders, or, non-Christians, to respond adequately. That is, they assume the respondents are familiar with the terms and expressions used by the majority of respondents.

The Religious Orientation Scale - Revised (Gorsuch & McPherson 1989) and the Religious Orientation Scale (Allport & Ross, cited in Hill & Hood 1999, p. 144) from which it was derived, have been used for both secular and religious respondents, but the item content indicates a focus on 'religious' respondents. For example, Item 6 in the I/E-R Scale is *I pray mainly to gain relief and protection.* A secular respondent who does not pray would be forced to respond with 'disagree' or 'don't know', whereas a religious respondent may respond with 'disagree' because they pray for other reasons. In this case, while it would be possible to discriminate between these different respondents using other items, there remains an element of confusion in the interpretation of response for that item, even though both respondents may belong to the same religious group.

Similarly, the Duke Religion Index (Koenig, Parkerson & Meador 1997) that was developed for use in psychiatric research into the relationship between religion and mental health, contains only five items, two of which are identical to those in the Religious Orientation Scale (Allport & Ross 1968). The Duke Religion Index is apparently used for both secular and religious respondents. The items; *'My religious beliefs are what really lie behind my whole approach to life'*, and *'I try hard to carry my religion over into all other dealings in life'* have the response categories

'definitely true' through to 'definitely not true'. Respondents who consider themselves as 'not religious' would presumably have to respond negatively to both items. However, those respondents who come under the 'extrinsic' religious category (Allport & Ross 1968), that is, they tend to use institutional religion as a tool for their own ends, might also respond negatively to the first item. In these examples, interpretation of the results could be difficult, but it is clear that a respondent with little or no interest in religion is likely to have different attitudes and engage in different behaviours to someone who 'uses' religion but whose religious beliefs do not modify their otherwise secular behaviour. As can be seen from Tables 3.1 and 3.2, and Appendix B, this category of item is found in at least fourteen of the twenty instruments reviewed, indicating that the problems arising from this category of item could be widespread in the literature.

The National Church Life Survey (2001) is included as a special case in this group. It is used mainly to profile church congregations, and is intended to measure different aspects of the of the religious/spiritual dimension to many of the other instruments. Although many of the items may be difficult for a secular attendee to respond to, this would be a minor issue in a congregational context.

The *third* category contains items that potentially breach today's ethical guidelines. It is the smallest category in terms of the number of scales in which it was identified, and the most difficult to assess, but the issue is nevertheless an important one. Examples of items in this category appear in the *Intolerance of Ambiguity* sub-scale of the *1968 Questionnaire*, an instrument examining dimensions of religious involvement (Hilty, Morgan & Burns 1984). This scale includes the following items:

1. *There are two kinds of women; the pure and the bad.*

2. *There are two kinds of people in the world; the weak and the strong.*

3. *You can classify almost all people as either honest or crooked.*

4. *It is part of one's patriotic duty to worship in the church of his choice*

5. *The purpose of prayer is to secure a happy and peaceful life.*

6. *A person is either a 100% American or he isn't.*

7. *A person either knows the answer to a question or he doesn't.*

8. *Church leaders should pay attention to recent scientific studies which prove that the White race is best.*

9. *There is only one right way to do anything.*

10. *One reason for being a church member is that such membership helps to establish a person in the community.*

11. *It doesn't take very long to find out if you can trust a person.*

12. *Being religious is mainly a matter of being honest and good.*

13. *What religion offers me most is comfort when sorrows and misfortune strike.*

The content of these items is consistent with the intended aim to measure 'Intolerance of Ambiguity'. From a methodological perspective the responses would be useful, however, Items 1 and 8 potentially breach ethical guidelines. In the first instance, they provide an outlet for a respondent to demean women, and in the second, because of possible racial vilification. It could of course be argued that the questions are designed to measure a specific characteristic in the respondents, and that they do not necessarily reflect the researcher's point of view. In addition to any ethical issues, there is also the question of how some of the responses would be weighted or interpreted. For example, Items 12 and 13 could both pose difficulties in interpretation because they raise the question, what is religion?

Items in the *fourth* group potentially present philosophical or methodological difficulties, are confusing, or contain what appear to be errors of logic. Most of the instruments or scales included items of this type. Numerically, this group was almost as significant as the first, and is possibly the greatest threat to the validity of the instrument because it raises doubts about the basic content and structure of the items. A number of examples follow to illustrate the point. The 'Literalism' scale of the Adventist Family Study (Strahan & Craig 1995, p. 153) contains the following items:

Item 66: *'The Bible is the final and complete guide to morality: it contains God's answers to all important questions about right and wrong.'*

Item 69: 'It is very important for true Christians to believe it is the infallible word of God.'

Item 77: 'I am sure the Bible contains no errors or contradictions.'

Item 62: 'Christians should not let themselves be influenced by worldly ideas.'

Item 73: 'Christians must try hard to defend the true teachings of God's word.'

Item 78: 'The best education for a child is in a Christian school with Christian teachers.'

A high score in this scale is claimed to indicate a high level of literalism, and is '... predictive of prejudicial attitudes against non-Christians, feminist ideology, and gay men ...'(Strahan & Craig 1995, p. 73). These items appear to assume particular belief structures, whereas there could be a number of different responses to the items for which no response option is provided. To disagree with the items, correctly makes a respondent appear less literalistic, but it raises questions about interpretation of the responses. A respondent returning a high score is not necessarily literalistic, as they may respond in the same way as a literalistic person, but for different reasons. Items such this highlight the problems associated with the nomothetic approach, which is discussed in Chapter 7.

The second example comes from the Quality of Life scale (Poloma & Pendleton 1990). The 'Belief' sub-scale contains two items dealing with life after death; *'I believe in a life after death where good deeds will be rewarded.'*, and *'I believe in a life after death where evil deeds will be punished'*. These items present some difficulties with philosophical interpretation of the responses, because they shape the meaning of a respondent's answers. For example, a respondent who believes there may be a punishment for evil deeds, but that the punishment is not associated with life after death, or one who believes that life after death is independent from any reward, would not be able to respond adequately to this item. Similarly, a respondent who believes that 'death', as in 'death is the end', with no possibility of an after life, would also not be able to respond to this question. The researcher is then forced to make a value judgment about non-conforming responses. The

problem appears to be one of interpretation, but is in fact based on the philosophical and theological concepts embedded in the question.

The third example comes from the *Religiousness Scale* (Strayhorn, Weidman & Larson 1990). Items in the 'Private' sub-scale are also subject to philosophical or conceptual difficulties with interpretation of the responses. For example, Item 1 asks the respondent '*How religious would you say you are?*' on a scale ranging from 'Not at all' to 'Very much'. Superficially, this is a relatively straightforward question. However, as has been noted in the analysis of several other scales, this approach may be simplistic. Indiscriminately pro-religious (Allport & Ross 1968, p. 238) or 'pharisaical' (hypocritical self-righteous) respondents would both be expected to score highly for this item. Yet their actual philosophical base and values outlook are significantly different. In contrast to this position, a deeply religious person who as a consequence of their experience feels 'unworthy' may return a low score but in fact (according to other measures) be 'more religious' than some high scoring respondents. The same argument applies to the item, '*How would you describe the nature of your relationship to God?*' If administered to a general population sample where there are a variety of belief systems, individual items such as these can be ambiguous, but of greater importance is the likelihood that scales incorporating such items are at best ambiguous. It is this potential for ambiguous interpretations that may be an important factor in the equivocal results reported in the literature.

A fourth example comes from the ROS-R Scale (Gorsuch & McPherson 1989) which was included in this study to evaluate the concurrent validity of elements of the survey instrument developed for this study. Application of this scale to both secular and religious respondents has been reported (Gorsuch & McPherson 1989; Hill and Hood 1999), but the item content indicates that the scale assumes most respondents to be 'religious'. The difficulties that could arise as a result of using the scale for secular respondents, are illustrated by Item 6 in the Scale; '*I pray mainly to gain relief and protection.*' A secular respondent who does not pray would be forced to answer 'disagree' or 'don't know' because they do not pray, whereas a religious respondent may answer 'disagree' because they pray for other reasons. While it may be possible to discriminate between these varying respondents using other items,

there remains an element of conceptual confusion in the interpretation of responses for that item.

The final example is taken from the *Dimensions of Religious Ideology, Orthodoxy sub-scale* (Putney & Middleton 1961). This scale contains the following two items; *'I believe there is a physical Hell where men are punished after death for the sins of their lives'*, and *'I believe there is a life after death'*. These items suffer the same conceptual and philosophical difficulties with interpretation of the concept of 'life after death'. A positive response the first item forces a positive response to second; there can be no punishment after death in a physical Hell if there is no life after death. However, a negative response does not have this effect, as one can believe in 'life after death' without believing in a physical Hell.

3.2.4 Summary of Findings for the Analysis of Scales.

The analysis shows that all twenty instruments reviewed contained items that potentially adversely affect the validity of the host scale. As it is not practical to discuss every item or even every instrument here, the results of the analysis are summarised in Appendix B. There are several adverse outcomes that potentially can arise from the types of problems identified in this analysis. The most significant of these is the misclassification of respondents. Data from a flawed scale could well result in equivocal or ambiguous results as noted earlier on the chapter.

The analysis suggests there are a number of empirical criteria that could be applied to the development of items and scales within an instrument to minimise threats to validity. These are as follows:

- avoid or minimise the use of negatively worded items or the need for reverse scoring. These techniques should only be used if it can be demonstrated that the reversal does not change the meaning of the item or of the responses;

- Avoid items that do not allow adequate response choices. Many religious/spiritual concepts are subject to more than a single interpretation, so all items should contain response choices that allow a diverse range of both religious and secular respondents the opportunity to indicate their true position in respect of the item content;

- items should contain only a single measurable concept; and

- avoid unintended embedded values. A response to one item should not force a response to another.

3.3   Defining Religion and Spirituality

The majority of studies reviewed either did not include any definitions of religion/spirituality in their discussion, or describe what meaning the researcher might have attributed to the concepts. Without this understanding of the meaning attributed to the concepts by all of the different researchers, it is difficult to compare the results of the various studies. Understanding the individual concepts is made more difficult by the relationship between them. For example, religion and spirituality may be related and used interchangeably (Benner 1991; Kozier, Erb & Blais 1992), or they may be entirely different concepts. Equally challenging is the question of their diversity and how this can be encompassed by any definitions. For example, typical estimates number Christian denominations and groups at around 1500 (Fairchild 2005). A definition must provide the basis for measures that will discriminate within a group, or between subgroups. Even limiting the number to only 1500 different Christian groups, the adequacy of a definition that is broad enough to include even a fraction of this number is unlikely to have the power to discriminate between them. The issue of an alternative to a formal definition is discussed further in Chapter 7.

The review that follows addresses religion and spirituality separately and in that order. The majority of the definitions of religion and spirituality come from sources outside the religious literature. There are four principal areas of the literature reporting definitions of religion; in dictionaries, in the philosophy, psychology, and sociology literature, in the nursing and health promotion areas where religion is often used as a contrast for the process of defining spirituality, and in encyclopaedias and on the World Wide Web. Biblical references to the concepts are also considered. These definitions are examples of type and content, and represent only a small sample of the total.

3.4   Defining Religion

3.4.1   Definitions from Dictionaries and Encyclopaedias

Dictionary definitions are important, as they tend to reflect the etymological origins of the words and their common usage, but they can sometimes be too succinct to generate sufficient meaning for a study such as this one. This discussion does not consider associated concepts such as 'religious' and 'religiosity'.

The Oxford English Dictionary defines religion as

> Action or conduct indicating a belief in, reverence for, and desire to please, a divine ruling power; the exercise or practice of rites or observances implying this ... as ... A particular system of faith and worship ... or ... Recognition on the part of man of some higher unseen power as having control of his destiny, and as being entitled to obedience, reverence, and worship; the general mental and moral attitude resulting from this belief, with reference to its effect upon the individual or the community; personal or general acceptance of this feeling as a standard of spiritual and practical life. (Oxford English Dictionary 1989, p. 568)

Other dictionary sources define religion as;

> ... the human recognition of superhuman controlling power and especially of a personal god entitled to obedience, and the effect of such recognition on conduct and mental attitude (Australian Concise Oxford Dictionary 1997, p. 1140)

or as

> Belief in or sensing of some superhuman controlling power or powers, entitled to obedience, reverence, and worship, or in a system defining a code of living, esp. as a means to achieve spiritual or material improvement (The New Oxford Shorter Dictionary 1993, p. 2538).

Each of these three definitions, despite being from various editions of the Oxford Dictionary, reveals subtle nuances indicating that views about the concept are not static.

The Collins English Dictionary (1993) also defines religion in terms of worship and obedience involving a superhuman power, but importantly, includes the definition "...the attitude and feeling of one who believes in a transcendent controlling power or powers" (p. 1309). The importance of this definition is that unlike the earlier definitions, the ideas of attitudes and feelings it contains are elements for which measurement techniques are available, an idea which is discussed in Chapter 4.

Along similar lines, the Encarta Dictionary defines religion as:

> ...people's beliefs and opinions concerning the existence, nature,
> and worship of God, a god, or gods, and divine involvement in the
> universe and human life (Encarta Dictionary 1999, p. 1587).

The idea of religion as "...recognition on the part of humans of a controlling superhuman power entitled to obedience, reverence and worship" is also found in the Macquarie Dictionary (1998). This source also presents an idea not as succinctly presented in the others, that religion is;

> ...the quest for the values of the ideal life involving three phases,
> the ideal, the practices for attaining the values of the ideal, and the
> theology or world view relating the quest to the environing universe
> (Macquarie Dictionary 1998, p. 1799)

Contained in this idea is concept of religion as a set of values, a point that is of considerable interest and together with the attitude and feelings elements is also developed further in Chapter 4.

Dictionaries commonly note the etymological origins of the word 'religion' is the Latin "religio" that refers to the bond between "...man and the gods.", or "religare" meaning to "...to bind back".(see for example, The Heritage Illustrated Dictionary of the English Language 1973, p. 1099)

Dictionary style definitions can contribute some elements towards a definition that is a basis for research, because they attempt to describe the concept in succinct terms that uncover its normative meaning. Elements that can be distilled from these definitions include:

- recognition of the existence of a superior being or divine force and humankind's dependence on that superior being;

- the individual's world view; and

- an organizational structure that incorporates an organised system of beliefs, worship, and rituals and codes of behaviours regarding that superior being.

These elements can be framed as beliefs, values, attitudes and opinions that are discussed in Chapter 4. However, as the next section will show, definitions from other sources are not always subject to same constraints as the dictionary definitions, and are often broader and more open to different interpretations.

Definitions in encyclopaedias are included here for completeness, but they often simply expand on those in the dictionaries. For instance, the Encyclopaedia Britannica presents religion as:

> ... human being's relationship to that which they regard as holy, sacred, spiritual or divine. Religion is commonly regarded as consisting of a person's relation to God or to gods or spirits. Worship is probably the most basic element of religion, but moral conduct, right belief, and participation in religious institutions are generally also constituent elements of the religious life as practiced by believers and worshipers and as commanded by religious sages and scriptures (Encyclopaedia Britannica 2002, CD-ROM)

The Encyclopaedia of Religion and Ethics (1980), and The Encyclopaedia of Religion (1987) both highlight the difficulty in adequately defining religion. The latter describes the quest for discovering the distinctive properties of religion as a peculiarly Western phenomenon; a result of the "... Western speculative, intellectualistic, and scientific disposition." (The Encyclopaedia of Religion 1987 v11, p. 283)

Contrasting with this so-called Western approach, is that of other societies',
religious behaviour is an integral part of the day-to-day lifestyle. In these societies,
religion is not considered as a separate activity, but is inextricably connected with all
other influences (The Encyclopaedia of Religion 1980, p. 282).

3.4.2 Definitions of Religion from the Philosophy of Religion

The discussion that follows-examines the position regarding the definition of religion
adopted by a number of significant contributors to the philosophy of religion: Karl
Marx, William James, Emile Durkheim, Sigmund Freud, Carl Jung, Milton Yinger,
and John Hick.

Karl Marx's view of religion is probably best known through his often quoted
description of religion as "... the opium of the people" (Marx 1844,, cited in Niebuhr
1964, p. 42). Taken in isolation, this statement conveys the idea of religion as a form
of control of the masses, subjugation, or at least a narcotic. However, when placed in
the context in which it was written, the statement can also be view from a different
perspective. The original context is as follows.

> Religion is the sigh of the oppressed creature, the heart of a
> heartless world, just as it is the spirit of a spiritless situation. It is
> the opium of the people (Niebuhr 1964, p. 42)

However, Marx also made a second statement about religion;

> Man makes religion, religion does not make man...Religion is the
> self-consciousness and self-feeling of man who has either not yet
> found himself or has already lost himself again (Niebuhr 1964, p.
> 41)

It would appear Marx saw religion as the people's response to the oppressive social
conditions of the time.

This idea of religion as a response to adverse experiences is an important one. The
question can be asked whether Marx viewed religion as a crutch for the weak who
would prefer to opt out of the pressures of life, or whether he may have viewed it as a
more substantial element of life. Marx raises the possibility that religion can be

considered in terms of feelings about the social environment and not simply as religious beliefs or behaviours in/of themselves.

William James (James 1994) observed that most books on the philosophy of religion attempt a precise definition of religion. He concluded that the many different definitions, each purporting to define religion, provide proof that reducing the meaning of religion to a single essential statement is difficult. He further suggested the concept was oversimplified and often considered in a narrow one-sided way, when in reality, the field of religion is very broad making it impossible to cover. To study religion, it needs to be defined so content boundaries are clarified. Agreement on what is to be included and excluded would allow different studies to be standardised for comparison.

In 1912, Emile Durkheim defined religion as:

> ... a unified system of beliefs and practices relative to sacred
> things, that is to say, things set apart and forbidden - beliefs and
> practices which unite into one single moral community called
> Church, all those who adhere to them (Durkheim 1995, p. 44).

Durkheim holds that all religious systems consist of two distinct religions. One, 'naturism', deals with natural phenomenon or forces: wind, water, storms, the sky, and with natural objects such as plants, animals, and rocks. The second system, 'animism', takes account of beliefs in spiritual beings such as spirits, souls, genies, demons, and other deities. These are each animate and conscious, but differ from humans in that they are usually not seen, and exhibit supernatural powers.

Like Marx, Sigmund Freud in his work *Future Of An Illusion* likens religion to "...
the universal obsessional neurosis of humanity" (Freud 1985, p. 226). This theme is prevalent throughout Freud's writings. Freud's view is a prominent departure from the dominant philosophical approach that tends to approach the study of religion through the examination of intellectual questions; for example, proof of the existence of God, death, or the origin of the human race. Freud's view does not readily lend

itself to the development of either a theoretical or a functional definition of religion. At best, it could be considered as an indication of the need to include measures that tap into the affective element of religion/spirituality.

(Jung 1988) defined religion as "... a dynamic agency or effect not caused by an arbitrary act of will" (Jung 1988, p. v), and as:

> ...a peculiar attitude of mind which could be formulated in
> accordance with the original use of the word *religio,* which means a
> careful consideration and observation of certain dynamic factors, that
> are conceived as 'powers': spirits, daemons, gods, laws, ideals, or
> whatever name man has given to such factors in his world as he has
> found powerful, dangerous, or helpful enough to be taken into
> careful consideration, or grand, or beautiful, and meaningful enough
> to be devoutly worshipped and loved (Fordham 1966, p. 71).

As presented, this definition does not appear immediately useful, but it identifies several important elements that could be incorporated into a working definition of religion. First, it contains the idea of religion as a relationship or series of relationships, for which theoretical structures could exist within sociology, and second, it allows for different gods within the same definition, which broadens the scope of the definition.

Like William James, Yinger observed that "Many studies of religion stumble over the first hurdle: the problem of definition."(Yinger 1970, p. 3). He wrote of religion surviving the growth of modern science, and of the difficulties of studying religion as it changes with changes in society. Yinger suggested three types of definitions: The first, the Evaluative definition describes religion in terms of what writers think it ought to be (that is, in terms of value judgments). The second, the Descriptive definition, describes the beliefs and practices belonging to religion, but does not evaluate them or their function. The third, the Substantive definition, applies to stable societies having well-established religious systems, and refers to the doctrines and beliefs that describe the supernatural. Anthropologist, E.B Tylor, advocated religion as the "... belief in spiritual beings" (Tylor, cited in Clack & Clack 1998, p. 2). This view may be relevant for Christianity, which includes a supernatural God,

and for some, angels and demons. However, for beliefs systems such as Buddhism, which generally place little emphasis on such beings, the substantive type of definition is not applicable (Clack& Clack 1998, p. 3).

As they stand, these definitions are unsuitable for practical use. Yinger (1970), for instance, goes on to discuss at length the problems with establishing a definition of religion. The outcome of that discussion is the *functional* definition (also later called an *operational* definition), that focuses not on the essence of what religion is, but on the processes it incorporates, the functions it serves, and on the relationships between the elements of that definition. It evaluates religion in terms of the functional role it has in binding communities together, rather than the beliefs or doctrines in incorporates (Clack & Clack 1998, p. 4)

Yinger does offer the following definition;

> Religion then, can be defined as a system of beliefs and practices
> by means of which a group of people struggles with (these) ultimate
> problems of human life (Yinger 1970, p. 7).

Yinger qualifies the functional definition by noting that not only religion deals with ultimate problems in life, but rational thinking also seeks to do so. However, in the end "… all societies, however rational they may be, have to deal with the problems of evil and suffering … so religion could be seen as the mechanism for dealing with life when all else has failed … ultimately requiring a 'leap of faith' in regards to what we believe" (Yinger 1970, p. 8). He also suggests a definition should not contain value judgments, as there are many different manifestations of religious belief within society, leading to difficulties with selecting which of these religions should be the basis for the definition.

The approach adopted by Hick quite possibly captures the essence of many of the arguments raised in discussions about what religion is. He observes:

> The nature of religion is a vast and complex subject that can be
> approached from a bewildering variety of viewpoints. Religion is
> one thing to an anthropologist, another to a sociologist, another to
> the psychologist (and another again to another psychologist!),

another to the Marxist, another to the mystic, another to the Zen Buddhist, and yet another to the Jew or the Christian. As a result there are a great variety of anthropological, sociological, psychological, naturalistic, and religious theories of the nature of religion. There is, consequently, no universally accepted definition of religion, and quite possibly never will be (Hick 1973, p. 3).

Hick's view leaves little room for optimism for the development of a definition of religion, but it is possible that closer attention to theoretical elements common to each of these forms of religion, rather than to the minutiae, will reveal common elements to form the basis for a working definition.

In another recently published work on the philosophy of religion (Brown 2001) begins with an examination of the question of life after death. It deals in particular with the questions of the soul and the idea of disembodied existence, arguments for a universe by design, the existence of evil and the implications for the question of the existence of God, and faith and reason. However, no definition of religion is offered, nor does the author discuss the concept of spirituality. It is typical of works on the philosophy of religion to address issues such as the existence of God, the attributes of God, evil, miracles and revelation, faith and reason, religious pluralism, and ethics without actually defining religion.

In another example of this approach, Pojman (1988) discusses religion without offering a concrete definition. However, he makes the following comment,

> No other subject has exercised as profound a role in human history as religion. Offering a comprehensive explanation of the universe and of our place in it, religion offers us a cosmic map; through its sacred books, it provides lessons in cosmic map reading, enabling us to find our way through what would otherwise be a labyrinth of chaos and confusion. *Religion tells us where we came from, where we are going, and how we get there.* In this regard, religion legitimises social mores, rituals, and morals. All have a coherent place on reality's map (Pojman 1998, p. viii, Italics added).

The element of the statement in italics describes a key conceptualization of religion not seen in any of the other works examined for this study. It is a simple statement with four elements relevant to any study of religion/spirituality. The phrase element "...*Religion tells us where we came from...*" encompasses our origins or beginnings; "...*where we are...and ...where are going...* " could be seen as implying growth, development, or a journey timeline; and "...*how we get there...*" suggests religion includes a process or system for the person to follow. The statement is broad, even ambiguous, but when compared with other literature, it stands alone in its potential usefulness for suggesting a means for establishing content boundaries for the study of religion.

Despite the consistent position adopted by philosophers that religion cannot be defined in a way acceptable to all, it does not prevent them from discussing religion, or from describing ideas or concepts as 'religious' (for example, religious language, religious behaviour). It would seem these discussions assume a definition of religion which the language used cannot adequately describe.

3.4.3   Definitions of Religion from the Psychology of Religion

In the first of several relatively recent works dealing with the psychology of religion, Hood et al. (1996, p. 4) unequivocally state the futility of attempting to create a definition of religion that will satisfy anyone other than the author of the definition. They refrain from attempting any formal definition of religion, maintaining that these offer little factual information and tend only to complicate the subject. However, they do differentiate between what they call the *outside* perspective which emphasises the institutional element (church, sect, rituals, and doctrines as avenues for the individual to express their religious faith.), and the *inside* perspective which focuses on the individual's faith and experience, particularly in relationship to "...a Beyond" (in Western society the connotation is particularly a deity, God) (Hood et al. 1996, p. 6). Furthermore, they suggest that a definition of religion should incorporate these perspectives, but acknowledge such a definition as being useful only as an operational one. That is, they provide a framework for developing the content of research questions, but do not necessarily provide any more detailed description of the concept.

Operational or functional definitions are an attempt to deal with these practical difficulties in defining religion, so that empirical research into religion can be conducted (Hood et al. 1996, p. 7; Levin 1996). In this approach, religion is defined by the researcher in terms of tangible elements or dimensions that can be measured. This approach may, or may not limit an operational definition to what the researcher perceives religion to be. Hood et al. (1996, p.8) suggest that religion be condensed to a concept describing an individual's knowledge, beliefs, feelings, and experience in relation concepts including God, or the supernatural. Batson, Schoenrade & Ventis (1993), focus on religion as experienced by the individual, and they also avoid stating any rigid definition. Instead, they describe the basis for a working or operational definition that acknowledges the complex and diverse nature of religion as an integral part of an individual's life, rather than as a concept that can be treated apart from the individual's day to day existence. In this way religion is seen as a coming to terms with questions such as existence and eventual death which confront us, and is defined as

> ... whatever we as individuals do to come to grips personally with
> the questions that confront us because we are aware that we and
> others like us are alike and that we will die. Such questions we
> shall call existential questions (Batson, Schoenrade & Ventis 1993,
> p. 21).

These existential questions might include the meaning and purpose of life, relationships with others, death, dying and suffering, and the way in which an individual deals with personal shortcomings. The definition is intended to take account of each and every way of dealing with such questions; including whatever beliefs, behaviours and practices an individual might bring to bear in the process of dealing with those questions.

The approach to defining religion as presented by these two examples from the psychology literature is to encourage the development of operational or analytical definitions that describe religion terms of elements taken from the context in which it is to be applied.

51

3.4.4 Definitions of Religion from Nursing and Health Promotion

A fourth context in which the concept of religion is presented is in the closely allied fields of nursing and health promotion. Like the psychology of religion literature, this body of literature also deals mainly with the practical issues of defining the religion. However it differs in that religion is often presented as a contrast to spirituality rather than for discussion in its own right.

Emblen (1992) provides an in-depth review of definitions of religion from a sample covering over two decades of the nursing literature. These definitions typically present religion and spirituality as different concepts. Specifically, religion is considered as an element of spirituality. Spirituality is seen as incorporating religious concepts, but religious affiliation or beliefs are not an essential element of spiritual development. In this view, an individual considered as having a well-developed spirituality is seen to have rejected organised religion (Goodloe & Arreola 1992). A similar view is also expressed by Leann, "... if internalised religious convictions are a part of one's spirituality, there must be an element of reflection upon these principles. If not, its essence would become distorted" (Leann 1988, cited in Goodloe &Arreola, 1992, p. 233), and Pilch, "... spirituality is one's response to life experiences based on spiritual values or religious beliefs" (Pilch 1988, cited in Goodloe & Arreola, 1992, p. 223).

Kozier, Erb and Blais (1992) propose a closer relationship between religion and spirituality.

> Religion is an organised system of worship. Religions have central beliefs, rituals, and practices usually related to death, marriage, and salvation. They also often have rules of conduct applicable to daily life. Many people satisfy their spiritual needs through a specific religion or religious framework (p.516)

Here, religion and spirituality are more complementary. They are still presented as different concepts, but with spirituality being the overarching concept and religion a means of expressing it.

3.4.5 Definitions of Religion and the World Wide Web.

A search for definitions of religion on the World Wide Web typically retrieves thousands of sources. Where the academic literature reviewed tends to focus on the Western Judeo-Christian religion, the content of Internet sources varies widely, from the personal 'soap box' to peer reviewed academic research articles. There is also greater representation of non- Judeo-Christian religions (for example, see http://www.Wikepedia.org/wiki/Definition of religion). The Internet sources add little to what has already been presented.

3.4.6 Religion's Definition of Religion

The most recent Australian Census reported that over 80% of Australians claim a Judeo-Christian orientation (Nagle 2001). Similarly, the great majority of Americans who acknowledge a religious preference claim Judeo-Christian affiliation (Koenig, McCullough & Larson 2001, p 4; Powell, Shahabi & Thoresen 2003, p. 36). While this review is not intended as an in depth treatment of the theological issues, it would be relevant to consider how the principal resource for Christianity, the Bible, deals with the question of defining religion, if at all. The review first identified occurrences of the word 'religion' in the New Revised Standard Version, then looked for those occurrences that were common to a number of those Bible versions. Table 3.3 presents those findings.

Table 3.3: Occurrences of the word 'religion' in five Bible versions

Bible Version	Number of Occurrences	Verses
New Revised Standard (NRSV)	5	Acts 25:19, 26:5, 1Timothy 3:16, James 1: 26, 27
King James Version (KJV)	5	Acts 26:5, Galatians 1: 13, 14, James 1:26, 27
New American Standard Version (NASV)	5	Acts 25:19, 26:5, Colossians 2:23, and James 1:26, 27
Douay-Rheims Bible (DR)	9	Leviticus 16:31, Esther 8;17, 9:27, Acts 26:5, Galatians 1;13, 14, Colossians 2:18, and James 1:26,27
New Century Version (NCV)	9	Acts 13:43, 25:19, 26:5, Galatians 1:13, 14, Colossians 2:23, 1 Timothy 1:9, and James 1:26, 27

The table shows there are three usages of the word 'religion' common to all five Bible versions (Acts 26:5, and James 1:26 and 27). The content of these verses are as follows.

> They have known for a long time, if they are willing to testify, that I have belonged to the strictest sect of our religion and lived as a Pharisee (Acts 26:5 NRSV).

> If any think they are religious, and do not bridle their tongues but deceive their hearts, their religion is worthless. Religion that is pure and undefiled before the Father, is this; to care for the orphans and widows in their distress, and to keep oneself unstained by the world (James 1:26,27 NRSV).

In each occurrence, the word religion is derived from the Greek word "Threskos" has the meaning "...fearing or worshipping God", "..to tremble", or "...trembling or fearful" (New Testament Greek Lexicon n.d.).

Although there will be deeper theological considerations associated with these words, it would appear that a definition of religion could include two concepts. The first is worshipping God with fear and trembling, and the second, that 'true' religion is a relationship with God expressed through kindness or service to others, according to James 1:26, 27. This idea of service to others is possibly, what many would consider the practical role of religion. However, the academic literature does not generally acknowledge such a role for religion.

From these two views arises the question of whether, given the complexity of defining religion, a definition should refer to religion as it is practiced (that is, an empirical definition derived from what people actually do), or as it is considered it should be (a theoretical definition), or should incorporate both. This issue is discussed further in Chapter 7

3.5   Defining Spirituality

3.5.1   An Overview

Attempting to define spirituality has been described as "...a study in itself and of itself"(Angeli 2001, p. 115). The literature consistently comments on how difficult defining the concept in words can be. It "...eludes the kind of rationalistic knowing that arrives at simple definitions" (Tacey 2000, p. 17). These difficulties are only exacerbated by the common usage of associated concepts such as the 'spiritual dimension', 'spiritual health', and 'spiritual well-being'; terms whose meaning is dependent on the meaning attributed to 'spiritual. The challenge to studying spirituality is illustrated, for example by the introductory sentence in one recent paper:

> Spirituality has had an impact on people's lives, and on society in
> several ways (Horsfall 1997).

If spirituality was as clearly defined as are the basic laws of physics or chemistry, this statement would be acceptable because there are boundaries and validated methods can be used to describe the concept and its effects. Spirituality as it is presented in the literature has no such properties, so a claim that spirituality impacts on people's lives cannot be justified because it might be some other factor that is the causal element effecting society. While such as view might be considered pedantic, it is quite common in the literature for spirituality to be used in a way that assumes it to be defined by the context, rather than in accordance with any accepted definition. The value of such work can be called into question. Tacey's view is that defining spirituality is difficult because it seeks to define "...what we don't know about ourselves" (Tacey 2000, p. 24). This idea invokes thoughts of transcendence that is frequently used in describing spirituality. In concluding a discussion of the quest for an Australian spiritual identity, Tacey proposes that spirituality could be defined as:

> ...all the cultural forces and mechanisms opposing the alienation of
> the ego and the self imposed isolation of the rational intellect. We
> desperately require a larger story, one which allows us to shed the
> illusions of the separate ego and join in celebration of our spiritual
> unity. (Tacey 2000, p. 242)

One of the early calls for spirituality to be considered as a concept relevant to the study of health was by Osman & Russell (1979, cited in Diaz 1993). There have subsequently been many attempts made to establish a working definition of spirituality (Heliker 1992; Goodloe and Arreola 1992), to explain the apparent association between spirituality and health outcomes (Bensley 1991a; Chapman 1986), and to develop models of spiritual well-being (Seawood 1991). However, despite the many definitions in the literature, the only real consensus is that there is no single generally accepted definition (Bensley 1991a; Diaz 1993; Heliker 1992; Mansen 1993; Levin 1996; Moberg 2001).

The spiritual dimension has variously been described as the least obvious or measurable of known dimensions (Banks 1980), and as difficult to define or operationalise (Bensley 1991b, Levin 1996). The task of resolving these issues is further complicated by the increasingly eclectic nature of present-day spirituality evident in the mass media. Even so, as Ellison (1983), and Archer (1987, cited in (Bensley 1991a) have pointed out, without consensus as to the definition of spirituality scientific study of the concept is more difficult. Even the most recent literature has not been able to satisfy this need for a coherent, useful definition.

The development of useful definitions of spirituality requires continued research in the field, but until very recently, strong interest in such research has not been evident. It appears this historically low level of research into the effects of spirituality on health and wellness has largely been the result of four arguments.

1. Spirituality cannot be defined and therefore cannot be researched. (Diaz 1993)

2. It is not necessary to study spirituality because it is already included in the mental/emotional/psychological aspects of health (Diaz 1993).

3. Its inclusion in education is against the principle of separation of church and state (Goodloe &Arreola, cited in Diaz 1993).

4. The 'anti-tenure factor'. Researchers in academic circles fail to attract research funding, or are unable to retain tenure of position if they venture to research the areas of religion or spirituality (Sherrill & Larson 1994)). It has been suggested, a way of dealing with such obstacles is to give the concepts

of religion or spirituality some other name, such as ethics, values, or purposes (Chapman 1986).

Despite these obstacles to progress and with an accepted definition yet to appear, there *is* consensus among researchers across many disciplines that spirituality has an important bearing on health (Goodloe& Arreola 1992; Koenig, McCullough & Larson 2001). A recent White House Commission on Complimentary and Alternative Medicine Policy, 2001, provides an indication of the growing level of interest in the association between spirituality and health at a government level (CAM 2001). That is, the importance of the influence of spirituality on health is recognised at the highest level of the United States government. However, there have recently been notable exceptions to this consensus. For example, when (Afifi & Breslow 1994) published their views on the future directions of public health research, these eminent researchers in the field of public health made no mention of spiritual factors as being important to public health.

A recent phenomenon that further complicates the issue of defining spirituality is the dramatic rise in use of the World Wide Web (Internet) as a vehicle both for the dissemination of academic literature on spirituality, and for the publication of opinions and ideas unlikely to be published in the peer reviewed literature. The effect has been to create two competitive spheres; the peer reviewed academic sphere, and the relatively unconstrained popular sphere which tends to present views predicated on the assumption that spirituality is a valid and defined concept; and philosophical or semantic difficulties are ignored or considered irrelevant. The popular sphere has raised awareness of the concept of spirituality (or at least certain 'types' of spirituality); most noticeably in the commercial context where books or spiritual services such as clairvoyance, astrology, or tarot card readings can be purchased. This popular view now appears to be dominant in both the electronic and the printed media, with relatively little discussion of definitions of spirituality in the current academic literature.

The academic literature reveals a growing tendency to separate the concepts of religion and spirituality, with spirituality usually being considered a more encompassing concept than religion. It was noted earlier that religion and

spirituality are often considered as incorporating elements of the other (Ellison 1983; Goodloe and Arreola 1992; Koenig 1992). It has also been suggested that spirituality encompasses not only traditional monotheistic religion, but also polytheism, the supernatural including the occult, (Roozen, McKinney & Thompson, 1990, cited in Koenig 1993), and beliefs and practices such as those of the New Age' philosophies from outside the normally defined religious sphere (Ellison 1983). These viewpoints reinforce the complexity of the task of studying spirituality.

As was the case for the review of definitions of religion, the definitions of spirituality are drawn from four main sources: dictionaries, the broad secular academic literature, the World Wide Web, and the Bible. The definitions of spirituality have a broader range of content and tend to be less tangible and more complex than definitions of religion.

The following definitions are examples of those typically encountered, and address the terms 'spirituality' or 'spiritual'. The term 'spiritualism' is addressed separately. A compilation of one hundred definitions of spirituality taken from the health care field can be found in Unruh, Versnel and Kerr (2002).

3.5.2 Dictionary Definitions

The Oxford English Dictionary (1989) defines spirituality simply as "The quality or condition of being spiritual; attachment to or regard for things of the spirit as opposed to material or worldly interests." From the same source, 'spiritual' is; "Of or pertaining to, consisting of, spirit, regarded in either a religious or intellectual aspect; of the nature of a spirit or incorporeal supernatural essence; immaterial." In this context, 'spirit' refers to either a supernatural being, a disembodied entity that exists in the human body and that is separated at death

Other dictionary definitions of spirituality and/or spiritual include the following. Spirituality is "The state or quality of being dedicated to God, religion, or spiritual things or values esp.as contrasted with material or temporal ones" (The Collins English Dictionary 1991). 'Spiritual' here is defined as, "…relating to the spirit or soul and not to physical nature or matter…"The Macquarie Dictionary (2001)

similarly defines spirituality in terms of spirit in contrast to matter, or of a relationship with the soul or spirit in contrast to an external reality. The Encarta Dictionary (2005) links spirituality to the condition of being spiritual; where spiritual refers to the relationship between the soul, spirit, or sacred things in contrast to material or worldly things.

There are elements within the definitions that need to be more concretely defined before the definitions take on relevance or meaning for measurement. For example, 'spirit', 'soul', 'supernatural' or 'external reality' are all concepts that are themselves subject to interpretation Thus, without further interpretation, these dictionary sourced definitions are of limited value to the development of a measurement strategy.

3.5.3 Definitions from the Academic Literature

Definitions of spirituality are more diffuse in the academic literature than was the case for definitions of religion, so the examples presented here are discussed without reference to the particular discipline (for example, philosophy, or psychology) they are drawn from.

The discussion of definitions of spirituality can quickly become embroiled in theological or philosophical argument because many of the definitions cannot be expressed in terms that are themselves adequately defined. Consider the following example from Chapman:

> Optimal spiritual health may be considered as the ability to develop
> our spiritual nature to its fullest potential. This would include our
> ability to discover and articulate our own basic purpose in life,
> learn how to experience love, joy, peace and fulfilment and how to
> help ourselves and others to achieve their full potential (Chapman
> 1986, p. 41)

Elements Chapman associates with spirituality, such as purpose in life (Hill & Hood 1999), and joy or happiness can be measured, but the definition offers little insight into how such measures may be interpreted in the

context of spiritual health because 'spiritual health' itself requires definition.

The following definitions present a different type of problem. Here, spirituality defined in terms of transcendence; of the individual's striving for a relationship with that which cannot be grasped, or measured.

> ...the human awareness of a relationship or connection that goes beyond sensory perception. This relationship as perceived by each person as an expanded or heightened knowledge beyond or outside of his or her personal being. This knowledge is not controlled by the subject's effort; instead it is given substance by drawing on the person's personal experiences for its shape and substance (Schultz-Hipp 2001, 86).

or as "...a human capacity for relationships that transcend sense perception." (Holmes, cited in Schultz-Hipp 2001, 86).

These statements suggest knowledge of the hypothesised relationship must come about by means other than the normal senses. There is no suggestion as to what these senses beyond the normal senses might be. Introducing the element of personal experience reduces the relationship back to one of normal perceptions. It is difficult to envisage how such definitions could be used as a basis for measurement.

One of the most recent definitions or spirituality is:

> ...a feeling of being connected to a greater or larger whole, and an awareness that in the part or fragment, the radiance of the whole shines forth (Tacey 2000, p. 20).

It is also about transcending ordinary humanity to have a relationship with what he terms the 'sacred' (Tacey 2000). Again, application of such a definition to the question of measurement is problematic because the elements of the definition are subject to definition.

The next two definitions are several decades old, but are among the few definitions that contain information that might contribute to the process of developing a measure of spirituality. In the first example, spirituality is seen as:

> ...a quality that goes beyond religious affiliation, that strives for inspiration, reverence, awe, meaning, and purpose, even in those who do not believe in any god. The spiritual dimension tries to be in harmony with the universe, strives for answers about the infinite ... (Murray & Zentner 1989, p. 78).

Reverence, awe, meaning, and purpose may respond to some measures, however, measurement of the degree of harmony with the universe would be problematic. In the second example, there is a similar attempt to create a framework within which to place spirituality. Here, spirituality is:

> ... the quality of those forces which activate us, or are the essential principle influencing us. Spiritual, although it might, does not necessarily mean religious; it also includes the psychological. The spiritual is opposed to the biological and mechanical, whose laws it may modify (Vaillot, cited in Emblen 1992, p. 43).

Both these examples link with psychological concepts, some of which have known measures. Sheehan proposes a definition based on specific elements:

> There are at least three components to this spiritual dimension. First, spirituality is an expression of how a person relates to a larger whole, be it God, a higher power, or the human family. Second, personal spirituality provides a source of meaning and understanding about the significance of being human. Third, personal spirituality often contains habits, rituals, gestures, and symbols that provide ways in which a person can interpret and manage existence (Sheehan, cited in Angeli 2001, p. 115)

This definition goes some way to meeting the requirements suggested by Koenig (1993), who concluded that spirituality is a broad and complex term which needs to be broken down into specific elements that can be tested to determine their suitability

for inclusion in the definition. There are a large number of definitions of spirituality having similar content to those discussed so far. Further consideration of the majority of them will not contribute significantly to this discussion. More detailed listings are available in Unruh, Versnel & Kerr (2002), or Emblen (1992).

3.5.4   Definitions from the World Wide Web

A search for spirituality and its related terms, such as spiritual and spiritualism reveals the enormous diversity in the utilization of the concept. For example, a search of 'spirituality' conducted in 2004 using the Google search engine returned nearly six million references. The content included references to Christian, New Age, occultic and indigenous spirituality, spiritual theology, commercial spirituality advertising spiritual literature and services, peer reviewed journal articles, book reviews and so on. There are web sites presenting personal opinions and stories, and criticism of other sites. Such diversity is to be expected and it is clear that the growth in information is mainly in the non-peer reviewed literature. Consequently, the usefulness of the World Wide Web for this study lies in the opportunity it presents to locate peer-reviewed articles not readily available from other sources, or that fall outside the realm of mainstream journals. The following examples fall into this category.

From the theological literature:

> One's level of spirituality could be defined, or at least somewhat
> measured, by a lack of self-centeredness. Think of it as a
> continuum with service at one end and self centeredness at the
> other (Hovde 1999).

In this example, spirituality is presented as the individual's willingness to be of service to others. The concept of self-centredness is an indirect measure of spirituality that could potentially be measured using any of a number of measures of personality or attitudes.

In the medical literature, we have the definition; spirituality is:

> ...the dynamic, interpretive, integrative, and relational dimension
> of human life, springing from, coextensive with, and grounded in

the relationship between the self and the transcendent (De Marco 2000, p. 920).

This definition also alludes to the potential for psychological measures such as various personality and relational concepts as 'soft' measures of spirituality.

One definition sourced from the World Wide Web was of particular significance for this study:

> Religion was defined as a quest for the sacred or ultimate reality
> involving the means, methods, rituals or prescribed behaviours
> receiving validation and support from an identifiable group.
> Spirituality was defined as the feelings, thoughts, experiences, and
> behaviours that arise from a search for the sacred, or of being a part
> of something greater than oneself. This distinction between
> religion and spirituality means that a person can be religious
> without being spiritual and be spiritual without being particularly
> religious (Jackson 2002)

The significance of these definitions lies in its disclosure of feelings, thoughts and behaviours as elements of empirical research into religion and spirituality, and in the strong support it proffers for the approach adopted for the structure of this study.

3.5.5 The Concept Of Spirituality In The Bible: Use Of The Terms Spirituality, Spiritual, And Spirit

There is clearly the potential for this discussion to be subject to theological and philosophical conjecture. Such is not the intention of the discussion; it is presented with the aim of examining how the use of the concept of spirituality in the Biblical context might contribute to the resolution of the difficulties with measuring spirituality evident in the literature.

The term 'spirituality' is not used in either the New Revised Standard, or the New International Versions of the Bible. 'Spiritual' occurs from 26 to 31 times depending on the version, and 'Spirit' from 498 to 580 times (from 99 to 108 times of these in the expression 'Holy Spirit'.) So, unlike the word 'religion' which has

limited expression in the Bible, the term 'spirit' occurs frequently. The meaning attributed to the term 'spirit' is dependent on the context in which it is used. In simple terms these meanings include: the breath (of a living person), mind, disposition or temperament, life energy, soul or Holy Spirit. In the above versions, the term 'spiritual' is used only in the New Testament, and most commonly refers to a belonging to, or relationship with a being higher than humanity, especially God the Holy Spirit (New Testament Greek Lexicon n.d.) Nelson's New Illustrated Bible Dictionary (n.d.) defines spirituality in a Biblical context as

> ...sensitivity or commitment to religious values and sacred
> matters. In the New Testament a person is spiritual because of
> the indwelling presence and power of the Holy Spirit and the
> spiritual gifts He imparts to the believer (1 Cor. 12:1; Col. 1:9)

3.5.6 Public or Popular Perceptions of Spiritual Concepts

The definitions presented so far have presented spirituality as a way of looking beyond the everyday existence, and of dealing with issues of personal meaning or ultimate purpose. These definitions have been taken mainly from the academic literature. However, in the public health setting that is the underlying focus of this study, the general public is the object of attention so there needs to be an accounting for the views of the general public. The literature, in practical terms, the measurement of spiritual concepts in population samples will be influenced by the interpretation the respondents place on the ideas of the human 'spirit' or 'soul' that seem to be the focus of the majority of usages of the term 'spirituality'. There are two common, but competing, even antagonistic interpretations for these two concepts. These will be discussed here together with examples of how they manifest in Western society.

The first interpretation is that which maintains there is no real existence, including any spiritual existence, apart from the physical body (Provonsha 1993, p. 9), that the soul is not something separate from the body, but rather refers to the total person (Whitlock, cited in Moberg 2001, p. 6). In this view, the individual *is* a soul. The second interpretations is predicated on the belief that the human being has separate physical and spiritual entities, as illustrated by the idea that at death, the 'soul'

leaves the body and continues as a separate living entity. Often referred to as the 'immortality of the soul' or, 'dualism', this concept is perhaps best illustrated by its usage at funerals when the deceased person may be said to have a soul that has gone to 'heaven' or to after-life. The concept has become increasingly evident in the popular press in such ideas as 'out-of-body' or 'near death experiences' and by the claims in the popular press that spirits of the dead can be contacted through spirit mediums or by channelling.

In the first interpretation, the individual *is* a soul, as compared with the second interpretation in which an individual *has* a soul. The two ideas are, as in this first interpretation there is no soul to live on after death or to leave the body in a 'near death experiences', and no spirits of the dead to contact through channeling or the like. The distinction between the two ideas is important because it is highly likely that adherents to these different beliefs about the human spirit would have manifestly different views in beliefs and practices in other areas.

Examples of the popularity of the second interpretation in use in the public domain are television programs such as *Crossing Over*, which features clairvoyant John Edward apparently communicating with the spirits of deceased persons in a public setting. In the television and motion picture domain there are *Dead Zone, Second Chance,* and *Ghost* depict life after death, while *Star Wars, The Haunting, Sixth Sense,* and *Buffy – Vampire Slayer* are largely predicated on the forces of the supernatural. In the print media, there are many magazines and books dealing with the subject.

While the popularity of such mass media programs does not necessarily mean the viewing public accepts the beliefs expressed in the programs, it is highly likely that any measurement would be influenced by this high level of exposure.

3.5.7 Spirituality and Evil

None of the definitions encountered in the literature include any significant reference to spirituality in a context of its being associated with evil. However, in addition to the above two interpretations of 'spirit', there are uses of the term 'spirit' (both in Biblical and other literature to describe 'evil spirits', 'demons, or Satan

(New Testament Greek Lexicon n.d.; Rogers 1992). In the extreme, this concept may even include cult based practices or satanic worship or ceremonies. The point here is not to investigate the association between spirituality and evil, merely to acknowledge that in some instances this connection is made and taken seriously (Pulling and Cawthon 1990; Fountain 1989). The 'evil' aspect of the 'spirit' concept is not commonly dealt with in the literature and it is presented here for the purpose of illustrating the point that the concept of spirituality is complex and often dealt with in the literature in a simplistic fashion

3.6   Summary of Findings for the Definitions of Religion and Spirituality.

The complex nature of the definitions of religion and spirituality in the academic literature makes detailed comparison of the two concepts very difficult, but in general, most literature tends to contrast the two. Religion is usually presented as an organizational structure or framework supporting individual beliefs concerning a Divine being, usually God, who is external to the individual. It is bound together as much by traditions and structures as by beliefs. Spirituality on the other hand is generally seen as transcending the structures of religion while emphasizing the process of developing the inner divinity that all individuals are assumed to possess and share. However, what is meant by transcendence not clear from the literature. In most cases, it seems to require the individual to acknowledge a *benevolent* superior entity, and that there is some type of personal benefit for the individual involved

Definitions based on Biblical sources suggest religion/religiosity and spirituality are more closely associated, describing different aspects of the one relationship between the individual and God, but including overt worship of a deity, and service to others. In contrast to this close relationship, definitions in the secular literature are not so closely associated; definitions of spirituality sometimes include religion as an element of spirituality, whereas none of the definitions of religion make mention of spirituality as either a complementary, or a competing concept.

3.7   Chapter Summary

Two important conclusions arise out this review of scales and their items, and of definitions of religion and spirituality. Dealing with the latter issue first, the uncertainty of study outcomes referred to in Chapter 2 is at least partly due to a

failure of researchers to adequately define religion and spirituality, or to achieve consensus regarding any definitions. Section 7.5 addresses this issue of definitions. The second conclusion is that many of the scales in the analysis include items containing errors of logic that present problems in interpretation of the responses. This issue is in addition to the problems of defining religion and spirituality. Given the diversity of people's beliefs and practices, even within Christianity, it will be very difficult to arrive at uniform interpretations of both the meaning of the questions, and of the responses.

While researchers continue to use different belief systems to create and interpret scales, reliable and valid outcomes will not be achieved, because there is no agreed foundation, or common set of interpretations upon which to progress a line of enquiry. Chapter 4 describes the development of a theoretical framework used to create the survey questionnaire that in turn was used to evaluate different types of questions and measurement techniques.

CHAPTER 4

The Theory and Development of the Survey Questionnaire.

4.1 Overview

The previous two chapters revealed that an association between religion and various aspects of health status is both expected and tentatively established, but that a causal link is difficult to identify due in part to a failure to resolve important conceptual and philosophical issues. These difficulties also impact on the study of spirituality. The fragility of any consensus is underscored by the fact that recent literature, For example, neither Koenig, McCullough & Larson (2001), or Chatters (2000) reveal any unequivocal theoretical framework in which the research can be located. Miller & Thoresen (2003, p. 24) describe research into the association between health, spirituality and religion as "...an emerging research field." suggesting a broadly acceptable framework is yet to be developed. Therefore, for this study to progress, a framework is required that supports an acceptable methodology.

As described in detail later in Chapter 5, the survey questionnaire approach was selected for this exploratory cross sectional study because it was considered to be the most effective way to reach sufficient numbers of respondents so as to achieve diversity in the responses. The decision to develop a new questionnaire was made after consideration of the following issues. Two decades ago, Gorsuch (1984) argued that there was little need for the development of new scales to investigate religion, and proposed a number of criteria to be met should development of a new scale be considered necessary. These included whether an existing scale could be revised or extended, whether a comparable scale existed, and whether a proposed concept provided unique information not available from another scale. Gorsuch (1990, p. 84) later repeated this call, but it appears to have gone unheeded, as the most recently published compilation of measures of religiosity lists 127 scales, nearly half of which were first published in or after 1983, and a fifth in or after 1990 (Hill & Hood 1999). This suggests that other researchers also saw a need to develop new scales, possibly because they also considered existing scales were inadequate. The scales may not have addressed the necessary concepts or, as was the case at the start of this study, many scales such as those made available by Hill and Hood, were

not available or accessible. The questionnaire used in this study was developed for a specific purpose not met by any of the other scales.

In this chapter, Section 4.2 describes the selection and development of the theoretical framework on which the structure of the study and subsequent methodology was constructed. It presents the idea that religion and spirituality can be considered as comprising beliefs, attitudes and values. It also describes the content boundaries for the questionnaire. In Section 4.3, this idea is developed further with the use of the tripartite classification that has three elements; cognition, conation, and affect, as a basis for exploring a person's beliefs, desires and feelings. This concept provides the basis for the structure of the questionnaire. Section 4.4 describes the four section structure of the questionnaire, and the content of each section.

4.2 Selection and Development of the Theoretical Framework

4.2.1 Selection of the Theoretical Model

(Jacox 1974) in discussing the state of research in the nursing profession, commented that researchers in nursing were collecting information in the expectation that a theoretical structure would emerge. She argued this to be "... analogous to a collection of bricklayers each making a brick in isolation from other bricklayers and with no blueprint to follow. They throw the bricks together into a large pile, confident that, somehow, a house will emerge" (Jacox 1974, p. 11). (Chalmers 1999, p. 105) argues that where there are no guiding principles governing a study, the results add little to the meaning of a concept. A recurring observation throughout the review of the literature was the absence of a structured approach that built on previous studies. Instead, research into religion/spirituality has tended to be fragmented, with each researcher attempting to establish a basic structure for research into the area Gorsuch (1990, p. 84). This is further illustrated by a recent study (Adamson et al. 2000) that used relatively sophisticated statistical tools to compare two scales said to measure religiosity. The study included in its analysis the *Francis Scale of Attitude toward Christianity*, which in the analysis of scales in Chapter 2 was argued to be simplistic or potentially flawed. If this assertion is correct, then studies built on such flawed scales are themselves potentially flawed.

A theoretical framework needs to be appropriate for the type of research it supports. (McKenna 1997, p 432) describes four different relationships between research and theory: Theory Testing Research, Theory Evaluating Research, Theory Generating Research, and Theory Framed Research. It is not implied that one type of study is better than another, only that they each meet different objectives. These different types of research will now be briefly discussed.

Theory Testing Research (TTR) tests existing theory for accuracy in predicting actual events or outcomes. As there is no relevant theory available to be tested, the TTR approach was not applicable to this study. Where a theory is not sufficiently well developed to support hypothesis testing using TTR, then Theory Evaluating Research (TER) can be used to provide a more general evaluation of the theory. TER relies on collective observations that are then compared with expected outcomes. This approach is also not applicable to this study, because although there has been quite a volume of information collected about religious behaviour relating to health outcomes, there is no suggestion in the literature that this information has yet be successfully used to create a predictive model that can be tested. The third type of research, Theory Generating Research (TGR), is usually applied where little is known about the concept under study and where the research aims to generate a theory from observation. It aims to discover new concepts from which theories may be derived. This approach is similar to that initially proposed for this study, but which was abandoned in light of the complex questions encountered, not the least of which was the question of what to observe for the purpose of generating a theory. McKenna's fourth type of research, Theory Framed Research (TFR), is useful where a theory does not need to be generated, cannot readily be generated, or where other theories are not being evaluated. TFR uses theory to provide a generalised framework, and a focus for the research. This research model was adopted for the study as it was acknowledged early in the study that development of a theory or hypothesis was not likely to be an outcome of the study.

However, while the TFR concept provides a useful description of the approach guiding the development of the theoretical structure for the study, it does not itself supply the structure, this still needs to be developed as will be discussed later in this chapter. Support for the TFR approach adopted in this study is supplied by

Chalmers, (1999, p. 105) who asserts that a theoretical structure is crucial in establishing the meaning of a concept. Chalmers argues that there is a need to present observations of phenomena within some theoretical structure, in the language and terminology of that structure, and that the value and precision of those observations will only be as precise and informative as the theory used to describe them. That is, the more coherent the theoretical structure supporting a concept, the more precisely the meaning of the concept can be argued. The reverse is probably also true. The ambiguous results identified in Chapter 2 could then be explained by an inadequate or imprecise theoretical structure being used to describe or define religion/spirituality.

Chalmers also addresses the problems of defining concepts, and examines the role of using the definition to establish the meaning of a concept. Defining a concept requires that the terms used in the definition have an established meaning (for example, a dictionary meaning), which provides insights into the theoretical structures that can be used to research them. However, if the meanings of those defining terms must in turn be established by definition, then the meaning of the original concept can become vague, circular, or be lost in the process (Chalmers 1999, p. 105). This effect was seen in a number of attempts to define religion and spirituality described in Chapter 3, in which the definitions included some terms having an uncertain meaning, which in turn introduces uncertainty into the intended definition.

The need for a theoretical structure for the study is clearly indicated and supported by elements of the literature. The TFR approach adopted removes the immediate need to define religion/spirituality, leaving open the possibility of later creating an empirical definition of religious/spiritual factors based on the survey responses. The following sections describe the development of the TFR type framework.

4.2.2 Clarification of Terminology

Before developing the study structure, it is necessary to clarify some of the terminology to be used. Religion/spirituality has been subjected to comment or study by researchers in theology, psychology, sociology, philosophy, medicine, physics, and many other fields. As a result, there are differences in the terminology used.

Religion and spirituality have been variously described as a concept (Diaz 1993, p. 324), a construct (Gorsuch 1984, p. 228), a philosophy (Pojman 1997, p. x), or a system (Chaplin 1975, p. 452); while in quantitative or statistical studies, the terms variable or dimension could be used. Any or all of these terms could be relevant for describing religion/spirituality depending on the context. (Fawcett & Downs 1986, p. 19) define a construct as a non-observable property that results from thought, and a concept as describing the meaning or structure of a phenomenon. (Chaplin 1975, p. 105) uses 'concept' to describe an idea that combines a number of related elements. As this study is not restricted to any particular discipline, to minimise the potential for confusion, religion/spirituality is referred to by the less restrictive term 'concept' rather than 'construct', and the terms 'variable', 'dimension', and 'item', are used when referring to the elements under consideration; for example, behaviour, or beliefs.

4.2.3 Content Boundaries for Variables to be Supported by the Theoretical Structure.

The dimensions selected for use in the questionnaire cannot exhaustively define the content boundaries for the study. However, they reflect the idea that religion and spirituality are complex concepts described by composite indices derived from indirect measures. The measures used include issues the public might associate either directly or indirectly with religion/spirituality. Typical measures such as religious or group affiliation, or church attendance were retained for their comparative value, but other dimensions could be quite diverse. An initial list of possible item pools was drawn from the literature review, from a review of issues appearing in the media, and from informal discussions. The list included ideas such as:

- the role of religion in war or sectarian conflict;

- religious/spiritual beliefs, experiences and feelings;

- abortion and euthanasia;

- questions about the existence and nature of deity and about the origins and purpose for human life;

- the search for meaning, miracles, the soul and life-after-death;

- religious doctrines and rituals; and

- scandals involving religious people or institutions.

At the organizational or institutional level, there are issues such as:

- the enormous diversity of religious groups, denominations and sects;

- the increasing tendency to see religion and spirituality as separate concepts;

- the general decline in church attendance and the rise of eclectic religions such as the 'New Age' movement;

- questions about the relevance of religion in modern society; and

- the growing influence of religion/spirituality on lifestyle choices.

The majority of dimensions were selected because they could be incorporated into a structure that described religion/spirituality in terms of values, attitudes, and beliefs, that were chosen as the conceptual starting points for the development of the questionnaire. Fundamental to the social sciences, these concepts do not appear to have been used as the theoretical basis for any study into the measurement of religion/spirituality. Their definitions, interrelationships, and usages are complex and are discussed in the following sections.

4.2.4 Beliefs, Values, and Attitudes: Their Roles in the Theoretical Structure.

Beliefs, values, and attitudes are the conceptual starting point for the study because the responses or thoughts evoked by religion/spirituality often have to do with personal values, and beliefs about one's place in the world. The literature generally suggests that beliefs, values, and attitudes are discrete concepts able to explain different aspects of human thought and behaviour. However, the reality is somewhat different. The concepts can be seen as part of a continuum, as different ways of describing a single idea or set of ideas. The following discussion is an overview of selected definitions that underpin each of these three concepts. It also includes a discussion of the relationships between the concepts, the difficulties arising from their application to the study of religion/spirituality, and the use of the tripartite classification to link the concepts.

4.2.4.1 Beliefs

There appears to be three main approaches to defining beliefs in the literature: those which present beliefs as an expression of trust or faith that justifies actions, those in which beliefs are inferred from the actions they prescribe, and the taxonomy of Rokeach (Rokeach 1968).

Beliefs as an Expression of Trust or Faith Justifying Action.

These approaches describe beliefs in terms of trust in the correctness of something (for example, The Australian Concise Oxford Dictionary), a notion having particular relevance for religious beliefs, which can often be the basis for personal decisions an individual might make. Other approaches are more subjective, for example, belief as:

> An emotional acceptance of a proposition or doctrine upon which
> one implicitly considers adequate grounds. The grounds for belief
> however are not often examined, nor does the believer imply that
> others need have the same grounds. Beliefs have varying degrees
> of subjective certitude (English & English 1958, p. 64).

Here, the degree of certainty required about the object of belief is only what the believer considers to be personally adequate; that is, beliefs are central for the individual and do not require reference to others. Other dictionaries also identify beliefs in terms of "…trust or confidence in a person or thing; faith, conviction in the truth or actuality of something…" (The Heritage Illustrated Dictionary 1973), but considers acceptance by a group of persons as important. In a much earlier, but still relevant work, Allport (1950) refers to belief as an *affirmation* regarding an object of belief, stating what others imply, that the certainty associated with the belief is in fact a feeling. This point is addressed later in this chapter when the concept of the 'tripartite classification' is introduced.

Beliefs in Which Actions Infer the Belief That Prescribes It

In this second type of approach, beliefs are placed in relationship with attitudes, as the cognitive component of attitudes that "…reflect the individual's perception of,

and information about, the attitude object" (Ajzen, cited in Corsini 1987, p. 96). A very general definition of this approach by Rokeach, sees beliefs as "...any simple proposition, conscious or unconscious, inferred from what a person says or does, capable of being preceded by the phrase 'I believe that... '. The content of that belief may be true or false, correct or incorrect, good or bad" (Rokeach 1968, p. 113). A central element of this approach is that the content of the belief is inferred from the actions it produces. This is not to imply actions are the result of a single belief; actions are also the result of collective beliefs.

There are a number of instances where the concept of beliefs is used without defining its meaning (Ajzen 2001), where beliefs are simply considered as an element of cognition (Katz & Stotland 1959), or where beliefs are seen as a specific element of cognition that take account of the factual nature of cognition and of "...human intellectual functioning..." (Meddin 1975, p. 892). In each instance, beliefs are implied to be part of some broader concept.

The Rokeach Taxonomy of Beliefs

By far the clearest explanation of the nature and role of beliefs was given by Rokeach, who described three principal types of beliefs; the descriptive or existential, the evaluative, and the prescriptive or proscriptive (Rokeach 1973, p. 113). Descriptive or existential beliefs are those which directly concern one's own existence and identity. These beliefs are held as basic truths. They can be true or false and may be held by 'faith' (for example, 'I believe in God'). They may be shared (for example, as a Christian in a church group) or not shared (as a Christian in a secular group). Evaluative beliefs are simply those in which the object of belief is judged to be good or bad. Prescriptive or proscriptive beliefs are those in which some end result is judged to be desirable or undesirable (for example, 'I believe that a Christian should regularly attend church.') As will be discussed later in this chapter, this type of belief can also be considered to be a 'value'. According to Rokeach (1973, p. 113) each of these different types of belief are predispositions to action.

4.2.4.2 Faith

The concept of faith is one that will inevitably be raised in a study of religion/spirituality. Belief and faith are terms that are often used interchangeably. For example; faith may be considered simply as a person's religious beliefs, presumably because of the nature of religious beliefs, but there do appear to be differences. For example, Allport (1950) describes faith as referring to less sure beliefs, as being 'warmer' than more clinical beliefs, and as being more strongly held, even though their validity may be questioned by others. Rokeach described faith as referring to "...one or more beliefs a person accepts as true, good, or desirable, regardless of social consensus or objective evidence, which are perceived as irrelevant" (Rokeach, 1968 p. 125). In both cases faith is seen to result in a greater commitment to action than does simply believing.

4.2.4.3 Values

There is a large body of literature dealing with values, so the discussion presented here looks at only a selection that can most readily be used in this discussion.

Definitions of values tend to be more unified than those of beliefs, with the common element being that values represent a desirable goal or end state. For example, values are "...the importance or worth attached to particular activities and objects, usually as ends but potentially as both means and end." (Aiken 1980, p. 2), "...a social end or goal which is considered desirable of achievement" (Chaplin 1975, p. 560), or "...any object of any need, attitude, or desire" (Becker 1961, cited in Gould & Kolb 1964). Each illustrates typical basic definitions of the value concept. The idea of a desirable end state or goal has clear application to religion/spirituality, as its adherents would typically be searching for a 'better' personal existence.

Other definitions are more complex, and often more qualified. For example, in the following definition, values are:

> An abstract concept; often merely implicit, that defines for an
> individual or for a social unit, what ends or means to an end are
> desirable. These abstract concepts of worth are usually not the
> result of the individual's own valuing, they are social products

that have been imposed on him and are only slowly internalised
– i.e. accepted and used as his own criteria of worth (English &
English 1958, p. 576).

That is, a value is not simply a desirable end state, but is also seen as being imposed from without. Where this definition is quite specific in its presentation, others are much less so; for example, values as:

... interests, pleasures, likes, preferences, duties, moral obligations, desires, wants, needs, aversions and attractions, and many other modalities of selective orientation (Pepper 1958, p. 7).

This is a broader more inclusive concept that is less focused on the end state, and more a process of selecting desirable avenues of action.

Whereas the above definitions link values to a desirable end state or process, the following definitions tend to emphasise the relationship values have with related concepts, and incorporate the idea that values can be broken down into components. One well known contemporary definitions is by Rokeach who defines a value as

... an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence (Rokeach 1973, p. 5).

Here a value is a belief, as is also the case for Allport, "A value is a belief upon which a man acts by preference." or a "...a prescriptive or proscriptive belief" (Allport, cited in Rokeach 1973, p. 7) Also describing their role, (Meddin 1975) refers to values as 'core meanings' organizing a large number of attitudes.

Two definitions that have specific application to this study are as follows. The first considers values in terms of "...relationships among abstract categories with strong affective components, implying a preference for a certain kind of action or state of affairs" (Triandis 1979, p. 209). Of interest is the reference to the affective

component, that is, it is feelings that are responsible for the final preference. In this same vein is an earlier definition, in which values are:

> ...complex but definitely patterned (rank-ordered) principles,
> resulting from the transactional interplay of three analytically
> distinguishable elements of the evaluative process – the
> cognitive, the affective, and the directive elements – which give
> order and direction to the everflowing stream of human acts and
> thoughts as these relate to the solution of "common human"
> problems (Kluckhohn & Strodtbeck 1961, p. 4).

This definition is even more specific in its description of the elements of values; the cognitive, affective, and the directive. These ideas are developed further after the next section which reviews definitions of attitudes.

4.2.4.4   Attitudes

Of the three concepts; beliefs, attitudes, and values, the study of attitudes is by far the most prevalent in the literature. The common threads that run through the definitions are that attitudes involve a learned and enduring predisposition to act arising from the activation of beliefs relevant to the situation, and the resultant evaluation process. One definition that incorporates most of these ideas is:

> An attitude is an enduring, learned predisposition to behave in a
> consistent way toward a class of objects; a persistent mental and
> /or neural state of readiness to react to a certain object or class
> of objects, not as they are, but as they are conceived to be. It is
> by the consistency of response to a class of objects that an
> attitude is identified. The readiness state has a directive effect
> upon feeling and action toward the object (English & English
> 1958, p 50).

Similar definitions have been presented by Chaplin (1975), and (Katz & Stotland 1959). Davis and Ostrom, cited in Corsini 1987) have noted that an attitude is an unobservable theoretical construct that can only be deduced from measured responses toward the attitude object. Triandis associates the predisposition to act

with feelings about the situation of interest, and describes an attitude as an "...imprecise, all-inclusive..." layman's term (Triandis 1979, p. 214). Rokeach (1973) attributed the predisposition to act, to an enduring organization of beliefs relating to the object of interest.

The above definitions represent the majority of the definitions of attitudes, but there is a trend evident in the literature. For example, early definitions such as this one by Allport:

> (An attitude is) a mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related (Allport, cited in Lindzey & Aronson 1968, p. 63).

have been largely replaced by the most recent definitions that emphasise the idea of an attitude being "...summary evaluations..." of objects of interest (Petty, Wegener & Fabrigar 1997, p. 611). Similarly, Ajzen states:

> There is general agreement that attitude represents a summary evaluation of a psychological object captured in such attribute dimensions as good-bad, harmful-beneficial, pleasant-unpleasant, and likeable-dislikeable (Ajzen 2001, p. 28).

The literature in general is consistent in the theoretical definitions of attitudes. However, the application of the concept to real-life situations, particularly to religion/spirituality, is more ambiguous; as the following discussion will show.

4.2.5 The Relationship between Beliefs, Values, and Attitudes

The area embraced by these concepts is complex, with contrasting and sometimes conflicting statements made regarding both the definitions, and the relationship between them. The following discussion draws on the literature to illustrate aspects of these relationships that impact on this study. It then looks at the relevance of the concepts to the study of religion/spirituality, and how they might contribute to the measurement of religious/spiritual factors.

In 1987 Ajzen stated, "Unfortunately, no single unifying theory of attitude is accepted by all researchers in the field." (Ajzen, cited in Corsini 1987, p. 98). He later commented that, "The ability of attitudes to predict behavioural intentions and overt behaviour continues to be a major focus of theory and research" (Ajzen 2001, p. 42). Azjen also notes there is no single theory of attitude that has achieved consensus among researchers. Ajzen's idea of using attitudes to predict behavioural intentions would appear to be at odds with the earlier statement by Davis & Ostrom, (cited in Corsini 1987), that attitudes are unobservable, and can only be deduced from measured responses toward the attitude object (behaviours?). In practical terms, measuring the behaviour resulting from one type of stimulus (remembering that in the previous section, an attitude was commonly considered as a predisposition to act), should allow the attitude to be inferred. Can this attitude then be used to predict a second behaviour? A problem that arises is deciding which concept takes precedence, the attitude or the behaviour? Activating certain values held by the respondent in the measurement of the first behaviour, can change the second behaviour to something different to what might have been if it had been measured directly (Feather, cited in Ajzen 2001, p, 42)

Meddin (1975, p. 891), suggested a different way of looking at these relationships; that values and attitudes are not discrete concepts, but exist along a continuum; values organising multiple attitudes about an object. This move away from the idea that beliefs, values, and attitudes are discreet concepts, towards a more generalised grouping of the concepts, has some support in the literature. 'Evaluation' is now considered a fundamental element of attitude derived from the beliefs formed about an object (Ajzen 2001). That is to say, attitudes are dependent on beliefs, a position supported by Rokeach's definition of an attitude as an enduring organization of beliefs (Rokeach 1968, p. 134). Values have also been described as "... specific prescriptive or proscriptive beliefs" (Rokeach 1973, p. 6), and "... a belief upon which a man acts by preference" (Allport, cited in Rokeach 1973, p. 7). From these statements then, we have values organizing attitudes, values being beliefs, and attitudes being composed of beliefs. Together, these could be interpreted as describing a general structure having beliefs as the core concept first for attitudes, and then for values.

However, this generalised model becomes confused when statements such as the following are taken into account. "A belief is an attitude which incorporates a large amount of cognitive structuring" (Cooper & McGaugh 1966, p. 26), and "A value is an attitude which is dominated by the individual's interpretation of the stimulus object's worth to him (sic) in the light of his goals" (Cooper & McGaugh 1966, p. 29). In the first instance, the relationship between the beliefs and attitudes is reversed from that of Rokeach discussed above, and in the second, a value is presented as a specific attitude rather than as an organisation of attitudes. One way of dealing with these difficulties is to acknowledge there are a range of ideas attempting to describe the relationship between beliefs, attitudes and values, but regardless of the action taken, the result is a confused picture.

The conclusion drawn from the discussion so far, is that the concepts; beliefs, values, and attitudes do not enjoy consensus regarding their meaning, and so do not offer an unambiguous basis from which to develop a theoretical framework for the measurement of religion/spirituality. However, to evaluate the concepts further, the following section examines their application in the study of religion/spirituality.

4.2.6 Applying the Concepts to the Study of Religion/Spirituality.

Values can be assessed using values inventories (Nunnally 1967, p. 355). With a concept as complex as religion/spirituality, and with the uncertainty about defining the concepts and the content boundaries, the creation and interpretation of a values inventory is inherently complex.

Attitudes are measured using a range of techniques, but regardless of which method is used, it is necessary first to identify the attitude 'object' (that is, the factor or dimension that is to be evaluated), and then to ensure the response can be reliably interpreted. For example, published scales designed to measure religious or spiritual factors aim to measure attitudes toward ideas such as Religion, God, Christianity, Women in the Church, Forgiveness, Racism, and so on, but many of these 'objects' are complex and not as readily considered as single discrete objects. Even beliefs, which are often considered as a fundamental, even indivisible, concept can at times be broken down into component beliefs. They can also include the idea of trust or faith in the correctness of the object of belief. There is then, not only the problem of

identifying what is to be measured, but also of measuring the level of trust or faith in the correctness of the belief or attitude. Consequently, interpretation of the responses is often difficult.

It is the multifaceted nature of religion/spirituality that creates the difficulties in attempting to measure them, and while the concepts of beliefs, attitudes and values might be useful, they do not clarify the issues sufficiently to provide a framework for the development of a questionnaire. Similarly, existing attitude or behaviour models such as Fishbein's attitude model (Aiken 1980), the Health Belief Model, (Green and Kreuter 1991, p. 156), or the Precede-Proceed model (Green & Kreuter 1991, p. 30), all tend to treat religious/spiritual factors as modifying factors or attitudes to be included along with a raft of other miscellaneous factors. For this reason they do not provide a basis from which to develop a theoretical structure for the study. The next section examines a possible solution to this problem.

4.3   The Tripartite Classification

4.3.1   Description of the Concept

The discussion so far has illustrated the difficulties with using beliefs, attitudes and values as the basis for measuring religion/spirituality. These difficulties are due mainly to the fact that attitudes and values in particular are composite constructs that collect beliefs, feelings, and experiences. The 'tripartite classification' provides a fundamental series of concepts that do not previously appear to have been used as distinct explanatory concepts in the study of religion/spirituality. This is possibly because the focus of research has been on synthesis rather than the analytical approach adopted in this study. Since religion/spirituality is composed of beliefs, attitudes, values, and religious/spiritual practices and behaviours, the tripartite classification may play an important role in reducing religion/spirituality to simpler, more fundamental elements that can be measured.

The tripartite classification, or 'Trilogy of Mind' (Hilgard 1980), has been described by Meddin (1975, p. 892) as "...being as old as philosophy itself...", and has been traced by Hilgard (1980, p. 108) back to the 17th Century. The tripartite classification describes three basic types of responses from which attitudes can be

inferred, or by which mental processes can be understood. Hilgard identified the most common terms for these three responses to be *cognition, affect, and conation,* but noted that other descriptions include; "...understanding, feeling, and will..", "...knowledge, feeling and desire...", "...thought, feeling and volition...", and "...understanding, affection, and will..."(1980, p. 109). The following discussion defines cognition, affect, and conation, and describes the basis for their use in this study.

Cognition is variously defined as: "...verbal statements of beliefs..." (Rosenberg & Hovland 1960), p. 3); as regarding perceptions of an object as the knowledge of appropriate responses to an object (Katz & Stotland 1959); as beliefs or perceptions about an object (Ajzen 1987); as the existential basis for a value (Kluckhohn & Strodtbeck 1961); or as a general term taking account of all knowing (Chaplin 1975). An important characteristic of these definitions is the relative stability of meaning attached to the term; that of knowledge or belief.

Affect has been described as the "...central aspect of the attitude..." (Katz & Stotland 1959, p. 429) and involves assigning good or bad attributes to the object of belief. The more general view is that affect refers to the feelings or emotional aspects of life, to the evaluation of an object (Meddin 1975; Chaplin 1975) or to verbal responses of like or dislike (Rosenberg & Hovland 1960).

The meanings attributed to the terms 'cognition' and 'affect' in the literature are quite consistent, but the same cannot be said for the term 'conation'. *Conation* has been defined as referring to "...striving; acting; willing..." (Chaplin 1975, p. 105), to "...behavioural intentions, tendencies and actions with respect to the object" or to the intention to behave in a certain way (Meddin 1975, p. 895). Meddin also points out the intention to act is not equivalent to the action itself, and that in many instances where the tripartite classification is discussed, the term 'conation' (the intent to act) is not used, but is instead replaced by the term 'behaviour' (the act itself). That is, overt behaviour is measured rather than the intent to behave in a certain way (Katz & Stotland 1959, Rosenberg & Hovland 1960). Others have used the term 'directive', rather than affect or behaviour. However, like conation, 'directive' has more

theoretical than practical connotations and would probably not be readily measured (Kluckhohn & Strodtbeck 1961, p. 5)

Hilgard (1980) observed that, in comparison to the cognitive, not only the conative, but also the affective component of the tripartite classification, were largely ignored in the literature. Since that time, the affective component has been returned to favour, but not the conative. It is noted that in the most recent literature addressing the empirical aspects of attitude research, the conative component is largely ignored, and that the emphasis is placed on the affective and cognitive elements. For example, Ajzen (2001), in a review of developments in attitude theory does not refer to either the conative or behavioural components. The tendency to ignore the conative component is probably due to pragmatic considerations, as measurement of intent to act is problematic. It would require a longitudinal study that examined both the intent to act, and whether the intent was acted out

4.3.2   Application of the Tripartite Classification to the Study.

One of the difficulties with attempting to measure attitudes toward religion/spirituality as an attitude object is that is a multifaceted concept. Therefore a respondent will have not one, but multiple attitudes to religion/spirituality. These attitudes will vary with the context in which religion/spirituality is being considered, and with the dimensions being measured. It is proposed here that the tripartite classification might provide measurable elements of beliefs, attitudes and values, and that these measures offer the possibility of obtaining discrimination between respondents. The idea is illustrated by the following example.

Consider the concept 'God'. An individual holds beliefs or attitudes relating to God that are reflected in the values they hold. Scales addressing this area tend to ask whether the respondent believes in God, how they feel about God, or about particular types of behaviour (such as church attendance), but rarely do the scales attempt a more detailed description of the attributes of that God. Using the tripartite classification, one of a respondent's pictures of God (there could be more than one god or picture) could be represented by a composite figure made up of the following elements. The *cognitive* element pertains to what the individual believes God is or is like; it is the way in which they might describe God. For example, God may be a

single supreme being, or a force pervading the Universe. The *affective* element deals with how the respondent feels about God. This response might include trust, confusion, anger, bitterness and so on. The *behavioural* element might relate to the individual's actions, behaviours or their intention or desire to act in a certain way in relation to God. This component could be indicated by church attendance, worship style, financial contributions, and health related or other prescriptive or proscriptive behaviour.

However, it is not only from the individual responses for each of these elements alone that a picture of 'God' is constructed. The way in which these components interact is also important. For example, an individual may believe in God (cognition) in a traditional Christian way, they may want to attend church (conation) and actually do so (behaviour), because they feel positive about doing so (affect). Another person may believe in God, and may want to attend church, but do not do so, because they feel rejected. Yet another person may believe in God, not feel a need to attend church, not actually attend church, and be happy with that situation. Another person may believe in God and may want to attend church, but do not do so because they are physically unable to attend due to disability, sickness, or isolation. For each respondent who does not attend church, the same response 'Does not attend church' would be recorded. However, each response is for an entirely different reason, and requires a different interpretation. Therefore to obtain a more complete picture of a particular respondent's behaviour, it is important to select and measure more than just overt behaviour such as church attendance. The tripartite classification can contribute such additional information. For example, responses to each of the tripartite classification elements (cognition, conation/behaviour, and affect) could be evaluated as positive, neutral, or negative, so that an attitude could also be classified as such, depending on whether some or all three classification elements were present. This example illustrates how judging a respondent's attitude to church attendance using a simple yes/no response, fails to take into account the personal or demographic factors that contribute to the final response. It also illustrates how important it is to consider something as fundamental as church attendance in terms of its components (that is, analytically) and not simply as an indivisible concept. If something as simple as church attendance requires this complex evaluation such as

this, more complex concepts will likely require at least a similar standard of evaluation.

In this tripartite classification model, each concept included in the study would ideally be represented by items from each of the tripartite classification elements. In practical terms this is not always possible, and some concepts may be represented in only one or two of the three elements. This problem is addressed by applying the classification to religion/spirituality itself. That is, in this study it is religion/spirituality that is taken to be composed of the three elements, cognition, conation/behaviour, and affect, and not the various dimensions that are selected for measurement as elements of religion/spirituality. These various dimensions collectively contribute to an encompassing measure of religion/spirituality, with some dimensions representing the cognitive element, some the conative/behavioural element, and others the affective element. The result

For example, the dimension 'Future' is presented in Section 3 of the survey questionnaire as an 'affective' element with the focus of the measurement being how the respondent feels about aspects of the future. This approach is used because 'Future' is not readily divisible into all three tripartite classification elements. If the *cognitive* element is taken to be knowledge based, then strictly speaking there can be no cognitive element of future because there can be no knowledge of the future, only of things that might influence the future. The *conative* element represented by the intent to act or by overt behaviours, presents practical problems with measurement because it requires a longitudinal study. The *affective* component, measuring feelings about the future, in this instance is both practical and meaningful. It is this last point, that a measure must be practical, meaningful, and able to be interpreted, that often carries more weight than theoretical or semantic arguments in determining how a concept is measured. The measurement of a respondent's feelings about their own future is used to contribute to the overall affective element of religion/spirituality.

Similarly, one might have beliefs, for example, about 'Jesus Christ' that are based on a particular understanding of history, and have feelings toward him that are in essence a distillation of many thoughts, feelings or experiences, but it is difficult to

frame questions of behaviour or intent specifically about 'Jesus Christ'. Like
'Future', 'Jesus Christ' is an element or dimension of the concept religion/spirituality
that contributes one or more of the tripartite elements to the composite concept called
religion/spirituality. It is this composite concept that has all three tripartite
components.

Applying the tripartite classification in this way, taking religion/spirituality as the
concept having the tripartite elements, and each of the measured dimensions as being
subordinate and representing one of the tripartite elements, points to a questionnaire
with a section representing each of the three components, together with broad
demographic information. These components are drawn together to provide
meaningful interpretation of the survey results. This is the theoretical framework
used for the construction of the survey questionnaire.

Although the tripartite classification provides the basic theoretical framework for the
study, further detail is required within the framework. The next section describes the
limitations to the study and the content boundaries for the development of the
questionnaire, before describing the structure of the survey questionnaire and the
dimensions to be included.

4.4   The Survey Questionnaire

This section describes the development of the survey questionnaire, including the
major content and structural elements, and the rationale for the selection of the
concepts represented.

4.4.1   The Content and Structure of the Survey Questionnaire

To date, there appears to be only one published scale measuring elements of
religion/spirituality that is based on the tripartite classification. The *Dimensions of
Religiosity Scale* (Cornwall et al, cited in Hill & Hood 1999, p. 277) is specifically
directed at the Church of Jesus Christ of Latter Day Saints (Mormons), and has only
marginal relevance to this study. Hill & Hood (1999) report twenty-one scales
measuring various religious beliefs and practices, and fifteen multidimensional
scales. Each of these thirty-six scales includes questions about some of the religious
beliefs and behaviours that have been included in this current study. There are

eleven scales addressing aspects of religious orientation, six for religious and moral values, and seven for God concept or God image. In all these scales, the focus of the questions is on beliefs or behaviours, that is, the cognitive or behavioural components. There are only a few scales (for example, the *Spiritual Well-Being Scale* (Ellison 1983)) that address the feelings about, or satisfaction with issues. With the exception of including the Religious Orientation Scale-Revised (ROS-R) (Gorsuch & McPherson 1989) for possible use validation purposes, this study does not compare the results of the survey with those from any other scale. The aim is to explore ways of creating categories that better reflect the religious/spiritual characteristics of survey respondents.

Religion/spirituality being a complex concept means the content of the survey questionnaire cannot be exhaustive, but it does need to identify and address core issues, reflect pragmatic considerations with the development and administration of the questionnaire, and take account of the exploratory nature of the study. The content was developed from extensive reading of the religious/spiritual and health literature, from consideration of what questions and issues might be influenced by religion/spirituality, and from other published questionnaires or scales in the field.

The complete survey questionnaire developed for this study can be found in Appendix B. It is based on the tripartite classification and has four sections. Broadly speaking, *Section 1* deals with cognitive aspects of religion/spirituality as reflected in beliefs about major concepts from Christianity. It also includes some religious/spiritual practices including denominational affiliation or church attendance, and financial contributions. *Section 2* focuses on selected behavioural aspects of religion/spirituality; including prayer and related practices, the study of literature addressing religion/spirituality, church involvement, and television viewing. A number of lifestyle and health-related behaviours that could be influenced by religious/spiritual ideas, or that could in some way indicate religious/spiritual thinking, were also included. *Section 3* addresses the affective component. The concepts selected for inclusion were those for which the meaning was more a matter of individual choice, rather than one taught by any religious doctrine, and for which individual responses were best expressed as feelings. These concepts included 'Parents and guardians', 'Life Meaning', 'The Future', 'Religion',

'Spirituality', 'Altruism' and 'God'. *Section 4* addresses a range of demographic questions required for the study.

Each section of the questionnaire includes questions other than just those of the respective element of the tripartite classification. For example, Section 1 addresses beliefs, but also includes questions on denominational affiliation and church attendance. This is for psychometric reasons, mainly to reduce the likelihood of 'response set'. The questions are rearranged into their tripartite groupings for the data analysis.

4.4.2 The Rationale for the Selection of Concepts and Items Used In the Questionnaire

4.4.2.1 Section 1: Religious/Spiritual Beliefs and Orientation

This section of the questionnaire contains items dealing with specific religious/spiritual beliefs or doctrines (cognition), and with group affiliation and personal religious/spiritual practices (cognition/behaviour). These items were placed first in the questionnaire because the response options were multiple choice, being easier to answer, and encouraging respondents to proceed to the next section. The beliefs or doctrines in this section were chosen assuming all respondents would have some knowledge of them, and could therefore be expected to have established an attitude toward them. The concepts were taken from Christianity; other groups such as Buddhists or Moslems having been excluded from the study in Section 1.6.

There are fifteen items dealing with specific beliefs or doctrines. In the order in which they appear in the survey questionnaire, the concepts are: God, Jesus Christ, The Holy Spirit, Origins of the Human Race, The Bible, The Soul, Sin, Satan or the Devil, Salvation, Heaven, Hell, Purgatory, The Ten Commandments, Angels, and Miracles. The first three items (God, Jesus, and The Holy Spirit) were placed first because they represent core concepts for Christianity, but beyond that, the order was for pragmatic reasons. Given the diversity of doctrines associated with different denominations, it is clear there may be concepts that were omitted, that read might be considered important, and conversely, concepts that have been included that might be of lesser importance to others. The aim was to provide sufficient breadth in the scope so as to cover the major beliefs of each tradition or group included in the

survey. Some beliefs unique to certain denominations were excluded from the study, for example, the refusal of blood transfusions by adherents to the Jehovah's Witness beliefs, the seventh day (Saturday) Sabbath observed by groups such as Seventh-Day Adventists, or beliefs about practices such as infant versus adult baptism, or sprinkling versus immersion. In such cases, the differences in responses were likely to be solely along denominational lines so their inclusion could not be justified.

Each of the fifteen concepts was provided with up to ten response options identified from the broad religious/spiritual literature. These options lists were not, and could not be exhaustive, but were intended to provide a best possible range of response options, while taking into account the pragmatic issues of the study, such as time and space. For example, for the concept 'God is...' the response options in the following list were provided. The respondent was able to choose as many of the options as was required to best describe their belief about the form in which God exists. In other words, this survey did not ask the respondent to choose only one option in categories such as this, but aimed to establish a more inclusive picture by eliciting all relevant responses. It was not assumed that potential responses were mutually exclusive.

1. I don't know
2. There is no God
3. God is a single being
4. God is described by the Trinity
5. God is an energy field
6. God is material/physical
7. God is non-material/spiritual
8. God is within every person
9. God is a symbol only
10. God is none of the above, but is described in other ways.

Without pre-empting the survey results, typical response combinations might be 2 only, 3 and 6, 5 only, 7 and 8, 9 only, or 10 only. The implications for data analysis of this response method, and the response options for the remaining beliefs are described in Chapter 5.

Before explaining the rationale for selecting of each of the fifteen concepts, there are three points to note. First, the primary aim was to group respondents together

according to their responses for that particular concept. Ultimately these groupings could, if desired, be examined for associations with behavioural or health and well-being outcomes. Second, where there may be theological issues associated with the concept, these were minimised by providing a range of response options that addressed those issues. Third, multiple responses would make the questions markedly different from any published scales, which typically allowed only a single response choice. This would make comparison with any other scale difficult. The only scale bearing any similarities is the Religious Attitude Scale (Armstrong, Larson & Mourer 1962, cited in Hill and Hood 1999, p. 44), which incorporates twelve of the concepts included in Section 1 but allows only a single response choice. Outside of Hill and Hood's reference to this scale, no literature could be found indicating a multiple response approach being used by other researchers.

An explanation of the rationale for selecting of each of the fifteen concepts follows.

Question 1: God

At one level, this concept is an obvious inclusion. All the scales and questionnaires included in the analysis in Chapter 2 appear to assume God to have a certain form and character, as they did not ask the respondents what form or character they thought their God might possess. This study asks respondents to consider this question, not for the purpose of comparing the responses against any established 'standard' image of God, but to measure the differences in how respondents chose to describe God, regardless of whether their particular picture of God conforms to any 'standard'.

This item assumes monotheism to be dominant. Other beliefs such as polytheism are not specifically canvassed by this study. At best they would be hidden in responses such as would be hidden but could be reported only by the response 'God is none of the above, but is described in other ways.'

Question 2: Jesus Christ

Jesus Christ is included here because he is a central figure of Christian beliefs and is inextricably linked to most major concepts of the Christian belief system. Who and what he actually was is not the point of discussion. Therefore, the differences in the

way respondents perceive him could have an important influence on their religious/spiritual beliefs and behaviours. For example, a respondent who believes Jesus Christ to be God, that he created this world and all life on it in six literal days, was born of a virgin, executed by crucifixion and brought back to life after being dead more than 36 hours, and then finally rose into the clouds and returned to heaven, is likely to be respond differently to other items, than a respondent who believes Jesus Christ was not God, but was a great teacher, married Mary Magdalene and had children by her, then died and did not rise from the dead, but is still dead.

Question 3: The Holy Spirit

The concept of the Holy Spirit is central to most Christian belief systems, but is included in only a few of the more than one hundred scales identified by Hill & Hood (1999), one example being the *Christian Orthodoxy Scale* (Hunsberger 1989, p. 15). The concept is included here because there are sufficient differences in the response options to allow the definition of different groups of respondents.

Question 4: Origins of the Human Race

There is more to this concept than simply the evolution versus creation debate. In addition to generating categories of respondents on the basis of the origins debate, the question was included in the study because some interpretations could be associated with certain lifestyle choices. For example, one interpretation of the Genesis account of creation that holds to the idea of a literal six day creation also holds that Adam and Eve were prescribed a plant-based diet (Genesis 1:29). This is found, for instance in some Seventh-Day Adventists traditions. It follows that those who accept this particular interpretation of Scripture could tend toward using a vegetarian diet. Conversely, for someone who believes the Genesis account to be largely symbolic, there is no such prescriptive pressure to use a vegetarian diet.

Such an argument may be considered by some to be tenuous, but the question is included without the intention of subjecting it to theological scrutiny, because it may provide some basis for grouping respondents.

Question 5: The Bible

The concept of the Bible was included because it represents the most tangible manifestation of Christian beliefs and values. Views of the Bible might range from it being a true and infallible revelation of God's will, through to being a good book, to being a book of myths, or just irrelevant.

This study focuses on respondent's views as to the relevance and reliability of the Bible in general, and its value to them as a guide to living. The study does not need to judge any particular view to be correct, but looks for any tendency to produce response groupings.

Question 6: The Soul

The belief that each person has a soul that is separate to the physical body and lives on after physical death, is reflected in the dualistic idea that the soul is immortal. It is perhaps most commonly encountered in funeral services that describe the soul of the dead person as having gone to heaven or to be with God.

In contrast to this view, the belief that the person *is* a soul is associated with a different set of beliefs, the principal one being that there is no separate soul that leaves the body at death, but rather the person *is a soul* rather than *has a soul* (Whitlock, cited in Moberg 2001). This belief rules out life after death, and all doctrines or beliefs associated with it; most notably communication with the dead.

The most recent writings continue to emphasise the importance of including the idea of the soul in discussions of religion/spirituality (for example Tacey 2000).

Question 7: Sin

The concept of 'sin' has a prominent place in much Christian thought and practice. The Bible is dominated by calls for repentance for sins, the Roman Catholic Church has confessional where sins are forgiven through a priest, and perhaps the best known prayer of all, commonly known as the Lord's Prayer, includes a request for forgiveness for sins. From one perspective, without the concept of sin there would be no need for the concept of salvation.

The items addressing the concept of sin focus on gauging the respondent's ideas of what sin, is in broad terms, and whether or not they consider it a relevant concept today. Although the response options are quite narrowly focussed, there was expected to be sufficient diversity in beliefs to differentiate between respondents.

Question 8: Satan or the Devil

The focus of this question is whether or not an individual believes in the existence of the 'Devil' or 'Satan', and if so, in what form. For example, if Satan as Lucifer is seen as the originator of sin (for example, see Ezekial 28: 12-15), the concept of Satan and sin become inextricably linked. Another view holds to the idea of Satan more as a metaphor or symbol for evil.

It could reasonably be expected that a person who believes that sin remains a relevant idea today, and that Satan is a real living being, is likely to have different views to someone who believes sin is no longer relevant and/or that Satan is merely a symbol. For example, their views on the origins of sin, on sickness, the loss of loved ones, personal misfortune, or world events or disasters, would differ. These views could in turn be expected to subtly influence personal choices.

Question 9: Salvation

In one common interpretation, salvation can be thought of as the process by which one is saved from the punishment prescribed by God for those who sin. However, this is only one way of looking at the concept, for such is the complex nature of religion that there are likely to be other ways of describing salvation. Once again it is important to recall that the purpose of the question is to capture any differences in responses and not to determine theological correctness.

The focus for this question is on the respondent's view of salvation as it affects them, and what they believe their personal standing is in respect of salvation. Differences in whether respondents feel the concept of salvation is relevant to them will be important, but perhaps more important, are differences among those who consider salvation *is* relevant. For example, a person who believes salvation to be important but that they 'are too bad to be saved', could conceivably make different choices to a person who not only believes salvation to be important but also attainable. Similarly,

there could also be differences in measures between respondents who believe they are saved and cannot be lost, and those who believe they are saved but can again be lost.

Among religious/spiritual concepts, salvation is complex, the meaning being easily lost in the language used to describe it. Accordingly it is sufficient at this stage to establish whether differences between respondents can be established.

Questions 10, 11, 12: Heaven, Hell and Purgatory

Heaven, hell, and purgatory, are sometimes controversial concepts supposedly describing different aspects or options for the state of a person after death. For this reason they will be considered together in this discussion.

It would be clear from even the most cursory consideration that what a person believes about what happens to them after death, will have some influence on the way they live. For example, a person who envisages going to heaven as sitting on a cloud playing a harp forever is likely to be less than enthusiastic about preparing for it than one who pictures heaven in terms of a place in every way more desirable than what they have now. It could be expected these beliefs would in turn influence other beliefs, attitudes, and values. Similarly, someone who believes in the 'fire and brimstone' interpretation of hell, could be expected to manifest measurable differences in attitudes and behaviours, compared with someone for whom hell simply means being in an unconscious state in a grave, or that hell is simply a symbol.

Purgatory is a uniquely Roman Catholic doctrine that creates a bridge between hell as a real place of torment, and an idyllic heaven, and could be seen as a 'second chance at salvation' (for example, see Macquarie Dictionary 1998). The concept does not appear to be included in any Protestant belief systems, but is included here because Roman Catholics represent a large portion of the population to be sampled.

It is beyond the scope of the study to discuss the theology of the three concepts, but fundamental differences in interpretation have been addressed in selecting the response options for each question. The creation of categories of responses requires

an awareness of the theological issues, but does not require discussion of the theology beyond ensuring the response options adequately reflect the theological differences.

Question 13: The Ten Commandments

In the literature covering the measurement of religion/spirituality, references to the Ten Commandments are rare. In the one hundred and twenty four measures of religiosity identified by Hill and Hood (1999), only two made direct reference to the Ten Commandments; Glock and Stark's *Dimensions of Religious Commitment* (Hill and Hood 1999, p. 279) and Broen's *Religious Attitude Inventory* (Hill and Hood 1999, p. 310). The Ten Commandments are included in this study, because they are an ethical framework common to all Christian traditions, and encompass the majority of underlying values of Western society. Differences in what a person believes about the personal relevance of the Commandments and their commitment to upholding them will be reflected in their attitudes toward many important matters, in particular behaviours that can affect personal relationships.

Question 14: Angels

The concept of angels has been included in an attempt to broaden the range of categories created beyond overtly Christian concepts to include those respondents with a more eclectic religious/spiritual orientation. The concept of angels is well represented in the Bible, there being references to both good and evil angels. The academic literature is largely silent on the question of angels, but the so-called 'New Age' practices include a focus on the role of angels as personal spirit guides (Melton, Clark and Kelly 1990, p. xiv). The response options focus on whether or not angels exist, are all good, or are guides to the 'spiritual dimension.' These options may not differentiate strongly between respondents within the Christian tradition, but should differentiate between Christian and New Age adherents.

Question 15: Miracles

There are many Biblical references to miracles being performed or experienced by Jesus. For example, Jesus turning water into wine (John 2:3), healing the lepers

(Luke 17:14), or restoring sight to the blind (John 9:6, 7). It is possible that there are respondents who have experienced what they consider a miracle. Belief in miracles is widely attested to among both church attenders and elements of the general population, as evidenced, for instance, by frequent references to faith healing in the mass media.

It is beyond the scope of this study to evaluate the reality or otherwise of miracles, but it is possible that a person who believes in, and has experienced such a phenomenon, would have a different view about, say, the future. They may be more prepared to trust in God than someone who considers miracles to have a rational explanation. Regardless of the explanations for miracles, it is the different responses that are the focus of this study.

Questions 1 – 15 discussed above are intended to address the cognitive component of religion/spirituality. Questions 16 - 26 address some of the pragmatic and historical aspects of the respondents' religious/spiritual oriented behaviours. These behaviours that could be seen as the 'hard variables' referred to by (Gartner, Larson and Allen 1991) and discussed in Chapter 2.

Question 16: Type of Religious or Spiritual Beliefs

There are two ideas incorporated into this question. The first is the question of religious or group affiliation that is most commonly used to describe respondents' religious characteristics. The second element of the question aims to determine whether a 'non-religious' respondent is against religion or not. It is reasonable to expect that a 'non-religious' respondent who identifies as being against religion will respondent differently in other areas to a 'non-religious' respondent who is not against religion.

This question does not raise the issue of whether or not the respondent is against spirituality, but the specific issue of perceived differences between religion and spirituality is addressed in Question 8 of Section 3.

Questions 17 – 21, 22, 24: Group Membership and Attendance

These questions address the questions of past and present group membership, and past and present frequency of meeting attendance. Their inclusion not only contributes to the information available about the respondent, but satisfies the fundamental epidemiological criteria of the frequency and duration and of an exposure of interest, in this case, membership of a religious/spiritual group, and attendance at associated meetings

Question 23: Financial Contributions

The question of financial contributions is included here as a potential indicator of the strength of a respondents religious/spiritual commitment. It is not commonly addressed in the literature, but has been used in several multi-dimensional scales as a measure of commitment (Hilty & Morgan, cited in Hill & Hood 1999, p. 326; King and Hunt, cited in Hill& Hood 1999, p. 333)

Question 24: The Types of Meeting Attended

This question attempts to classify respondents according to their preference for a particular style of church or worship meeting. For example, some religious denominations will have churches that employ different meeting styles that might include contemplative style, traditional, Pentecostal, or the use of Christian rock music. A person who prefers a quiet, contemplative type of meeting, could hold different values or attitudes to someone who attends meetings that are of a Pentecostal nature. This issue has not been addressed in the literature and is included here as an exploratory tool that might provide additional means of discriminating between respondents.

Questions 25, 26: Personal Physical Disability and Religious/Spiritual Participation, and Spouse/Partner Beliefs

These questions were included to modify the responses of individuals who may be reported as having low attendance at meetings, but might otherwise be considered to have a high level of religiosity/spirituality. For example, chronic physical disability often prevents people attending church or other meetings as often as they would like (Breen 1992). Similarly, having a spouse or partner who has objections to the

respondent attending such meetings might also result in lower attendance. In both cases there could be a false low religiosity recorded if religiosity is measured by attendance alone. There may also be other circumstances involving work or family matters that might also affect a person's ability to attend meetings.

4.4.2.2   Section 2: Behavioural Factors

The literature reviewed in Chapter 2 gave an overview of the evidence that religion is positively associated with both physical and mental health (Gartner, Larson& Allen 1991; Levin 1996). The inclusion of both health related and religious behaviours in the survey questionnaire, addresses the behavioural element of the tripartite classification. It also allows for the possibility that overt health behaviours might be useful in the process of developing categories of respondents. This approach concurs with the statement, "The best religious predictors of mental health are not religious questionnaire responses, but real life religious behaviour. Behaviour predicts behaviour" (Gartner, Larson &Allen 1991, p. 16). With the measurement of religion/spirituality in mind, these questions about a number of health and religious/spiritual related behaviours were included to broaden the basis for discriminating between respondents. It is acknowledged that some of the factors addressed by the questions might have effects on health behaviour that are independent of an individual's religious beliefs

Questions 1 to 3: The Use of Conventional or Allopathic Medicine, Natural Remedies, and Alternative Medicine and Therapies

These questions deal with the individual's use of conventional (allopathic) medicine, natural remedies, and alternative medicine, respectively. These items were intended to gauge the extent to which respondents had moved away from the use of conventional allopathic medicine, toward either natural remedies which tend to be self-administered and which advocate allowing the body to heal itself without the use of drugs, or 'alternative' therapies which are practitioner oriented but not involving allopathic practices. There is a growing body of evidence that shows a move to including alternative medicine and therapies in the treatment regimes of allopathic medicine (for example, Eisenberg et al. 1993), CAM in self-care and wellness 2001). Jarvis (1993) has suggested that the origins of well established practices such as

homeopathy, iridology, naturopathy, acupuncture and chiropractic can be traced to monistic or pantheistic beliefs. Testing the extent to which this claim is true is not the aim of these questions, but the underlying spiritual basis for these techniques is sufficient to justify their inclusion, if they offer the potential for discriminating between respondents.

Question 4: The Use of Spiritually Oriented Practices

This concept was included to complement the information obtained from Questions 1 to 3 and create categories of respondents who tend toward using alternative therapies and spiritually oriented practices. So far there has been an emphasis on Christian practice, but because there is a blurring of the boundaries between religion and spirituality, if they are viewed as being different concepts, then these questions broaden the content boundaries.

Each of the practices included as examples in the question: astrology, numerology, clairvoyance, and channelling, has a strong spiritual element, particularly channelling which aims to communicate with the spirits of the dead. Jarvis (1993) classifies astrology and spirit channelling by mediums as occultic practices, due to their involving supernatural agencies, or to practitioners having 'secret knowledge' of such agencies.

Question 5: The Influence of Religious/Spiritual Beliefs on Vocational Choices

This concept aims to identify those respondents for whom religious/spiritual principles strongly influence important lifestyle choices, in this case their vocation or type of employment. For example, a respondent who attributes sacredness to either Saturday or Sunday may choose not to engage in employment that would ordinarily require them to work on those days. Similarly, if an individual's religious/spiritual beliefs require them to abstain from the use of alcohol or tobacco, they may choose not to engage in employment that requires them to sell or otherwise deal with those substances.

Questions 6 To 10: The Influence of Religious/Spiritual Beliefs on Specific Lifestyle Choices

These questions were specifically intended to indicate the extent to which the respondent's religious/spiritual beliefs may have influenced a number of lifestyle factors known to have a significant bearing on individual health status. These include: meat consumption, alcohol intake, smoking status, and exercise. Questions 8 to 10 indicate the duration of practices relating to diet, alcohol consumption, and smoking.

These items have been included because from the outset this study was health-oriented, and some groups with a strong religious/spiritual orientation exhibit low risk health behaviour in respect of these lifestyle factors (Dwyer 1988; Levin 1996). It is acknowledged there may be a tendency for under-reporting of undesirable behaviours such as alcohol intake and smoking status, and over-reporting of desirable behaviour such as exercise, but as the study is exploratory, it does not aim to test any specific hypothesis regarding an association between religion/spirituality and specified lifestyle practices.

Questions 11 to 16: The Allocation of Time to Religious/Spiritual Practices

These questions deal with various aspects of a respondent's allocation of time to practices such as reading or television viewing (both secular and religious/spiritual), meditation and prayer, Bible study, and voluntary activities in a church or similar group context.

The questions about reading and television viewing (Questions 11 and 12) aim to estimate the total time spent watching television, videos/video games, or using the Internet, because they are potentially major competing activity for the other activities in Questions 13 to 16. Recent estimates suggest Australians over the age of 18 on average watch free-to-air television for at least three to four hours each day (Australian Film Commission n.d.). These figures do not account for pay-TV. If this viewing was predominantly secular viewing, it could indicate some that viewers, (for example, those with full-time employment) may have little free time available for religious/spiritual, or other activities.

Questions 11 and 12 together are an attempt to provide a distinction between the viewing of religious/spiritual and secular programs. Again, both under-reporting and over-reporting are likely to be issues with these questions.

Questions 13 and 14 aim to differentiate between time spent in prayer and time spent engaging in practices such as transcendental meditation, yoga, and related techniques that are often part of broader spiritual practice. It does not preclude respondents who may engage in both these and typical Christian practices.

Question 15 addresses the frequency of Bible study for the purpose of providing additional discrimination between categories of respondents who might appear to be similar in other categories. The question does not distinguish between Bible study for devotional purposes and study of a more intellectual nature, with both weighted equally.

The final question (Question 16) in the group asks about voluntary involvement with 'church' or group activities to differentiate between those who engage in such activities in their own time, and those who may be employed by a church or other religious/spiritual group.

4.4.2.3   Section 3: The Affective Component.

This section addresses the affective component of the tripartite classification and allows respondents greater opportunity to express their feelings about core issues. The concepts selected for inclusion in this section came from a large pool developed from wide reading of the literature. Clearly these concepts do not, even cannot, exhaust the possibilities, but for the purposes of developing strategies for the measurement of religion/spirituality, they are meaningful and interpretable. The concepts, in the order in which they appear in the questionnaire are:

- Religiosity/spirituality of the respondents parents or guardians;
- Feelings about the future;
- Life's meaning;
- Religion from the respondent's perspective;

- Spirituality from the respondent's perspective;
- Altruism; for example, feelings toward the poor and needy; and
- God

The semantic differential method used in this study to evaluate the affective component, was used originally to establish the meaning of words or concepts (Osgood, Suci & Tannenbaum 1957), has been used in market research (Mindak 1969), and in the investigation of attitude structure (Maguire 1973; Schibeci 1982). Ajzen (1991) used the factor analysis of semantic differentials to investigate attitude structure, while more recently, Farley and Stasson (2003) used the method to support the tripartite structure of attitudes. The technique and the rationale for its use are more fully described in Chapter 5.

Questions 1 and 2: Religiosity/Spirituality of the Parents or Guardians

Several surveys examining the relationship between youth raised in the church and church membership, found that those respondents most likely to remain in the church had parents who were considered to be religious, loving toward their children, and whose religious practices were seen as fair and reasonable. By contrast, youth whose parents were, for example, authoritarian, were less likely to remain church members (Strahan & Craig 1995, p. 68). That is, the ways in which parents were religious was an important factor in determining whether children either become religious or remained religious (Habenicht 1994, p. 166).

The questions ask respondents if they considered their parents or guardians to be religious or spiritual, and if a parent was non-religious or non-spiritual, whether they were anti–religious/spiritual. In addition to the face value of the questions, these two questions are among a number that probe the issue of whether religion and spirituality are seen as being the same or different concepts.

Questions 3, 4 (The Future) and 5, 6 (Life's Meaning):

In the questionnaire, these two concepts are treated separately, but for the purpose of this discussion they are considered together. This is because in the literature they tend to be considered together, with the issue of life's meaning being dominant.

Question 3: Life's Meaning

It is not the intention of the study to try and determine what life means to each respondent, but rather it seeks to establish if life has meaning to them and how they felt about life, whatever that meaning might be. The questions seek to create a profile that describes, albeit in a rudimentary form, the respondent's feelings towards life.

Although few would deny that religious/spiritual factors can influence a person's view of life's meaning, the association is not specifically addressed in the mainstream literature. There are a number of authors whose work offers an explanatory framework that could be adapted to include religious/spiritual factors. The most prominent of these authors is Viktor Frankl. In his often-cited book *Man's Search for Meaning* Frankl (1985, p. 123) coined the term 'noogenic neurosis' to describe a type of neurosis brought on by a complete lack of meaning or purpose in life. Frankl considered the search for meaning as defining human existence, with the failure to find meaning in some cases associated with the 'noogenic neurosis'. In a similar fashion, Maddi (1970, p. 137) described those failing totally in their search for meaning in life as having 'existential sickness'. Significantly, Maddi described the symptoms of this condition in terms of the tripartite classification, where the sense of meaninglessness or triviality of life expresses the cognitive component, depression or boredom the affective component, and apathy the behavioural component.

The theme of the tripartite classification in the context of personal meaning is continued by Reker & Wong (1988, p. 220), who suggested that personal meaning has at least three components. These are: the cognitive, that addresses the beliefs the person has about the existential aspects of events that occur in their life; the motivational which encompasses the individual's values that guide their day-to-day pursuit of goals and of a sense of purpose; and the affective component dealing with the sense of satisfaction associated with achieving personal goals. A role for religion/spirituality in establishing life's meaning comes through Reker & Wong (1988), who asserted that personal meaning requires value judgements that result from the person's own beliefs and world view, and is an interpretation of the circumstances and outcomes of that person's life. If value judgements can be

considered as being influenced by religious/spiritual beliefs and values, then a link between personal meaning and religious/spiritual factors is established. Such a link is also found in Baird (1985), who suggested that a meaningful life is not found, but is created upon the foundation of three basic elements. The first element was meaningful relationships and communications. The second, the individual's drive to set goals, and to seek to make the world a better place for their trying, and the third, developing 'stories' that describe for the individual, the role their life plays in this world. These three elements also provide a basis for acknowledging a role for religion/spirituality in creating a meaning for life.

The concept 'life's meaning' is also a complex one, but it has a place in this study because there would appear to be reasonable grounds for acknowledging that religion/spirituality can influence the meaning a person places on their life. For example, Christianity expresses the importance of maintaining relationships with others, it urges adherents to embrace a specific set of goals and behaviours (as a means to 'salvation'). In this instance, the Bible fulfils the role of telling the 'stories' that prescribe beliefs and behaviours.

Question 5: The Future

This study includes 'Future' as an affective component and seeks to establish how a respondent feels about the future. Most people would from time-to-time, consider their future and give some thought to the direction they feel things are heading. Exposure to the concept of 'Future' can come from many sources, but has been popularised by movies (for example; *Back to the Future, Star Trek, 'Mad Max*), through fortune tellers such as are often encountered in popular magazines, and through prophetic writings such as those by Nostradamus. None of the religious/spiritual scales identified by Hill & Hood (1999), or the wider literature, contained any readily identifiable scales, or significant references to the measurement of 'Future' as a distinct concept. Scales having limited relevance to the concept include the Purpose-in-Life Test (Crumbaugh, cited in Robinson, Shaver & Wrightsman 1991, p. 335), and the Meaninglessness Scale (Neal &Groat, cited in Robinson, Shaver & Wrightsman 1991, p. 329).

The concept of 'Future' is included in this questionnaire as it has particular relevance for those having a religious/spiritual orientation. Christian beliefs invariably include beliefs about future events, typically relating to the second coming of Jesus Christ and the events preceding and following it. However, some of the goals of Christianity are never to be fulfilled in 'this life'. For example, for a living person, the idea of living forever in a physical heaven is future, as are issues relating to the question of life after death.

From a measurement perspective, both 'Life Meaning', and 'Future' could be seen as a cognition or beliefs, as both can be described using statements that can be preceded by 'I believe that'. However, a respondent has no knowledge of the future until it becomes present or past; they can only have feelings about it (i.e. affect). Given the complex nature of these concepts, measuring them as affect would seem a suitable option.

Questions 7 and 8: Religion and Spirituality

In this thesis so far, religion/spirituality has been used as a collective term as there is yet no valid reason to consider them as separate concepts. Given the difficulties with defining religion and spirituality described in Chapter 2, these two questions are an attempt to determine whether any useful empirical distinction can be made between the concepts that allows creation of categories of respondents. There is also the possibility of creating empirical definitions that can discriminate between the concepts on a pragmatic, rather than a philosophical basis.

These questions are also intended to complement Question 11, which is taken from the Religious Orientation Scale – Revised (Gorsuch & McPherson 1989) that taps into the intrinsic-extrinsic religion concepts of Allport.

Question 9: The Poor and Needy In the Community

This concept is included to address the ideas that prosperity associated with success is seen as a blessing from God, while poverty is God withholding his blessing. Similarly, sickness or misfortune might be seen as punishment from God for wrong deeds done, with the implication that good health is a blessing from God. In attempting to discriminate between survey respondents, a person who believes that

God would punish or bless people in this manner, would likely have a very different picture of God's character, than someone who believes in a God allows natural consequences to occur, but seeks to forgive people for their wrongdoings rather than punish them.

The concept in question is broader than just a person's view of God. Just as importantly, it looks at how respondents view other people. This study focuses on those who may be classed as the 'poor and needy' in the community. In broad terms, the question seeks to evaluate the capacity for a series of semantic differentials to discriminate between respondents on the basis of a concept that could be variously described as altruism, compassion, or generosity. A specific religious context for the concept in question is created by a number of verses of Scripture (for example, James 1:27, 2:15-18; 1 John 3:17; Luke 3:11), which quite clearly show that 'true religion' includes actually helping those in need, even if it requires sharing one's own goods

Semantic differentials were constructed to include the following ideas:

- that poverty is the result of personal failure;
- that the poor are a burden on society;
- that the poor are not important to society;
- that the poor are less valuable than those who are not poor;
- that the poor are irresponsible, lazy, or ungrateful; and
- that the poor are poor because they are being punished for something they have done.

The question was not intended to imply any judgement of a respondent's attitudes towards the poor, but was only to create categories of respondents based on any differences in responses.

Question 10: God

This question attempts to create a profile of the character of the respondent's God, and of their relationship with that entity, including whether they believe God cares for them, whether God is approachable, or can be understood. Whereas Questions 1 − 3 of Section 1 dealt with the cognitive aspects of a person's belief in God, this question specifically targets the person's feelings about God. There are several scales that adopt a similar approach, for example, the *Adjective Ratings of God*

(Gorsuch, cited in Hill & Hood 1999), or the *Concept of God and Parental Images Scale* (Vergote et al., cited in Hill & Hood 1999, p. 390). These scales became available after the completion of the survey component of the study, but comparison of the items used with those in these scales shows a number of similar items which provides support for the approach adopted in this study

Question 11: The Religious Orientation Scale – Revised

This question was included specifically for the purpose of establishing concurrent validity for any scale used in the study, or developed from the study. The Religious Orientation Scale – Revised (ROS-R) (Gorsuch & McPherson 1989) was selected as the most suitable scale for this purpose, of those available. Based on the Religious Orientation Scale (Allport & Ross, cited in Hill & Hood 1999, p. 144), ROS-R incorporated some of the concepts being addressed by this study, and has a published factor structure.

4.4.2.4   Section 4: Physio-Socio-Demographic Factors.

Section 4 of the survey questionnaire asks for personal details including: gender, age, weight, height, level of education, marital status, employment status and category, address, household income, hours worked, number and ages of dependent children, and group or club memberships.

Most of these variables can be used to generate categories of respondents (for example, gender, and age), but some have been included specifically for the purpose of building other indicators, or as a filter for checking on earlier responses. For example, weight and height can be used to calculate the Body Mass Index for which there are published categories (Wahlqvist 1988), and which provide a check against some lifestyle factors (for example, exercise, calorie intake). Similarly, the level of religious activity of a woman could be modified if she also has multiple young children that leave her with little free time. Hours worked and household income could be linked to church/spiritual group activities or financial contributions to such organisations. The address was included to allow for matching of test-retest responses, and the possibility of determining, if required, how far a respondent travelled to attend church or group meetings.

4.5   Chapter Summary

The Theory Framed Research model adopted for the study supported the development of a framework for the study using theory only in the development of, and justification for a new questionnaire. Starting with the idea that religion and spirituality can be described by beliefs, attitudes and values, the questionnaire structure and content were ultimately based on the tripartite classification, with its components of cognition, conation, and affect. These were operationalised as beliefs, behaviours and feelings. This structure is in contrast to most existing measures of religion/spirituality that tend to focus on a single element of the tripartite classification.

The rationale for the inclusion of each item in the questionnaire was presented, with the aim of identifying a diverse range of measures whose interactions would together provide maximum discrimination between respondents. Some of these measures may seem to fall outside of the usual content boundaries, reflecting the idea that religion/spirituality has complex overarching concepts that are not readily definable, and that measures of religion/spirituality for epidemiological purposes, do not necessarily need to fall within the boundaries of any specific theoretical definition. The next chapter describes the process undertaken in the selection of the measurement and analytical techniques, the selection of the survey population, and the administration of the questionnaire.

CHAPTER 5

Development of the Questionnaire and Associated Analytical Methods

5.1 Overview

The previous chapter described the theoretical framework for the study, the structure of the questionnaire and the rationale for selection of the concepts used. In this chapter, Section 5.2 briefly describes the reasons why a number of other scales would not have been suitable for inclusion in the questionnaire. Section 5.3 details the measurement methods, the response options, and the analytical methods on a question-by-question basis The semantic differentials method used as a measure of 'affect' in Section 3 of the questionnaire is described in detail because it is seldom used in the study of religion/spirituality. Section 5.4 describes the three stages of piloting of the questionnaire, the selection of the religious/spiritual and general population groups, the exclusion criteria, and the recruitment of respondents. It also describes the primary and test-retest administrations of the questionnaire. Section 5.5 describes the data analysis for each section, including treatment of missing data, and the development of a method for analysing multiple response belief questions in questionnaire Section 1. Section 5.6 deals with the test-retest methods analysis, including the Kappa statistic.

5.2 Construction of the Measures for the Questionnaire

Several factors were taken into account when constructing the measures used in the questionnaire. First, the time to complete the questionnaire has an important bearing on the number and type of measures that can be used and was assessed during piloting. Second, the reason for allowing respondents to choose multiple options was an attempt to avoid difficulties with double-barrelled and double negative questions identified in the analysis of scales in Chapter 3. This is to reduce the perceived length of the questionnaire and minimise the likelihood of response fatigue that could arise from a simple sequential numbering system, the question number in each section commenced at '1'.

5.2.1 Comparison with Other Scales

At this stage, it is appropriate to examine any similar scales that might have been used. The only available resource for this exercise is Hill & Hood (1999), a compilation of 126 scales measuring various aspects of religion. The following five scales include concepts similar to those in Section 1 (beliefs and behaviours). The *Inventory of Religious Belief* (Brown & Lowe cited in Hill and Hood 1999, p. 22) consists of 15 statements that make oblique references to the Trinity, the Bible, Jesus, Creation, and Heaven and Hell. However, the statements are presented as Likert scales and do not provide adequate response options to satisfy the aims of this study. The *Inventory of Religious Concepts* (Dunkel cited in Hill and Hood 1999, p. 24) is a 130 item scale that uses statements of belief to present religious concepts, including perceptions of God, attitudes toward God and the Bible, religious values, doctrines and practices, individual self worth, and attitudes to a number of social issues such as war. The similarities in the broad content of the scale offer support for this study, but the majority of the statements are of little use because it is often not clear what the concept in question is. The same comments apply to the *Religious Attitude Inventory* (Ausubel & Schpoont in Hill and Hood 1999, p. 94) and to the *Religious Belief Inventory*, (Lee cited in Hill and Hood 1999, p 50) which respectively consist of 50 and 60 statements that address beliefs and behaviours as Likert scales. This study also addresses some of the concepts in these scales, but the remaining items are not particularly relevant. The *Religious Attitude Scale* (Armstrong, Larson & Mourer, 1962, in Hill and Hood 1999, p. 44) includes 16 items that that address 12 of the 15 concepts included in Section 1 of this questionnaire. Each item allows the respondent to choose only one of three statements that best describes their attitude.

5.2.2 Summary of the Questionnaire: Its Structure, Concepts, Data Type and Analysis

The questionnaire structure, response options and analytical procedures are summarised in Table 5.1. The questionnaire is described in detail in Section 5.2, and is presented in its final form in Appendix B.

Table 5.1: Summary of questionnaire structure and contents

Section 1: Beliefs & religious behaviours

Question Type	Question	Concept in Question	N° Response Options or Phrase Pairs	Data Type & Analysis
Core Religious Beliefs Measures of cognition	1	God	10 options	
	2	Jesus Christ	9 options	
	3	Holy Spirit	7 options	
	4	Origins of humanity	6 options	
	5	The Bible	9 options	
	6	The Soul	6 options	Multiple response
	7	Sin	7 options	
	8	Satan or the Devil	6 options	Calculate Odds Ratios,
	9	Being saved	9 options	nominal categories,
	10	Heaven	5 options	interaction terms
	11	Hell	7 options	
	12	Purgatory	6 options	
	13	Ten Commandments	6 options	
	14	Angels	7 options	
	15	Miracles	8 options	
Behaviours	16	Religious Affiliation	3 options	Nominal categories
	17	Duration of Affiliation	1 options	Collapse to ordinal, frequency data
	18	Group membership	2 options	Yes/No
	19	Religious Attendance	2 options	Yes/No
	20	Frequency of attendance	6 options	Likert, frequency data
	21	Duration of attendance	Number line	Collapse to ordinal, frequency data
	22	Type of meeting	13 options	Not used
	23	Financial contributions	Number line	Collapse to ordinal, frequency data
	24	Previous group membership	Open question	Frequency
	25	Disability and attendance	2 options	Frequency data
	26	Similarity of partner beliefs	3 options	Frequency data

Section 2: Health related behaviours, religious behaviours

Question Type	Question	Concept	N° Response Options Or Phrase Pairs	Data Type & Treatment
Influence of religious or spiritual beliefs on behaviours	1	On use of conventional medicine	5 point Likert	Frequencies
	2	On use of natural remedies	5 point Likert	Frequencies
	3	On use of alternative medicine	5 point Likert	Frequencies
	4	On use of spiritual aids	5 point Likert	Frequencies
	5	On type of employment	3 point Likert	Frequencies
	6	On health and lifestyle choices	3 point Likert	Frequencies
Health behaviours	7	Meat intake	6 options	Frequencies
		Alcohol use	5 options	Frequencies
		Smoking	5 options	Frequencies
		Exercise	4 options	Frequencies
	8	Duration of diet type	Number line	
	9	Duration of alcohol use	Number line	Number line collapsed to ordinal,
	10	Duration of smoking	Number line	Frequency Data
Religious behaviours	11	Religious/spiritual TV, videos	Number line	
	12	Secular TV, videos	Number line	
	13	Use of yoga, meditation	Number line	
	14	Frequency of prayer	Number line	
	15	Frequency of Bible study	Number line	
	16	Volunteer involvement	Number line	

Section 3: Measures of affect

Question Type	Question	Concept	N° Response Options Or Phrase Pairs	Data Type & Treatment
Feelings about concepts Measures of affect	1	Religiosity/spirituality of female Guardian	4 phrase pairs	Number line collapsed to four category ordinal Exploratory factor Analysis
	2	Religiosity/spirituality of male Guardian	4 phrase pairs	
	3	The future	14 phrase pairs	
	4	Religion/spirituality/science and ideas about the future	3 phrase pairs	
	5	Life's meaning	18 phrase pairs	
	6	Religion/spirituality/science and ideas about the life's meaning	3 phrase pairs	
	7	Perceptions and experience of Religion	19 phrase pairs	
	8	Perceptions and experience of Spirituality	19 phrase pairs	
	9	The poor and the needy – altruism	15 phrase pairs	
	10	God	25 phrase pairs	
Published Scale for Concurrent Validity	11	The i/e –revised scale	14 phrase pairs	Likert Exploratory Factor analysis

Section 4: Physio-socio-demographics

Question Type	Question	Concept	N° Response Options Or Phrase Pairs	Data Type & Usage
General Purpose	1	Gender	2 options	Continuous, collapsed to ordinal, frequency data
	2	Weight	Open	
	3	Height	Open	
	4	Age	Open	
	5	Education	11 options	Ordinal, collapsed to fewer categories
	6	Marital status	1 options	Nominal categories
	7	Dependent children	4 options	Ordinal
	8	Address – street name	Open	Information used to match respondents for test-retest.
	9	Address – suburb	Open	
	10	Address – post code	Open	
	11	Employment status	8 options	Nominal, not used
	12	Occupation	open	Nominal, not used
	13	Previous Occupations	open	Nominal, not used
	14	Work hours	Number Line	Continuous, collapsed to ordinal, frequency data
	15	Income	Number Line	Continuous, collapsed to ordinal, frequency data
	16	Group memberships	Open	Nominal, not used

5.3 Details of the Questionnaire: Response Options and Analytical Methods

5.3.1 Section 1 (Questions 1 - 15): Religious Beliefs

There are fifteen questions in this section. Each deals with a specific belief and contains up to ten response options which are essentially an inventory of different beliefs commonly encountered. The following example illustrates this.

.Question 1. **'God' is...**

1	There is no God	☐
2	Is a single being	☐
3	Is described by the Trinity	☐
4	Is an energy field	☐
5	Is material/physical	☐
6	Is spiritual/non-material	☐
7	Is within every person	☐
8	Is a symbol only	☐
9	I don't know	☐
10	None of the above, I have other views	☐

The inventory is not exhaustive, but a profile of the respondent's beliefs about the concept can be constructed by allowing them to choose multiple options. This approach potentially results in a more accurate description of the respondent's beliefs about the concept in question, and allows evaluation of the interactions between a respondent's belief profiles for different concepts. How this is done is discussed in Section 5.5 which addresses the data analysis.

Originally, strength of belief was to be included as a Likert scale, but was omitted for several reasons. First, it was envisaged there would be difficulty interpreting the responses because of difficulties deciding what the strength could be compared with. Second, as each individual's response is unique, any comparison of individual responses would be difficult.

Selection of Response Options.

The rationale for the inclusion of the different concepts was discussed in Chapter 3. This section briefly describes the response options used for each concept in Section 1. Ideally, the response options represent the content boundaries for each concept as completely as possible, but the complexity of the area makes this difficult. In order to ensure all respondents could respond, two specific response options were included

114

in all fifteen questions. The first option was 'I don't know about (the concept in question), and the second, 'None of the above, I have other views'.

Question 1: God.

This question addresses issues of the existence and form of God. The matters of the personal attributes of that God, and of the respondent's feelings toward that God are addressed in Question 10 of Section 3 of the questionnaire. Beliefs about God addressed by the response options include: there being no God (atheism), God as the name for an energy field that pervades the universe (pantheism), God as a spiritual and non-material entity (in contrast to a material/physical being), the idea that every person has divinity within them, or God as merely a symbol for something that cannot be otherwise expressed. There is a further question on the Trinity, which in its basic form addresses the matter of whether God is a single being, or is three equal coexisting beings called the Father, The Son (Jesus Christ), and the Holy Spirit or Holy Ghost.

Question 2: Jesus Christ.

Beliefs about Jesus Christ include: his never having existed, being only a symbol, his existing but as a mere mortal human being, his being a lesser god, and his being fully God. Within those who accept Jesus Christ existed, it is of interest to know whether they believe he is presently dead or alive, either in heaven, on Earth, or elsewhere. Other questions such as Jesus being married and having children were excluded because they are too emotive or controversial. The option that Jesus Christ 'was an enlightened master, but not God' was included to allow a response option for New Age adherents.

Question 3: The Holy Spirit.

As in the previous two questions, the response options for this question about the Holy Spirit also addressed the question of existence ('Does not exist'), form ('Is an energy field in the Universe', 'a real person', 'only a symbol'), and deity (' is God').

115

Question 4: The Origin of the Human Race on Earth.

This question addresses the Evolution and Creation views of the origins of the human race. The concepts and their response options were: Darwinian Evolution ('Evolution by natural selection'), theistic evolution ('Evolution under God's control'), literal Creation ('Creation on a literal sixth day'), and symbolic Creation ('Creation at an unknown time').

Question 5: The Bible

The central issues addressed by this question, and their response options, were: the relevance of the Bible ('Is not relevant today', 'both Old and New Testaments are relevant today', 'only the New Testament is relevant today'), whether or not it contains errors and contradictions ('contains errors and contradictions', 'is true and infallible'), and its perceived usefulness as a guide to moral issues ('is of no more value than many other books', 'is the final word on moral issues').

Question 6: The Soul

The two issues addressed by this question were the body-soul dualism, and the immortality of the soul. Both issues are addressed by the response options: 'a person *has* a soul that lives on after the body dies', 'a person *is* a soul', 'there is no soul that goes on living after the body dies'. The option that the soul 'is the connection a person has with the oneness of the Universe' was included for respondents having a New Age orientation.

Question 7: Sin

This question focussed on the definition and relevance of sin. The respective response options were: 'is a natural part of the Universe', 'is disobedience to God's laws', 'is ignorance of our inner divinity', and 'not a relevant idea today', and 'still a relevant idea today').

Question 8: Satan or the Devil

This question assumes Satan and the Devil to be the same, and addresses only their existence ('is a real, living being', 'is a dark force in the Universe', 'is imaginary and does not exist', or 'is symbolic only'). These response options present a simplistic

116

view of the concept, and in constructing this question, it was decided these options would provide enough discrimination between respondents without the need to include options addressing other ideas such as evil angels or the occult.

Question 9: Salvation or 'Being Saved'

The response options for this question address the relevance of the concept ('it has no relevance for me'), and which of several common beliefs was held by the respondent. This was achieved through combinations of response options. For example, a respondent might choose the options 'I am saved' and 'I cannot be lost' to describe their beliefs. This view is theologically very different to that described by the options 'I am saved' with 'I can again be lost', and it could be expected there might also be differences in associated beliefs or behaviours. Similarly, there might be differences between responses to other questions about beliefs and behaviours for those who choose 'I can be saved', compared with 'I am too bad to be saved', or 'being a good person is more important than what I believe'.

Question 10: Heaven

The response options address the issues of Heaven's existence ('not real, but is a symbol or concept'), and of its basic form ('a real physical place', 'a real spiritual state'). This is a simplistic approach, which omits other details, such as the form, or type of existence an individual might have in Heaven.

Question 11: Hell

The response options encompass the ideas that hell 'is a real place where the body and/or the soul are punished', 'a tormented state of mind', 'a name for the grave', or 'just a symbol'. As for the previous question, response options addressing the form and nature of existence of an individual in hell are omitted.

Question 12: Purgatory

The response options address the issue of its existence ('is a real physical place', is a 'real spiritual state', 'is a symbolic idea', 'imaginary and does not exist').

The 'Purgatory' concept is peculiar to Catholicism, and given the large proportion of the population who indicate Catholic affiliation (Nagle 2001), the purpose of this

question was to allow for possible categories of respondents *within* the Catholic group.

Question 13: The Ten Commandments

The purpose of the response options for this question was to assess whether or not the respondents consider the Ten Commandments to be relevant; ('are all relevant today', 'not at all relevant today', or 'partly relevant today'). The latter two options could be combined with 'now replaced by other laws', a reference to the beliefs held by some, that the Ten Commandments were either replaced by others (Matthew 22:37-40), or were abolished when Jesus was crucified (Colossians 2:14).

Question 14: Angels

The response options, 'do not exist', 'exist and are real', and 'are symbolic only' each address the question of whether angels exist or not. The option, 'are all good' addresses the question of good and evil angels, while 'are our guides to the spiritual realm' is included for adherents to New Age beliefs.

Question 15: Miracles

The response options 'do not happen', 'are real supernatural events', 'all have a rational or natural explanation', and 'I have personally experienced a miracle' address whether miracles are real events or not (to the respondent at least). The option, 'miracles are all good', would be omitted by those who believe some miracles may originate from evil forces, while 'involve magical powers' is included for those who ascribe supernatural events to magic, whatever that may be.

5.3.2   Questions 16 - 26: Religious Activities and Behaviours

This group of questions deals with issues of group affiliation or membership, meeting attendance and style, financial contributions, and the effect of physical disability on participation. The measurement methods and the associated response options for each question are as follows.

Question 16: What Type of religious or spiritual beliefs do you presently hold?

As originally constructed, the response options for this question included a comprehensive list of denominational or group names from which the respondent could chose. This approach was discarded in favour of using an open question. There were three reasons for adopting this change; it saved space, it reduced the time to answer the question, and respondents would not be forced into any category. Three responses were offered, 'No religion — against religion', 'No religion— not against religion', and an open question asking for the respondent's own description of their religious/spiritual affiliation. The first two options were included rather than categories such as 'atheist', 'agnostic', or 'sceptic' as some respondents might not understand what these terms mean.

Question 17: How long do you estimate you have held these present beliefs?

This question requests the length of time the respondent has held the beliefs indicated in Question 16. It is included because duration of exposure to a potential 'causal' factor (in this, case religion/spirituality) is an important epidemiological variable. It was measured on a number line having a range of 0-50 years. This option allowed for any subsequent collapsing of ratio data to ordinal data if required for analysis.

Question 18: Are you presently a member of any religious or spiritually oriented groups?

The purpose of this question was to differentiate between adherence to the beliefs of a particular religious group and membership of that, or any group. It required a simple Yes/No response.

Questions 19, 20 and 21: Issues Relating to Meeting Attendance

These three questions each address a component of the respondent's attendance at religious or spiritually oriented meetings. Question 19 is a filter question, directing those respondents who have never attended church services, mass or similar religious or spiritually oriented meetings, to bypass Questions 20 and 21 which addressed the frequency and duration of meeting attendance. Question 20 asks for the frequency of attendance using an ordinal scale ranging from 'rarely' to 'more than once a week'.

Question 21 addresses the duration of that frequency of attendance using a number line.

Question 22: The group you presently belong to, or whose beliefs you hold, could best be described as?

Thirteen categorical response options were supplied for this question: 'Fundamentalist, Conservative, Liberal, Charismatic, Pentecostal, Reformed, Contemporary, Traditional, Spiritualistic, Evangelical, Meditative, Progressive, Other-None of the above'. These options were presented in a list with a box for the respondent to tick to indicate their choice.

Question 23: Financial contributions to religious or spiritual groups

This question asked respondents for their level of financial contributions to religious or spiritual groups, as a percentage of their gross income recorded on a continuous number line. This approach was adopted rather than asking for actual dollar amounts, to identify those who pay a tithe, or who regularly contributed to a church or group, a proportion of their gross income. This data could be collapsed to ordinal data as required.

Question 24: Previous Membership of Religious, Denominational or Spiritual Groups

This open question asks for the names and number of any such group to which the respondent may have previously belonged. The names of any previous groups could indicate the strength of any motivation associated with a change. For example, someone who changes from a Catholic to a Protestant orientation would likely have a different reason for changing than one who changes through several charismatic protestant groups. Similarly, changing from a traditional group setting to a New Age orientation could be useful information. The number of times a respondent has changed group affiliation, could indicate the strength of any tendency to search for religious/spiritual answers, or perhaps a general dissatisfaction with some underlying factor.

Question 25: The Effect of Physical Disability on Participation in Religious/Spiritual Activities

This question used a simple Yes/No response to possibly explain low meeting attendance for a respondent who, based on other information provided, might have been expected to attend meetings more regularly. The response does not indicate the degree of disability, nor whether the disability is physical and/or mental. Asking for such information could breach ethical guidelines.

Question 26. Does your spouse or partner hold similar religious or spiritual beliefs to yours?

This question used a Yes/No/Not Applicable response. The purpose of this question was to provide additional information about a respondent's pattern of meeting attendance. For example, a 'No' response from a respondent who regularly attends meetings could indicate a strong religious/spiritual orientation, or a 'Yes' response from a regular attendee could indicate a supportive home environment. The question does not provide sufficient information to draw such conclusions, but there may be associations with other information from the questionnaire that could be informative.

5.3.3   Section 2: Religious/Spiritual Behaviours and the Influence of Religion/Spirituality on Health Behaviours

Questions 1 – 4 use the following five point Likert scale as the response options question: 'Strongly Influence toward their use, Moderately influence toward their use, No real influence at all, Moderately influence against their use, Strongly influence against their use'. The purpose is to gauge the strength and direction of the influence the respondent's religious/spiritual beliefs have on their use of the services indicated. In Chapter 3 it was noted that the use of Likert scales in a study of this nature is of limited use because of the lack of any standard for comparison. However, in the absence of more suitable measurement methods, the scales in this instance should provide at least a direction of the influence.

Questions 1-3: The Influence of religious/spiritual beliefs on the use of selected medical related services

These three questions address the use of conventional medical practitioners and therapies (Question 1), the use of natural remedies such as diet, massage, hydrotherapy (Question 2), and the use of alternative medicine practitioners and therapists such as naturopaths, chiropractors, or herbalists (Question 3). There was no evidence from the literature to indicate what pattern of responses might be expected, only that the frequency of use of alternative therapies has increased in recent years.

Question 4: The Influence of religious/spiritual beliefs on the use of spiritual aids such as astrology, numerology, clairvoyants, channelling, etc.

The response options for this question are also a five point Likert scale. Unlike the previous three questions where responses are expected to be spread across all religious/spiritual groups, in this instance, a positive association between 'influence toward their use' and New Age beliefs is expected.

Question 5: The Influence of religious/spiritual beliefs on the type of employment engaged in

The response options for this question took the form of a three point Likert Scale. 'Strongly influence type of employment, Moderately influence type of employment, No real influence at all'. The 'influence against' response options was not relevant for this question, first because the question relates to the type of employment the respondent had chosen, and second, to ascertain the types of employment a respondent would *not* engage in would require either an inventory or an open question. No particular response pattern was anticipated.

Question 6: The Influence of religious/spiritual beliefs on general health and lifestyle choices

The response options for this question also took the form of a three point Likert Scale: 'Strongly influence lifestyle choices', 'Moderately influence lifestyle choices', 'No real influence at all'. Chapter 2 highlighted a number of religious/spiritual groups, for example Mormons and Seventh-Day Adventists, whose beliefs prescribe

certain positive health and lifestyle choices including diet and the use of tobacco and alcohol.

Questions 7: Identification of respondents' health related behaviours

Question 7 asks about four specific lifestyle choices: meat and alcohol intake, smoking, and exercise. The response options were ordinal. For meat intake these were, 'eat meat frequently, often, occasionally, or rarely, vegan-vegetarian, other-vegetarian'. For alcohol intake: 'non-drinker, moderate drinker, heavy drinker, binge drinker, ex-drinker'. The ex-drinker option was included to supplement the non-drinker option. Similarly, for smoking, the response options were 'non-smoker, occasional smoker, moderate smoker, heavy smoker, ex-smoker', and for exercise; 'exercise rarely, exercise occasionally, exercise often, exercise frequently'.

The meaning of some of the response options are somewhat subjective and so are not directly comparable. Time and cost prevented using a more detailed questionnaire or interview technique to obtain further information. However, analysis later showed the measures used were able to demonstrate that differences exist in the study population.

Questions 8 to 10: Duration of health related behaviours

These questions provide the duration of exposure data for the meat intake, alcohol intake, and smoking behaviour respectively. In each case, a continuous number line indicating 'years' provided ratio data that could be collapsed to ordinal level if required.

Questions 11 to 16: Religious/spiritual practices

Questions 11 to 16 address the commitment of time to a range of activities: television viewing (Question 11 and 12), transcendental meditation, yoga, and related practices (Question 13), prayer (Question 14), Bible study (Question 15), and voluntary church or group activities (Question 16). In each case, a continuous number line provided ratio data that could be collapsed to ordinal level data if required.

It was expected that the data might show a competitive or negative association between time spent in television viewing compared with that spent in the other

activities. There might also be an association between transcendental meditation, yoga, and related practices (Question 13) that are more common amongst New Age adherents; and Questions 15 and 16 (Bible study, and voluntary church or group activities).

5.3.4 Section 3: Measures of Affect - The Semantic Differential

This section of the questionnaire addressed concepts representing the affective component of the tripartite classification. The method selected as the measure of affect is the semantic differential. A description of the method and its advantages are presented here in some detail, because unlike the Likert Scale, the method is not widely used, and its application to this study is uncommon in the field.

The semantic differential technique has been used mainly as a means of establishing the connotative (or subjective) meaning of a word, as compared with its denotative or dictionary meaning. Osgood, Suci & Tannenbaum (1957) developed fifty standardised scales or word pairs for this purpose. These word pairs were adjectives such as weak-strong, hot-cold, hard-soft, that were either denotative or connotative opposites. Using a Likert scale, these bipolar pairs (i.e. a pair of opposite meaning words) were then rated to indicate the extent to which each word of the pair described the meaning of the concept. There were four groups into which these bipolar pairs tended to fall, 'Evaluative', 'Potency', and 'Activity' (Nunnally 1978, p. 609), and 'Understandability' (Emmerson & Neely 1988, p. 267).

The semantic differential technique has been used as an exploratory tool for examining the structure of attitudes (Maguire 1973) for measuring brand, product and company images (Mindak 1969), and perceptions about attributes or characteristics of persons, events or activities (Hartenian, Bobko &Berger 1993). The method allows quantitative scores to be obtained that indicate the meaning a concept has for respondents. 'Meaning' here is a "...measurable feeling about a concept" (Emmerson & Neely 1988, p. 265), and the 'concept' is the word or phrase eliciting the feeling being measured (Mindak 1969, p. 618). The technique was applied to this study using this latter approach.

Advantages and Disadvantages of Semantic Differentials

A disadvantage of using semantic differentials is that the bipolar pairs do not directly address the concept of the question, so different respondents could attribute different meanings to them. In this respect, semantic differentials are less sensitive than Likert scales (Schibeci 1982). One of the principal advantages of the method is that semantic differentials are less overt than direct questions. It was felt that the highly personal nature of religious/spiritual issues might prevent respondents from answering a direct question, and that an indirect technique would be less threatening. A second distinct advantage is that semantic differentials can be less dependent on wording than Likert scales, and may be less prone to problems with phrasing and ambiguity (Schibeci 1982). One further advantage is that any tendency for stereotyped responses is minimised, because the respondent is asked to complete the scales quickly and without stopping to think for long about their response. Mindak (1969) stressed the importance of time and speed in administration, of not giving respondents too much time to judge and so exercise too much control over the ratings.

Construction of the Semantic Differential Scales

Although semantic differentials were used in this study to establish the connotative meaning of a number of concepts, the aim was to produce meaningful categories that discriminated between respondents. Many of the standard bipolar word pairs (or scales) developed by Osgood, Suci & Tannenbaum (1957), were designed for establishing the meaning of words, and so did not adequately address the concepts under examination. New scales were developed by selecting from the academic, theological, philosophical, and popular literature, key words that described or suggested feelings about the concept. The opposites or antonyms required to create each bipolar pair were then selected from resources such as Roget's Thesaurus and from dictionaries. In certain instances, instead of using a word pair, pairs of phrases were used to anchor a scale (Mindak 1969). The four groupings for the bipolar pairs mentioned earlier: Evaluative, Potency, Activity, Understandability, were used as a guide in the development of the scales for each concept. However, not all of these groupings were necessarily represented for each concept, nor did all scales necessarily fall into one of those groups.

The final selection of the bipolar pairs for the scales was subjected to a number of criteria. First, the pairs needed to be relevant to the concept, be understandable, meaningful, and be defined for all members of the study population. That is, the pairs should, as far as possible, have the same meaning for both the religious and the general population groups (Maguire 1973). Second, the question of whether the scale was likely to evoke a positive or negative response was also addressed. Several studies have concluded that like and dislike are not necessarily bipolar pairs of a single scale but may require separate scales (Rodin cited in Hartenian, Bobko & Berger 1993), and that positive and negative feelings are independent of each other and are not necessarily opposites (Diener 1994; Diener and Emmons 1985). This problem is similar to that of reverse scoring of Likert scales identified in Chapter 2, where it was shown that the reversed question did not necessarily evoke the opposite response to the original question. Third, in a number of instances, most notably Questions 7 (Religion) and 8 (Spirituality), the same scale or bipolar pairs were used for different concepts. The issue here is whether the scales have the same meaning in both cases. Every effort was made to minimise scale-concept interactions (when the meaning attributed to a bipolar pair changes with the different concepts), or scale-person interactions (when the scale has different meanings for different respondents.). A fourth criterion is concerned with the possibility that some respondents, in particular those claiming religious/spiritual commitment, might not wish to judge a concept such as 'God' negatively, or to respond in a way that could be interpreted as being critical of God, or to indicate their religious/spiritual experience was anything but perfect, regardless of their true feelings. This type of response would be what as been described as "indiscriminately pro-religious" (Allport & Ross 1968, p. 238). The opposite response could also be encountered, where a respondent may not wish to in any way indicate a positive response toward religious/spiritual issues. Such a response style could be described as 'indiscriminately anti-religious'.

Following on from this issue was how to establish the midpoint of a scale. It has been suggested that the psychological midpoint of a scale may be different to the semantic or connotative midpoint, that is, it may be that a scale may have 'true' midpoint skewed toward one end (Cogliser & Schriesheim 1994). To address this concern, words and phrases that were non-polar opposites were used as required. For

example, instead of bipolar 'negative - positive' pairs, pairs such as 'very positive - neutral', or 'very positive - positive' were used. The problem would remain regardless of the semantic distance between the end words or phrases, and be addressed by the data analysis.

The Rating Method

Most examples of semantic differentials encountered in the literature use 5-7 response categories. However, Albaum, Best & Hawkins (1981) proposed that a continuous rating scale would provide the best discrimination between respondents without the loss of information. If intervals were used, less than six response categories would produce more ordinal data and likely lead to a loss of discrimination. The need to maximise discrimination between respondents was the principal reason for using continuous rating scales. A second reason was to minimise the tendency for non-continuous rating scales to limit respondents' choices. Although the data were subsequently collapsed into four nominal categories using uneven intervals that reflected the nature of the data, this option would not have been possible if a 5-7 interval scale had been used.

The bipolar pairs were placed on a line 100 mm long. There were no numbers or marks on the line, and the location of a respondent's mark on the scale was determined by measuring to the nearest 2-3 mm using a ruled overlay.

The Numbers of Scales for Each Concept

The number of semantic scales used for each concept was a compromise between the need to adequately represent the content of each concept, and the need to minimise the size of the questionnaire. Having decided that there was adequate coverage of the content for each concept, a completion time of five seconds per scale was used as a rough guide for determining the number of scales included (Maguire 1973).

Randomization

To reduce the tendency for response bias, Emmerson and Neely (1988) recommended the scales be randomly positioned with about half being positioned positive-negative in one direction, and the other half reversed. In this study, the order of the scales for each question was randomised but less than half were reversed. It was reasoned that

with one hundred and twenty four semantic differential scales, a large proportion of reversals could lead to response fatigue and result in a poor completion rate and/or response set. Response set could still be a problem even with randomization. There is no way of knowing which responses incur a response bias, because making such a judgment is predicated on the assumption that the response distribution should conform to certain patterns, and such a judgment is prone to researcher bias. Much effort was directed to addressing this issue by ensuring the questionnaire as a whole was interesting, relevant and balanced. A judgment regarding the relevance of this approach would ultimately be a subjective one.

The Semantic Differential Scales

The following section describes the word or phrase pairs making up the scales for each question or concept .

Questions 1 and 2: Your mother (or female guardian)/ your father (or male guardian) is (or was) religious/spiritual, against/supportive of religion/spirituality

The purpose of the scales for these two questions was twofold, to assess whether the parent or guardian was religious or spiritual, and whether they were opposed to, or supportive of religion and spirituality. The question separated religion and spirituality to allow for the respondent's belief that the concepts are different. The assumption was that a respondent who believed the concepts to be the same would respond in the same way to both questions. This may not be valid in some cases, but the approach presents another way of measuring similarities and differences between religion and spirituality.

The phrase pairs were: 'very religious/not at all religious, supports religion/against religion, very spiritual/not at all spiritual, supports being spiritual /against being spiritual'.

Question 3: For Me, The Future Is...

The scales for this question address a number of general aspects of the concept. It is likely these aspects are interrelated, and will overlap with Question 5, 'Life's Meaning'.

The first aspect addressed a sense of fear or trepidation about the future, and incorporated the phrase pairs 'bright/dark, full of hope/full of despair, comforting/not comforting, peaceful/not peaceful, frightening/not frightening'. The second aspect used the pairs 'ever changing/unchanging, a matter of fate/a matter of choice, predictable/unpredictable' to assess the respondent's sense of having control over their future. The third aspect, using the pairs 'free/not free, clear/unclear, mysterious/not mysterious, has many goals/has no goals' addressed their degree of confidence about the future.

The two pairs, 'soon to end/to go on forever', and 'free of nuclear weapons /nuclear war' addressed the question of future existence (of the human race), and allowed respondents to indicate their feelings about the possibility of mass extinction of life on Earth after nuclear catastrophe.

Question 4: The Ideas That Describe The Future For Me Are....

This question used the following pairs to gauge the relative influence of religion/spirituality, or science and philosophy on the respondent's feelings about the future. The phrase pairs were: 'totally described by religious beliefs /not at all described by religious beliefs, totally described by spiritual beliefs/not at all described by spiritual beliefs, and totally described by science or philosophy/not at all described by science or philosophy'.

Question 5: Life's Meaning To Me Is....

There are three aspects of this complex concept. The first is the extent to which the respondent 'wonders' about the meaning of life, and the importance they place on the question. The phrase pairs were: 'something I often wonder about/something I rarely wonder about, very important/not important, a matter of urgency/not at all urgent, meaningful/meaningless'. The second aspect is the sense of happiness or despair the respondent feels about their life: 'refreshing/not refreshing, happiness/sadness, comforting/not comforting, satisfying/not satisfying, a daily struggle/a source of hope each day, a source of hope/a source of despair, a source of torment/not a source of torment'. The third aspect is the certainty the respondent feels about their life: 'very uncertain/very certain, ever changing/unchanging, mysterious/not at all mysterious, predictable/unpredictable, clear/unclear'. In addition to these three aspects, there

were two other aspects addressed. These were: the general sense of having the power of choice about life ('about free choice /about little choice'), and the belief that helping others, contributes to meaning in life ('about meeting the needs of others/not about meeting the needs of others'). This last response could be taken in isolation, and compared with responses to Question 9 that looks at the concept of altruism.

Question 6: The Day-To-Day Meaning Of Life For Me Is....

As was the case in Question 4, this question used the following phrase pairs to gauge the relative influence of religion/spirituality, or science and philosophy on the respondent's sense of meaning in life. The semantic scales were: 'totally described by religious beliefs /not at all described by religious beliefs, totally described by spiritual beliefs/not at all described by spiritual beliefs, and totally described by science or philosophy/not at all described by science or philosophy'.

Questions 7 and 8: Religion as I see or experience it; Spirituality as I see or experience it

These two questions assessed whether respondents considered religion/spirituality are different, or are the same concept. With the exception of the phrases 'the same as being spiritual (religious)/different to being spiritual (religious)', the two questions used identical phrase pairs, and were placed back to back in the questionnaire to minimise response set.

The phrase pairs were grouped as follows. The question of whether the respondent associates religion/spirituality with feeling secure or cared for, was addressed by the phrases, 'encouraging/discouraging, very caring/uncaring, happy/unhappy, and threatening /non-threatening'. The sense of usefulness or relevance of religion/spirituality is addresses by the phrases, 'practical/impractical, valuable/not at all valuable, attractive/unattractive, very interesting/very uninteresting, and relevant/irrelevant'. Other issues addressed were: the perceived demands religion/spirituality places on an adherent ('reasonable/unreasonable,'), the strength or empathy associated with religion/spirituality ('strong/weak, sick/healthy, tolerant/intolerant, hard/easy, wise/unwise'), and whether religion/spirituality are, or

can be understood ('readily understood/not readily understood, very meaningful/meaningless'). The phrases 'not affected at all by the physical body/very much affected by the physical body' were included to investigate the relationship between religious/spiritual status and physical well-being. Finally, the phrases 'the same as being spiritual/different to being spiritual' (Question 7), and 'the same as being religious/different to being religious' (Question 8) examined whether respondents felt religion/spirituality to be the same or different concepts.

Question 9: The Poor and the Needy In Our Community....

This question sought respondents' views on the poor or disadvantaged in society, and addressed a number of ideas. The first set of phrase pairs addressed whether poverty or misfortune were punishments for wrongdoing. These are: 'are deserving/are undeserving, are lazy/are not lazy, suffer poverty that is self- inflicted/suffer poverty that is not self-inflicted, their need is a punishment/their need is not a punishment, are noticed by God/go unnoticed by God, are victims of destiny/have choices to make in life'.

The second set of phrase pairs addressed the idea that true religion motivates the religious/spiritual person to help the poor and needy in some way. The phrase pairs used here were: 'are the responsibility of government and welfare agencies/are not the responsibility of government and welfare agencies, are the responsibility of every person/are not the responsibility of every person, abuse help given them/appreciate help given them'. Additional phrases addressed whether the poor are to be tolerated ('are a nuisance/are not a nuisance'), and valued ('are not important to our society/are important to our society, are valuable/are worthless, should be content with their lot in life/should not give up trying to better themselves'). The remaining two phrases addressed the ideas that the presence or absence of material possessions is an indicator of need ('are hard to recognise/are easy to recognise'), and that present wealth or possessions are in some way protective against future poverty or need ('could be me one day/will never be me').

Question 10: God To Me Is....

This question examines the relationship between respondents and 'God'. The phrase pairs are grouped as follows. The first set deals with the general attributes of 'God'

('is unapproachable/approachable, is impractical/practical, not tolerant/tolerant, ready to send illness to punish/reluctant to send illness to punish, unforgiving/forgiving, never fair/always fair, doesn't listen/a good listener, vengeful/merciful/'). The second set deals with the respondent's perceptions of God's interest in them personally ('not aware of my thoughts/aware of my thoughts, impersonal and not interested in my daily situations/personal and very interested in my daily situations, never seeking me/always seeking me/'). The third set deals with the respondent's evaluation of God: (meaningless/very meaningful, does not provide direction in life/provides direction in life, cannot be understood/readily understood, very confusing/not at all confusing, uncaring/caring, worthless/valuable, not worth knowing/worth knowing, boring/interesting, a source of unhappiness/a source of happiness, not able to solve my problems/able to solve my problems, a source of anxiety/a source of well-being'); and with the strength of the respondent's relationship with God ('never first in my life/ways first in my life'). The next two phrase pairs were included to acknowledge the existence of a relationship between religion/spirituality and health behaviour, ('interested in how I take care of my spiritual self/not interested in how I take care of my spiritual self, and interested in how I take care of my physical self/not interested in how I take care of my physical self').

Question 11: The Gorsuch and McPherson I/E-R Scale

This scale was included as a possible means of establishing concurrent validity for any scale developed from the study. The wording and response options used here are unchanged from those of (Gorsuch and McPherson 1989). There are fourteen items, each using a five point Likert Scale having the response categories, 'Strongly Agree, Agree, Not Applicable/Don't Know, Disagree, Strongly Disagree.' The full scale is presented in Section 3 Question 11 of the survey questionnaire.

5.3.5   Section 4: Physio–socio-demographics

This section seeks information on a number of physical, social, and demographic factors.

Question 1: Gender.

Response categories were 'Male' and 'Female'

Questions 2, 3, and 4: Weight, height, and age

These were open questions, with the responses being used to calculate the respondent's Body Mass Index.

Questions 5 and 6: Education attained, Marital status.

These questions asked the respondent to select one option in an inventory for each, indicating their' highest level of education attained', and their 'marital status'

Question 7: Dependent children

This question asks for the 'numbers of dependent children' in each of four specified age groups; 0 – 5 years, 6 – 10 years, 11 – 17 years, and 18 years and older. This included dependent children not living with the respondent (for example, a divorced male respondent may be paying maintenance to children from a previous marriage. To avoid being too intrusive, this was not spelled out in the question). The question was intended only to detect dependent children, but it is recognised that some respondents could include non-dependent children.

Questions 8, 9, and 10: Residential address

These questions are concerned with the respondent's residential address, namely: 'street name, suburb, and postcode'.

Question 11: Present employment status

This question asks the respondent to indicate their present employment status in an inventory. The response options were: 'employed full-time, employed part-time, employed- casual, not employed, retired, volunteer, full-time student, part-time student'.

Questions 12 and 13: Present and previous occupations

These were open questions about the respondent's present and previous occupations included to supplement information from Question 11.

Questions 14 and 15: Hours spent in main occupation, Total income

These two questions asked respondents to indicate on a number line, the 'hours spent in their main occupation' and the 'total income for themselves and their partner'.

Question 16: Membership of clubs, volunteer, or self-help groups

This was an open question asking the respondent to list any clubs, volunteer or self help groups, or any other organizations they belonged to. Whether through official membership or attendance only was not specified.

5.4 Piloting and Administration of the Survey Questionnaire

5.4.1 Pilot Testing the Questionnaire

The purpose of the pilot administrations was to examine the time required for respondents to complete the questionnaire, wording of the items, the response options, and general suitability of the scales. There were three pilot stages. Two pilot groups were people from the same religious group, and the third from the general population. Details of the pilot administrations are as follows.

First Pilot

The first stage of piloting used thirty members of a local Seventh-Day Adventist Church. This was a sample of convenience, and the denominational composition for the pilot was of less importance than achieving a diverse group. Any bias that might be induced by changes based on pilot responses was minimised by the fact that the content of the questionnaire was theory driven and was not altered by the pilot responses. The purpose of the pilot was to examine the structure of the questionnaire, and issues relating to its administration to the study population. This first pilot group consisted of approximately half male and half female, both life-long and recently-joined church members aged between 20 and 65 years. Ten of the group held tertiary qualifications, one was a church pastor, and three were church elders. Respondents were instructed to first complete the questionnaire as quickly as possible, noting the time taken to do so, then to complete the questionnaire again and include any comments regarding the clarity or content of the questions and instructions.

The time required to complete the questionnaire varied from 25 to 60 minutes, with most taking about 30-35 minutes to complete. Changes made because of this pilot were minor, and limited to changes to item wording, response choices, and questionnaire layout.

Second Pilot

The second pilot group was made up of ten respondents from the first group, ten new respondents from the same congregation, and ten randomly selected members of the public who were recruited by door knocking. The purpose of this second pilot was to evaluate the changes made after the first pilot, and again respondents were asked to comment on anything they felt might improve the questionnaire. Seven of the public group completed the questionnaire (N = 27). Only minor changes were made to the basic structure of the questionnaire or to the item content.

Third Pilot

The third pilot stage involved critical evaluation of the item content by the leader of each congregation or group approached to participate in the study. Copies of the questionnaire were delivered to each participant in person, at which time their role in the pilot, and in the subsequent administration of the survey questionnaire, was explained. Each was asked to comment on the content of the items and on any aspect of either the questionnaire or its administration to their group.

Of the thirty ministers and group leaders who reviewed the questionnaire, none made any adverse comments. This indicated the content of the questionnaire was satisfactory, or at least not likely to cause offence.

5.4.2 Administration of the Questionnaire

Selection of Participating Groups

Many studies in this area have typically involved university students (particularly psychology students), the aged, or members of specific religious groups. To ensure variability in the data on beliefs, as many different religious groups or denominations as possible were represented. The groups approached for inclusion in the study included: Catholic, Anglican, Uniting, Presbyterian, Baptist, Pentecostal groups such as the Assemblies of God and Four Square Gospel, Salvation Army, Seventh-Day

Adventist, Church of Jesus Christ of Latter Day Saints (Mormons), Jehovah's Witnesses, Non-denominational groups such as Potter's House, Spiritualists, Jewish, 'New Age', and 'Non-religious' groups such as the Vegetarian Society. Several of these smaller groups (Mormons, and Seventh-Day Adventists) were included in the study because both groups were identified in the literature as having a better health status than the general population (Dwyer 1988; Levin 1996; Nieman 1988), and because it was important to maximise variability in the data. Respondents not claiming any group affiliation or attending any group meetings were sourced from the public. Details of participant recruitment are presented later in this section.

Exclusion Criteria

Data from the 1991 Australian Census was used as the primary source of information for excluding groups from the study (Castles 1991). The Census data shows that approximately 80% of the population report a Judeo-Christian orientation. Persons reported as having a religious orientation other than Judeo-Christian (for example, Islam, Buddhism, Hindu) represent approximately 2% of the population. These latter groups were excluded from the study because of the substantial differences in fundamental beliefs, and the difficulties associated with both constructing suitable items, and satisfying time and space constraints. Also excluded from the study were Christian groups or congregations with a high ethnic composition and for whom English was the second language (for example, Indian, Spanish, Korean, or Greek Orthodox congregations).

Sample Size

With a goal of achieving variability in the data to satisfy the exploratory nature of the study, the use of power and significance criteria to estimate the sample size was secondary to achieving a diverse study sample. It was anticipated the sample groups would have a non-normal distribution with respect to many of the measures. Applying the Central Limit Theorem, which in practical terms states that a sufficiently large number of samples taken from a non-normally distributed population will return an approximately normal distribution of means, the sample size should be at least thirty (Shott 1990). This minimum sample size was adopted for each of the male and female strata for each group. That is, a minimum of 60 respondents was required for each individual group participating in the study.

According to Census data smaller religious groups such as Baptists, Jehovah's Witnesses, Seventh-Day Adventists and Mormons each account for only about 0.3-0.5% of the Australian population (Castles 1991). To achieve 60 respondents in these groups by random selection from the population would require a minimum sample size of approximately $60 \div 0.003$ or 20,000. A 30% response rate lifts the sample size required to 60,000. A sample of this size is impractical, and for this reason, the best option was a sample of convenience from selected church congregations.

Recruitment of Religious and Non-Religious Groups

For logistical reasons, the participating groups were all located in the Perth metropolitan area, and were selected using two criteria. First, as many of the nominated religious groups as possible were to be represented in a particular suburb or immediately surrounding suburbs. Where a particular group was not represented within the sampling locations, the closest one to that location was selected. It is acknowledged that the catchment area for a church is often not restricted to the immediately surrounding suburbs. Members of a given congregation or group may sometimes traverse many suburbs to attend a congregation of their choice, and in doing so may pass by other churches of the same denomination. Second, there should be differences in socio-demographic factors between the suburbs. This information was obtained from the Census Atlas (Australian Bureau of Statistics, 1993). Three suburbs satisfied this socio-economic status criterion, and also had a good representation of the different denominational groups either in that suburb or its adjoining suburbs. These were; Forrestfield (an established lower income area), Leeming/Bateman (younger middle-income area), and Mt Pleasant (an older middle/upper income area). Groups not represented in these areas were accessed wherever they were available. This selection method does potentially give rise to a selection bias, but as the aim was to maximise the variability in the data, whether or not the sample was representative, was a secondary consideration.

Access to each religious group was in each case via several 'gatekeepers' (Bogdan & Taylor 1975, p. 31). In the first instance, where a Western Australian headquarters could be identified, an authorizing officer was first contacted by phone, with a follow-up explanatory letter that included a copy of the questionnaire. In each case,

the authorizing officer delegated the decision about participation to the local parish or church administration. The priest or pastor of the selected congregation was first contacted by phone, then sent the explanatory letter and a copy of the questionnaire. In all but one case, the decision to participate was taken by that individual, or by the local church board or administrative committee. The one exception was a congregation who forwarded the request to their Australian headquarters in Sydney. This was eventually approved and the group was included in the study.

There were a number of instances where participation of the target congregation was either not pursued, or not obtained. In the first case, the target congregation (Catholic – Forrestfield) was found to be predominantly of a single ethnic group, thus meeting the exclusion criterion. The second case was a church congregation (Salvation Army - Bentley) which was excluded because the youngest member was over 60 years of age. In the third case, a Spiritualist Church, the congregation declined to participate. In the first two cases, alternative congregations were selected, but for the Spiritualist church there was no alternative. The fourth case involved the Jewish community. There are two Jewish congregations in Perth, the Orthodox, and the Progressive. The Orthodox Jewish congregation declined to participate. The Progressive Jewish congregation agreed to participate but with the condition that administration of the questionnaire being carried out by an elder of the congregation after a mid-week meeting, and not on the Sabbath. However, circumstances were such that the questionnaire could not be administered, and there were no alternative Jewish congregations. The Vegetarian Society agreed to participate, but the difficulties with accessing members and administering the questionnaire in a reasonable period were insurmountable, so the group was removed from the participation list. Adherents to 'New Age' type beliefs do not generally operate according to a conventional congregational/church type organization as do most religious groups, but certain individuals coordinate a loosely bound group based largely on 'commercial' interests. One such group was identified and permission was obtained to recruit participants from group members having stalls at what was described as a 'New Age Fair'. This fair was held on a Sunday in a local hotel function centre and was open to the public.

The groups who participated in the survey are listed in Table 5.2. These details are in the format 'Denomination – Suburb where group meetings are held'.

Sampling the Church Congregations or Groups

The intended approach to sampling the religious groups was to administer the questionnaire to a randomly selected sample from a congregation after a typical worship service or meeting, as attendance could be expected to be highest at this type of meeting, compared with 'Sunday School' or mid-week meetings. In all cases, the sample was to be made up of volunteers. In most congregations, participation was requested by a senior officer of the congregation, usually the officiating minister or an assistant, and usually at the commencement of the worship service. The desirability of having a representative sample in respect of gender and age was made known to the congregation at this time. In only a few cases was administration of the questionnaire able to be conducted after the worship service. In the majority of cases, participants took the questionnaire home. To facilitate collection and follow-up, each participant provided personal details that were retained by the church, and agreed to be contacted if necessary to arrange for the questionnaire to be collected within a few days. There were several other variants of this procedure. In one case, the church minister provided a list of volunteers. Each person on the list was contacted by telephone to arrange for delivery of the questionnaire, and for its collection two days later. In another case, there was no contact allowed with the congregation, but the senior elder distributed and collected the questionnaire.

Selection and recruitment of the General Population Sample (GPS).

The purpose of the GPS was to provide a comparison group made up of members of the general public who had 'no religion', whether against religion or not. Such a sample would be more varied than secular groups such as sporting clubs.

The GPS respondents were chosen from those suburbs providing participants in the religious/church groups. In each of the suburbs where there were church group respondents, a number of widely separated streets were randomly selected from a street directory. Respondents were then recruited by door-knocking houses having at least two houses separation. The author conducted all recruitment of participants using a standard approach that explained the purpose of the study, and the steps taken to ensure confidentiality. Recruitment was conducted in accordance with advice provided by the Department of Fair Trading of the Western Australian Government that door-to-door activities were restricted to the hours between 8 A.M. and 8 P.M.

on weekdays only. Most recruiting was conducted in late afternoon to improve the likelihood of recruiting male respondents, and those working during the day. For reasons of personal security and to avoiding interrupting evening meal times, recruitment was not continued past 6:30 pm.

The target number of respondents for the GPS was 30 males and 30 females who had selected either of the two 'no religion' categories in the religious affiliation item (Section 1 Item 16). This target number was achieved by recruiting 109 respondents. The remaining 49 respondents not in these categories were reported having a religious or spiritual belief type, or denominational affiliation, and were included as a separate group named 'General Population –Religious'.

Table 5.2: List of denominational and other groups participating in the study

Group or Denomination & Suburb
Anglican – Bull Creek
Anglican – Mt Pleasant
Anglican –Forrestfield
Assemblies of God – Canning Vale
Assemblies of God – Southern Cross Bible College
Baptist - Como
Baptist - Forrestfield
Baptist – Mt Pleasant
Catholic - Bateman
Catholic - Bentley
Catholic - Como
Church of Jesus Christ of Latter-day Saints (Mormon)-Ballajura
Church of Jesus Christ of Latter-day Saints (Mormon)-Greenmount
Church of Jesus Christ of Latter-day Saints (Mormon)-Noranda
Four Square Gospel Church - Kelmscott
Jehovah's Witness – Wattle Grove
New Age – Not area specific
New Age - (Floreat Meeting)
Potter's House – Not area specific
Presbyterian – Peppermint Grove
Rhema - Riverview – Not area specific
Salvation Army – Swan View
Seventh- Day Adventist - Livingston
Seventh- Day Adventist – Maida Vale
Seventh- Day Adventist - Riverside
Uniting - Como
Uniting – Foothills
Uniting – Mt Pleasant

While the respondents in the GPS were volunteers and not representative of the general population, this method of recruitment did have the advantage of capturing respondents to the 'non religious' category who otherwise may not have responded to a mail-out type recruitment.

5.4.3 Test-Retest

All questionnaires administered included a separate consent form requesting respondents to complete the instrument a second time 10-14 days later. The consent form asked for the respondent's address and phone number, but the procedure ensured the questionnaires remained anonymous. Eighty nine respondents agreed to the retest. Questionnaires for retest were delivered to the respondents address, and collected two days later.

5.4.4 Validity Assessment

Potential validity assessment was limited to face and concurrent validity. Content validity was not assessed because the purpose of the study was to establish acceptable content. Construct validity was not considered for this exploratory phase of the questionnaire and its sub-scales as it requires the new measures to be correlated with a valid measure of the same construct (Carmines and Zeller 1988). As yet there is no broadly accepted measure to serve this purpose. Face validity addresses the extent to which a proposed measure appears to 'fit' with the concept it is intended to measure, in this case, religion/spirituality (Fullerton 1993; Aiken 1980). Face validity was taken as being achieved when the thirty church ministers and leaders who examined the questionnaire in the third pilot stage returned no adverse findings.

Concurrent validity of any new scale developed through the study was to be evaluated against the ROS-R (Gorsuch & McPherson 1989) included in Question 11, Section 3 of the questionnaire. Concurrent validity was evaluated by comparing the factor structures obtained from the study with those published for ROS-R.

5.5   Data Analysis Methods.

The principal aim of this data analysis was to identify those measures in the questionnaire that might create categories of respondents other than by denominational affiliation or group membership. For this reason, the emphasis was on *question-by-question* analysis to evaluate the potential measurement properties of each question. Tests of association were applied to only a few questions and were not an essential feature of the study. The following description of the data analysis first addresses the issues of data entry and cleaning, and then considers the methods applied to the individual sections of the questionnaire. Where required analysis was conducted using the Statistical Package for Social Sciences (SPSS), Version 10.

5.5.1   Data Entry and Cleaning, Missing Data

The format of the questionnaire presents difficulties with data entry. To ensure consistency of data entry, the author entered all data. Data entry was checked by proof reading, checking outliers, and by examining frequencies. Missing data were entered as missing. No attempt was made to estimate missing values as this would require making assumptions about respondent's beliefs, and there was no information upon which to base any such assumptions. Only missing postcodes were inserted.

Missing data could also have different patterns for each different question format. For example, the semantic differentials in Section 3 of the questionnaire appeared to have a greater number of older respondents who marked only one of the multiple semantic differentials for a given question, when all were to have been marked. To take account of this, missing data for each of the four sections of the questionnaire was described, but for the analysis, was removed by listwise deletion.

5.5.2   Grouping of the Data for Analysis

The construction of the questionnaire in four sections was for the purpose of administration, to avoid placing certain items close together, and to minimise problems such as response fatigue or response bias. However, to facilitate the analysis, the questions were grouped as follows.

Group 1: Section 1 Items 1 to 15 dealing with specific beliefs.

Group 2: Section 1 Items 16 to 26 and Section 2 Items 11 to 16 dealing with religious
practices

Group 3: Section 3 Items 1, 2, 4, 6 and 10 dealing with feelings about a range of
issues related to religious background and perceptions of God.

Group 4: Section 3 Items 7 and 8 dealing with perceptions about whether religion and
spirituality are the same or different concepts.

Group 5: Section 3 Items 3, 5, and 9 dealing with feelings about a range of existential
issues.

Group 6: Section 2 Items 1 to 10, and Section 4 Items 1 to 4 dealing with health
oriented variables.

Group 7: Section 4 Items 5 to 16 dealing with demographics.

Group 8: Section 3 Item 11 contained the ROS-R (Gorsuch and McPherson 1989) to
be used as a measure of concurrent validity if required.

The following description is based on this group structure.

5.5.3   Group 1

The response data for these questions is nominal categorical. Frequency distributions
were produced describing the number of respondents choosing each option. As is
described later in this section, these individual response options were used to
calculate odds ratios. Also, because respondents were able to choose more than one
response option in each question, the analysis included evaluating the effects of
combining response options, as a means of building individual response profiles. To
obtain this information, a technique was developed that described a respondent's
beliefs about the particular concept in question. The technique is illustrated in the
following section.

Creating Belief Profiles

Derivation of a single number representing a respondent's belief profile for a given
concept is now described using Questionnaire Section 1, Question 5 (The Bible) as
an example. This question had nine response options, numbered 1 to 9. These were
coded either '0' for not selected, or '1' for selected. In the following expression, the

exponential terms locate the options selected, and the summed value describes the combination of response options chosen for that question:

$$\text{Belief Profile} = [1 \times (\text{Option 1 response } (0 \text{ or } 1) \times 10^8)]$$
$$+ [2 \times (\text{Option 2 response } (0 \text{ or } 1) \times 10^7)]$$
$$+ [3 \times (\text{Option 3 response } (0 \text{ or } 1) \times 10^6)]$$
$$+ [4 \times (\text{Option 4 response } (0 \text{ or } 1) \times 10^5)]$$
$$+ [5 \times (\text{Option 5 response } (0 \text{ or } 1) \times 10^4)]$$
$$+ [6 \times (\text{Option 6 response } (0 \text{ or } 1) \times 10^3)]$$
$$+ [7 \times (\text{Option 7 response } (0 \text{ or } 1) \times 10^2)]$$
$$+ [8 \times (\text{Option 8 response } (0 \text{ or } 1) \times 10^1)]$$
$$+ [9 \times (\text{Option 9 response } (0 \text{ or } 1) \times 10^0)]$$

For example, for a respondent who selected options 4, 5 and 8 for this question, those response options are coded '1' and all other response options are coded '0'. The above expression then becomes:

$$1 \times (\text{option 1 response } (0) \times 10^8) \quad = 1 \times 0 \times 10^8 \quad = 0$$
$$+ 2 \times (\text{option 2 response } (0) \times 10^7) \quad = 2 \times 0 \times 10^7 \quad = 0$$
$$+ 3 \times (\text{option 3 response } (0) \times 10^6) \quad = 3 \times 0 \times 10^6 \quad = 0$$
$$+ 4 \times (\text{option 4 response } (1) \times 10^5) \quad = 4 \times 1 \times 10^5 \quad = 400000$$
$$+ 5 \times (\text{option 5 response } (1) \times 10^4) \quad = 5 \times 1 \times 10^4 \quad = 50000$$
$$+ 6 \times (\text{option 6 response } (0) \times 10^3) \quad = 6 \times 0 \times 10^3 \quad = 0$$
$$+ 7 \times (\text{option 7 response } (0) \times 10^2) \quad = 7 \times 0 \times 10^2 \quad = 0$$
$$+ 8 \times (\text{option 8 response } (1) \times 10^1) \quad = 8 \times 1 \times 10^1 \quad = 80$$
$$+ 9 \times (\text{option 9 response } (0) \times 10^0) \quad = 9 \times 0 \times 10^0 \quad = 0$$

Sum = 450080

This sum of the expression, termed here the 'Belief Profile', is the numerical description of that individual's belief profile for Question 5. This 'Belief Profile' is a numerical description of the individual's belief for a given question. It is a nominal category label and cannot be manipulated, as can ordinal, interval, or ratio data.

However, frequencies can be evaluated, and analysed using any method suitable for nominal categorical data.

Between Question Interaction Terms (BQIT)

The Belief Profile values calculated for each question provided the basis for evaluating selected interactions *within* questions. Initial analyses indicated a large number of possible combinations. Summing the Belief Profile values for selected questions, produced another numerical value describing the composite Belief Profile or interactions for the selected questions. This composite Belief Profile was termed the 'Between Question Interaction Term (BQIT)'. These BQIT values are not necessarily unique. If required, the uniqueness of any value can be checked by examining the *contributing* Belief Profile values. This BQIT value is also a category label and although it has no obvious mathematical meaning, frequency analysis is relevant.

Calculation of Odds Ratios

For each of the 108 options in Questions 1 to 15 of Section 1, the raw odds ratio (OR) for each of the twelve 'religious' groups was calculated using the following expression:

$$OR = \frac{(\text{'yes' responses for religious group} \div \text{'no' responses for religious group})}{(\text{'yes' responses for non - religious group} \div \text{'no' responses for non - religious group})}$$

(Altman 1991, p. 268)

The non-religious category was derived from the 'No religion – against religion', and 'No religion – not against religion' response options of Question 16 of Section 1.

That is, the odds of a respondent from each religious group selecting a given response option was compared with the odds of a respondent from the non-religious group of the general population sample selecting the same response option. The OR was calculated for each group as a whole, and also for males and females from each group separately, thus allowing differences in responses for both gender and group categories to be evaluated.

The 95% confidence intervals were estimated using the standard error (SE) of the log of the odds ratio (ln OR):

$$95\% \text{ Confidence Limits for log } odds = \ln(OR) \pm N_{0.975} \times SE(\ln(OR))$$

where $N_{0.975}$ is the value from the Normal distribution

$$SE(\ln OR) = \sqrt{\left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c} + \frac{1}{d}\right)}$$

and a and c, are the 'Yes', and b, and d the 'No' responses for the religious and non-religious groups respectively (Altman 1991, p. 269).

5.5.4 Group 2

Section 1 Question 16 provided the categories that separated the respondents based on religious group membership, and whether they were 'against' religion or not. This question addressed only religion.

For the remaining items in the group, continuous data from those items that used a number line, were in all cases collapsed into ordinal data using category ranges reflecting the respective distribution of responses. The remaining questions that used binary or Likert responses were left unchanged. .In all cases, frequency distributions were used to assess the data.

5.5.5 Groups 3, 4 and 5

These groups comprised all the semantic differentials of Section 3 of the questionnaire. In selecting the analytical procedures for these questions, several issues arose. First, semantic differentials provide a measure of feelings about a concept for which there is no true zero response, so the raw data from the number line is interval level data. Interpretation of responses about feelings is complex. For example, a 'new convert', having recently made a decision to religious commitment, may show an apparently greater intensity of feeling or belief than someone who has held to their beliefs for many years. The difference in responses may be due not just to the strength or intensity of feeling, but may arise from differences in other unspecified aspects of the affective response. The relationship between intensity of feeling and time might be non-linear, and other factors such as indiscriminate pro-

religious or anti-religious behaviour may also influence or skew measures. Secondly, in most cases the frequency data are skewed, because respondents are possibly reluctant to appear as having negative feelings towards God. Skewing is not necessarily a problem, and may be the norm for the types of concepts in question.

The purpose of this analysis is to reduce the large number of variables by selecting those offering the most meaningful explanation of the data. To prepare the data after reversal, the continuous data was reduced to four ordered categories with the following boundary values. This category structure produced roughly the same frequency of responses in each category.

Table 5.3: Ordered category boundaries for continuous data

Ordered Category	Continuous Data Values in Category
1	0 – 60
2	61 – 85
3	86 – 97
4	98- 100

For non-normally distributed data, Principal Axis Factor Analysis (PAF) with Oblimin rotation was used to explore the factor structure of these questions. The Oblimin rotation took into account any correlations between the factors. Factors with eigenvalues greater than one were retained, and where required, Cronbach's Alpha was calculated for the factors and used to reduce the number of items in each factor.

5.5.6   Group 6

Responses for Section 2, Items 1-4 having a five point Likert response format 'Strongly Influence for to Strongly Influence Against' were coded 1 to 5, while Items 5 and 6 that have a three point Likert response 'Strongly Influence to No Real Influence' were coded 1 to 3. Section 2, Question 7 dealing with health behaviours was treated as nominal data. For those questions using a number line, the continuous data was collapsed into ordered categories.

Section 4 Item 2 (Weight) and Item 3 (Height), were used to calculate the Body Mass Index (BMI) using the formula:

$$BMI = \frac{Weight\,(kg)}{Height^2\,(m)}$$

(Wahlqvist 1988, p. 201)

The BMI could be used to assess lifestyle factors such as exercise, addressed in Question 7 of Section 2. The BMI and Age data were also recoded to ordinal data for analysis.

5.5.7 Group 7: Section 4 Items 5 – 16 dealing with demographics.

Of the questions in this group, level of education, marital status, address, employment status, present and past occupations, and organizational or club membership were either nominal or ordinal data. Hours worked (Question 14) and Income (Question 15) both used continuous number lines, but the data was collapsed to ordered categories.

5.5.8 Group 8: The Gorsuch and McPherson I/E-Revised Scale

The ROS-R (Gorsuch and McPherson 1989) was analysed using Exploratory Factor Analysis (Principal Axis Factoring with Direct Oblimin Rotation). The factor structure obtained was compared with that reported by Gorsuch and McPherson.

5.6   Test –Retest

The test-retest administration provided anonymity for the respondents, but for analytical purposes, the test-retest responses were able to be matched using address, gender, age, and occupation data. The discussion that follows briefly describes the generation of the various statistics for establishing the reliability of the responses.

5.6.1   Group 1

The test-retest reliability of the responses for this group was evaluated in several ways. Kappa (K) is a commonly used measure of agreement for dichotomous data that takes into account the influence of chance agreement. For each respondent, each original response option is compared with the retest response option using a 2 x 2

cross tabulation (Altman 1991). The strength of agreement attached to the Kappa statistic are as listed in Table 5.4.

Table 5.4: Kappa statistics and strength of agreement

Value of Kappa*	Strength of Agreement
<0.20	Poor
0.20 – 0.40	Fair
0.41 – 0.60	Moderate
0.61 – 0.80	Good
0.81 – 1.00	Very Good

* Values from (Altman 1991, p. 404)

The following example illustrates this method. For Section 1, Question 1, Response Option 3, the response data is as follows.

	Retest		
Test	**0**	**1**	**Row Totals**
0	62	9	71
1	7	11	18
Column Totals	69	20	89

The exact agreements are 62 + 11 = 73 or 73 ÷ 89 = 0.82 or 82%

This value does not take account of the agreement that could result by chance alone. The expected agreement is given by:

[(71 x 69) + (18 x 20)] ÷ 89 = 59

The proportion of agreements expected by chance is 59 ÷ 89 = 0.66

The maximum agreement is 1.00, so the proportion of agreement not due to chance is:

1.00 - 0.66 = 0.34

Kappa for this example is obtained as follows:

(0.82 - 0.66) ÷ (1.00 - 0.66) = 0.47, meaning that moderate agreement has been obtained.

Where a cell is empty, kappa cannot be calculated, and it is necessary to use other means to assess the retest reliability.

149

5.6.2 Groups 2 and 6

Both these groups included nominal, ordinal, interval and ratio data. The Kappa statistic was calculated for nominal data, and the weighted Kappa for ordinal data involving more than two categories. The paired t-test was used to compare the interval and ratio data prior to collapsing it into ordinal data. The lack of a significant difference would be interpreted as stability of responses over the fourteen-day period.

5.6.3 Groups 3, 4 and 5

The data in this group are all interval data generated from the semantic differentials. The t-test was applied to the continuous interval data prior to collapsing it into ordinal data. The t-statistic was used to estimate whether differences in test and retest data sets were significantly different. The absence of a significant difference indicated the test and retest responses were stable over the fourteen day period.

5.6.4 Group 7

The majority of data in this group are nominal categorical for which the Kappa statistic was estimated. The t-test was applied to the remaining interval and ratio data.

5.6.5 Group 8

The ROS-R scale (Gorsuch and McPherson 1989) uses a five point Likert scale, so weighted Kappa statistics were estimated.

5.7 Chapter Summary

This chapter completes the description of the questionnaire development, its theoretical and organised structure, its content, and the methodology for piloting and final administration. The final questionnaire comprised four sections containing elements of the tripartite classification that are implemented in this study as cognitions (beliefs), conations (behaviours, in the absence of a longitudinal study to evaluate intent), and affect (feelings). In addition to the structure of the questionnaire, the use of multiple response questions to build respondent profiles and

interaction terms, the use of odds ratios to examine group homogeneity and gender effects, and semantic differentials to measure affect, are all uncommon.

The description of the pilot, main and retest administrations of the questionnaire includes selection and recruitment of the survey population, and corresponding analytical methods.

The next chapter presents the results of the survey, with some of the findings potentially having significant implications for research into the measurement of religion and spirituality.

CHAPTER 6
Results

6.1   Overview of Results

The questionnaire was administered to a sample drawn from church congregations and the public over a three week period. Seven hundred and twenty questionnaires were distributed to participants, of which 700 (97%) were returned for 611 (85%) useful responses. The purpose of the analysis was to identify which of the measures used could contribute to resolving some of the impediments to progress in researching religion/spirituality, and to the creation of meaningful ways to discriminate between respondents. The results reveal potential avenues to resolve several of the difficulties often encountered in the study of religion and spirituality. For instance, the assumption that religious denominations are homogeneous, as is often implied by the use of religious affiliation as a study variable, is brought into question by results showing that the beliefs of members of most groups are probably quite heterogeneous. Data showing differences in responses between genders offers further support for this heterogeneity. The results also reveal that spirituality is considered a more positive concept than is religion, and that this trend is strongly influenced by denominational affiliation, as is the tendency toward being either 'Indiscriminately Pro-religious' or 'Indiscriminately Anti-religious.'

The results reveal a strong association between denominational affiliation and the number of health habits practiced. This may be one of the few instances where the use of 'denominational affiliation' may be valid because of there are several denominations (for example, Seventh-Day Adventists and Mormons) whose members generally adhere to the prescribed health practices of the denomination.

Factor analysis of the semantic differentials, together with the frequency data, resulted in the successful extraction of a number of factors that could be of use for further studies. From the demographic data, the differences in education levels between denominational groups is marked, while the association between the number of dependent children and frequency of Bible study is indicative of the interactions between demographic factors and certain behaviours.

The reliability of the results is underpinned by the good test-retest statistics obtained from a sample of N = 89 (15% of the total sample).

Section 6.2 describes the sample characteristics including respondent distribution, and age and gender composition. This grouping differs from that in the questionnaire which was designed to satisfy psychometric requirements. Section 6.3 presents the test-retest results. Section 6.4 describes the missing data characteristics and the face, content and concurrent validity of the main data set. Section 6.5 first describes the regrouping of the questions for analysis. It presents a summary of all results in Table 6.6 before describing the complete analysis in detail.

6.2   Characteristics of the Survey Sample

6.2.1   Respondent Distribution

The distribution across religious/spiritual group affiliation of the respondents is summarised in Table 6.1. This sample does not reflect the distribution of these groups in the general population. For example, smaller groups such as Mormons, Jehovah's Witness, and Seventh-Day Adventists which each contribute 5 – 10% of the study sample, represent less than 0.5% of the general population. As discussed in Section 5.4.2, this was done to ensure variability in the data.

Table 6.1: Distribution of respondents across groups

Group Identity	Number Of Respondents	% of Total
Anglican	55	9.0
Assemblies Of God	52	8.5
Baptist	67	11.0
Catholic	47	7.7
GP-NR	53	8.7
GP-REL	47	7.7
Jehovah's Witness	28	4.6
Mormon	53	8.7
New Age	18	3.0
Presbyterian	8	1.3
Pentecostal	54	8.8
Salvation Army	15	2.4
Seventh-Day Adventist	55	9.0
Uniting	59	9.6
Total	**611**	**100**

6.2.2 Age and Gender Distribution

The age and gender distribution of the sample is presented in Table 6.2. The total sample consisted of 56.8% females and 43.2% males. The mean age was 44.5 years (SD =16.0 years), the median age 43 years, and the range 14 to 87 years. The detailed group affiliation and age distribution is presented in Appendix C

Table 6.2: Age and gender distribution of the survey respondents

Age (Years)	Total Sample			Female		Male	
	Frequency (N)	%	% of Valid	Frequency (N)	% of Valid	Frequency (N)	% of Valid
<20	30	4.9	5.0	15	2.5	15	2.5
21-30	100	16.4	16.9	59	10.0	41	6.9
31-40	121	19.8	20.4	74	12.5	47	7.9
41-50	148	24.2	25.0	85	14.3	63	10.6
51-60	90	14.7	15.2	47	7.9	43	7.3
>60	104	17.0	17.5	57	9.6	47	7.9
Total	593	97.1	100	· 337	56.8	256	43.1
Missing*	18	2.9					
Total	611	100.0					

* Missing for age and gender data only

6.3 Test-Retest Results

The retest sample (N=89) was 15% of the total usable test sample (N=611). Results of the analyses conducted on either raw or recoded data are summarised as follows. There were 294 questions in the questionnaire subjected to test-retest reliability using either the Kappa or the 't'-test. The Kappa statistic was applied to 153 questions with 72% (110 questions) returning moderate to very good strength of agreement . Interpretation of the Kappa values and the values obtained for those items are as listed in Table 6.3.

Table 6.3: Distribution of Kappa values for test-retest data

Value of Kappa*	Strength of Agreement	% of Responses (153 items)
<0.20	Poor	2
0.20 – 0.40	Fair	18
0.41 – 0.60	Moderate	28
0.61 – 0.80	Good	33
0.81 – 1.00	Very Good	11
	Missing Data	8

* Values from (Altman 1991, p. 404)

The remaining 141 questions were evaluated using the paired t-test: For 9% (13 questions), there was a significant difference at the 5% significance level. In the remaining 91% (128 questions), the null hypothesis that there was no difference between test and retest data could not be rejected. Overall these results show 81% (238 of the 294 questions that could be tested) returned a test statistic indicating a moderate to good agreement between test and retest. Details of test-retest results for each data group are presented in Appendix Z, which includes an examination how some of the retest responses changed in relation to the age, gender and denominational affiliation of the respondents.

6.4 Analysis of the Main Data Set

6.4.1 Missing Data

In the process of developing measurement scales, missing data can provide information about the content, wording or structure of questions or the administration of the questionnaire. This section examines the frequency, gender and age related distribution of the missing data looking for any useful patterns.

The proportion of missing values varies with the different questions in the questionnaire, and in for each question, listwise deletion reduced the number of respondents from the original 611 useful responses. For each of the Groups 1-8, the missing data frequencies are presented in Table 6.4.

Table 6.4: Missing data frequencies

Group	Questionnaire Section (Question N^{os})	Mean % Missing	Std Deviation (%)
1	1 (1-15)	0.93	0.76
2	1 (16-26) 2 (11-16)	2.0	2.0
3	3 (1, 2, 4, 6, 10)	16.4	4.8
4	3 (7, 8)	14.4	2.1
5	3 (3, 5, 9)	16.2	4.8
6	2 (1-10) 4 (1-4)	2.1	1.5
7	4 (5-16)	5.4	3.7
8	3 (11)	4.0	0.60

For Groups 1, 2, 6, 7 and 8, missing data occurred in less than 5% of questions. However, for Groups 3, 4 and 5, the missing data was comparatively higher at 16.4%, 14.4%, and 16.2% respectively. The questions in these three groups consist of semantic differentials from Section 3 of the questionnaire. As the items from Section 4 of the questionnaire reported only about 5% missing data and would in most cases have been completed after Section 3, higher missing data in Groups 3, 4 and 5 was probably due to the structure of the questions or the administration methods used; in several of the congregations it was necessary to allow the participants to take the questionnaire home. In one congregation in particular, nearly all the respondents marked only one of the semantic differentials in each question, rather than all as was instructed.

Examples from Groups 3, 4 and 5 Data

Table 6.5 shows the distribution of the missing data for Groups 3, 4 and 5 across respondent group affiliation.

Table 6.5: %Missing data across group affiliation for Groups 3, 4 & 5

Collapsed Group ID	% of Total Missing for Groups 3, 4 & 5
Anglican	21.8
Pentecostal	6.2
Baptist	11.5
Catholic	5.4
Jehovah's Witness	6.6
Mormons	8.2
New Age	3.6
Presbyterian	0.1
Seventh-Day Adventist	0.8
Uniting	8.0
Assemblies of God	5.6
GP-NR	15.6
GP-REL	6.6
Totals	**100**

It is likely the high proportion of missing data recorded for the Anglican group relates to one particular congregation where there were possibly issues arising from the administration of the questionnaire to the group. In this case, a group elder organised a one-off administration to a single group of respondents without the

researcher being present. It is evident from the response pattern that the instructions for that section were not clearly understood, as many of these respondents marked only those semantic differentials they felt were relevant to them. The instructions clearly asked that all the questions be answered. This information would be taken into account in the construction of a revised questionnaire.

6.4.2 Face and Content Validity of the Survey Questionnaire

Both face and content validity of the questionnaire were assessed during the construction, piloting and administration of the questionnaire. The questionnaire consisted of a number of sub-scales representing possible dimensions and types of measures. Each of these sub-scales was evaluated for its potential as an individual measure of religiosity/spirituality.

Face Validity

Face validity addresses whether the value of a measure of religiosity/spirituality is likely to change accordingly if the religious/spiritual status of a respondent changes (see Fullerton 1993). Various elements of the questionnaire could be evaluated for face validity. For example, Section 1 of the questionnaire included questions on a range of religious beliefs, together with a range of responses that could continue to provide a profile of the respondent's beliefs which could change over time as a respondent 'grows' or 'matures'. Similarly, Section 2 Questions 1 to 10 asked about a range of health behaviours which could also be expected to change with a respondent's attitudes towards health matters; as would questions addressing religious/spiritual affiliations and attendance, or demographic issues. The elements of the questionnaire that are more difficult to assess are the semantic differentials in Section 3, because this method of measurement does not appear to have been previously applied to the measurement of religion/spirituality, and so little is known about it. A crude assessment of face validity was achieved in the recruitment of religious groups. The gatekeepers for each group approached were ministers of religion who reviewed the questionnaire before consenting to its administration to their congregation. Although each of these persons was requested to comment on the content, no adverse comments were received. From these observations, it may assumed the item content has face validity.

157

Content Validity

A scale has content validity if its items adequately measure the construct in question (Fullerton 1993, Carmines & Zeller 1988). With the exploratory nature of the study, assessment of content validity might not be appropriate, as any judgment as to whether the measures used actually measure elements of religion/spirituality is subject to question. However, if the results show denominational groups to be heterogeneous (for example, in their beliefs), or that there are differences in gender responses, or that there are differences between religion and spirituality, and these results are correct, then it could be claimed that those elements of the questionnaire producing those results have content validity.

Concurrent Validity

Concurrent validity is a form of criterion validity obtained when scales using measures of similar interest, are administered simultaneously. The questionnaire included the Religious Orientation Scale – Revised (ROS-R) (Gorsuch & McPherson 1989) for this purpose. Exploratory factor analysis was used to generate the factor structure of the survey data. Principal components and principal axis extraction methods with both orthogonal and oblique rotations each gave a factor structure consistent with that reported by Gorsuch and McPherson. The factor structure obtained was as follows:

Factor 1: Options 1, 3, 4, 5, 7, 10, 12, 14 (Corresponding to the ROS-R 'I (Revised)')

Factor 2: Options 6, 8, 9 (Corresponding to the ROS-R 'Ep (Revised)')

Factor 3: Options 2, 11, 13 (Corresponding to the ROS-R 'Es (Revised)')

Cronbach's Alpha estimates of internal consistency for the three factors obtained (those reported for ROS-R) were 0.14 (0.83), 0.62 (0.57), and 0.61 (0.58) respectively. The reliabilities estimates for the factors from this study are poor compared with those reported for ROS-R by (Gorsuch and McPherson 1989). It is possible that the sample of college students used by Gorsuch and McPherson was more homogenous with respect to age and beliefs. These results form part of the Group 8 analysis discussed later in Section 6.4.8

6.5 Grouped Data Analysis

6.5.1 Grouping of the Questions for Analysis

The questions were arranged throughout the questionnaire as part of the methodology. To facilitate the analysis, the questions were reorganised into logical groupings as described in Table 6.6. As there is a large volume of information in this analysis and in the appendices, these results are *summarised in Table 6.6* prior to the detailed presentation of the results.

6.5.2 Group 1 Data

The analysis for this group aims to examine respondent Belief Profiles for patterns that could be used to create categories of respondents other than group affiliation, and also to examine basic assumptions about group homogeneity that are implicit in the literature. Because multiple dichotomous response options were used, suitable analytical techniques are limited. However, odds ratios and what is possibly a novel interaction term developed for this data, provide compelling evidence that challenges those assumptions.

Frequency Data

The raw frequency data for all response options in Group 1 are in Appendix D. Beyond providing a crude indication as to which response options were most selected this data is of limited usefulness and in this form is not considered further in subsequent analyses.

Odds Ratios

Odds are the ratio of the probability of selecting a given response option to that of not selecting the same response option. The 'Odds Ratio' (OR), is the ratio of the odds of a given response being selected by a group, to the odds of that same response option being selected by the reference group. The General Population - Non-Religious group (GP-NR) were selected as the reference group to maximise the likelihood that the odds ratio would be greater than one for most of the religious groups and most of the response options. It should be noted that a high OR does not imply a high frequency of selection; a low selection frequency can produce a high odds ratio if the odds in the reference group (the denominator in the odds ratio calculation) are even lower.

Analytical Group & Theoretical Element	Questionnaire Sections	Question Numbers	Concepts Explored	Purpose of Analysis
Group 1: Cognition or beliefs	1	1 to 15	• Fifteen specific religious beliefs	• Test homogeneity of religious groups
Group 2: Religious/spiritual Practices and Behaviours	1 2	16 to 26 11 to 16	• Religious practices	• Question-by-question analysis • Identify behaviour that discriminates between respondents
Group 3: Affect (feelings)	3	1, 2, 4, 6, 10	• Religious background, • Perceived religiosity/spirituality of parents/guardians • Perceptions of god.	• Explore factor structure • Identify factors for inclusion in measures of religion/spirituality • Reduce the number of options in each factor if required
Group 4: Affect	3	7, 8	• Perceptions about religion and spirituality as the same or different concepts.	• As for Group 3
Group 5: Affect	3	3, 5, 9	• Existential issues,: • The Future • Life's Meaning • The Poor and Needy - Altruism	• As for Group 3
Group 6: Behaviours	2	1 to 10	• Health and lifestyle practices	• Included to identify health-related behaviours associated with religious beliefs
	4	1 to 4	• Height, weight, age,	
Group 7: Demographics	4	5 to 16	• Demographics	• Included for possible modelling
Group 8: Concurrent Validity	3	11	• Gorsuch & McPherson ROS-R • Concurrent Validity check	• Explore factor structure for comparison with published structure

Table 6.6: Summary of Results – Descriptions of Group Content, Concepts Explored, and Purpose for the Analysis.

Concept	Data type Analytical Method Details Located in..	Summarised Results and Conclusions	Item Retained?
	Binary data Odds ratios using non-religious public group as reference group. Each response option tested separately. Section 6.4.2 Tables 6.8 – 6.9, Appendices E, F	• Shows considerable variability in beliefs *across* all groups even for core Christian beliefs such as the nature of God. • Shows variability of beliefs *within each* religious group • Shows that gender-based variability in beliefs can be large. • Concludes that for beliefs tested, religious groups are generally *not* homogeneous as implied by use of the 'religious affiliation' variable. • Alternative groups explored.	
Fifteen core Christian beliefs	Belief profiles combine selected responses options for each questions into single number representing a belief profile. Section 6.4.2 Table 6.10 Appendix G, H	• Results show between 14 and 61 different Belief Profiles for *each* question..	All Retained with modification
	Between Question Interactions combines belief profiles for different core concepts Section 6.4.2 Table 6.11	• Combinations of Belief Profiles for from 2 to 4 core concepts returned 51 to 310 interaction terms, and shows extent of heterogeneity of beliefs	
	Recoding Belief Profile to create new groups as alternative to religious groups. Section 6.4.2 Tables 6.12-6.14 Appendices I, J, K, L	• Recoding identifies from 3 to 5 categories of dominant responses for each of the 15 core beliefs. These new categories collect respondents from all religious groups (Appendix L) and offer potential alternatives to religious affiliation as a means of grouping respondents.	

Table 6.6: Summary of Results – Group 1:

Concept	Data type / Analytical Method / Details Located in...	Summarised Results and Conclusions	Item Retained?
Religious affiliation	Self-report religious affiliation / Frequencies / Section 6.4.3, Sect 1 Question 16, Appendix M	• Wide variations in self-reported religious affiliation indicates respondents do not always identify with an official group name.	Retained
Duration of present beliefs	Continuous collapsed to ordinal, Frequencies / Section 6.4.3, Sect 1 Question 17, Table 6.15, Appendix N	• As expected, duration of attendance is strongly associated with age and religious affiliation. Results inconclusive for the small sample.	Retained for use with larger sample.
Respondent has current group membership?	Yes/No, Frequencies / Section 6.4.3, Sect 1 Question 18, Appendix N	• No current group membership >55% in 'GP-NR', 'GP-REL', and 'New Age' respondents.	Retained
Church or meeting attendance – ever attended	Yes/No, Frequencies / Section 6.4.3, Sect 1 Question 19, Appendix N	• Filter question.	Possibly retain
Frequency of meeting attendance	Likert scale – ordinal data, Frequencies / Section 6.4.3, Sect 1 Question 20, Appendix N	• Frequency of attendance is strongly associated with group membership, but large range found within most groups. Overall, 34% attended once/week. Results inconclusive for the small sample	Retained for use with larger sample.
Duration of meeting attendance	Continuous data collapsed to ordinal, Frequencies / Section 6.4.3, Sect 1 Question 21, Appendix N	• The results showed no useful trends	Not retained
Meeting type	Inventory type response options / Section 6.4.3, Sect 1 Question 22, Appendix N	• The results showed no useful trends due to poor item construction	Possibly retained if modified
Financial contributions	Continuous data collapsed to ordinal, Frequencies / Section 6.4.3, Sect 1 Question 23, Appendix N	• 21% of respondents (range 0 – 98%) made nil contributions • 49% of respondents (range 0 - 83%) made >10% of income contributions	Retained
Previous group membership	Yes/No, and names of previous memberships / Section 6.4.3, Sect 1 Question 24, Appendix N	• No useful results obtained, but may be useful for larger sample	Not retained in this form

Table 6.6: Summary of Results – Group 2:

Concept	Data type Analytical Method Details Located in..	Summarised Results and Conclusions	Item Retained?
Physical disability Prevents participation	Yes/No Frequencies Section 6.4.3, Sect 1 Question 25, Appendix N	• 96% returned 'No' response	Retained for larger sample.
Similarity of spouse beliefs	Yes/No/Not Applicable Frequencies Section 6.4.4, Sect 1 Question 26, Appendix N	• 62% (range 40 – 70%) reported spouse had similar beliefs	Retained
Exposure to TV, videos having religious/spiritual content	Continuous data collapsed to ordinal Frequencies Section 6.4.4, Sect 2 Question 11, Appendix O	• 45% of respondents (range 2 – 50%) watched more than 2.5 hours/week	Retained
Exposure to general tv, video or similar	Continuous data collapsed to ordinal Frequencies Section 6.4.4, Section 2 Question 12, Appendix O Tables 6.19-6.20	• 32% of respondents (Range 0 – 38%) watched < 1.0 hours/day • 18% of respondents (Range 8 – 33%) watched >3-5 hours/day	Retained but may require modification
Use of meditation, yoga & related techniques	Continuous data collapsed to ordinal Frequencies Section 6.4.4, Section 2 Question 13, Appendix O	• 83% of respondents (Range 11 – 100%) did not use these techniques • Only the New Age group showed an elevated frequency of use (72%) beyond the '0.1-2 times/week' category.	Does not discriminate, Not retained
Use of personal prayer	Continuous data collapsed to ordinal Frequencies Section 6.4.4, Section 2 Question 14, Appendix O Table 6.21	• Nil % of respondents (Range 0 – 75%) did not pray at all • 48% of respondents (Range 0 – 28%) prayed > 7 times/week	Retained subject to defining prayer
Personal bible study	Continuous data collapsed to ordinal Frequencies. Section 6.4.4, Section 2 Question 15, Appendix O Table 6.22	• 30 % of respondents (Range 0 – 96%) did not study at all • 55% of respondents (Range 0 – 62%) studied up to 7 times/week • 15% of respondents (Range 0 – 42%) studied >7 times/week High proportion of 'Nil' respondents in GP-REL, Anglican, and Catholic groups. Small Protestant groups reported high levels of involvement	Retained subject to modification
Voluntary involvement	Continuous data collapsed to ordinal Frequencies Section 6.4.4, Section 2 Question 16, Appendix O Table 6.23	• The results are not useful due to difficulties with defining voluntary involvement.	Not retained
Gender effects in prayer, bible study, voluntary involvement	Differences in Male /female responses Section 6.4.5, Table 6.24, Appendix P	• There is evidence to warrant further investigation of gender effects in these variables.	Not Applicable

Table 6.6: Summary of Results - Group 2 cont'd

Concepts	Data type Analytical Method Details Located in..	Summarised Results and Conclusions	Item Retained?
Perceived parental religiosity/spirituality	Continuous data collapsed to ordinal. Frequencies, Exploratory Factor Analysis Section 6.4.6, Questionnaire Section 3, Questions 1 & 2 Appendix Q, Table 6.25-6.26	• Two factors explaining 69% of variance • Factor 1 – all options from Question 2 • Factor 2 - all options from Question 1 • Factor correlation = 0.66 • Factors did not discriminate between religion and spirituality • Factors did discriminate between mother's and father's religion/spirituality. • Frequency data suggests mother's influence is more positive.	Items retained
Perceived influence of religion/spirituality	Continuous data collapsed to ordinal. Frequencies, Exploratory Factor Analysis Section 6.4.6, Questionnaire Section 3, Questions 4 & 6 Appendix Q, Tables 6.27- 6.28	• Two factors explaining 64% of variance • Factor 1 – all religious and spiritual options from Questions 4 and 6 • Factor 2 – all science and philosophy options from Questions 4 and 6. • Factor correlation = -0.15 • Factors did not discriminate between religion and spirituality • Factors did discriminate between religion/spirituality and science/philosophy. • Frequency data suggests religion/spirituality viewed more positively than science/philosophy. • Religious/spiritual respondents' less likely to use science/philosophy to explain 'meaning of life'.	Items retained
Feelings about God	Continuous data collapsed to ordinal. Frequencies, Exploratory Factor Analysis, Alpha Reliability Section 6.4.6, Questionnaire Section 3, Question 10 Appendix Q, Tables 6.29 -6.31	• Two factors explaining 63% of variance • Factor 1 – comprises all options not in Factor 2 • Factor 2 Options 19, 21 dealing with understanding God. • The number of options in Factor 1 reduced from 21 to 10 using Alpha criterion. The factor describes the characteristics of God, and God's interest in the respondent..	Question retained with reduced number of options.

Table 6.6: Summary of Results – Group 3:

Concepts	Data type Analytical Method Details Located in..	Summarised Results and Conclusions	Item Retained?
Religion	Continuous data collapsed to ordinal. Frequencies, Exploratory Factor Analysis Section 6.4.7, Questionnaire Sect 3, Question 7 Table 6.32, Appendix Q, R	• Two Factors explaining 68% of variance • Factor 1 describes characteristics of religion as 'valuable, strong, practical, meaningful' • Factor 2 describes whether religion is 'easy ' or 'readily understood' • Frequency data suggests religion is considered hard rather than easy to understand.	Items Retained
Spirituality	Continuous data collapsed to ordinal Frequencies Exploratory Factor Analysis Section 6.4.7, Questionnaire Sect 3, Question 8, Table 6.33, Appendix Q, S	• Two Factors explaining 69% of variance • Factor 1 describes characteristics of spirituality as 'valuable, strong, practical, meaningful' • Factor 2 describes whether religion is 'easy ', 'readily understood', and 'non-threatening'. • It is suggested respondents feel less threatened by spirituality than by religion	Items Retained
Combined religion and spirituality	As above Exploratory factor analysis on combined data set. Section 6.4.7, Questionnaire Sect 3, Questions 7 & 8, Appendix Q, T	• Five factors explaining 74% of the variance. • The factor structure for the combined questions suggest religion and spirituality are perceived differently by respondents.	Supports Retaining items
Combined religion and spirituality	As above Comparison of Questions 7 (Religion) and 8 (Spirituality) using 't-test' on identical questions. Recoding of differences raw reversed scores for each question Section 6.4.7, Appendix U, Table 6.34- 6.35	• For all but two options (Option 15 'readily understood – not readily understood', and Option 19 'affected/not affected by the physical body') • Hypothesis that there is no difference between the mean scores for religion and spirituality is rejected. • Recoding indicates groups most likely to perceive spirituality as the more positive concept include: New Age, and GP-NR. • Religion considered the more positive concept by: Salvation Army, Anglican, Baptists, and Seventh-Day Adventists.	Not Applicable
Indiscriminately Pro-Religious Indiscriminately Anti-Religious	For Questions 7 & 8 Comparison of % of respondents having raw reversed scores in the ranges; • 80% of scores in range 97-100 for Indiscriminately pro-religious • 80% of scores in range 0 – 3 for indiscriminately anti-religious Section 6.4.8, Tables 6.36-6.38	• Indiscriminately pro-religious: 17 – 25% of following groups meet the 80% criterion, Assemblies of God, Jehovah's Witness, Pentecostal, and Mormons. • Indiscriminately anti-religious: 13 – 23% of following groups meet the 80% criterion, GP-NR, Anglican, New Age, and Salvation Army.	Not Applicable

Table 6.6: Summary of Results - Group 4:

Concept(s)	Data type Analytical Method Details Located in.	Summarised Results and Conclusions	Item Retained?
The Future	Continuous data collapsed to ordinal. Frequencies, Exploratory Factor Analysis Section 6.4.9, Questionnaire Sect 3, Question 3 Table 6.39, Appendix Q	• Three factors explaining 61% of variance • Factor 1: contains the highest loading options together with frequency data suggests the positive characteristics 'bright, comforting, full of hope, and peaceful' describes the future for many respondents. The lower loading options such as 'unchanging, has many goals, not frightening, and free of nuclear war', are more complex. • Factor 2: describes the ability to know the future as 'mysterious' or 'a matter of fate'. • Factor 3: ('predictable, to go on forever') also pertains to the predictability of the future. However, the frequency data suggests this factor may be less positive that the others.	Reduced option set retained – Cross-loaded options removed
Life's Meaning	Continuous data collapsed to ordinal. Frequencies, Exploratory Factor Analysis Section 6.4.9, Questionnaire Sect 3, Question 5 Table 6.40, Appendix Q	• Three factors explaining 61% of variance • Factor 1: contains 13 of the 18 options and describes the general descriptives of life, such as hope, satisfaction, comfort, refreshment, and meaning. The frequency data indicates they are perceived positively. • Factor 2: appears to describe the uncertainties about life through the terms 'change, wonderment and mystery'. The frequency data tends to be negative. • Factor 3: deals with the 'urgency', and 'predictability' in life. Frequency data indicates they are viewed negatively.	Reduced option set retained – Cross-loaded options removed
The Poor and Needy - Altruism	Continuous data collapsed to ordinal. Frequencies, Exploratory Factor Analysis Section 6.4.9, Questionnaire Sect 3, Question 9 Table 6.41, Appendix Q	• Four factors explaining 59% of variance • Factor 1: collected options describing the value of the poor and needy, and that they are 'noticed by God'. This factor has a positive weighting in the frequency data. • Factor 2: is a negative factor indicating respondents thought the poor and needy to be lazy and ungrateful, and that their poverty is self-inflicted. • Factor 3: retains option 15, which together with negative tendencies in the frequency data, indicate respondents thought they could one day be poor and needy. • Factor 4" collects two options, 'are easy/hard to recognise', and 'are/are not the responsibility of government and welfare agencies'. Both tend to be weighted negatively, indicating the poor are considered hard to recognise and are more the responsibility of government and welfare agencies.	Reduced option set retained – Cross-loaded options removed

Table 6.6: Summary of Results - Group 5:

Concept(s)	Data type Analytical Method Details Located in...	• Summarised Results and Conclusions	Item Retained?
Influence of religion/spirituality on health related behaviours	Likert scale Frequencies Section 2, Question 1- 6 Section 6.4.10, Table 6.42, Appendix W	• Use of conventional medicine: influence to use 47%, influence not to use – 7% • Use of natural remedies: influence to use – 45%, influence not to use 4% • Use of alternative therapies: influence to use – 31%, influence not to use – 12% • Use of spiritual aids: influence to use 9%, influence not to use 66% • Influence of religion on employment: influence to use 59%, influence not to use – not applicable • Influence of religion on lifestyle: influence to use 84%, influence not to use – not applicable • The table shows the most significant influence of religion/spirituality is against the use of 'spiritual aids' and in lifestyle choices.	Retain subject to modification
Health habits (meat and alcohol intake, smoking, exercise	Likert scale Frequencies Section 2, Question 7 - 11 Section 6.4.10, Table 6.43 -6.44 Appendix W, X	• Respondents observing more than three of four health habits: yes 30%, no 70% (range 0 – 87%) • Only Mormons (53%) and Seventh-Day Adventists (87%) had more than a third of their respondents observing more than three of the health habits. Both groups figure prominently in positive public health statistics. • Should be considered for inclusion in measures of religion and spirituality as bible indicates a healthy lifestyle is an important part of being a Christian.	Consider for retention
Gender, weight, height and age	Continuous data collapsed to ordinal. Included for calculation of Body Mass Index. Section 4, Question 1 - 4 Section 6.4.10, Table 6.45 – 49	• BMI > 25 male: 48%, female: 30% • BMI ≤ 25 male: 52%, female: 70%	Retain

Table 6.6: Summary of Results –Group 6:

Concept(s)	Data type Analytical Method Details Located in..	Summarised Results and Conclusions	Item Retained?
Education	Inventory Frequencies Section 4, Question 5 Section 6.4.11, Table 6.50,	• Highest proportion with tertiary education: Catholic, Presbyterian, Baptist, Uniting ((48 – 64%)) • Lowest proportion with tertiary education: Mormons, Salvation Army, Jehovah's Witness (<20%) • Technical college and apprenticeships tend to increase with lower levels of tertiary education	Retained in demographics
Marital Status	Inventory Frequencies Section 4, Question 6 Section 6.4.11, Table 6.51	• Never married: 0 – 42%, (Presbyterian – Assemblies of God • Married: 22 – 87% (New Age – Presbyterian) • Widowed: 2 13% (Catholic – Salvation Army) • Divorced: 0- 12% (Anglican- GP-REL) • Separated: 0 – 17% (various – New Age) • DeFacto: 0- 17% (Various – New Age)	Retained in demographics
Dependent Children	Chose from four age ranges Frequencies Section 4, Question 7 Section 6.4.11, Table 6.52-6.53 Continuous data collapsed to ordinal Frequencies Section 4, Question 14 Section 6.4.11, Table 6.54	Marital status reflects ages of each groups, and is not very useful • Raw data is inconclusive • Example of way in which number of children influence measures of religion is as follows: As number of dependent children increases, Frequency of Bible study decreases. This could give a false picture of an parents religiosity/spirituality if the lower frequency of Bible study is interpreted incorrectly as been 'less' religious. • Not used	Retained in demographics Not determined
Income	Continuous data collapsed to ordinal Frequencies Section 4, Question 16, Section 6.4.11, Table 6.55	• There is a wide variation in the data. No specific trends are noted. Generally, age appears to the most significant influence determining income.	Retained in demographics
rships	Open question Frequencies Section 4, Question 16 Section 6.4.11, Table 6.56	• Not used	Not determined

Table 6.6: Summary of Results - Group 7

Concept(s)	Data type Analytical Method Details Located in..	• Summarised Results and Conclusions	Item Retained?
Intrinsic-Extrinsic (Revised Scale) Concurrent validity if required for any measures developed	Likert scale, ordinal Factor analysis Sect 6.4.12, Table 6.57,	• Extracted three factors which are identical to those reported in the literature • Alpha reliabilities were 0.61 – 0.72 • Results indicate the scale could be used for establishing concurrent validity of scales developed.	Retain if required.

Table 6.6: Summary of Results - Group 8

The odds ratios (OR) calculated for the 'Belief' Questions 1 -15 in Section 1 of the questionnaire compare the odds for each response option from each of the religious groups with the odds for the 'Non-Religious' category of Section 1 Question 16. The odds ratios are presented for each Group ID. Upper and Lower 95% limits were calculated but are not reported here as they did not contribute any additional useful information. They can be supplied if required.

The proportions of females and males used in the calculation of the odds ratio were 56% and 44% respectively. Taking missing data into account, the Group Membership make up of the sample for the OR calculations is presented in Table 6.7.

Table 6.7: Denominational group membership details

Group Membership	% of Total
Anglican	9.2
Pentecostal	17.6
Baptist	11.0
Catholic	7.4
Jehovah's Witness	4.6
Mormons	8.6
New Age	3.0
Presbyterian	1.3
Salvation Army	2.5
Seventh-Day Adventist	9.0
Uniting	9.5
GP-REL	7.9
GP-NR**	8.4
Total	**100**

** This is the reference group for the calculation of odds ratios

The use of the GP-NR as the reference group is arbitrary. Any group could have been used, but this group could be expected to be different from the other religious/spiritual groups.

The odds ratio allows differentiation between the group responses and between the females and males so the homogeneity of responses within and between the groups can be evaluated. Odds ratios for all Group 1 questions are presented in Appendix E. Inclusion of the respective odds and the confidence intervals occupies nearly one hundred pages and so is omitted from this document.

The interpretation of the odds ratio estimate for Question 1 is illustrated in Table 6.8. The mean odds ratio for the total sample (female + male) decreases in the order: Option 4 (OR: 136.6) > Option 3 (OR: 41.6) > Option 6 (OR: 6.38) > Option 7(2.70) > Option 8 (OR: 2.56). For each of these five response options, the odds of the response option being selected by the 'religious' groups is greater than the odds of being selected by the 'non-religious' reference group (that is, OR>1). For the remaining response options, the odds of the option being selected were less than the odds of the option being selected by the reference group; Option 1 (OR: 0.06), Option 2 (OR: 0.06), Option 5 (OR: 0.82), Option 9 (OR: 0.04), and Option 10 (OR: 0.72). An OR = 1 shows the odds of an option being selected are the same for both the group in question and the reference group. Table 6.8 provides a general picture of response patterns for Question 1. The following section examines the effect of gender on the OR.

Table 6.8: Odds ratios across group 1 questions 1 ('God is...') for all respondents

Response Option For Section 1 Question 1	Response Option	Mean OR Across All Groups
Options having higher odds of selection than reference group.		
4	described by the Trinity	136
3	a single being	41.6
6	material/physical	6.38
7	spiritual/non-material	2.70
8	within every person	2.56
Options having similar odds of selection to reference group.		
5	an energy field	0.82
10	None of the above, I have other views	0.72
Options having lower odds of selection than reference group.		
1	I don't know	0.06
2	there is no God	0.06
9	a symbol only	0.04

Gender Effects

The variation of responses with gender is also revealed in the data. Table 6.9 shows, for Question 1, the mean odds ratios for both male and female.

The odds ratios for Question 1 vary with gender. In six response options, the odds ratio for females was between 1.5 to 3.4 times higher than the odds ratio for males. In the remaining four response options, the odds ratio for males was 1.2 to 5.9 times higher than that of females. These few responses provide a strong indication that gender interactions may need to be taken into account. The extent of the effect is further illustrated in Appendix E. Results for Question 1, Response Option 3 show the OR value for the total sample (males + females) has values in a range 0.0 (Salvation Army) to 325.0 (Jehovah's Witness). This is to be expected as it reflects the different doctrinal positions adopted by variations denominational groups. In the adjoining 'Female' and 'Male' columns, the OR is also seen to vary between genders. For the Jehovah's Witness, the OR for the 'total' sample is 325.0, but for 'Females' is 377.0, and for 'Males' 110.0.

Table 6.9: The influence of gender on OR for Section 1 Question 1 ('God is...')

Response Option	Description	OR for FEMALE	OR for MALE	Ratio of OR's			
				F:M	M:F	Maximum value	Gender having max value
1	I don't know	0.04	0.21	0.17	5.87	5.9	male
2	there is no God	0.10	0.04	2.82	0.35	2.8	female
3	a single being	49.67	15.06	3.30	0.30	3.3	female
4	described by the Trinity	153.22	44.78	3.42	0.29	3.4	female
5	an energy field	0.48	2.83	0.17	5.86	5.9	male
6	material/physical	3.33	4.03	0.83	1.21	1.2	male
7	spiritual/non-material	3.65	2.42	1.51	0.66	1.5	female
8	within every person	2.13	4.98	0.43	2.33	2.3	male
9	a symbol only	0.04	0.03	1.55	0.65	1.5	female
10	None of the above, I have other views	1.01	0.54	1.88	0.53	1.9	female

The gender effect may be seen from a different perspective in Appendix F in which the odds ratios for each gender have been recalculated to show the ratio between odds ratios. For clarity, the table shows only the larger of the two ratios (F:M or M:F), and to reduce the information in the table, only ratio values greater than 3.0. In the example above OR values for the Jehovah's Witness's were 377.0 for 'Females' and 110.0 for 'Males'. The F:M ratio of these OR values is 3.4; 'females' being the larger of the two values. Appendix F shows there are many instances where there are large differences in the OR values.

To varying extents, the differences in OR between genders is evident to all fifteen questions in Group 1.

Denominational Membership Effects

The data in Appendix E shows that for each question and each denominational group, the OR varies with each response. For a given question, an OR = 0.0 for all response options except one would indicate all respondents have chosen that one particular non-zero response and that there was perfect homogeneity within the group for that specific belief. The variation in OR across the response options indicates the beliefs of each group are heterogenous, and that the assumption the denominational groups are homogeneous in their beliefs is possibly invalid.

Interaction of Beliefs in Group 1

The results presented in the previous section focus on the association between gender and group membership and the odds of choosing a particular belief option. In reality, what is commonly called a 'belief' is often not a single belief, but a collection of beliefs. This section will examine the interactions between belief options both within each question, and also between different related questions that were grouped together. The interactions within each question have been termed *Belief Profiles*, and those between each questions the *Between Question Interaction Terms*, (BQITs).

Belief Profiles

The calculation and interpretation of the Belief Profiles was described in detail in Section 5.4.3.1. The specific purpose of the Belief Profiles was to identify alternative means of grouping the survey respondents other than by group or denominational membership/affiliation. These values have been calculated only for the total of each group. Group membership and Gender effects were not calculated because the data is complex.

The Belief Profiles for all fifteen questions of Group 1 are presented in Appendix G. The number of different values for the Belief Profiles for each question are presented in Table 6.10.

Table 6.10: The number of belief profiles for Group 1 questions

QUESTION No	Number of Belief Profiles
1	61
2	38
3	22
4	21
5	39
6	20
7	23
8	19
9	38
10	18
11	31
12	17
13	14
14	21
15	30

The large numbers of Belief Profiles for each question is an indication of the number of different profiles that might exist. Appendix H presents cross tabulations of Belief Profiles and Denominational Membership, from which it can be seen that the Belief Profiles are dispersed across the denominations.

Between Question Interaction Terms (BQIT)

Initial efforts to find combinations of BQIT's that grouped respondents into a reduced number of categories having greater homogeneity of beliefs than the original religious/spiritual groupings yielded no useful combinations. In a second attempt to simplify the search for useful combinations, the creation of combinations of BQIT's was limited certain groups of questions. These groupings brought together concepts that were logically related. For example; Questions 1, 2, and 3 dealing with the concepts of God. Jesus, and the Holy Spirit respectively; Questions 4 and 5 that deal with the questions of origins of the human race, and the Bible; Questions 6 (The Soul) and 10 (Heaven); Questions 6 and 11 (Hell); and Questions 6 and 12 (Purgatory).. The BQIT values were obtained by summing the Belief Profiles for the combination of questions of interest. Table 6.11 shows the number of different BQIT values obtained for each combination of questions. The detailed information is presented in Appendix I

Table 6.11: BQIT values for Section 1

Section 1 Question Numbers Included In BQIT	Number of BQIT Values	% of Respondents collected by Top BQIT	% of Respondents collected by Top 5 BQITs
1, 2, 3	259	7	26
4, 5	133	15	42
6, 7, 8, 9, 10, 11, 12	310	7	19
6, 10	81	29	53
6, 11	112	28	45
6, 12	68	13	48
6, 13	51	44	65
4, 6	69	20	49
4, 13	50	30	66
11, 13	82	30	56
11, 12	101	9	36
14, 15	114	17	42
7, 8	94	23	60
7, 9	141	13	46
13, 14, 15	193	15	35
10, 11, 12	193	8	24
6, 10, 11,12	310	7	19
7, 13	76	34	69
14, 15	114	17	42
All (1 to 15)	604	0.5	2

Table 6.11 shows that summing Belief Profiles for *all fifteen questions* created 604 BQIT values. Appendix I further shows that only 5 of those 604 values collected more than a single person. In each combination of Belief Profiles used to create the respective BQITs, the proportion of the respondents collected was typically small and in practical terms offer no useful opportunities for creating categories representing significant proportions of the study population. An alternative approach to extracting new categories of respondents was to examine the possibility of reducing the number of response options. This is described in the next section.

The Creation of Respondent Categories by Reduction of Belief Profiles

Appendix J presents data generated by examining the Belief Profiles for each question and making judgements about which response options might be grouped together to collect respondents into a reduced number of categories. These judgements were based primarily on the original theoretical reasons for including each response option, and modified by judgements based on the content of the Belief Profiles. This approach must logically result in some loss of data, but it allows creation of a number of new categories of respondents. The process was used to create Appendix J, with typical results are illustrated in Tables 6.12 to 6.14, using

175

data from Question 1. The process was as follows. The original response options are noted in Table 6.12. These were grouped together as in Table 6.12 to create four new response categories where there were ten. The judgments made in creating the new categories in Table 6.12 from the survey data were as follows. Any belief profile containing response options 1, 2, 9 or 10 were allocated to the New Category 1. Similarly any belief profile containing response option 8 was allocated to New Category 2, those containing response options 5 or 7 to New Category 3, and those containing response option 6 to New Category 4.

In this example, Question 1 was initially described by sixty-one Belief Profiles (Table 6.10). Eight of the ten response options for Question 1 (Table 6.12) were reduced to four new composite options which in turn provided the basis for recoding the Belief Profiles into four new categories. Only Option 3 (God is a single being) and Option 4 (God is described by the Trinity) were omitted because the results were judged to be too closely associated with denominational beliefs to be useful. The distribution of response options to each of these new composite options is presented in Table 6.12. The distribution of original Belief Profiles into each of the resultant four new categories is listed in Table 6.12.

The frequency data for the new categories created for Question 1 are presented in Table 6.13 and for all fifteen questions in Table 6.14 and Appendix L. This table shows that for each question, 3, 4, or 5 new categories were created.

Table 6.13: Distribution of recoded categories for Question 1

Recode Category	Frequency	Percent	Valid Percent	Cumulative Percent
1	51	8.3	8.3	8.3
2	193	31.6	31.6	39.9
3	143	23.4	23.4	63.3
4	224	36.7	36.7	100.0
Total	**611**	**100.0**	**100.0**	

VALUES OF BELIEF PROFILES IN EACH RECODED CATEGORY (Total = 61)

ORIGINAL Question 1
Concept: God is

Original Response Option ID	Original Response Options	Recoded Category			
		1	2	3	4
1	I don't know	0	800	7000	60000
2	there is no God	1	890	67000	4000000
3	a single being	90	7800	507000	4000001
4	described by the Trinity	200000000	7890	4007000	4060000
5	an energy field	200000090	60800	4007090	30000000
6	material/physical	230000000	500800	4067000	30000001
7	spiritual/non-material	230060000	507800	4567000	30000090
8	within every person	1000000000	567800	30007000	30060000
9	a symbol only	1000000001	4000800	30067000	34000000
10	None of the above, I have other views	1204567891	4007800	30067001	34000800
			4567800	34007000	34060000
			4507800	34507000	1034000000
			30000800	1000007000	
			34007800	1000500000	
			34007890	1004007000	
			34007890		
			34067800		
			34067800		
			34507800		
			34507800		
			34550800		
			34560800		
			34567800		
			34567800		
			204000800		
			204000800		
			234007800		
			1000000800		
			1000507800		

RECODED RESPONSE CATEGORIES BASED ON RESULTS

RECODED CATEGORY	Response Options in Recoded Category
1	• I don't know (Option 1)
	• there is no God (Option 2)
	• a symbol only (Option 9)
	• None of the above, I have other views (Option 10)
2	• God within each person (Option 8)
3	• God is spiritual non-material (Option 7)
	• an energy field (Option 5)
4	• God is material/physical (Option 6)

Table 6.12: Table showing reduced response options for Section 1 Question 1

Table 6.14 Recoded categories for all Group 1 questions

QUESTION	N° Respondents In Each New Category (N = 611)					% Respondents In Each New Category				
	1	2	3	4	5	1	2	3	4	5
1	51	193	143	224		8.3	31.6	23.4	36.7	-
2	52	62	31	466		8.5	10.1	5.1	76.3	-
3	124	79	236	172		20.3	12.9	38.6	28.2	-
4	56	91	210	181	73	9.2	14.9	34.4	29.6	11.9
5	38	434	139			6.2	71.0	22.7		--
6	63	131	417			10.3	21.4	68.2		--
7	56	82	473			9.2	13.4	77.4		
8	96	207	40	268		15.7	33.9	6.5	43.9	
9	110	358	143			18.0	58.6	23.4		
10	106	144	361			17.3	23.6	59.1		
11	146	54	342	69		23.9	8.8	56.0	11.3	
12	209	201	90	111		34.2	32.9	14.7	18.2	
13	22	84	464	41		3.6	13.7	75.9	6.7	
14	89	147	375			14.6	24.1	61.4		
15	73	39	45	69	385	11.9	6.4	7.4	11.3	63.0

Chi-Square Significance Test on Recoded Categories.

Pearson's chi-square statistic was used to evaluate the relationships between the new categories for each question. Categories for each of the fifteen questions were placed in a cross tabulation with each other question, and the chi-square significance obtained from the SPSS statistical package. In each case, the chi-square probability was $p < 0.05$, indicating that the null hypothesis of the row and column variables in the cross tabulations as being unrelated, can be rejected. That is, it appears that all the categories in all the questions are related. However, this conclusion is to be interpreted with caution, as the assumption that the cross tabulated variables are independent is questionable. It is more likely that having information about a respondent's position regarding one of the fifteen questions also gives some knowledge about the respondent's position on some or all of the other questions.

6.5.3 Group 2: Questionnaire Section 1

Group 2 comprises questionnaire Section 1, Questions 16 – 26 that deal with the type and duration of group affiliation, frequency, type and duration of meeting attendance, financial contributions, and the influence of physical disability and spouse beliefs.

Section 2, Questions 11 – 16 deals with television viewing, and religious/spiritual practices such as meditation, yoga, Bible study, prayer and voluntary work.

Question 16.

The results of a cross tabulation for this question are presented in Appendix M. The table compares the official name of each denominational group with the group identification indicated by the respondents in this open question. It shows that within each group respondents indicate a number of different group identities. The large mainstream denominations such as Catholic and Anglican, both show small variations in composition. In each case, approximately 90% of respondents recorded Catholic and Anglican respectively, approximately 4% did not record a group identity, and 4% reported being 'non-denominational'. For the Baptist, and Uniting groups, 70% and 81% of respondents respectively, reported being Baptist, and Uniting, and 12- 15% 'non-denominational'. The Pentecostal, Assemblies of God, and Salvation Army groups each had a higher proportion of respondents report being 'non-denominational (82%, 64%, and 27% respectively), with the remainder reporting their official group identity. For each of the remaining denominational groups, Jehovah's Witnesses, Mormons, and Seventh-Day Adventists, 100% of respondents reported their respective denominational name. The New Age, and GP-REL groups each had a more diverse makeup that might be expected from eclectic groups. The purpose in presenting these results is to illustrate the diversity that exists within each group, and that group members may have beliefs that are different to those typical of the group of which they are members. This reinforces the findings of Group 1, that it cannot be assumed that denominational groups are homogeneous.

Question 17: Duration of present beliefs.

These results are presented in Appendix N. The small Protestant groups, Baptist, Pentecostal, Assemblies of God, and the GP-NR group have the largest proportion of members (10 – 11.5%) who have held their the current beliefs for less than five years. However, as Table 6.15 shows, these same groups also have the greatest proportion of respondents under the age of 30. There is no similar trend in the remaining groups, which suggests the association noted is unique to that age group and to those Pentecostal oriented group

Group Membership	% of Respondents Holding Present Belief for <5 years	% of Respondents in Age Group <30 years
Assemblies Of God	11.5	45.1
Pentecostal	11.1	41.5
Baptist	10.6	16.7
GP-NR *	10.0	27.5
Mormons	9.4	27.7
Jehovah's Witness	7.1	19.2
Salvation Army	6.7	20.0
New Age	5.9	22.2
Seventh-Day Adventist	5.6	25.5
Catholic	4.3	17.4
Uniting	3.4	8.6
GP-REL **	2.2	13.0
Anglican	1.8	3.7
Presbyterian	0.0	0.0
Total	7.0	21.9
Average	6.4	20.6
Maximum	11.5	45.1
Minimum	0.0	0.0

Group Membership	% of Respondents Holding Present Belief for 5-20 years	% Respondents in Age Group 31-50 years
Assemblies Of God	75.0	45.1
Pentecostal	66.6	49.1
Salvation Army	53.3	33.3
New Age	52.9	72.2
GP-NR *	48.0	41.2
Jehovah's Witness	46.4	50.0
Mormons	35.8	59.6
Seventh-Day Adventist	29.6	45.5
Baptist	25.8	36.4
Catholic	23.9	58.7
GP-REL **	19.5	52.2
Anglican	14.5	24.1
Presbyterian	12.5	71.4
Uniting	11.9	37.9
Total	35.9	45.4
Average	36.8	48.3
Maximum	75.0	72.2
Minimum	11.9	24.1

Group Membership	% of Respondents Holding Present Belief for ≥21 years	% Respondents in Age Group >50 years
Presbyterian	87.5	28.6
Uniting	84.8	53.4
Anglican	83.6	72.2
GP-REL *	78.2	34.8
Catholic	71.8	23.9
Seventh-Day Adventist	64.8	29.1
Baptist	63.6	47.0
Mormons	54.7	12.8
Jehovah's Witness	46.4	30.8
GP-NR *	42.0	31.4
New Age	41.2	5.6
Salvation Army	40.0	46.7
Pentecostal	23.2	9.4
Assemblies Of God	13.4	9.8
Total	57.1	32.7
Average	56.8	31.1
Maximum	87.5	72.2
Minimum	13.4	5.6

* GP-NR From Section 1 Q16. This was the reference group for the Odds Ratios.

** GP-REL From Section 1 Q16. This is the element of the General Population group who indicated religious group membership

Table 6.15: Distribution of years present beliefs held with age group.

Questions 18: Present Membership of Religious or Spiritual Groups

As expected, there are high proportions of each religious group reported as members of those groups. Of interest is the proportion of each religious group (from 0 to 17%) who were not members of that group. For the remaining groups, 47% of the General Population (Religious) were not a member of any group, and were 98% of the General Population (Non-Religious) group.

Question 19: Filter Questions

Question 19 was intended as a filter question. The results are presented in Appendix N, but are not required for subsequent discussion. It is noted that 11% of New Age group members have never attended a church service or mass, or any other religious or spiritually oriented meeting.

Question 20: Frequency of Meeting Attendance

The results presented in Appendix N are summarised in Table 6.16.

Table 6.16: Group 1 frequency of meeting attendance

Group Membership	Not at all or Rarely (Options 1, 2) %	Several times/month or Several times/year (Options 3, 4) %	Once/More than once /week (Options 5, 6) %
GP-NR	95.8	0.0	4.2
New Age	62.5	18.8	18.8
GP-REL	41.3	28.3	30.4
Catholic	10.6	17.0	72.3
Baptist	3.0	9.0	88.1
Anglican	1.8	21.8	76.4
Presbyterian	0.0	0.0	100.0
Salvation Army	0.0	0.0	100.0
Mormons	0.0	1.9	98.1
Assemblies Of God	0.0	1.9	98.1
Jehovah's Witness	0.0	3.6	96.4
Seventh-Day Adventist	0.0	3.6	96.4
Pentecostal	0.0	5.6	94.4
Uniting	0.0	7.0	93.0
Total	**13.8**	**9.0**	**77.2**

The table shows that the lowest level of religious/spiritual meeting attendance (Not at all, or Rarely) is recorded by the GP-NR group. This group shows an expected corresponding low proportion of respondents reporting higher levels of attendance. Next, the New Age, GP-REL, and Catholic groups report attendance spread more across all categories. Finally, the remaining groups report attendance levels concentrated in the Once and More than once /week categories.

This data suggests meeting attendance could be retained as a measure. However, it evident from this data that the level of attendance is strongly associated with group membership, and may not provide any additional discrimination between respondents.

Question 21: Duration of Indicated Frequency of Attendance

The results for this question are presented in Appendix N. This question was included to provide the duration element required for epidemiological consideration. However, the results show no useful trends, and are probably closely related to the age distribution. If the question was to be retained, it would need to be modified.

Question 22: Meeting Type

As presented in the questionnaire, the question allowed respondents to select more than one option, where it should have specified the respondents select only one option that best described the type of meeting they attended. Consequently any useful information has been lost. Appendix N presents the first selected response type without knowledge of which type the respondent felt was most important. It again indicates diversity within each group. Designed differently, this question may provide more useful information about the meeting type, and could offer a means of characterizing the respondent rather than the meeting type; characteristics that may be associated with certain types of behaviour.

Question 23: Financial Contributions

Financial contributions within Christian religious groups are often related to a tithe (an offering amounting to one-tenth of an individual's income), and other free-will

offerings or donations. The results presented in Appendix N, and in Table 6.17, have been sorted into descending order on the 10-20% contribution column.

It is clear from the table that some of the small denominations (Mormons, Seventh-Day Adventist, Pentecostal, Assemblies of God, and Salvation Army) have the highest proportion of members (96% decreasing to 73% respectively), who contribute 10 – 20% of their income. There are only a few in any group who contribute more than 20%. It is mainly the larger denominational groups who are represented with contributions in the 1-9% range or the 'nil' categories. As might be expected, the New Age and GP-NR groups are not represented in the 10 - 20% contribution range, but have a high proportion (80% – 98%) in the 'nil' contributions category.

There is a strong association between denominational or group membership and financial contributions, so there are limited opportunities for creating new categories of respondents using this data. It may be useful to examine the possibility that respondents, whose financial contributions are significantly below the typical contributions rates for their group, could be grouped together into a single category.

Table 6.17: Distribution of financial contributions

Group Membership	% of Respondents with Financial contributions in range				Total %	N
	Nil	1-9%	10-20%	>20%		
Mormons	0.0	3.8	96.2	0.0	100	53
Seventh-Day Adventist	3.8	13.2	83.0	0.0	100	53
Pentecostal	0.0	19.2	80.8	0.0	100	52
Assemblies Of God	0.0	15.7	78.4	5.9	100	51
Salvation Army	0.0	20.0	73.3	6.7	100	15
Baptist	13.1	32.8	54.1	0.0	100	61
Uniting	1.9	57.7	40.4	0.0	100	52
Anglican	7.8	66.7	25.5	0.0	100	51
Presbyterian	0.0	75.0	25.0	0.0	100	8
GP-REL	55.3	26.3	18.4	0.0	100	38
Jehovah's Witness	52.4	33.3	14.3	0.0	100	21
Catholic	24.4	64.4	11.1	0.0	100	45
New Age	80.0	20.0	0.0	0.0	100	15
GP-NR	98.1	1.9	0.0	0.0	100	52
Total	**21.3**	**30.0**	**48.0**	**0.7**	**100**	**567**

Question 24: Previous Group Membership

Appendix N shows that for the total sample, 62% of respondents indicated no previous group membership, 31% had one previous membership, 5% had two previous memberships, and less than 2% had three or more group membership. These results do not contribute directly to the study outcomes, but in a more diverse population there may be more respondents who previously were members of, or attended 'church', but perhaps no longer do. This question may provide useful information in a larger study.

Question 25: Physical Disability

The results in Appendix N show 3.8% of the total respondents had a physical disability that prevents or limits them from participating in religious/spiritual activities. While nearly all groups had less than 5% of respondents select the 'yes' option, the Baptists recorded 12% in this category. There is no obvious association between this observation and the frequency of attendance data presented in Question 20 earlier. These results do not contribute to the study outcomes and are not discussed further. The question might provide useful information in a sample of aged respondents, or if interview questions were used to better characterise for each respondent, the relationship between religious/spiritual issues and their disability.

Question 26: Spouse Beliefs

The results in Appendix N show 27% of total respondents selected the 'not applicable' response, which is interpreted as meaning there is no spouse or partner, 11% have a spouse or partner who holds different religious/spiritual beliefs to the respondent, and 62% whose spouse or partner holds similar beliefs. Within the respondents having no spouse or partner, the responses range from 12.5% for the Presbyterian group through to 50% for Assemblies of God respondents. This latter result is reflected in the age composition of the groups (Table 6.15); the Assemblies of God have the highest proportion of responses in the <30 age group (45%) whereas the Presbyterian group has amongst the highest proportion in the 31 – 50 years age group (71.4%). These groups probably represent the 'singles' and 'married' categories, though some respondents could be widowed. The smaller groups such as Seventh-Day Adventists (1.8% 'no'), and Mormons (1.9% 'no') had the lowest

proportion of 'no' responses. It has been reported by Levin (1996) and Dwyer (1988) that these groups tend to marry within the group, so a low 'no' response is always likely. These results do not contribute significantly to the study outcomes and are not discussed further.

6.5.4 Group 2: Questionnaire Section 2

Question 11: Average hours per *week* spent reading, watching videos or TV programs having a religious or spiritual content

The summarised data in Table 6.18 shows that the highest proportion of respondents having 'nil' exposure to religious/spiritual media, are found in the New Age, GP-NR, GP-REL groups (50%, 70%, and 53% respectively). The groups recording the highest levels of exposure were Jehovah's Witness, Salvation Army, and Assemblies of God (34.6%, 40.0%, and 46.2% respectively having 7.6 – 10 hours/week exposure). Detailed data is presented in Appendix O.

Table 6.18: Hours of religious TV or reading across group membership

Group Membership	N	% of Respondents Engaging in Religious TV viewing or reading in Hrs/week Category				
		nil	0.5-2.5	2.6-5	5.1-7.5	7.6-10
Anglican	52	15.4	57.7	19.2	5.8	1.9
Pentecostal	53	11.3	28.3	30.2	9.4	20.8
Baptist	65	10.8	35.4	29.2	7.7	16.9
Catholic	47	29.8	44.7	14.9	4.3	6.4
Jehovah's Witness	26	15.4	15.4	15.4	19.2	34.6
Mormons	53	11.3	41.5	26.4	11.3	9.4
New Age	18	50.0	27.8	16.7	5.6	0.0
Presbyterian	8	0.0	25.0	50.0	12.5	12.5
Salvation Army	15	0.0	20.0	33.3	6.7	40.0
Seventh-Day Adventist	55	5.5	30.9	36.4	14.5	12.7
Uniting	59	5.1	57.6	18.6	10.2	8.5
Assemblies Of God	52	3.8	11.5	32.7	5.8	46.2
GP-NR	53	69.8	15.1	1.9	1.9	11.3
GP-REL	47	53.2	27.7	4.3	0.0	14.9
Total	603	20.6	33.7	22.1	7.8	15.9

Question 12: Average hours per day spent watching general television, videos, movies, playing video games, non-work internet time, etc.

Results for this question are presented in Table 6.19 with detailed data in Appendix O.

Given the ubiquitous distribution of television and visual media, it was not expected this question would be able to clearly discriminate between respondents. Table 6.20 shows this is generally the case. However, the intention of the question was to identify what was expected to be a small number of respondents whose exposure to general or more secular visual media was different to that of the majority. The table shows 6.2% of the respondents watched no secular television (range, 1.5% – 19.2%), 25.6% watched less than one hour per day (range, 6.4%- 53.8%), and 17.8% (range (7.7% – 32.7%) who watched up to 5 hours per day.

Table 6.19: Hours of general TV, reading, video, internet vs group membership

Group Membership	N	% of Respondents Engaging in General TV viewing (Hrs/day)				Summary Data (Hrs/day)	
		nil	0.1-1	1.1-3	3.1-5	<1	>1
Jehovah's Witness	26	19.2	34.6	38.5	7.7	53.8	46.2
New Age	18	16.7	16.7	55.6	11.1	33.4	66.7
Assemblies Of God	52	13.5	38.5	25.0	23.1	52.0	48.1
Presbyterian	8	12.5	25.0	50.0	12.5	37.5	62.5
Mormons	53	11.3	30.2	37.7	20.8	41.5	58.5
Pentecostal	51	9.8	27.5	47.1	15.7	37.3	62.8
Seventh-Day Adventist	54	7.4	24.1	55.6	13.0	31.5	68.6
Catholic	47	4.3	36.2	44.7	14.9	40.5	59.6
Uniting	59	3.4	25.4	57.6	13.6	28.8	71.2
GP-NR	52	1.9	13.5	51.9	32.7	15.4	84.6
Baptist	65	1.5	32.3	55.4	10.8	33.8	66.2
Anglican	54	0.0	20.4	64.8	14.8	20.4	79.6
Salvation Army	15	0.0	20.0	53.3	26.7	20.0	80.0
GP-REL	47	0.0	6.4	66.0	27.7	6.4	93.7
Total	**601**	**6.2**	**25.6**	**50.4**	**17.8**	**31.8**	**68.2**

It had been expected that there would be a reciprocal relationship between secular and religious/spiritual visual media time, and that a person watching higher levels of 'Secular TV' would tend to watch less 'Religious/Spiritual Oriented TV'. Table 6.20 compares the proportions of respondents for each group who reported television viewing in the highest category for each question. Rather than a reciprocal relationship, it shows that respondents reporting high levels of 'General TV'

viewing, also show a weak tendency to report higher levels of 'Religious/Spiritual Oriented TV'. This could be due to factors such as age, as both older and younger people who are not employed and/or have no children, may watch more TV because they have the time to do so. The age distributions for all groups are presented in Appendix C.

Table 6.20: Comparison of television viewing data for Section 2 Questions 11, 12.

Group Membership	General TV % of respondents Viewing for 3.1-5 hrs/day	Relig/Sp TV % of respondents Viewing for 7.6-10 hrs/week	Total % of respondents in highest categories
Assemblies Of God	23.1	46.2	69.3
Salvation Army	26.7	40.0	66.7
GP-NR	32.7	11.3	44.0
GP-REL	27.7	14.9	42.6
Jehovah's Witness	7.7	34.6	42.3
Pentecostal	15.7	20.8	36.5
Mormons	20.8	9.4	30.2
Baptist	10.8	16.9	27.7
Seventh-Day Adventist	13.0	12.7	25.7
Presbyterian	12.5	12.5	25.0
Uniting	13.6	8.5	22.1
Catholic	14.9	6.4	21.3
Anglican	14.8	1.9	16.7
New Age	11.1	0.0	11.1
Total	17.8	15.9	33.7

Question 13: Average times per week using meditation, yoga or related techniques.

The results in Appendix O show that only the New Age group showed an elevated frequency of use (72%) beyond the '0.1-2 times/week' category. Other groups also having more than 10% of respondents using the techniques up to 14 times per week were Presbyterian (12.5%) and the GP-NR group (11.3%).

It appears from the results, that this question does not provide the power to discriminate between respondents beyond that achieved by the group membership/affiliation question.

Question 14: Average times per week engaging in personal prayer

The results for this question are presented in Appendix O and are summarised in Table 6.21. The data in the Table 6.21 has been sorted so that the values for those engaging in personal prayer '7 – 28 times/week' are in descending order. It shows a trend in the frequency of use of personal prayer. Three groups have a high proportion of respondents in the 'nil' use category: the GP-NR (76%), New Age (39%), and the GP-REL (35%). The Catholic (13%), Anglican (5.8%), and Uniting (3.4%) groups are the only other recognised denominations having respondents in this category. In contrast to these figures, the groups having the highest proportion of respondents in the two highest categories are the small Protestant groups: Mormons (81%), Jehovah's Witness (77%), Seventh-Day Adventist (60%), Assemblies of God (71%), and Pentecostal (56%).

Table 6.21: Prayer frequency across group membership

Group Membership	% of Respondents With Prayer Frequency (Times/week)				N
	Nil	< 7	7-28	>28	
Mormons	0.0	18.9	52.8	28.3	53
Jehovah's Witness	0.0	23.1	50.0	26.9	26
Seventh-Day Adventist	0.0	40.0	47.3	12.7	55
Assemblies Of God	0.0	28.8	44.2	26.9	52
Pentecostal	0.0	44.2	40.4	15.4	52
Salvation Army	0.0	46.7	40.0	13.3	15
Catholic	13.0	41.3	39.1	6.5	46
Presbyterian	0.0	50.0	37.5	12.5	8
Uniting	3.4	43.1	36.2	17.2	58
GP-REL	34.8	30.4	30.4	4.3	46
Anglican	5.8	57.7	28.8	7.7	52
Baptist	0.0	70.3	25.0	4.7	64
New Age	38.9	44.4	11.1	5.6	18
GP-NR	75.5	18.9	5.7	0.0	53
Total	**12.4**	**39.8**	**34.9**	**12.9**	**598**

The discrimination between the groups is not well defined, so the trends noted above may be useful for general descriptive purposes, but probably do not provide sufficient discrimination to justify their use as specific categories. Factors that could impact on the usefulness of this measure include the way the question is interpreted by respondents, and the response options provided. For example, one individual might pray at regular times, while another prays moment by moment throughout the

day. The response options provided, allowed only a single response type, the 'number of times', which does not adequately cover the possible responses. Revision of the question to improve the response options would be appropriate. An alternative approach is for this and similar questions to be asked in an interview setting.

Question 15: Average times per week engaging in personal or group Bible Study

The results for this question are presented in Appendix O. The data in Table 6.22 has been sorted so that the values for those engaging in Bible study '2.1-7 times/week' are in descending order.

Table 6.22: Frequency of Bible study vs group membership

Group Membership	% of Respondents With Frequency of Bible Study (Times/Week)				N
	Nil	0.1-2	2.1-7	7.1-14	
Presbyterian	0.0	12.5	62.5	25.0	8
Jehovah's Witness	0.0	0.0	57.7	42.3	26
Mormons	0.0	30.2	52.8	17.0	53
Assemblies Of God	0.0	13.7	49.0	37.3	51
Salvation Army	6.7	33.3	46.7	13.3	15
Seventh-Day Adventist	3.6	32.7	43.6	20.0	55
Baptist	13.8	35.4	40.0	10.8	65
Pentecostal	13.5	23.1	36.5	26.9	52
Uniting	13.6	44.1	30.5	11.9	59
Anglican	40.4	38.5	15.4	5.8	52
Catholic	65.2	19.6	10.9	4.3	46
GP-REL	69.6	15.2	10.9	4.3	46
New Age	94.4	5.6	0.0	0.0	18
GP-NR	96.2	3.8	0.0	0.0	53
Total	**29.7**	**24.5**	**30.9**	**14.9**	**599**

The results are similar in trend to that of the previous question dealing with prayer. Three groups, GP-NR, New Age , and GP-REL each have high a proportion of respondents (>70%) reporting 'nil' Bible study. The Catholic (65%), and Anglican (40%) groups also have a significant proportion of respondents in this category. Similarly to the results of the 'Prayer' question, the Mormons (17%), Jehovah's Witness (42%), Seventh-Day Adventist (20%), Assemblies Of God (37%), and Pentecostal (27%) groups have the highest representation in the '7.1 – 14 time/week' category.

The usefulness of 'Bible Study' as a measure is subject to interpretation as to what constitutes bible study. To be useful, the measure probably needs to be more appropriately defined to account for different styles of Bible study.

Question 16: Average Hours/week of Voluntary Involvement.

The results are presented in Appendix O and in Table 6.23. The data in the table has been sorted so that the values for those volunteering '5.1 – 10 hours/week' are in descending order.

Table 6.23: Hours/week of voluntary involvement vs group membership

Group Membership	% of Respondents With Volunteer Involvement (Hrs/week)				N
	Nil	0.1 - 2	2.1-5	5.1-10	
Salvation Army	6.7	25	6.7	80.0	15
Jehovah's Witness	4.0	52	16.0	56.0	25
Assemblies Of God	3.8	53	26.9	50.0	52
Mormons	0.0	52	35.8	47.2	53
Pentecostal	13.5	58	21.2	46.2	52
Uniting	6.9	8	29.3	31.0	58
Presbyterian	25.0	54	12.5	25.0	8
Seventh-Day Adventist	14.8	18	18.5	18.5	54
New Age	72.2	63	5.6	16.7	18
Baptist	20.6	47	23.8	15.9	63
GP-REL	59.6	52	8.5	12.8	47
Anglican	23.1	46	28.8	11.5	52
Catholic	34.8	53	15.2	4.3	46
GP-NR	90.6	596	0.0	0.0	53
Total	**26.0**	**27.5**	**20.0**	**26.5**	**596**

The Salvation Army, Jehovah's Witness, and Assemblies of God groups all have more than 50% of respondents volunteering between 5 and 10 hours /week, while Mormons, Pentecostal, and Uniting groups were in the range 31 – 47%. Only the GP-NR group returned 0% in this category; and a corresponding 91% in the 'nil' Volunteer Involvement category.

The results for this measure appear too broad to offer a useful means of clearly discriminating between respondents. The concept is logically an important one for any measure of religion/spirituality, but because of the many different ways

190

voluntary work is perceived and practiced, the question would be better addressed in an interview.

6.5.5 Gender Effects in Group 2 Results

Gender effects in beliefs have earlier been shown to be pronounced. Table 6.24 illustrates the variations in prayer frequency associated with gender differences. Detailed results for Prayer, Bible Study, and Volunteer Involvement are presented in Appendix P.

The gender differences in Table 6.24 are shown by the positive and negative values for the expression '%Female -% Male' (a positive value indicates that the % Females in a category is greater than the % Males in same category). For example, only males report a 'nil' prayer frequency, and there are more negative than positive values in the prayer frequency up to 7 times/week; that is, more males than females report in those categories. The trend is reversed for frequencies above 7 times/week. This shows, that in general, females report praying more often than males.

Table 6.24: Gender differences in prayer frequency

Group membership	Difference In Prayer Frequency (% of Times/Week) (% for Female -% for Male).					
	Nil	0.1-2	2.1-7	7.1-14	14.1-28	>28
Anglican	-8.2	12.7	-18.0	15.4	-5.2	3.3
Assemblies Of God	0.0	-2.4	-17.9	7.7	10.1	2.4
Baptist	0.0	-11.7	-1.2	-0.3	11.5	1.7
Catholic	8.5	0.4	-12.9	-9.8	4.5	9.4
GP-NR	0.0	-9.5	6.0	-3.6	34.5	-27.4
GP-REL	0.0	-0.3	-1.3	17.9	-10.3	-6.1
Jehovah's Witness	-53.2	27.3	-1.3	9.1	9.1	9.1
Mormons	0.0	-20.0	-6.7	33.3	-40.0	33.3
New Age	0.0	-11.1	-38.9	27.8	16.7	5.6
Pentecostal	0.0	-9.2	-1.1	3.2	9.3	-2.3
Presbyterian	-1.1	-11.7	-6.1	15.9	-17.0	20.1
Salvation Army	0.0	-9.5	-14.0	3.5	-1.2	21.2
Seventh-Day Adventist	-16.4	4.2	2.1	10.0	0.0	0.0
Uniting	-19.5	15.8	-4.9	12.4	-10.8	6.9

Note: A positive value indicates % of Females in a Category > % of Males in same Category

The results in Appendix P show gender effects are also evident within the categories for 'Bible Study', and 'Volunteer Involvement'.

6.5.6 Group 3 Results

Group 3 comprises the following questions from Section 3 of the questionnaire:

- Question 1: Religiosity/spirituality of mother or female guardian;

- Question 2: Religiosity/spirituality of father or male guardian;.

- Question 4: Role of religion/spirituality, science and philosophy in explaining the future);

- Question 6: Role of religion/spirituality, science and philosophy in explaining the meaning of life); and

- Question 10: God.

Frequency data is presented in Appendix Q. Three sub-categories of closely related questions were analysed using factor analysis. These were Questions 1 and 2, Questions 4 and 6, and Question 10 only. Results of the factor analysis are as follows.

Section 3 Questions 1 and 2.

The exploratory factor structure obtained is as follows. Two factors were extracted explaining 69% of the variance. All the options in Factor 1 came from Question 2, while the options in Factor 2 came from Question 1 only. The pattern matrix (Hair and Anderson 1995) presented in Table 6.25 shows the factor loadings for both factors. The factors are moderately correlated (R = 0.66).

Table 6.25: Pattern matrix for questions 1 & 2 factor analysis

Group 3 Option	Factor Loadings	
	Factor 1	**Factor 2**
Question 2 Option 3 Reversed	0.930	
Question 2 Option 1 Reversed	0.865	
Question 2 Option 4 Reversed	0.800	
Question 2 Option 2 Reversed	0.744	
Question 1 Option 3 Reversed		0.912
Question 1 Option 4 Reversed		0.851
Question 1 Option 1 Reversed		0.788
Question 1 Option 2 Reversed		0.662

These two questions were included as measures of the influence the religiosity/spirituality of the parents or guardians may have had on that of the

respondent. In view of the results obtained from the analysis of Group 4 questions (Section 3 Questions 7 and 8) in which a 'small' difference was found between the concepts of Religion and Spirituality, the appearance of all Question 2 options in Factor 1, and all Question 1 options in Factor 2 suggests the analysis was not sufficiently sensitive to discriminate between religion and spirituality, as both questions included separate options about religion and spirituality. This would appear to imply that respondents perceive no difference between religion and spirituality, but do perceive a difference between the religiosity/spirituality of the Mother/Female Guardian and that of the Father/Male Guardian. The frequency data in Table 6.26 (See also Appendix Q) shows that all options in Question 2 (Father/Male Guardian) were more frequently rated as Category 1 (that is negatively) than were the options from Question 1 (Mother/Female Guardian). This tends to suggest Mothers/Female Guardians had the more positive influence on the respondents, but there is insufficient data to draw any further conclusions about the nature of the difference.

Table 6.26: Frequency data for questions 1 & 2 response categories

| Group 3 Option [*] | % of Non-missing Respondents | | | | |
| | ← More negative - More positive → | | | | |
	Response Category 1[**]	Response Category 2	Response Category 3	Response Category 4	Total
Question 1 Option 1	37.2	25.0	16.6	21.2	100
Question 1 Option 2	17.2	23.2	30.5	29.1	100
Question 1 Option 3	38.6	24.7	20.0	16.8	100
Question 1 Option 4	29.7	22.0	27.6	20.6	100
Question 2 Option 1	57.0	17.4	11.8	13.8	100
Question 2 Option 2	34.4	21.1	21.9	22.5	100
Question 2 Option 3	60.7	17.1	11.3	10.9	100
Question 2 Option 4	46.4	19.4	18.2	15.9	100

[*] All option raw scores reversed

[**] Response Categories are based on division of continuous(0-100) number line into four segments having scores as follows: 0-61, 62-85, 86-97, and 98-100.

Section 3 Questions 4 and 6

Two factors were extracted explaining 64% of the variance. The pattern matrix is presented in Table 6.27.

Table 6.27: Pattern matrix for questions 4 & 6 factor analysis

Group 3 Option*	Factor Loading	
	Factor 1	Factor 2
Question 4 Option 1	0.841	
Question 6 Option 1	0.837	
Question 4 Option 2	0.812	
Question 6 Option 2	0.809	
Question 6 Option 3		0.839
Question 4 Option 3		0.663

* All option raw scores reversed

Factor 1 collected Options 1 (religious factors) and 2 (spiritual factors) from both questions, whereas Factor 2 collects Options 3 (science and philosophy) from both questions. Again, the factor analysis was not able to discriminate between religion and spirituality, but because minimal cross loading occurred between the factors, it suggests respondents view science and philosophy as separate influences to religion/spirituality. This view is supported by the very low correlation (-0.15) between the two factors.

The frequency data (Appendix Q) shows that Option 3 (science and philosophy) for both Questions 4 and 6 was more frequently rated as Category 1 (that is negatively), and much less frequently rated as Category 4 (that is, positively) than were Options 1 and 2 from Factor 1. This point is illustrated by Table 6.28 which summarises the frequency data for Question 4 only. The data from Question 6 is very similar.

In the data for Response Option 1(Religion), 30% of the total sample rated the influence of religion as Category 1, that is, 'negatively' (See Appendix Q). Across the denominational groups there is considerable variation in this proportion. Of particular interest are the New Age, and the two General Population groups which have proportions in Category 1 of 93%, 98% and 61% respectively. The same comparison made for Response Option 2 (Spirituality) also shows the two General

Population groups have higher proportions in Category 1 of 77% and 64% respectively. However, there is a marked contrast in the result for the New Age group, with only 13% of respondents rating spirituality negatively and a corresponding increase in the frequency of those rating it as Category 4 (positively). This reflects the 'spiritual' nature of the New Age group who tend to reject organised religion.

The data for Response Option 3 (Science and Philosophy) shows high proportions of respondents rating it as Category 1 (negatively), the interpretation of these results being that, those who are 'religious/spiritual' tend to reject science and philosophy as a means of describing the future, or the meaning of life. It would appear that science and philosophy have probably been interpreted by the respondents as being a secular concepts, hence the negative rating of that option by religious/spiritual group respondents. There is insufficient data to draw any further conclusions about the nature of that difference.

| | Question 4 Option 1 (Religion) | | | | | Question 4 Option 2 (Spirituality) | | | | | Question 4 Option 3 (Science and Philosophy) | | | | |
| Group Membership | ← More negative - More positive → | | | | | ← More negative - More positive → | | | | | ← More negative - More positive → | | | | |
	1	2	3	4	Total	1	2	3	4	Total	1	2	3	4	Total
Anglican	33	21	17	29	100	30	30	15	25	100	71	10	3	16	100
Pentecostal	14	22	29	35	100	8	24	26	42	100	87	4	4	4	100
Baptist	22	38	26	14	100	15	32	29	24	100	91	6	2	2	100
Catholic	29	33	16	22	100	24	27	24	24	100	67	14	10	10	100
Jehovah's Witness	5	0	23	73	100	0	4	26	70	100	94	0	0	6	100
Mormons	14	28	12	46	100	21	25	10	44	100	89	9	2	0	100
New Age	93	0	0	7	100	13	25	13	50	100	64	14	7	14	100
Presbyterian	0	38	13	50	100	13	38	0	50	100	100	0	0	0	100
Salvation Army	8	8	46	38	100	31	0	46	23	100	91	0	0	9	100
Seventh-Day Adventist	11	47	22	20	100	18	42	22	18	100	89	11	0	0	100
Uniting	18	45	24	13	100	19	38	25	17	100	88	10	2	0	100
Assemblies Of God	15	17	19	49	100	4	21	19	55	100	90	2	2	5	100
GP-NR	98	0	2	0	100	77	5	2	16	100	56	11	16	18	100
GP-REL	61	18	7	14	100	64	14	7	14	100	86	8	3	3	100
Total Sample	**30**	**26**	**18**	**26**	**100**	**25**	**25**	**19**	**31**	**100**	**82**	**8**	**4**	**5**	**100**

Note: Response Categories are based on division of the continuous (0-100) number line
into four segments having scores as follows: 0-61, 62-85, 86-97, and 98-100.

Table 6.28: Distribution of response categories with group membership

Section 3 Question 10: 'God is...'

This question was included with the intention of providing respondents with the opportunity of indicating their feelings about God without making any judgments about what God was for them. For the majority this would be the God of Christianity. The question was originally designed with four factors in mind, however, the factor analysis extracted only two factors explaining approximately 63% of the variance. The pattern matrix is presented in Table 6.29.

Table 6.29: Pattern matrix for Section 3 Question 10 factor analysis

Question 10	Factor Loading	
Option No	Factor 1	Factor 2
10	1.034	
7	1.017	
8	1.016	
9	1.006	
12	.913	
5	.854	
14	.833	
24	.830	
11	.787	
20	0.785	
3	0.768	
15	0.760	
1	0.749	
6	0.739	
13	0.718	
25	0.666	
23	0.658	
17	0.643	
2	0.628	
22	0.610	
16	0.604	
4	0.340	
19		0.709
21		0.588
18		0.497

Factor 2, the smaller of the two factors collects Options 18 (always first in my life / never first in my life), 19 (readily understood / cannot be understood) and 21 (very confusing / not at all confusing). However, Option 18 cross-loads significantly (0.324) on Factor 1 and was deleted. Options 19 and 21 both address the idea of understanding God. The frequency data in Appendix Q which is summarised by Table 6.30, shows a relatively even distribution of responses across all four categories. This suggests there may be uncertainty in the respondents' understanding of God.

Factor 1 collects the remaining twenty two response options in Question 10. To reduce this number, an internal reliability analysis using Cronbach's Alpha criterion was conducted. Nunally, (1967) suggests an Alpha ≈ 0.8 is a suitable standard for assessing scale reliability. The initial Alpha on the Factor 1 scale was 0.97. By removing options with an item-total correlation below approximately 0.8, the number of options was reduced to ten and Alpha remained at 0.97. To complement Option 24 which remained in the scale, Option 25 was added back into the scale. The Option numbers and the associated options remaining in Factor 1 are presented in Table 6.31. To maintain a range, no further options were deleted from this factor

Table 6.30: Response frequency distribution for Section 3 Question 10

Response Option No	% of Non-missing Respondents in Response Category				
	← More negative - More positive →				
	1	2	3	4	Total
FACTOR 1					
1	4.3	11.8	38.5	45.3	100
2	7.8	14.1	37.6	40.5	100
3	6.0	11.3	39.1	43.6	100
4	13.2	13.8	27.9	45.0	100
5	4.0	9.7	38.3	48.0	100
6	9.6	10.7	39.0	40.7	100
7	2.1	10.5	43.3	44.1	100
8	1.9	10.2	43.5	44.4	100
9	2.8	11.3	44.6	41.3	100
10	1.9	10.3	45.5	42.3	100
11	5.1	12.2	43.9	38.8	100
12	4.1	9.0	42.6	44.3	100
13	8.6	10.7	39.7	41.0	100
14	8.1	9.2	40.8	41.9	100
15	5.0	12.1	40.7	42.2	100
16	14.2	14.4	32.3	39.1	100
17	7.0	12.5	36.7	43.8	100
20	5.3	13.7	34.2	46.9	100
22	3.2	9.8	35.2	51.8	100
23	5.7	12.8	29.8	51.7	100
24	3.8	11.3	33.2	51.6	100
25	5.4	13.2	32.8	48.5	100
FACTOR 2					
18	17.1	30.6	22.3	30.0	100
19	29.8	27.0	19.1	24.1	100
21	34.7	22.0	16.8	26.5	100

.Table 6.31: Question 10, Factor 1 final retained options

Option No	Anchor phrases For Retained Options. Concept 'God is…'	
5	• aware of my thoughts	• not aware of my thoughts
7	• valuable	• worthless
8	• worth knowing	• not worth knowing
9	• interesting	• boring
10	• caring	• uncaring
12	• merciful	• vengeful
14	• personal and very interested in my daily situations	• impersonal and not interested in my daily situations
15	• a source of happiness	• a source of unhappiness
20	• very meaningful	• meaningless
24	• interested in how I take care of my spiritual self	• not interested in how I take care of my spiritual self
25	• interested in how I take care of my physical self	• not interested in how I take care of my physical self

The options remaining are interpreted as describing a relationship between the respondent and God in which Options 5, 7, 8, 9, 10, and 12 each describe a characteristic of God, and Options 14, 15, 20, 24, and 25 address God's interest in the respondent.

6.5.7 Group 4: Section 3 Questions 7 (Religion) and 8 (Spirituality)

The reason for including these two questions was to provide a mechanism by which to gauge respondents' feelings about whether religion and spirituality are the same, or different concepts. Factor analysis was conducted on the questions, both separately and together.

Separate Analyses of Questions 7 and 8

Question 7:

Two factors were extracted from Question 7, explaining 68% of the total variance. The pattern matrix is presented in Table 6.32. Details are presented in Appendix R.

Table 6.32: Pattern matrix for Section 3 Question 7 factor analysis

Response Option No	Factor Loadings		Anchor phrases	
	1	2		
3R	0.996		• valuable	not at all valuable
1R	0.946		• encouraging	discouraging
4R	0.938		• attractive	unattractive
9R	0.926		• strong	weak
2R	0.918		• practical	impractical
7R	0.890		• very interesting	very uninteresting
14R	0.882		• very meaningful	meaningless
8R	0.838		• reasonable	unreasonable
13R	0.834		• relevant	irrelevant
6R	0.823		• very caring	uncaring
16R	0.807		• wise	unwise
10R	0.751		• tolerant	intolerant
18R	0.656		• happy	unhappy
11	0.614		• sick	healthy
5R	0.412		• the same as being spiritual	different to being spiritual
17	0.398*	*0.369**	• threatening	non-threatening
19	0.127*	*0.089**	• not affected at all by the physical body	very much affected by the physical body
12	.	0.595	• hard	easy
15R		0.450	• readily understood	not readily understood

Note: 'R' = Reverse Scored   * Cross loading options deleted

Factor 1 collects all but the two options (12 and 15) that make up Factor 2. Twelve options in Factor 1 including those having positive anchors such as 'valuable', 'strong', 'practical', or 'meaningful' (Appendix R) generally address basic feelings or judgments about the concept 'religion'. Four options (5, 11, 17, and 18) have significant cross loadings on Factor 2, and would be deleted. The reason for the cross loading is not obvious, but could be due to the options being less readily interpreted by the respondents. Option 19 produced only weak loadings.

Factor 2 collects two options (12 and 15) having the positive anchors 'easy' and 'readily understood'. The latter option cross loads onto Factor 1. Frequency data (Appendix Q) shows both options were predominantly rated negatively, in Category 1 indicating respondents considered religion to be hard, rather than easy to understand.

Question 8

Two factors were also extracted from Question 8, explaining 69% of the total variance. The pattern matrix is presented in Table 6.33. Details are presented in Appendix S.

The factor structure and loadings obtained were very similar to that of Question 7, with the exception that Option 17 ('threatening' / 'non-threatening') loaded more on Factor 2. The cross loading characteristics and frequency characteristics were also very similar to those of Question 7 (Appendix S). As the option content and order were identical to those of Question 7, the general interpretation of the factor structure can also be applied.

However, the presence of Option 17 (threatening / non-threatening) in Factor 2 does provide a point of difference; it has only a small cross loading on Factor 1 (0.12). The frequency data shows respondents predominantly rated the option positively (Categories 3 and 4) compared with Option 12 ('easy/hard') which was rated negatively. Although the case should not be overstated, it could indicate some respondents feel less threatened by spirituality than by religion.

Table 6.33: Pattern matrix for Section 3 Question 8 factor analysis

Response Option No	Factor Loadings		Anchor Phrases	
	Factor 1	Factor 2		
3R	1.000		• valuable	worthless
1R	0.964		• encouraging	discouraging
4R	0.947		• attractive	unattractive
9R	0.922		• strong	weak
7R	0.913		• very interesting	very uninteresting
2R	0.908		• practical	impractical
6R	0.896		• very caring	uncaring
14R	0.865		• very meaningful	meaningless
13R	0.857		• relevant	irrelevant
8R	0.847		• reasonable	unreasonable
10R	0.812		• tolerant	intolerant
16R	0.796		• wise	unwise
18R	0.609		• happy	unhappy
11U	0.571		• sick	healthy
5R	0.261		• the same as being spiritual	different to being spiritual
19U	0.177*	*	• not affected at all by the physical body	very much affected by the physical body
17U		0.672	• threatening	non-threatening
12U		0.629	• hard	easy
15R	0.268*	*	• readily understood	not readily understood

Note: 'R' = Reverse Scored.   * Cross loaded options deleted

Combined Questions 7 and 8

Factor Structure

Factor analysis of these questions taken together identified five possible factors accounting for 74% of the variance. The factor structure table is large, and is presented in Appendix T. The salient features of the analysis are as follows:

- Factor 1: Collects Question 7 (Religion) Options 1 - 4, 6-9, 10, 11, 13–18;

- Factor 2: Collects Question 8 (Spirituality) Options 1 - 4, 6-9, 10, 11, 13, 14, 16, 18;

- Factor 3: Collects Question 7 and 8, Option 12;

- Factor 4: Collects Question 7 and 8, Option 19; and

- Factor 5: Collects Question 7 and 8, Option 5

Interpretation of the Combined Factors

Factors 1 and 2 have very similar option content which suggests respondents have differentiated between the concepts of religion and spirituality on the basis of perceived differences between the concepts, rather than on the specific option content. Factor 3 collects Option 12 ('hard/easy') from both questions. Frequency data (Appendix Q) for this option shows 66% and 55% of responses respectively, rated Religion and Spirituality as Category 1, or 'hard'. Factor 4 collects Option 19 (not affected at all by the physical body / very much affected by the physical body) for both questions. The frequency data shows 66% and 61% of respondents respectively, rated the options as Category 1, suggesting the majority of respondents do not feel religious or spiritual experience are adversely affected by the (state of) the physical body. Factor 5 collects Option 5 from both Questions 7 ('religion is the same as being spiritual/different to being spiritual') and Question 8 ('spirituality is the same as being religious/is different to being religious'). Frequency data (Appendix Q) shows that 48% of respondents to Question 7, and 52% to Question 8 rated these Option 5 as Category 1, or <61 on a scale 0-100. A value of 100 would mean there was no difference between religion and spirituality, so Category 1 indicates that respondents consider religion and spirituality to be different. This

question of the difference between religion and spirituality is considered from a different empirical perspective in the following section.

Comparison of Questions 7 and 8 Using the t-test.

In addition to the factor analysis, differences between religion and spirituality were assessed empirically using the t-test. The results in Appendix U show that respondents considered religion and spirituality to be different concepts. Only for Options 15 (readily understood - not readily understood) and 19 (not affected at all by the physical body - very much affected by the physical body), was the difference not significant at the 0.05 level. That is, for all other options, the hypothesis that there is no difference between mean scores for religion and spirituality is rejected.

The value of the difference between the *raw reversed scores* (a scale of 0 – 100) for the following equation ranged from +66 to -75 (Mean -4.2).

Difference = s3q7oX (Religion) – s3q8oX (Spirituality)
(where X is the respective Option Number 1 -19)

That is, on average, the value of the options for Question 8 (spirituality) was greater than for Question 7 (Religion). One possible interpretation of this observation is that the respondents considered spirituality more positively than they did religion. Although not immediately verifiable from the data in this study, this interpretation is consistent with the sentiments inherent in the discussion of definitions of religion and spirituality in Chapter 2. That is, religion is considered more institutional and offering less freedom for the individual, in comparison to spirituality, which is seen as a more individual characteristic.

The resulting values of 'Difference' in the above equation were recoded as follows: (0 = 0), (-99 to -3 = -2), (-2 to -1 =1), (1 to 2 = +1), and (3 to 99 = +2). An index was then created by summing these recoded 'Differences' for all nineteen options. To simplify the data, this index was itself recoded as follows: (0 = -7 to 7), (-1 = -20 to -8), (-2 = Lowest to -21), (+1= 8 to 20), and +2 = 21 to the Highest) The final recoded values are summarised in Table 6.34, which separates the respondents into the five recoded categories described above

Table 6.34: Empirical differences between religion and spirituality

Recoded Index	Frequency	Percent	More Positive Concept
+2	33	5.4	religion
+1	58	9.5	religion
0	154	25.2	neutral
-1	111	18.2	spirituality
-2	82	13.4	spirituality
Total	**438**	**71.7**	
Missing	173	28.3	
Total	**611**	**100.0**	

Note: The 'Recoded Index' values represent nominal categories.

Table 6.35 is a cross tabulation of the recoded index value from the Table 6.34 with Group membership. The data has been sorted on Recoded Index Value '-2'

Table 6.35: Distribution of recoded index values'

Group Membership	% of Respondents in Recoded Index Value					Total %
	-2 (Spirituality Most Positive)	-1	0	+1	+2 (Religion Most Positive)	
New Age	71.4	28.6	0	0	0	100
GP-NR	37.8	18.9	37.8	5.4	0	100
Baptist	30.6	26.5	24.5	2.0	16.3	100
Seventh-Day Adventist	25.0	10.4	33.3	16.7	14.6	100
Salvation Army	20.0	10.0	30.0	20.0	20.0	100
GP-REL	17.1	31.4	25.7	14.3	11.4	100
Assemblies Of God	17.1	31.7	36.6	9.8	4.9	100
Uniting	13.6	18.2	36.4	22.7	9.1	100
Catholic	11.4	42.9	28.6	17.1	0	100
Pentecostal	7.1	31.0	52.4	7.1	2.4	100
Jehovah's Witness	6.7	20.0	53.3	20.0	0	100
Anglican	4.5	27.3	31.8	18.2	18.2	100
Mormons	2.6	25.6	48.7	23.1	0	100
Presbyterian	0	28.6	42.9	14.3	14.3	100
Total	**18.7**	**25.3**	**35.2**	**13.2**	**7.5**	**100**

The expanded table shows that the proportion of respondents who view spirituality more positively than religion ranged from 71% for the New Age group and 38% for the GP-NR group, to less than 5% for the Anglican, Latter Day Saint and Presbyterian groups. The proportion indicating 'no difference' between the two, ranged from 0% for the New Age group to 24-26% for the Baptist and the GP-REL

groups, through to more than 50% for the Mormons and Presbyterians. The highest proportion of respondents considering religion the more positive concepts are in the Salvation Army (20%), Anglican (18%), Baptist (16%), Seventh-Day Adventist (15%) and Presbyterian (14%) groups.

6.5.8 Indiscriminately Pro-religious and Indiscriminately Anti-religious Responses.

Allport and Ross (1968) spoke of the indiscriminately pro-religious and the indiscriminately anti-religious responses to religious issues in the context of prejudice. Evaluation of this idea was based on the semantic differentials dealing specifically with the following religious/spiritual issues: Section 3 Question 7 ('Religion to me is...'), Question 8 ('Spirituality to me is..'), and Question 10 ('God to me is..'). Each of these questions is an indirect measure of affect or feeling about God, and together comprise a total of sixty three semantic differentials which should provide a measure of robustness for the results.

Tables 6.36 and 6.37 are the starting points for examination of any tendencies toward indiscriminate pro-religious or anti-religious behaviour. The data in the tables was generated from the upper and lower limits of the raw reversed data as follows.

For the 'indiscriminately pro-religious' concept, the procedure was:

1. Responses scoring in the range 97-100 were coded '1' and all other responses were coded '0'. The range of values could have been any desired value, but '97 - 100' was selected to illustrate the idea.

2. For all three Questions 7, 8 and 10, the number of '1' values was recorded as a percentage of the 63 semantic differentials

3. The percentage of '1' values for each respondent was then recoded into five categories that describe the percentage of responses falling within the range '97-100': Category 1 (0 – 20%), Category 2 (20.1 – 40%), Category 3 (40.1 – 60%), Category 4 (60.1 – 80%), and Category 5 (80.1 – 100)

These categories are simply an indication of the extent to which respondents possibly tended towards indiscriminate pro-religious behaviour; the higher the category, the greater the likelihood of indiscriminately pro-religious behaviour.

The same process was applied to the data to reveal possible *indiscriminately anti-religious* responses, in which the reversed responses would be consistently low. The value range selected as the low limit was 0 - 3. Again, this is an arbitrary value chosen to illustrate the idea; there being no precedent for this treatment of such data in the literature. The same range of %values were used to create the five categories; but in this case, the values are for proportion of total responses that were ≤3.

Table 6.36 presents the results for the 'pro-religious' data. For the purpose of illustration, *'indiscriminately pro-religious' is defined by there being Category 5 responses in more than 80% of the semantic differentials.* The table shows that, with the exception of the Presbyterian sample which is very small (N = 8), there were four groups; Assemblies Of God, Jehovah's Witness, Pentecostal, and Mormons that stood apart from the remainder of the groups. For these four groups, between 17% and 25% of respondents rated as Category 5, compared with the remainder of the groups for which the range was much lower at between 0% and 7.3%. The identification of *indiscriminately pro-religious* respondents in the manner described here is not incontrovertible and may be an artefact of the way the options were presented. However, the large sample size and number of options involved provide some robustness to the measure.

The mechanism for generating the *Indiscriminately Anti-religious* category was the same as that used to generate the 'Indiscriminately Pro-religious' categories, the difference being that the value refers to the proportion of responses rated in the range 0 – 3 compared with those rated as 97 – 100 for the 'Indiscriminately Pro-religious' categories.

The results in Table 6.37 show that on average, 73% of respondents returned less than 20% of responses in the 0 – 3 range. The groups with highest proportion of respondents in Category 5 (>80% of responses in the 0 – 3 range), are the GP-NR

(23%), the Anglican (22%), the New Age (17%), and the Salvation Army (13%) groups.

Table 6.36: Indiscriminately pro-religious

Group Membership	% of Respondents In Each Pro-Religious Category (% With Score in Range 97-100)					
	Category 1 (0-20%)	Category 2 (21-40%)	Category 3 (41-60%)	Category 4 (61-80%)	Category 5 (81-100%)	N
Presbyterian	50.0	12.5	0.0	12.5	25.0	8
Assemblies Of God	15.4	23.1	11.5	25.0	25.0	52
Jehovah's Witness	35.7	17.9	10.7	14.3	21.4	28
Pentecostal	29.6	18.5	20.4	13.0	18.5	54
Mormons	35.8	7.5	13.2	26.4	17.0	53
Seventh-Day Adventist	56.4	14.5	16.4	5.5	7.3	55
Salvation Army	66.7	6.7	6.7	13.3	6.7	15
Catholic	66.0	17.0	6.4	6.4	4.3	47
GP-REL	48.9	21.3	14.9	10.6	4.3	47
Uniting	71.2	15.3	6.8	3.4	3.4	59
Baptist	61.2	16.4	10.4	9.0	3.0	67
Anglican	65.5	16.4	7.3	9.1	1.8	55
New Age	55.6	11.1	16.7	16.7	0.0	18
GP-NR	77.4	11.3	9.4	1.9	0.0	53
N	322	96	70	69	54	611
Mean %	52.5	15.0	10.8	11.9	9.8	

Table 6.37: Indiscriminately anti-religious

Group Membership	% of Respondents In Each Anti-Religious Category (% With Score in Range 0-3)					
	Category 1 (0-20%)	Category 2 (21-40%)	Category 3 (41-60%)	Category 4 (61-80%)	Category 5 (81-100%)	N
GP-NR	34.0	13.2	18.9	11.3	22.6	53
Anglican	49.1	7.3	14.5	7.3	21.8	55
New Age	61.1	16.7	5.6	0.0	16.7	18
Salvation Army	73.3	6.7	6.7	0.0	13.3	15
Mormons	81.1	3.8	1.9	0.0	13.2	53
Jehovah's Witness	67.9	14.3	0.0	7.1	10.7	28
Baptist	76.1	10.4	3.0	3.0	7.5	67
Uniting	83.1	5.1	1.7	3.4	6.8	59
Catholic	76.6	12.8	4.3	2.1	4.3	47
GP-REL	72.3	14.9	2.1	6.4	4.3	47
Pentecostal	85.2	5.6	1.9	3.7	3.7	54
Assemblies Of God	86.5	3.8	3.8	3.8	1.9	52
Presbyterian	87.5	12.5	0.0	0.0	0.0	8
Sevent- Day Adventist	92.7	7.3	0.0	0.0	0.0	55
N	448	54	30	24	55	611
Mean %	73.3	9.6	4.6	3.4	9.1	

Comparison of the Trends towards Indiscriminate Religious/Spiritual Responses

Table 6.38 presents results from each orientation. It is noted however, that several groups (Jehovah's Witnesses, and Mormons), have relatively high proportions in both the Indiscriminately Pro-religious, and Indiscriminately Anti-religious categories. Consideration of the reasons for this are outside the scope of this study, but given both groups fall outside of mainstream Christian groups, it could be related to conflict between the content of the options and the elements of the belief system for these two groups.

These results provide only a tentative insight into the idea of indiscriminately Pro/Anti-religious behaviours, but the results are broadly in keeping with those that might be expected, and suggest their inclusion in a range of religious measures might

Table 6.38: Comparison of results for anti/pro religious/spiritual responses

Group Membership	% of Respondents in Indiscriminately Pro-religious (80% of responses in range 97 – 100)	% of Respondents in Indiscriminately Anti-religious (80% of responses in range 0 – 3)
Assemblies Of God	25.0	1.9
Presbyterian	25.0	0.0
Jehovah's Witness	21.4	10.7
Pentecostal	18.5	3.7
Mormons	17.0	13.2
Seventh-Day Adventist	7.3	0.0
Salvation Army	6.7	13.3
Catholic	4.3	4.3
GP-REL	4.3	4.3
Uniting	3.4	6.8
Baptist	3.0	7.5
Anglican	1.8	21.8
GP-NR	0.0	22.6
New Age	0.0	16.7

6.5.9 Group 5 Questions

This group collects Questions 3, 5 and 9 of Section 3 and deal with feelings about a range of existential issues. Frequency data is presented in Appendix Q. The results of exploratory factor analysis conducted on the individual questions are as follows.

Section 3 Question 3: 'For Me, The Future is..'

Three factors were extracted from Question 3, which together explain approximately 61% of the variance. The pattern matrix and loadings are presented in Table 6.39.

Table 6.39: Pattern matrix for Section 3 Question 3 'Future' factor analysis

Response Option	Factor Loadings			Anchor Phrases for Semantic Differentials	
	Factor 1	Factor 2	Factor 3		
1R[1]	0.938			• bright	dark
2R	0.934			• comforting	not comforting
3R	0.896			• full of hope	full of despair
4R	0.857			• peaceful	not peaceful
6R	0.733			• free	not free
7R	0.573			• clear	unclear
5R	0.488			• ever changing	unchanging
13R	0.477			•has many goals	has no goals
12U[2]	0.439			• frightening	not frightening
14R	0.320			•free of nuclear weapons	nuclear war
9U		0.783		• mysterious	not mysterious
8U		0.572		• a matter of fate	a matter of choice
10U			0.726	•predictable	unpredictable
11U			0.268	• soon to end	to go on forever

Note: (1) R=reversed scores, (2) U= non-reversed scores

Factor 1 collects ten of the fourteen options in the question. The options with the highest factor loadings (>0.85) in the pattern matrix also have the highest proportion of responses in Category 4 (>97 on 0 – 100 scale) and the lowest in Category 1 (<61 on 0-100 scale) (See Appendix Q). This factor collects many of the positive concepts or anchors for the semantic differentials, for example, 'bright', 'comforting', 'full of hope', and 'peaceful', which suggest the factor represents a predominantly positive response about the future. These options are probably also the most consistently meaningful to the respondents. The options in Factor 1 with lower factor loadings (for example, 'unchanging', 'has many goals', 'not frightening', 'free of nuclear war')also appear to be more complex and likely to be subject to change. That the factor loadings appear related to the degree of complexity may also be an artefact of the anchor phrases used.

Factor 2 contains Options 8 and 9 that address the question of the future as 'mysterious' or 'a matter of fate', that is, the ability to know about the future. Similarly Factor 3 collects two options (10 and 11), which have the positive semantic differential anchors 'predictable', and 'to go on forever' respectively. Option 10 ('predictable') could also have been considered *theoretically* as part of Factor 2, but

is clearly differentiated by the factor loadings (0.73 in Factor 3, but only -0.01 in Factor 2). The frequency data (Appendix Q) indicates 52% of respondents rated this option in Category 1, that is, negatively. This suggests uncertainty about the future, but given the positive outlook indicated by Factor 1, could also indicate the option is simply too difficult to answer.

Section 3 Question 5: Life's Meaning to me is...

Three factors were extracted accounting for 61% of the variance. The pattern matrix and loadings are presented in Table 6.40.

Factor 1 collects thirteen of the eighteen options in the question. The positive semantic differential anchors for this factor include: 'hope', 'satisfying', 'comforting', 'refreshing', and 'meaningful'. The frequency data for Factor 1 (Appendix Q) indicates a predominantly positive response (Categories 3 and 4) to each of the options. This factor is interpreted as referring to general descriptives of life.

Table 6.40: Pattern matrix and factor loadings for 'Life's Meaning'

Response Option	Factor Loadings			Anchor Phrases for Semantic Differentials	
	Factor 1	Factor 2	Factor 3		
8R	0.885			• a source of hope	• a source of despair
9R	0.848			• satisfying	• not satisfying
7R	0.844			• comforting	• not comforting
5R	0.781			• refreshing	• not refreshing
15R	0.777			• meaningful	• meaningless
17R	0.765			• happiness	• sadness
10U	0.756			• a source of torment	• not a source of torment
2U	0.725			• a daily struggle	• a source of hope each day
12R	0.664			• about free choice	• about little choice
6R	0.647			• clear	• unclear
3R	0.645			• very important	• not important
11U	0.597			• very uncertain	• very certain
18R	0.531			• about meeting the needs of others	• not about meeting the needs of others
4R		0.564		• something I often wonder about	• something I rarely wonder about
14R		0.506		• mysterious	• not at all mysterious
1U		-0.402	0.275	• ever changing	• unchanging
13R			0.694	• a matter of urgency	• not at all urgent
16R			0.419	• predictable	• unpredictable

Factor 2 collects three options (1, 4, and 14) dealing with 'change', 'wonderment', and 'mystery' respectively. Option 1 cross loads onto Factor 3 and would be deleted. The frequency data for Factor 1 (Appendix Q) indicates these options were each

rated more negatively (Category 1) than options in Factor 1, and consequently are
interpreted as addressing the uncertainties about life. The loadings for this factor
show Option 1 to be negatively correlated with Options 4 and 14. There is no
obvious reason why this should be the case; it may be that the respondents
interpreted the option in the opposite way to that intended. Factor 3 collects two
options (13 and 16) dealing with 'urgency' and 'predictability' in life respectively.
The frequency data is predominantly in Category 1 indicating a negative responses to
these options, and possibly uncertainty regarding the aspects of life.

Section 3 Question 9: The Poor and Needy in our Community

This question was an attempt to assess altruistic tendencies in respondents. Four
factors were extracted explaining 59% of the variance. The pattern matrix and
loadings are presented in Table 6.41.

Table 6.41: Pattern matrix and factor loadings for 'the poor and needy in our community'

Response Option	Factor Loadings				Anchor Phrases for Semantic Differentials	
	Factor 1	Factor 2	Factor 3	Factor 4		
9R	0.843				• are valuable	are worthless
13R	0.633				• are noticed by God	go unnoticed by God
5R	0.555				• are the responsibility of every person	are not the responsibility of every person
2R	0.462*				• are deserving	are undeserving
10U	0.460				• are not important to our society	are important to our society
1U	0.425*				• are a nuisance	are not a nuisance
8U	0.358*				• their need is a punishment	their need is not a punishment
7U		-0.867			• suffer poverty that is self-inflicted	suffer poverty that is not self-inflicted
6U		-0.745			• are lazy	are not lazy
11U		-0.688			•abuse help given them	appreciate help given them
12U			0.562*		• should be content with their lot in life	should not give up trying to better themselves
14U			0.516*		• are victims of destiny	have choices to make in life
15U			0.310		• could be me one day	will never be me.
3U				0.606	•are hard to recognise	are easy to recognise
4U				0.226	• are the responsibility of gov't and welfare agencies	are not the responsibility of gov't and welfare agencies f

* Indicates significant cross loading - factor loading in range 0.2 – 0.35

Factor 1, which collects seven of fifteen options in the question, describes the
respondents' feelings about the value or importance of the poor and needy. The
options address their value to society and include: 'are important to our society', 'are
valuable', 'are deserving', 'are important', and 'are the responsibility of every

person'. Their perceived value to God is addressed by Option 13, 'are noticed by God'. Option 8 'their need is a punishment', cross loads on Factors 2 and 3 and is deleted from the analysis. This cross loading suggests there may be several distinct response patterns within the sample population, so the option may be retained. It is noted that the data points to the possibility that a relationship exits, but the nature of that relationship is beyond the scope of this study, and could addressed in detail by future studies.

Factor 2 collects three options (6, 7 and 11) that address whether respondents thought 'poverty is self-inflicted', 'the poor are lazy' or 'appreciate the help they receive'. The frequency data (Appendix Q) shows the responses to be predominantly negative, with 43%, 56%, and 43% of respondents respectively, rating the options as Category 1 (<61 on 0-100 scale). The negative factor loadings indicate the options are negatively correlated with other options in the question, possibly meaning that while respondents are predominantly positive in Factor 1, there appears to be a tendency to consider those in need, to be lazy or ungrateful.

Factor 3 collects three options (12, 14, and 15) having positive anchor phrases: 'should not give up trying to better themselves', 'have choices to make in life', and 'will never be me' respectively. Option 12 and 14 both cross load on Factor 1, and while they could readily be considered as part of Factor 1, they would probably be deleted from Factor 3. This leaves Option 15 'will never be me' that was included to assess whether respondents thought they could ever become poor and needy. This option does not cross-load, and the frequency data (Appendix Q) shows the responses were predominantly negative (Category 1, <61 on 0-100 scale). This could indicate many respondents felt they could one day be poor and needy.

Factor 4 collects Options 3 and 4 that have positive anchors 'are easy to recognise' and 'are not the responsibility of government and welfare agencies' respectively. The factor loading for Option 4 (0.23), is weak, but given the absence of cross-loadings, and the large sample size, is significant. The frequency data shows both options were rated negatively in Category 1 (<61 on 0-100 scale) by 56% and 69% of respondents respectively. That is, respondents considered the poor and needy are hard rather than easy to recognise, and that they are more the responsibility of

government and welfare agencies. This is a reasonable association, as it is difficult for an individual to help someone who is hard to recognise as needing help.

6.5.10 Group 6 Questions

This group collects Section 2, Questions 1 to 10 that address the question of the self-reported influence of religion/spirituality on the respondent's use of conventional and alternative medicine and spiritual aids, on employment and lifestyle matters, and on selected lifestyle practices (meat and alcohol intake, smoking). This group also collects Section 4, Questions 1 to 4 that address gender, height, weight and age. Frequency data for these questions are presented in Appendix V.

Table 6.42 summarises the distribution of responses for Section 2, Questions 1 to 6 that address the question of the influence of religion/spirituality on selected health and employment related behaviours. It shows that for Questions 1 (use of conventional medicine), 2 (use of alternative therapies), and 3 (use of spiritual aids), the majority of respondents indicated that religion/spirituality had either no influence or only a moderate influence on their use of those services. By contrast, religion/spirituality tended to influence respondents away from the use of 'spiritual aids'. As listed in the question, these included: astrology, numerology, clairvoyance, channeling and the like. There was a slightly greater tendency for employment and lifestyle choices to be influenced by religion/spirituality. Interpretation of these results is difficult because there is no standardised meaning for the 'Strong' and 'Moderate' descriptors in the Likert Scale. This is often a problem for Likert scales. The best that can be determined is that there is appears to be a broad relationship between self-reported influence of religious/spiritual and the specified behaviours.

Table 6.42: The influence of religion/spirituality on specified behaviours.

Question No	% of Total Respondents						Missing %	Total %
	Strong Influence to use	Moderate Influence to use	No Influence to use	Moderate Influence Not to use	Strong Influence Not to use	Total		
1. Use of Conventional Medicine	15.5	31.4	45.4	5.6	0.8	98.7	1.3	100
2. Use of Natural Remedies	10.5	34.4	50.4	3.3	0.3	98.9	1.1	100
3. Use of Alternative Therapies	7.4	22.9	56.3	7.0	4.6	98.2	1.8	100
4. Use of Spiritual Aids	3.3	4.9	24.4	5.7	60.4	98.7	1.3	100
5. Influence of Religion on Employment	25.4	32.6	38.2	-	-	96.2	3.8	100
6. Influence of Religion on Lifestyle	49.3	32.9	14.9	-	-	97.1	2.9	100

Results for Section 2 Question 7 (meat and alcohol intake, smoking and exercise) are presented in Appendix W, but are not readily summarised for inclusion here. The data shows that meat consumption is highest (Frequent or often) amongst Assemblies of God, Baptist, Pentecostal and GP-REL groups, at 83%, 80%, 84%, and 85% respectively. The lowest were Latter Days Saints and Seventh-Day Adventists at 38% and 20% respectively. Alcohol consumption is characterised by three groups reporting near complete abstinence as indicated by the value for 'Total non-drinkers': Mormons, Salvation Army (100%), and Seventh-Day Adventists (96%). Jehovah's Witnesses reported 93% as moderate drinkers. Similarly, there were five groups that reported near complete abstinence from smoking; Presbyterian, Seventh-Day Adventist, Mormons, Jehovah's Witness (all 100%), and Assemblies Of God (98%). The highest proportion of smokers was found in the New Age (24%), and in the GP-NR (36%).

The results for 'Exercise' are more difficult to interpret because of the uncertainty associated with the meaning of the categories (rarely, occasionally, often, frequently). However, as reported, Seventh-Day Adventist, Catholic, and Anglican have the highest levels of exercise (often and frequently) at 70%, 44%, and 57% respectively. These values compare with approximately 46% for the total sample.

As lifestyle behaviours are made up of multiple practices, the four health practices being reviewed here are presented in Appendix X, and summarised in Table 6.43, to show the proportions of each group reporting adherence to three or four of the four health habits mentioned above. The criteria used to create the table were: either non-

smoker or ex smoker, abstinence from or rarely use alcohol, eat meat 'occasionally' or less, and exercise more than 'often'.

Table 6.43: Proportion of respondents observing three or more health habits

Group Membership	>3 Health Habits		Total
	No	Yes	
Seventh-Day Adventist	13.2	86.8	100.
Mormons	47.2	52.8	100.
Pentecostal	66.7	33.3	100.
Salvation Army	66.7	33.3	100.
Assemblies Of God	66.7	33.3	100.
Baptist	70.5	29.5	100.
Anglican	82.7	17.3	100.
Uniting	83.1	16.9	100.
Catholic	84.4	15.6	100.
New Age	84.6	15.4	100.
GP-NR	87.8	12.2	100.
GP-REL	88.9	11.1	100.
Jehovah's Witness	92.6	7.4	100.
Presbyterian	100.0	0.0	100.
Total	**70.2**	**29.8**	**100.**

Even allowing for the difficulties associated with interpreting the meaning of the quantitative categories for each habit, there is a clearly defined trend in the data. The two groups having the highest proportion of respondents reporting adherence to more than three of the health practices (Seventh-Day Adventists, Mormons), are also the groups most often reporting elevated health status in population health studies. This result indicates that religious/spiritual factors do influence health related behaviours. Levin (1996) also notes that Seventh-Day Adventists have a prescriptive/proscriptive approach to health and lifestyle practices that is illustrated by these results.

Results for Questions 8 to 10, dealing with duration of the practices: meat and alcohol consumption, and smoking, are presented in Appendix W, and summarised in Table 6.44. The question of duration of 'Exercise' practices was not asked because of uncertainty about whether consistent meaning of the frequency categories could be achieved. The data shows there to be a reasonable spread across the duration categories, with no trends evident.

Table 6.44: Duration of health practices

Health practice	% of Respondents in each Duration Category				
	<10 years	11-20 years	21-30 years	>30 years	Total %
Meat Consumption	31.6	21.4	15.9	31.1	100
Alcohol consumption	24.8	23.8	16.8	34.5	100
Tobacco use	20.2	18.2	19.7	42.0	100

The results for gender, weight, height distributions are presented in Appendix V. Table 6.45 presents the gender distribution for the study sample. The total sample comprised 57% female and 43% male, which is consistent with the original aim. Across the groups, the proportion of females (males) ranged from 38% (62%) to a high of 70%(30%).

Table 6.45: Gender distribution

Group Membership	% of Respondents in Gender	
	Female	Male
Anglican	65.5	34.5
Pentecostal	47.2	52.8
Baptist	56.7	43.3
Catholic	70.2	29.8
Jehovah's Witness	53.8	46.2
Mormons	52.0	48.0
New Age	61.1	38.9
Presbyterian	37.5	62.5
Salvation Army	40.0	60.0
Seventh-Day Adventist	47.3	52.7
Uniting	58.6	41.4
Assemblies Of God	59.6	40.4
GP-NR	57.7	42.3
GP-REL	61.7	38.3
Total	56.7	43.3

Results for Questions 2 and 3 (Weight and Height) are summarised data in Tables 6.46 and 6.47. These questions were included for the purpose of calculating the Body Mass Index.

Table 6.46: Respondents' weight distribution

| Gender | % of Respondents in each Weight category | | | | | Total |
	<55 kg	56–70 kg	71-85 kg	86-100 kg	>100 kg	
Female	21.0	56.4	16.6	3.8	2.2	100
Male	2.0	23.8	44.0	23.8	6.3	100
Total	12.6	42.0	28.7	12.6	4.0	100

Table 6.47: Respondent height distribution

| Gender | % of Respondents in each Height category | | | | | Total |
	<160 cm	160-170 cm	171-180 cm	181-190 cm	>190 cm	
Female	33.6	52.6	13.2	0.3	0.3	100.
Male	2.4	19.6	51.4	24.3	2.4	100.
Total	20.1	38.3	29.8	10.7	1.2	100

The Body Mass Index (BMI) is of greatest interest as it a standard measure of whether an individual's weight-to-height relationship conforms to idealised standard values. Table 6.48 shows 10.9% of the total sample had a BMI >30 (range 6.7-18.9%) and were classified as obese, 27.1% (range 13.5 – 50.0%) had a BMI of 26-30 and were overweight, and 51%(range 33.3 – 71.4%) were in the ideal BMI range of 21-25

Table 6.48: Respondent Body Mass Index distribution

| Gender | % of Respondents in each BMI category | | | | |
	<20	21-25	26-30	>30	Total
Female	13.3	56.8	19.3	10.6	100
Male	7.5	44.3	36.8	11.3	100
Total	10.7	51.3	27.1	10.9	100
Range	2.3-23.3	33.3 – 71.4	13.5 – 50.0	6.7- 18.9	

While BMI is commonly used to illustrate the prevalence of overweight or obesity in a community, it is also noted that 10.7% (Range 2.3-23.3%) of the sample had a BMI <20 and were underweight. Appendix Y shows the distribution of BMI across gender and Group membership. The data sorted on 'BMI > 30' shows the lowest proportion of obese respondents is in those groups having the greatest adherence to positive health habits, as shown earlier in Table 6.43. As other factors such as age (Table 6.49) would also influence BMI, the implications of these BMI values are not

considered further. However, it is clear that the BMI could be used to discriminate between respondents.

Question 4: Age

Frequency data for 'Age' are presented in Appendix V and summarised in Table 6.49, which is sorted into descending order on the category '>50 years'. The data shows there are differences in the age distributions of the groups that will need to be considered in any discussion of results.

Table 6.49: Respondents' age distribution

Group Membership	% of Respondents in each Age Category		
	<30 years	31-50 years	>50 years
Anglican	3.7	24.1	72.2
Uniting	8.6	37.9	53.4
Baptist	16.7	36.4	47.0
Salvation Army	20.0	33.3	46.7
GP-REL	13.0	52.2	34.8
GP-NR	27.5	41.2	31.4
Jehovah's Witness	19.2	50.0	30.8
Seventh-Day Adventist	25.5	45.5	29.1
Presbyterian	0.0	71.4	28.6
Catholic	17.4	58.7	23.9
Mormons	27.7	59.6	12.8
Assemblies Of God	45.1	45.1	9.8
Pentecostal	41.5	49.1	9.4
New Age	22.2	72.2	5.6
Total	**21.9**	**45.4**	**32.7**

It is noted that the Anglican and Uniting groups have the highest proportion of respondents aged over 50 years, and the Assemblies of God, Pentecostal and New Age groups, the lowest. Age will not be discussed further as it was included as a demographic variable for use in any modelling of health and religion/spirituality, but examples of the findings in other areas of research into religion/sspirituality and aging can be seen in the works of Idler (1987), Koenig, Kvale & Ferrel (1988), Bearon & Koenig (1990), Breen (1992), Courtenay et al. (1992), Koenig (1993), Ainlay & Smith (1993), Strawbridge et al. (1997), and Krause (2004). However, it is noted that studies with a very large sample might find a relationship between age and beliefs.

6.5.11 Group 7 Questions

Group 7 collects demographic information from questionnaire Section 4, Questions 5 to 16. These questions collect information on: education level, marital status, age and number of dependent children, address details, employment status, past and present occupations, hours worked, income and club, volunteer or self-help group membership.

Question 5: Education

Table 6.50 presents data on respondents' level of education. The data are sorted into descending order on the column 'Undergraduate and/or Post Graduate Degree'.

Table 6.50: Distribution of level of education

Group Membership	% of Respondents in each Education Level			
	Primary And/Or Secondary	Secretarial Technical College Apprenticeship	Undergrad and/or Post Grad Degree	N
Catholic	25.5	10.6	63.8	47
Presbyterian	25.0	25.0	50.0	8
Baptist	23.1	27.7	49.2	65
Uniting	29.3	22.4	48.3	58
Assemblies Of God	41.2	19.6	39.2	51
New Age	27.8	38.9	33.3	18
Seventh-Day Adventist	38.2	29.1	32.7	55
Anglican	40.0	29.1	30.9	55
GP-REL	44.7	25.5	29.8	47
Pentecostal	37.3	35.3	27.5	51
GP-NR	37.3	35.3	27.5	51
Mormons	44.7	34.0	21.3	47
Salvation Army	46.7	40.0	13.3	15
Jehovah's Witness	64.0	36.0	0.0	25
Total	**36.8**	**28.0**	**35.2**	**593**

The table shows the Catholic, Presbyterian, Baptist, and Uniting groups have the highest proportion of respondents with tertiary level education. Mormons, Salvation Army, and Jehovah's Witnesses have the lowest level of respondents in this category, but have more respondents holding technical/trade qualifications. These results are not considered further here, but would be included as an important demographic component of most surveys.

Question 6: Marital Status

Data describing respondents' marital status are presented in Table 6.51. Data is sorted on column 'Married'.

Table 6.51: Marital status

Group	% of Respondents having Marital Status						
	Never married	Married	Widowed	Divorced	Separated	DeFacto	Other
Presbyterian	-	87.5	-	12.5	-	-	-
Jehovah's Witness	7.7	80.8	3.8	7.7	-	-	-
Anglican	5.5	80.0	9.1	-	5.5	-	-
Uniting	10.5	75.4	8.8	3.5	1.8	-	-
Mormons	22.4	73.5	2.0	2.0	-	-	-
Baptist	18.2	72.7	3.0	3.0	1.5	1.5	-
GP-REL	10.6	72.3	4.3	8.5	2.1	2.1	-
Seventh-Day Adventist	23.6	67.3	1.8	5.5	-	-	1.8
Salvation Army	20.0	66.7	13.3	-	-	-	-
Catholic	27.7	66.0	-	4.3	-	-	2.1
GP-NR	14.0	64.0	4.0	12.0	2.0	4.0	-
Pentecostal	26.4	58.5	3.8	7.5	3.8	-	-
Assemblies Of God	42.3	46.2	3.8	7.7	-	-	-
New Age	33.3	22.2	-	11.1	16.7	16.7	-
Total	19.6	67.2	4.2	5.5	2.0	1.2	0.3

The proportion of married respondents in all but the New Age group ranges from 46% to 88%. The New Age group is a notable deviation from the general trend in that the proportion of married respondents is much lower (22%) and the total of divorced, separated or de-facto relationships is much higher (45%). These results do not contribute to the study outcomes and are not considered further. They would normally be included in the demographic component of most surveys.

Question 7: Dependent Children

The data for the total numbers of dependent children is summarised data in Table 6.52.

Table 6.52: Number of dependent children

Group Membership	% of Respondents Having Total Number of Children								Total
	0	1	2	3	4	5	6	7	
Anglican	67.3	10.9	16.4	5.5					100
Pentecostal	55.8	9.6	13.5	11.5	9.6				100
Baptist	65.2	7.6	15.2	6.1	3.0	1.5	1.5		100
Catholic	44.7	8.5	25.5	8.5	6.4	4.3	2.1		100
Jehovah's Witness	44.0	16.0	20.0	16.0	4.0				100
Mormons	40.4	6.4	10.6	19.1	8.5	10.6		4.3	100
New Age	77.8		16.7	5.6					100
Presbyterian	37.5		25.0	25.0	12.5				100
Salvation Army	57.1		14.3	21.4			7.1		100
Seventh-Day Adventist	50.9	10.9	27.3	5.5	3.6		1.8		100
Uniting	58.6	3.4	20.7	13.8	3.4				100
Assemblies Of God	59.6	5.8	11.5	13.5	7.7	1.9			100
GP-NR	46.0	16.0	32.0	6.0					100
GP-REL	40.4	12.8	25.5	17.0	4.3				100
Total	53.9	8.8	19.5	10.9	4.4	1.5	0.7	0.3	100

The purpose of this question was to provide an indicator of the 'free' time a respondent might have available for other activities; including 'religious/spiritual' activities. The example presented in Table 6.53 illustrates this point. Bible study is sometimes considered as an indicator of religious/spiritual behaviour. The table shows that for categories representing any amount of Bible study, the proportion of respondents engaging in Bible study generally decreases as the number of dependent children under the age of ten years increases. It is acknowledged there will be other variables that also impact on the frequency of Bible study, and that the number of dependent children will influence other activities, for example exercise, or voluntary involvement.

There is some uncertainty as to whether respondents have indicated the number of dependent children, or the total number of children. The question is poorly constructed and as a result there are no ways of ascertaining which respondents have recorded which data. However, the idea of measuring the number and age characteristics of (dependent) children may still have merit if properly presented

Table 6.53: Number children under 10 yrs vs frequency of Bible study

| N° Children <10yrs | % of Respondents engaging in Bible Study | | | | Total | N |
	Nil times/week	0.1-2 times/week	2.1-7 times/week	7.1-14 times/week		
0	73.7	81.9	73.8	83.5	77.2	453
1	8.6	3.5	9.8	11.8	8.2	48
2	16.6	9.0	7.7	3.5	10.1	59
3	1.1	4.2	6.0	0.0	3.2	19
4	0.0	1.4	1.1	1.2	0.9	5
5	0.0	0.0	1.6	0.0	0.5	3
Total	100	100	100	100	100	587
N	175	144	183	85	587	

Questions 8 – 13

These questions collected data for addresses, employment status, and occupation (present and previous). Results for each of these questions were deleted from the study as they are diverse data which are difficult to present in a simplified form, and provide no information relevant to the outcomes of the study.

Question 14: Hours Spent in Main Occupation.

The results for this question are presented in Table 6.54. Interpretation is difficult and made more so by insufficient supporting data about the nature of the 'Main Occupation', that is, whether it involves Volunteer service, or is related more to hours worked in employment. Together with several other questions (Section 2 Question 11, Section 4 Question 8), the intention of this question was to gauge the extent of the activities competing for time that might be spent in religious/spiritual involvement.

Table 6.54: Hours spent in main occupations vs group membership

| Group Membership | % of Respondents Hours Spent in Main Occupation | | | | | | |
	0-20	21-40	41-60	61-80	81-100	Total	N
Anglican	50.0	26.1	21.7	2.2	0.0	100	46
Pentecostal	16.3	42.9	32.7	6.1	2.0	100	49
Baptist	41.0	23.0	31.1	4.9	0.0	100	61
Catholic	48.8	30.2	16.3	4.7	0.0	100	43
Jehovah's Witness	41.7	50.0	8.3	0.0	0.0	100	24
Mormons	21.7	28.3	34.8	8.7	6.5	100	46
New Age	5.6	44.4	44.4	5.6	0.0	100	18
Presbyterian	37.5	25.0	37.5	0.0	0.0	100	8
Salvation Army	25.0	16.7	50.0	8.3	0.0	100	12
Seventh-Day Adventist	23.6	30.9	41.8	3.6	0.0	100	55
Uniting	50.9	16.4	29.1	3.6	0.0	100	55
Assemblies Of God	24.0	42.0	28.0	4.0	2.0	100	50
GP-NR	33.3	42.2	8.9	13.3	2.2	100	45
GP-REL	65.9	13.6	15.9	4.5	0.0	100	44
Total	**36.2**	**30.4**	**27.2**	**5.2**	**1.1**	**100**	**556**

Question 15: Income

Results for the question about respondents' income are summarised in Table 6.55. The table shows 61% of respondents have incomes of less than $40, 000 per annum and 32% less than $20, 000 per annum. Within the '$0 – $20,000' income category, there are large variations between groups; ranging from 'nil' for the small Presbyterian group, or 15.9% of the larger Catholic group, through to a high of 53 % of Assemblies of God respondents, 57% of Pentecostals or 63.6% of the Salvation Army group. In each of these three latter groups, age is likely to be a factor in determining the low income, the Assemblies of God and Pentecostals have a high proportion of young respondents, and the Salvation Army group a higher proportion of older respondents. There is relatively less variation from the average in the $21 – $60,000 income range, increasing again in the categories above $60,000.

Income was included in the study solely as a demographic variable. No specific attempt has been made to incorporate the result, nor does it contribute to the outcomes of the study.

Table 6.55: Respondent income vs group membership

Group Membership	% of Respondents in each Income category $(K=1000)							Total N
	0-20K	21-40K	41-60K	61-80K	81-100K	>100K	Total	
Anglican	32.6	17.4	26.1	19.6	4.3	0.0	100	46
Pentecostal	57.1	18.4	18.4	4.1	2.0	0.0	100	49
Baptist	30.4	26.8	21.4	10.7	8.9	1.8	100	56
Catholic	15.9	38.6	20.5	9.1	15.9	0.0	100	44
Jehovah's Witness	37.5	33.3	25.0	4.2	0.0	0.0	100	24
Mormons	17.0	36.2	27.7	4.3	14.9	0.0	100	47
New Age	18.8	56.3	25.0	0.0	0.0	0.0	100	16
Presbyterian	0.0	57.1	14.3	0.0	14.3	14.3	100	7
Salvation Army	63.6	18.2	18.2	0.0	0.0	0.0	100	11
Seventh-Day Adventist	32.7	26.9	19.2	17.3	1.9	1.9	100	52
Uniting	20.8	35.4	22.9	14.6	4.2	2.1	100	48
Assemblies Of God	53.1	26.5	12.2	6.1	2.0	0.0	100	49
GP-NR	23.3	27.9	16.3	25.6	4.7	2.3	100	43
GP-REL	32.6	27.9	14.0	16.3	9.3	0.0	100	43
Total	32.0	29.3	20.2	11.4	6.2	0.9	100	535

Question 16: Group/Club Membership.

The data for this question is summarised in Table 6.56. It shows that more than half of all respondents had no group memberships other than the religious/spiritual groups most belonged to. Within the group having no other group memberships, those with the highest representation were Jehovah's Witnesses (86.4%), Assemblies of God (78%), Mormons (66.7%) and Pentecostal (65.9%). These are also amongst those groups most removed from the mainstream Christian groups. Conversely, the mainstream groups, Anglicans (34.6%), Catholics (41.9%), and Uniting (24.6%) have the lowest proportion of respondents with 'nil' group memberships, and representations in as many as 5 to 7 other categories.

This variable was included as a demographic, but the results provide some discrimination between groups and may be useful to include in future studies.

Table 6.56: Club membership

Group Membership	% of Respondents with Number of Club Memberships									N
	0	1	2	3	4	5	6	7	Total	
Anglican	34.6	26.9	15.4	17.3	3.8	1.9			100	52
Pentecostal	65.9	25.0	4.5	4.5					100	44
Baptist	56.5	17.7	11.3	4.8	4.8	3.2	1.6		100	62
Catholic	41.9	37.2	9.3	7.0		2.3		2.3	100	42
Jehovah's Witness	86.4	9.1	4.5						100	22
Mormons	66.7	16.7	14.3	2.4					100	42
New Age	58.8	11.8	23.5	5.9					100	17
Presbyterian	57.1	28.6		14.3					100	7
Salvation Army	66.7	20.0	6.7		6.7				100	15
Seventh-Day Adventist	50.0	34.0	14.0					2.0	100	49
Uniting	24.6	35.1	21.1	14.0	3.5	1.8			100	57
Assemblies Of God	78.0	10.0	12.0						100	50
GP-NR	57.4	19.1	14.9	4.3	4.3				100	47
GP-REL	59.1	18.2	11.4	2.3	2.3	6.8			100	44
Total	54.7	23.0	12.7	5.6	2.0	1.4	0.2	0.4	100	550

6.5.12 Group 8: Religious Orientation Scale – Revised (ROS-R)

This group collects questionnaire Section 3 Question 11, the ROS-R scale (Gorsuch and McPherson 1989). This scale was included to assist in evaluating the validity of any scale developed through the study. The factor structure revealed by the results from the exploratory factor analysis is summarised by the pattern matrix in Table 6.57. It was not intended to explore the factor structure beyond simply comparing it with the published structure.

Table 6.57: Pattern matrix for factor analysis of ROS-R scale

Option No	Factor Loadings		
	Factor 1	Factor 2	Factor 3
12	0.853		
1	0.760		
4	0.754		
3 reversed	-0.734		
7	0.728		
5	0.678		
10 reversed	-0.636		
14 reversed	-0.442		
8		0.615	
9		0.549	
6		0.528	
13			-0.764
11			-0.659
2			-0.486

Three rotated factors were extracted, explaining 68% of the variance:

- Factor 1 collects response options 1, 3, 4, 5, 7, 10, 12, 14.
- Factor 2 collects response options 6, 8, 9
- Factor 3 collects response options 2, 11, 13

The Alpha reliabilities obtained for Factors 1, 2, and 3 were 0.72, 0.62, and 0.61 respectively.

This factor structure obtained for the survey data is the same as that reported for ROS-R by Gorsuch and McPherson, who used "... group factor analysis ..." (1989, p. 349), compared with the principal axis factoring method used in this study. Factor 1 for this study is identical to the 'Intrinsic' factor, Factor 2 with the Extrinsic (Personal Benefits) factor, and Factor 3 with the Extrinsic (Social Relationships) factor. Cronbach Alpha reliabilities reported were 0.83, 0.57, 0.58 respectively (Gorsuch and McPherson 1989, p. 352).

The Factor Correlation Matrix is presented in Table 6.58.

Table 6.58: Factor correlations for ROS-R scale

Factor	1	2	3
1	1.0	0.07	-0.16
2	0.07	1.0	0.35
3	-0.16	0.35	1.0

The factor correlations are low, suggesting the use of the oblique rotation is justified.

The comparison of the ROS-R factor structure obtained from this study, and that published by Gorsuch and McPherson (1989), is made difficult by the fact that different factor analysis methods were used. However, the ROS-R could be useful for validating (concurrent and possibly construct validity) any new scale derived from the survey results, once the equivalent concepts to be measured by ROS-R and the new scale were agreed upon.

6.6   Summary of Results

The validity of the results is supported, first by the congregational leaders who accepted the questionnaire for administration to their congregations without the need for alteration; second, by the fourteen day test-retest results; and third, by the agreement between the factor structure obtained for the ROS-R Scale and the published factor structure.

The main purpose of the questionnaire was to evaluate a range of proposed measures that together characterise a respondent's religious/spiritual 'status'. The findings of each analysis group are as follows.

Group 1 (Beliefs): These fifteen core beliefs would be retained, and in some cases expanded or modified. Odds ratios, Belief Profiles, and between question interaction terms were used to explore the homogeneity of the responses for denominational groups. Denominational groups were found to be heterogeneous in their beliefs. An alternative means of grouping respondents based on Belief Profiles is suggested.

Group 2 (Religious/Spiritual Practices and Behaviours): Addressing denominational affiliation, meeting attendance and related practices, the majority of questions in this group would be retained. However, they would need to be supplemented by interviews aimed at explaining the differences in the reasons why respondents do what they do; information often not obtainable through questionnaires. This issue is addressed in the next chapter.

Group 3 (Measures of Affect relating to religious/spiritual background and perceptions of God.): Factor analysis of the semantic differentials revealed that respondents perceive religion and spirituality to be different concepts, and that the religious/spiritual influence of the Mother or female guardian was viewed more positively than that of the Father or male guardian. Religion/spirituality was considered a more positive influence in establishing a respondent's life meaning than was science/philosophy.

Group 4 (Measures of Affect specifically dealing with Religion and Spirituality): Factor analysis, and paired t-test statistics of these semantic differentials showed that respondents consider religion and spirituality to be different

concepts. Analysis of the differences in raw reversed response values, also showed that different denominational groups viewed the concepts differently. Measures of *indiscriminately pro-religious* and *anti-religious* feelings were developed for possible future evaluation. These measures would be retained, but could be improved by the addition or replacement of options.

Group 5 (Existential Issues – The Future, Life's Meaning, and The Poor and Needy): Factor analysis of these semantic differentials revealed useful factors that could contribute to measures of religion/spirituality.

Group 6 (Health and lifestyle factors): These questions did not directly address religion/spirituality, but revealed an association between healthy lifestyle and denominational membership that is consistent with the literature.

Group 7 (Physio-socio-demographics): These questions do not directly address religion/spirituality, but may be included as required.

Group 8 (Intrinsic/Extrinsic-Revised scale): This scale was included to assess concurrent validity the factor structure obtained was the same as that published. This scale may be retained if new scales measuring the same concepts are developed.

In addition to evaluating the different measures, several specific findings are reported:

- from the 'Beliefs' questions in Section 1 of the questionnaire, comes the finding that members of the denominational groups are not homogeneous in certain core beliefs. This heterogeneity of the religious or denominational groups is evident in the Belief Profiles, and in the odds ratios created for each question;

- t-test and factor analysis of the semantic differentials used as measures of affect in Section 3 of the questionnaire, reveals that religion and spirituality are considered by respondents, to be different concepts. Smaller religious groups tend to perceive religion as the more positive concept, whereas the New Age and non-religious groups viewed spirituality more positively;

- the reversed raw data from Section 3 was also used to develop a possible means of identifying '*Indiscriminately Pro-religious*' and '*Indiscriminately Anti-religious*' respondents; and

- the health behaviour questions in Section 2 support the idea that certain religious groups, known to consistently be reported as having better health, also report high levels of observance of recommended health behaviours in the areas of meat consumption, alcohol intake, smoking and exercise.

The final chapter discusses the further development of the potential measures and methodology extracted from these results.

CHAPTER 7

Discussion of the Results and Revision of the Survey Questionnaire

7.1   Overview

The aim of the study was to explore the measurement of religion and spirituality, and to identify items or measures that could be used in health related studies. The results demonstrate there are obstacles to defining and measuring religion and spirituality in a way that achieves reliable results. As Chatters (2000, p. 349) notes, it "…is exceedingly complex." In the last decade or so, there has been little meaningful progress in overcoming these obstacles using the approaches evident in the literature. Commenting on the trends in the use and study of spirituality, McSherry and Cash (2004, p. 159) concluded "…it would appear that there is no such thing as a universal definition of spirituality and the possibility of creating one is virtually impossible." However, these comments are contrary to those expressed by Chatters, "…health researchers are often unfamiliar with measurement strategies that that have produced brief, reliable, and content-valid instruments for measuring religious involvement" (Chatters 2000, p. 349). Unfortunately, the contribution of these 'valid instruments' to advancing the study of religion/spirituality is not evident in research being reported in the literature. Certainly, there appears to be little consensus as to which of the instruments referred to by Chatters, is preferred by researchers. This lack of valid measures continues to be underscored by what is possibly the most recently reported attempt to identify and measure dimensions of religiosity and spirituality (Idler et al. 2003). The *NIA/Fetzer Short Form for the Measurement of Religiousness and Spirituality* was developed to address the "… absence of an adequate measure of religiousness and spirituality" (Idler et al. 2003, p. 327). The instrument focuses on those dimensions thought to have the greatest potential to impact on the hypothesised pathways to health, and includes, for example: affiliation, past and present experience and behaviours, and the type and strength of beliefs and values. The authors do not define religion or spirituality, but include in the instrument items representing both concepts as inclusively as possible. This approach, in which 'operational definitions' are implied by the content and structure of the measures, is pragmatic and useful, however the results are ultimately still subject to problems with interpretation, in the absence of an agreed meaning for the concepts. The

survey questionnaire used for this study was developed in a similar way, but the discussion also attempts to further explore the issues of definitions.

In this chapter, Section 7.2 addresses the reliability and validity of the survey results. Section 7.3 discusses the major findings from the survey questionnaire and their implications. Some of these findings go to the core of the understanding and measurement of religion/spirituality, and highlight the need to have a sound theoretical structure. Section 7.4 discusses the findings from the question-by-question analysis. Section 7.5 addresses the challenging issue of defining religion and spirituality, and proposes definitions that take account of the study findings. The final three sections discuss changes to the questionnaire. Section 7.6 compares and contrasts the nomothetic and idiographic approaches to measurement, and suggests the introduction of an interview component to the questionnaire. Section 7.7 introduces a second possible modifying concept; that of the *intention* to act, which carries with it the need for a longitudinal study, as compared with the cross sectional study reported here. The final Section 7.8 presents proposed revisions to the survey questionnaire to allow for further development of the ideas and measures identified by study. The issue remains a complex one, so specific application to the health sector would be the subject of future studies.

7.2. Test-Retest Outcomes: Reliability and Validity of the Survey Results

The test-retest results for the survey instrument presented in Section 6.3, were the basis for establishing the reliability of the survey results. It is noted that reliable results do not necessarily mean the measures have validity. The retest was conducted on 89 respondents, or 15% of the total sample. There were 294 items subjected to test-retest. Half were evaluated using the Kappa statistic, which rated the agreement of 72% of them as 'moderate' or better. The remainder were evaluated using the paired t-test, and in 91% of cases, the null hypothesis, that there was no difference between test and retest data, could not be rejected. That is, there was a significant difference at 5% significance level in only 9% of cases. Only 14 non-numerical items in the questionnaire could not be evaluated. Overall, the results are taken as evidence that the questionnaire has solid test-retest reliability and that the responses are at least moderately stable.

Within the overall data, the ROS-R scale (Gorsuch & McPherson 1989) in Section 3, Question 11, returned between 43 and 76% agreement ('Fair' to 'Moderate') using the Kappa statistic. This is poorer agreement than the overall test-retest statistics and indicates that the ROS-R scale may not provide stable responses with different populations. The potential for such outcomes was discussed in Chapter 3, where it was suggested some of the apparent assumptions about religious beliefs in the scale were questionable. The ROS-R scale was included in the questionnaire as a measure of concurrent validity, but was ultimately not required, as no scales were created. However, its inclusion serves to highlight the difficulty in obtaining reproducible results from survey samples of different composition. Gorsuch and McPherson used a narrow sample of university students for their reported results, whereas this study used a more diverse sample.

7.3   Limitations to the Study

To maximise variability in the sample pool and in the data, approximately equal numbers of respondents were drawn from selected religious or spiritually oriented groups, and from the general population without regard for the proportion of the total population they represented. Although this limits the application of the results to the general population, this was known from the outset and does not detract from the value of the study.

All respondents were volunteers, raising the possibility of volunteer effects that can manifest as bias. This was done to achieve diversity in the responses and, and again does not detract from the value of the study.

Non –Christian religious groups (for example; Moslem, Buddhist, Bahai) were excluded from the study because their core beliefs are quite different to those of Christianity, which created difficulties with selecting the content of the questionnaire. As the proportion of the individual groups in the population is relatively small, their impact on the study outcomes was also considered likely to be acceptably small. They could however be included in future studies.

Religious groups having a predominantly ethnic composition were excluded from the study because these groups often have English as a second language, again leading to

difficulties ensuring the content and language of the questionnaire took this into account.

7.4   Major Study Findings.

There are five principal themes to the findings arising from the study:

- the apparent failure of the assumption of homogeneity of denominational groups;

- gender differences in beliefs;

- empirically derived comparisons of religion and spirituality;

- the measurement of indiscriminately pro-religious and anti-religious responses; and

- the question-by-question analysis and the resultant restructuring of the survey questionnaire to incorporate the study findings.

The results for Section 1 of the questionnaire, which addresses core Christian beliefs, show there were many different combinations of beliefs reported *within* each of the groups surveyed. If the groups were homogeneous, a single set of beliefs, or even a few sets might be expected. Gender effects are a major contributor to this result, most notably in beliefs about God, about the Devil, and about the Bible. The measures of affect in Section 3, show that many respondents considered religion and spirituality to be different rather than the same concepts. These measures of affect also formed and indiscriminate pro-religious and anti-religious tendencies are shown to be potentially measurable. This issues are discussed in the following sections.

7.4.1   Finding 1: Challenging the Assumption of Group Homogeneity;

A notable assumption implicit in many published studies of religion in particular, is that religious groups are relatively homogenous with respect to belief structure and behaviour. This assumption is seen in the use of the variable 'Religious Affiliation'. Strong evidence-emerges from this study to suggest this assumption is either invalid or not sufficiently robust to be useful. Chatters (2000) also draws attention to this issue. The evidence is found in three sets of results; the belief profile or interactions of responses within in each question, the overall odds ratios for Section 1, and the

comparison of gender odds ratios. One exception to the finding is seen in lifestyle related health habits reported by respondents of several religious groups. These findings will now be discussed in detail.

Using Belief profiles and other Item Interaction Terms as Indicators of Group Homogeneity

If the assumption that denominational groups are homogenous in their beliefs was correct, it would be expected that each group would be represented by only one Belief Profile, or at least only a few. The results in Table 7.1 show this not to be the case, and that each group actually comprises many different profiles. It is acknowledged that some of the noted effects may be artefacts of the way in which questions are presented, of the content and analysis of the response options, or of any theoretical interactions there may be between them.

Summarizing Appendix G and sorted on the column 'Number of Response Options', Table 7.1 shows the number of different Belief Profiles increases with the number of response options available in each question

Table 7.1: Relationship between the numbers of response options and belief profiles.

Question No	Concept	Number of Response Options	Number of Interaction terms (Belief profiles)
1	God	10	61
2	Jesus Christ	9	38
5	The Bible	9	39
9	Salvation	9	38
15	Miracles	8	30
3	Holy Spirit	7	22
7	Sin	7	23
11	Hell	7	31
14	Angels	7	21
4	Origin of Human Race	6	21
6	The Soul	6	20
8	Satan	6	19
12	Purgatory	6	17
13	Ten Commandments	6	14
10	Heaven	5	18

Similarly, Appendix H is a cross tabulation of the 'Group Membership' or 'Religious Affiliation' with the number of Belief Profiles, and illustrates for each of the fifteen questions, the diversity that exists within each group. Appendix L, in which Belief

Profiles are reduced to a new set of belief related categories, shows that these new categories comprise respondents from many of the denominational groups. The data for the Uniting Church in Question 3 presented in Table 7.2 illustrates this. The four categories of Belief Profiles contain 5%, 22%, 53% and 20% of the Uniting Church respondents respectively. That is, 22% of the Uniting Church members surveyed, believe the Holy Spirit to be an energy field in the Universe, while another 20% believe Holy Spirit to be real person. Only 2% of all respondents selected both options, which suggests that the differences between the two options are distinct. This in turn suggests that the differences in belief about the 'Holy Spirit' reported for the Uniting Church are based on real differences between respondents, and are not simply the result of subtle differences of interpretation.

The Belief Profile term, addresses only the interactions between responses *within* each question, that is, for a single concept only. For a group to be considered homogenous, it also needs to be homogeneous across all the different core beliefs held by that group. The Between Question Interaction Terms (BQIT) presented in Appendix I and summarised in Tables 5.19 and 5.20 show the extent to which the homogeneity within denominational groups changes, as the number and type of questions included changes. Examination of the BQIT values obtained for the nineteen combinations of questions evaluated and reported in Appendix I, shows that the interaction of *two* questions generated from 50 to 150 BQIT values. The combination of *three* questions generated up to 200 interaction terms, *four* questions generated more than 300 terms, and in the extreme case, where *all* of Section 1 Questions 1 to 15 were considered together in a single interaction term, more than 600 interaction terms were obtained. Of these, only five interaction terms collecting more than one person; and they collected up to a maximum of three respondents.

Even allowing for the possibility that some of the noted effects are artefacts of the analysis, there can be little doubt, that the data from this study does not support the assumption of homogeneity of beliefs within denominational groups, as implied by use of Religious Affiliation as a variable. This assertion is supported by the results of a survey released in January 2004 by the Barna Research Group (Barna 2004). This survey found that only half of a sample of over six hundred senior pastors of Protestant denominations, held to a number of core beliefs including; an inerrant

Original Response Options Used in Survey Questionnaire.

Original Response Option Number	Response Options
1	I don't know
2	does not exist,
3	a real person
4	God
5	an energy field in the Universe
6	a symbol only
7	none of the above, I have other views

Collapsed (Recoded) Categories Derived from the Original Response Options

Recoded Category (Response Options in Category)	Main Concepts Describing Category
1 (1, 2, 6, 7)	• I don't know, does not exist • a symbol only, None of the above, I have other views
2 (5)	• an energy field in the Universe
3 (4)	• God
4 (3)	• a real person

Distribution of Group Members across recoded belief categories

Recoded Category	% of Respondents from each Group Membership														Total %	Total N
	ANG	PENT	BAP	CATH	JW	LDS	NA	PRES	SA	SDA	UNIT	AOG	GP-NR	GP-R		
1	9.1	7.4	4.5	8.5	71.4	45.3	16.7	0.0	0.0	10.9	5.1	3.8	71.7	25.5	20.3	124
2	18.2	3.7	6.0	12.8	21.4	11.3	66.7	0.0	0.0	5.5	22.0	0.0	18.9	14.9	12.9	79
3	65.5	35.2	47.8	68.1	7.1	0.0	11.1	75.0	60.0	50.9	52.5	19.2	9.4	51.1	38.6	236
4	7.3	53.7	41.8	10.6	0.0	43.4	5.6	25.0	40.0	32.7	20.3	76.9	0.0	8.5	28.2	172
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	611

TABLE 7.2: The Distribution of Respondents into Recode Categories for Section 1 Question 3 'The Holy Spirit…'

Bible, the sinless nature of Jesus Christ, the power and presence of God, and salvation by grace alone. Gender effects were also reported, with female pastors in the survey more likely to depart from an accepted Biblical viewpoint than were the male pastors. That is, where substantial consistency could be expected, there was only 50% agreement on core beliefs.

Using Odds Ratios as Indicators of Group Homogeneity

The derivation of the odds ratio (OR) is described in Chapter 4. The OR data has been calculated using the GP-NR group as the reference group. Any group could have been used, as the actual value of the OR is less important than the relationship between the OR values for the various groups. For example, the data in Appendix E clearly shows large variations in the value of the OR, both within each response option (down the column of denominational groups), and within each denominational group (across rows of response options). If there was homogeneity within a given group (that is, across the rows), then a few response options representing the beliefs of that group would show a non-zero OR. The remainder of the response options that *do not* represent the beliefs of the group should return a zero OR, because none of that group should choose them. There should also be similar OR values for both genders. This ideal case is absent from the data, supporting the conclusion that the assumption of *within* group homogeneity of beliefs, is not valid, and pointing towards a more complex picture than was anticipated.

7.4.2   Finding 2: Gender Effects In the Odds Ratio Data.

The OR data most clearly shows the differences in the odds ratios between male and female responses. Appendix F presents the OR data for instances where the difference in the OR is more than three times. There are pronounced gender effects in the majority of response options across all fifteen core belief questions in Group 1 (Section 1, Questions 1 to 15). This may indicate, that the failure of the assumption of group homogeneity may be due in large part to gender effects. Two examples of gender differences in beliefs are as follows. The first example taken from Appendix E is summarised in Table 7.3. Within Section 1 Question 1 ('God is...'), there is a tendency for females to select response Options 2, 3, 4, 7, 9 and 10, whereas males were more likely to selects Options 1, 5, 6 and 8. Eliminating Options 1, 2 and 9

which have very small odds ratios, the results suggest that females may tend to think of God as a personal spiritual being, whereas males, tend towards the idea of God as an energy field pervading both the environment and the person. The reason for this is not clear from the results, but it is a potentially significant explanatory factor.

Table 7.3: Gender effects on OR values for Section 1, Question 1 (God is...)

Response Option N°	Response Option	Total Odd Ratio Female	Total Odds Ratio Male	Ratio F:M >1	Ratio M:F >1
1	I don't know	0.04	.21		5.87
2	there is no God	0.10	0.04	2.82	
3	a single being	49.6	15.1	3.30	
4	described by the Trinity	153	44.7	3.42	
5	an energy field	0.48	2.83		5.86
6	material/physical	3.33	4.03		1.21
7	spiritual/non-material	3.65	2.42	1.51	
8	within every person	2.13	4.98		2.33
9	a symbol only	0.04	0.03	1.55	
10	None of the above, I have other views	1.01	0.54	1.88	

The second example, that illustrates possible gender effects in beliefs, is taken from Question 5 ('The Bible'); for which the odds ratios are summarised in Table 7:4. Removing options 1 and 6 which have low odds ratios for both males and females, there is a greater tendency for males to consider the Bible to be irrelevant, or to contain errors and contradictions. By contrast, females are more likely to consider the Bible to be relevant, true and infallible, and to be the final word on moral issues.

Table 7.4: Odds ratios for Question 5 (The Bible ...)

Response Option ID	Response Options	Total Odd Ratio Female	Total Odds Ratio Male	Ratio F:M >1	Ratio M:F >1
1	I don't know	0.03	0.49		14.4
2	is not relevant today	0.20	0.45		2.22
3	both Old and New Testaments are relevant today	83.68	43.8	1.91	
4	only the New Testament is relevant today	0.46	0.12	3.92	
5	contains errors and contradictions	0.32	0.59		1.83
6	is of no more value than many other books	0.06	0.10		1.61
7	is true and infallible	56.3	38.2	1.47	
8	is the final word on moral issues	49.8	33.0	1.51	
9	none of the above, I have other views	0.80	0.09	8.74	

Summarised data for the remaining questions in Group 1 are presented in Appendix F. Question 8 (Satan or the Devil is...) also presents an interpretable gender related

pattern. It shows that males tend toward thinking of Satan as a name for a dark force in the Universe, which is consistent with the male view of God as an energy field in Question 1. Females tend toward viewing Satan as a symbol, as they also tended to do with the concepts of God, Jesus Christ, the Holy Spirit. The remainder of the questions produced results that support gender based differences to varying degrees, but overall, there strong evidence that gender effects do exist, and that they threaten the idea of homogeneity within groups.

7.4.3   Where is Religious Affiliation Useful?

Despite the study finding that religious groups are heterogeneous in their beliefs, and that as a result, 'Religious Affiliation' is possibly of limited value as an independent variable, there are clear exceptions where it may be an appropriate variable in the study of certain health outcomes. For example, in Section 6.5.10, it was shown that Mormons and Seventh-Day Adventists, who either proscribe or recommend standards of behaviour regarding some, or all of, smoking, alcohol consumption, diet, exercise, sleep, and spiritual regime (Nieman 1988), report greater adherence to beneficial health behaviours. The outcome of this issue, is that denominational or any group affiliation is useful if it identifies groups in which certain strong prescriptive beliefs, or recommendations that are adhered to by the members.

Religious denomination or other group affiliation should be retained as a survey question, subject to acknowledgment of the limitation on its validity.

7.4.4   Finding 3: The Empirical Comparison of Religion and Spirituality

The majority of reported studies that include religion/spirituality do not define the concepts, but typically refer to religious attendance or practices, and in doing so imply some underlying definition. In many instances, this may not be a problem, but if this implied definition from the researcher is at odds with that held by the respondents, then this dissonance may result in the responses not being what the researcher expects, creating the potential for difficulties in interpretation of the responses. This study explored this issue by using the survey responses as the basis for assessing whether religion and spirituality are perceived to the same or different concepts. This issue in discussed in the next section.

239

Perceived Differences Between Religion and Spirituality

Group 4 (Section 3, Questions 7 and 8) looked at the question of whether respondents thought religion and spirituality were the same, or different. Respondents were specifically asked (in Option 5), whether they considered religion/spirituality to be the same, or different concepts. Factor analysis of the combined data for those two questions produced separate factors for religion and spirituality, showing they are empirically different using that particular set of semantic differentials.

Results from the paired t-test analysis of the same raw data are summarised in Table 7.5, and provide further support for the idea that respondents considered religion and spirituality to be different concepts. Nearly 65% of respondents who answered the question considered the concepts to be different, broken down into 44% who considered spirituality the more positively, and 21% who considered religion more positively. It is assumed that the remaining 35% considered there was no difference between the two concepts.

TABLE 7.5: Recoded results from paired t-test data for Section 3 Questions 7 & 8

Recoded Category	Frequency	Percent	Percent Of Non-missing	More Positive Concept
-2	82	13.4	18.7	spirituality
-1	111	18.2	25.4	spirituality
0	154	25.2	35.1	neither
1	58	9.5	13.2	religion
2	33	5.4	7.5	religion
Total	438	71.7		
Missing	173	28.3		
Total	611	100		

Table 6.36 presents the same data cross tabulated with group membership. The proportion of respondents who viewed spirituality more positively than religion, ranged from 71% for the New Age group and 38% for the GP-NR group, to less than 5% for the Anglican, Mormons and Presbyterian groups. Those indicating no difference ranged from 'nil' for the New Age group, to 24%-26% for Baptist and the GP-REL groups, through to more than 50% for the and Presbyterians. The highest proportion of respondents considering religion the more positive concept were in the

Salvation Army (20%), Anglican, Baptist(16%), and Seventh Day Adventists(15%). It is not clear from the data why the difference exists, but it was seen in the belief questions (Section 1, Questions 1 to 3) that there was a tendency for God, Jesus, and the Holy Spirit to be perceived to have either a physical form, or to be more of a spirit or energy in the Universe. It is possible that these differences in the perceived meaning of religion and spirituality are related to these differences in beliefs.

It should be noted that the categories in Table 7.5 were created to distinguish between religion and spirituality, and were intended to be treated as nominal categories, not as ordinal data indicating that there is some quantitative difference between the two concepts.

The empirical evidence pointing to religion and spirituality being different concepts is strong, and provides the rationale for reconsidering the question of how the concepts should be defined. This question is addressed in Section 7.5

7.4.5 Finding 4: Indiscriminately Pro and Anti Religious/Spiritual Responses

Identifying indiscriminately pro or anti-religious/spiritual tendencies in respondents is a potentially useful measure to develop because such tendencies may be associated with personality characteristics that affect both physical and mental health (Koenig 1993).

The results show the measures of indiscriminately pro-religious (IPR) or anti-religious (IAR) tendencies developed using selected semantic differentials as measures of affect. In principle, the concepts are defined by the tendency for a respondent to consistently select response options at the extremes of the range of available values. The results presented in Tables 6.37 and 6.38 show that approximately 10% of respondents selected more than 80% of their responses at either extreme (0-3 or 97-100) of the 0 - 100 range on the reversed raw scores. These results reported were not derived using a previously reported method, but are presented to illustrate a potential method. Allport & Ross (1968, p. 251) describe the use of the **ROS** Likert scale scores for this purpose, but this was not used because the Revised form of the scale (the ROS-R) was not included in the survey questionnaire).

A possible limitation to the method is revealed in Table 6.38, which shows that Jehovah's Witnesses and Mormons both returned a comparatively higher proportion of respondents in both the IPR and IAR categories. Both of these groups fall outside of the 'mainstream' Christian groups, so the measure may be detecting some difference related to membership of those groups. A second issue is that the frequency of indiscriminately pro or anti-religious responses will be influenced by the choice of terminal words and phrases used in the construction of the semantic differentials, or more specifically, the semantic distance between the terminal phrases. For example, with a concept such as 'God', it is difficult to judge how extreme the terminal pairs should be to avoid the problem of large numbers of responses at the extremes due to a reluctance by the respondent to be seen as criticizing God. The terminal pair 'valuable-worthless' could alternatively be replaced by a more extreme pair such as, 'extremely valuable- utterly worthless' so that more responses would be further from the extreme, and therefore potentially result in fewer 'indiscriminate' responses; depending on the cut-off value defining such responses. That is, the arbitrary values used here to define the boundaries for IPR and IAR, could be changed to any that suit the purposes. The use of the semantic differential as the basis for the measure appears to be useful, but questions more specifically designed for the purpose would make it a more robust measure.

7.5 Discussion of Other Useful Results

This section examines-which of the remaining questions may have the potential to be part of a composite measure of religion/spirituality. The 'Groups' discussed here are the analytical groupings described in Chapter 5

7.5.1 Group 1 (Belief) Questions

In the discussion of the major findings at the beginning of this chapter, selected results describing the major findings for Section 1, Questions 1 to 15 were presented. This section examines those results after recoding of the responses to create categories of respondents based on similarities in their belief profiles, rather than denominational affiliation. The recoded responses for the fifteen questions in the Group 1 (Beliefs) are presented in-Appendix K. Each questions has either three, four, or five of these new belief categories which group together respondents having

similar Belief Profiles, but who belong to different denominational groups. For example, Category 1 is common for all fifteen questions, and collects the responses 'I don't know', 'Is a symbol only', and 'None of the above, I have other views'. It typically collects the smallest proportion of respondents. Categories 2, 3, 4 and 5, then collect different beliefs options for each question as described in Appendix K. The significance of the new categories is that they collect respondents having similar beliefs without reference to their denominational membership, so a given category could collect respondents from any number of the denominations.

Appendix L shows the distribution of Group Affiliation with the new recoded categories. Table 7.6 shows how the respondents are distributed across the new categories for each question.

Table 7.6: Distribution of Respondents across Recoded Belief Profiles for Group 1

Recoded Category	% Of Respondents In Category For Each Question														
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
1	8	9	20	9	6	10	7	16	18	8	9	20	9	6	10
2	32	10	13	15	71	21	5	34	59	32	10	13	15	71	21
3	23	5	39	34	23	68	11	7	23	23	5	39	34	23	68
4	37	66	28	30	-	-	77	44	-	37	66	28	30	-	-
5	-	11		12	-	-	-	-	-	-	11	-	12	-	-
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

There are several ways to utilise the information provided from these new categories. First, by using the questions unchanged from survey questionnaire and conducting tests of association of the new categories with other variables. Second, use the content of the new categories as the basis for constructing new response options for the existing questions, or third, construct new questions. In this instance, we will examine the second option, the outcomes of which may lead to some further reworking of the questions to improve the clarity and optimise the number of response options. For example, Section 1 Question 6, *The 'soul...'* had the following response options

I don't know

Is the connection a person has with the oneness of the Universe

A person has a soul that lives on after the body dies.

There is no soul that goes on living after the body dies

A person is a soul.

None of the above, I have other views.

Tables 7.7 and 7.8 present the three new categories created from these response options by recoding, and the distribution of group members into those categories. The tables show members of almost every different denominational group in each category, but indicates the categories are more homogeneous with respect to the concept in question than was denominational affiliation. Using these categories in any analysis could result in a different outcome to that obtained using denominational affiliation.

Given the growth in belief regarding spiritual matters including life after death, the response options could be expanded to include some or all of the following:

- The soul is a person's spirit;
- Some person's can communicate with the spirits of the dead;
- These spirits of the dead can guide and protect those still living;
- The soul of every person who dies goes to heaven;
- The souls of some people who die go to hell;
- When a person dies they are/can be reincarnated or born again into new physical bodies;
- When a person dies, they remain in the grave;
- When a person dies they are not reborn;
- When a person dies and is buried, they turn to dust and that's the end of the matter;
- At sometime in the future, there will be a resurrection of the dead;
- No dead person will ever come back to life; and
- Some dead people will be raised from the dead to live again.

New Category	Original Response Options in Category
1	• I don't know • none of the above, I have other views • a person is a soul
2	• there is no soul that goes on living after the body dies
3	• is the connection a person has with the oneness of the Universe • a person has a soul that lives on after the body dies

Table 7.7: New Categories and Response Options for Section 1 Question 6 'The soul...'

Category						% of each Denomination/Group in New Categories.									Total	Total N
	ANG	PENT	BAP	CATH	JW	LDS	NA	PRES	SA	SDA	UNIT	AOG	GP-NR	GP-R		
1	7.3	13.0	1.5	8.5	0.0	11.3	16.7	0.0	13.3	9.1	11.9	5.8	26.4	14.9	10.3	63
2	5.5	16.7	9.0	4.3	100	5.7	16.7	12.5	0.0	87.3	1.7	13.5	30.2	8.5	21.4	131
3	87.3	70.4	89.6	87.2	0.0	83.0	66.7	87.5	86.7	3.6	86.4	80.8	43.4	76.6	68.2	417
Total	10	100	100	100	100	100	100	100	100	100	100	100	100	100	100	611

Table 7.8: Distribution of Group Members into New Categories for . Section 1 Question 6 'The soul...'

The analytical method used to create the belief profiles (Section 5.4.3) works best when there are ten or less response options, so items would be chosen so that there are no more than ten response options.

The principles applied in the construction of the original response options also apply here. First, a person could select more than one response option and so create a belief profile for that concept. Second, options that raise contentious theological questions may be of limited value. Third, concepts should as far as possible have the same meaning to all respondents. This study was limited to the Christian concepts because the great majority of the population acknowledges these belief types. Response options from other belief systems may be of limited value because of the small proportion of the population they apply to.

Any theological issues that arise with a response option do not necessarily preclude the use of that option, because it does not necessarily need to be theologically 'correct', so long as they represent the beliefs of some of the study population. This position is adopted in light of the fact that there are also issues of theological correctness in the core beliefs of the some of the denominations in the study. The principal aim is to provide response options that respondents can select to most adequately describe their beliefs; whether theologically correct or not.

7.5.2 Group 2 Questions

Questions making up Group 2 (Religious Behaviours) include the following: from Section 1, Questions 16, 17, 20, 21, 23, and 26. These deal with:

- religious/group affiliation;

- duration of belief;

- present attendance;

- duration of attendance;

- financial contributions; and

- spouse/partner beliefs same or different.

As explained earlier in this chapter, religious/group affiliation is retained even though its usefulness may be limited to specific applications such as lifestyle choices. The duration of belief or meeting attendance can each be considered as indicators of the strength of belief or attachment to the group, although the respondent's age is likely to be an important modifying variable. Spouse/Partner beliefs can influence an individual's behaviour, for example, there may be interpersonal conflict arising from the religious/spiritual practices associated with the beliefs. Alternatively, partners who share like religious/spiritual beliefs and practices may benefit from an increased level of mutual support. Each of these items would be retained.

The following concepts were addressed by Section 2, Questions 12, 13, 14, 15 and 16:

- television viewing;

- practices such as meditation, yoga, and so on;.

- personal prayer;

- bible study; and

- voluntary activity.

In each case, the response options for these questions would be changed from a continuous number line to an ordered response category based on the findings of the study.

Television viewing is a competing behaviour for religious/spiritual involvement simply because the time spent viewing television, particularly secular television programs, is time not able to be spent in religious/spiritual (or other) activities. Appendix O shows an average of 51% of all respondents watched from 1 − 3 hours/day of general television, and 18% 3 − 5 hours/day. No judgment is made regarding these values, except to indicate that a person watching television for 20 to 30 hours/week is unlikely to be involved in significant levels of not only religious/spiritual activities, but also physical exercise.

Meditation and yoga are indictors of personal involvement that were included so that the small number of individuals engaged in these practices would be accommodated in the study (see Appendix O). Prayer and study of either the Bible or other religious/spiritual material could be seen as indicators of an individual's commitment to 'search' for meaning, or as simply 'religious/spiritual' activity.

All questions are retained, but possibly require modification.

7.5.3 Group 3 Questions

Group 3 collects Questions 1, 2, 4, 6 and 10 from Section 3, and addresses the concepts of:

- perceived religiosity/spirituality of the respondents parents or guardians;

- the influence of religion/spirituality, science, or philosophy in explaining the respondent's view of the future and of the meaning of life; and

- God.

The factor analyses showed that respondents tended not to discriminate between parent/guardian being religious or spiritual. However, there was a gender based difference in the type of religion/spirituality exhibited by the parent/guardian. As the parent/guardian influence is important, these questions would be retained. Respondents discriminated between religion/spirituality and science/philosophy as influences in the perceptions of the future and of the meaning of life (Question 4 and 6). These questions would also be retained, possibly with the individual religion, spirituality, science and philosophy options collapsed to 'religion/spirituality' and 'science/philosophy'. This would reduce the number of question with minimal loss of information.

Question 10 ('God is...') was reduced by factor analysis to two sub-scales that are described in Table 6.30. To minimise the likelihood of the study being considered overtly 'religious', the study design deliberately avoided attempting to evaluate the respondent's relationship with a deity. However, after considering the results, and confronting the question of defining religion and spirituality, it is concluded that the deity, as a concept fundamental to religion/spirituality, should be a clear and

unequivocal focus of the measurement process. The two sub-scales would be retained as they tap into different affective element of a respondent's relationship with God. The range of items may need to be expanded to incorporate issues relating to a respondent's feelings toward God in respect of issues such as human suffering and natural disasters. For example, new semantic differentials could be constructed for underlying themes such as

- What sort of God would send a soul to a hell to suffer?
- Why does God let people suffer needlessly?
- If God is so good, how come there is so much suffering in this world.?
- How come God allows natural disasters to occur?
- How much do you trust God? and
- Having faith in God

The aim is to provide the respondents with the opportunity to respond as openly as can be made possible by the semantic differentials; to tap into their true feelings with minimal restraint arising from restrictive response options, and achieve replicable responses. An interview component to the measurement process can provide additional insights into the respondents 'true' feelings about concepts such as 'God', but these still have to be recorded and interpreted, which can be subject to rater error.

7.5.4   Group 4 Questions

The main purpose of including these two questions (Section 3, Questions 7 and 8) was to allow examination of whether respondents considered religion and spirituality were the same or different concepts. Factor analysis of the two questions together produced five factors, two of which contained the majority of options from each of Questions 7 and 8 and three much smaller scales (See Section 6.5.7, Tables 6.32, 6.33, and Appendix T). Factors 1 and 2 illustrated the differences between religion and spirituality and were discussed in detail earlier in Section 7.4.4.

Of the remaining three factors, Factor 3 shows most respondents considered both religion and spirituality to be 'hard' to understand or confusing, while Factor 4 suggests the majority of respondents do not feel religious or spiritual experience is adversely affected by the physical body. The original purpose of this latter item was to examine whether or not respondents felt their religious/spiritual experience was

influenced by their physical health. For example, a person who considers there to be no direct relationship between their physical health, their mental faculties, and their relationship with the deity *may* be more inclined to engage in lifestyle choices injurious to their health and yet still believe themselves to be religious/spiritual. The item requires rewording to reflect this intention more effectively.

Factor 5 is a small factor accounting for only 3% of the variance, but had a major role in addressing the question of whether religion and spirituality are empirically the same or different concepts. The factor collected Item 5 for both Question 7 ('religion is the same as being spiritual/different to being spiritual') and Question 8 ('Spirituality is the same as being religious/is different to being religious'). The results associated with this factor were discussed in detail in Section 7.4.4. As the only item to ask directly the respondents views on whether religion and spirituality are the same or different, Item 5 was the pivotal and would be retained without modification in a reduced set of semantic differentials.

7.5.5 Group 5 Questions

Results of the factor and reliability analysis for the three questions in this group, Question 3 (The Future), Question 5 (Life's Meaning), and Question 9 (The Poor and Needy) presented in Section 6.5.9 show they make an important contribution to the study.

Factor analysis of 'The Future' (Question 3) returned three factors. Factor 1 contributed most to explaining the variance, and indicated respondents generally had a positive view of the future. Factor 2 seems to address the 'mystery or fate' aspects of the ability to know about the future, and Factor 3 addresses the predictability of the future.

The question 'Life's Meaning' (Question 5) returned three factors. The items collected by Factor 1 were mainly positive responses to the descriptive phrases that included; 'hope', 'satisfying', 'comforting', and 'meaningful'. Factor 2 however collected negative responses to items addressing uncertainties about life as described by, change, wonderment, and mystery. Factor 3 collected predominantly negative responses to items dealing with urgency and predictability in life.

Factors for both of these questions address issues important to understanding how religion/spirituality influence an individual's life choices, and could be associated with an individual's religious/spiritual status. Both questions would be retained with the reduced number of items resulting from reliability analysis. Both concepts ('The Future', and 'Life's Meaning') could also could be considered as indicators of religion/spirituality, since neither concept can be completely known, and for most people, would ultimately be subject to their having faith in the ability of a power greater than self to justify that faith. Faith about the future does not necessarily mean a positive future; simply that the individual's belief about the future is derived from their relationship with a power or deity. Similarly, with the 'Life's Meaning', the individual's sense of meaning about their own existence would in many cases be derived from their relationship with some power or deity.

Question 9, 'The Poor and Needy in our Community', examines the respondent's relationship with other people, especially those less fortunate than themselves. More generally, this question was an attempt to tap into the concept of altruism, which in a religious/spiritual context would commonly manifest as service to others. The question returned four factors. The seven items collected by Factor 1 address the perceived value or importance of the poor and the needy. Generally, the factor items were rated positively. In contrast to Factor 1, Factor 2 items were negatively rated items suggesting the poverty of the poor and needy is self-inflicted, and that they are lazy and ungrateful. After removing several items that cross loaded, Factor 3 retained only the single item 'could be me one day /'will never be me.' The responses were predominantly negative, suggesting many respondents felt they could one day be poor and needy. Finally, Factor 4 collects items dealing with the questions of whether they poor and needy can be readily recognised, and who has the responsibility caring for them. Most respondents indicated they thought it is hard to know who is poor and needy, and that (therefore), they are the responsibility of government and welfare agencies.

This question is retained as the factors are meaningful, but it requires revision or the addition of items that more directly address the relationship between religion/spirituality and altruistic behaviour.

7.5.6 Group 6 Questions

Results for this group are found in Section 6.5.10. These questions from Section 2, Questions 1 to10, and Section 4, Questions 1 to 4 dealing with health oriented variables , were originally intended to provide data for an evaluation of the association between religion/spirituality and health behaviours. The data shows there is a strong association between the number of positive health behaviours reported, and membership of a group that maintains strong prescriptive beliefs about health and lifestyle, particular the Seventh-Day Adventists and the Mormons (See Table 6.43). This finding is consistent with the literature reviewed which describes these two groups as having strong health oriented beliefs (for example, (Dwyer 1988), (Levin 1996), and (Nieman 1988). These questions are retained, because they are relevant as indicators of religiosity/spirituality, provided they are used and interpreted appropriately. Additional questions to allow development of a scale to describe the religion/spirituality – health orientation have been added to the modified questionnaire (See Section 7.9.3).

7.5.7 Group 7 Questions

Questionnaire Section 4 Questions 5 to 16, deal with physio-socio-economic factors. As used in the survey questionnaire they do not provide any direct information about religion/spirituality. However, with modification, several of questions could contribute useful information. For example, in some cases postcode data could show how far a respondent travels to attend church or group meetings, and how many alternate churches or meeting locations of the same denomination they pass by in doing so.

Question 7 asks how many dependent children a respondent has in a number of age groups up to 17 years of age. The question requires revision from its original form to ensure the question of dependent children is clarified. The question raises many issues of how any data should be interpreted to take into account societies values relating to children, but could still be included, as time spent addressing children's many needs could be considered a competing behaviour that manifests as an *apparent* reduced level of commitment to religious/spiritual activity.

The majority of the remaining concepts in this group, dealing with occupation, income, and social networks, would be found in some form in most questionnaires, and are not discussed further here.

7.5.8   Group 8 Questions

The ROS-R scale could be retained in the question pool, if it was to be used to validate new scale measuring similar concepts. Its use in this study was not as helpful as expected, and other means of establishing the validity of any scales developed would be required. However, the idea of intrinsic-extrinsic characteristics of 'religious' respondents remains relevant, and it may be useful to include questions that directly address the three factors; labelled by Gorsuch and McPherson (1989) as Intrinsic, Extrinsic (Personal Benefits), and Extrinsic (Social Relationships).

7.6   The Conceptualization and Definition of Religion /Spirituality.

It was noted in Chapters 1 and 2 that the literature contains articles discussing the definition of religion and/or spirituality, but rarely do works that aim to *measure* religion/spirituality define what they seek to measure. In Section 3.7, it was commented that research into religion/spirituality could only progress if the concepts could be defined to establish their meaning. The importance of resolving this question of definitions cannot be understated, but any resolution needs to take into account not only the researchers' knowledge and opinions, but also those of the study population. There is the clear potential for problems to arise in population studies if the questions and their interpretation are based on beliefs that are different to those of the study population. That is, the definition of religion/spirituality that underlies the study instrument must be consistent with, or at least take into account, the beliefs of the study population. If this condition is not met, then respondents may be misclassified, distorting the true picture of that population. This is not to imply the feelings of the study population should dominate, only that they should not be excluded, or modelled using an inappropriate definition.

A trend towards treating religion and spirituality as discrete concepts, usually without each acknowledging the other, is especially evident in the burgeoning popular media on spirituality, which not only presents spirituality as a discrete

concept, but does so in a way that implies religion is an inferior pursuit. Others have also noted this polarization (Chatters 2000; Ellison 1983; Hill & Pargament 2003). This popular media, together with the information appearing on the world wide web, may be leading to the polarization of the two concepts in the general population. This in turn could have the effect of making studies of religion/spirituality in the general population more difficult.

One approach to addressing these issues may be integrate religion and spirituality to create an operational definition. In the absence of a compelling theoretical definition for either concept, a working definition was created. The first step in this process was to establishing a set of guidelines to describe the principal elements of the definition. These guidelines, described in the next section, were derived both from the theory covered in conducting the study, and from the study results.

7.6.1 Guidelines for Defining Religion/Spirituality

The principal guideline adopted here is that religion and spirituality are complementary concepts, a position supported by recent literature (Chatters, 2000) Treating religion and spirituality as complementary concepts, allows a more complete picture to be developed than does the antagonistic view sometimes evident in the literature, because a complementary view acknowledges the contribution each concept has to make.

7.6.2 A Complementary Model of Religion and Spirituality.

There are probably many ways to describe the relationship between religion and spirituality. For example, religion is to spirituality as words are to thoughts, there being more than one way of verbalizing or visualizing a thought. Alternatively, religion and spirituality might go together like hand and glove. Using Rosenberg's concept of *reciprocal relationships*, religion and spirituality are interacting, mutually reinforcing concepts like the interaction between temperature and thermostat, or a chicken and egg. 'It is sufficient to know that the chicken and egg are responsible for each other without confronting the problem of which came first'(Rosenberg 1968, p. 8). Changes in an individual's motivation to search for, or maintain a relationship with God or another deity will be reflected in that individual's religious

practices. The reverse could also operate, as changes to the individual's religious association or practices, could manifest as a change in the motivation, or manner in which any relationship with God or other deity is conducted. Such a model of alternating association would be consistent with the process of change (growth or decline) in religious/spiritual status an individual or group experiences over time. For example, and individual's personal beliefs or group membership might change as a result of some particular positive or negative experience. Measures of religion/spirituality are expressions at a point in time of a process, and not simply static concepts.

Religion/spirituality are also elements of a process that are constantly being reassessed and restructured, with each contributing to both common and unique elements, and describing the way in which respondents seek to answer questions of existence, purpose and direction. Pojman's comment on the role of religion that was introduced in Chapter 2, provides a useful framework that can also be applied to spirituality.

> No other subject has exercised as profound a role in human
> history as religion. Offering a comprehensive explanation of
> the universe and of our place in it, religion offers us a cosmic
> map; through its sacred books, it provides lessons in cosmic
> map reading, enabling us to find our way through what would
> otherwise be a labyrinth of chaos and confusion. *Religion*
> *tells us where we came from, where we are, where we are*
> *going, and how we get there.* In this regard, religion
> legitimises social mores, rituals, and morals. All have a
> coherent place on reality's map (Pojman 1997, p. viii) italics
> added).

A complementary model of religion and spirituality retains both concepts. It should be noted, that in measurement terms, whether particular practices are 'religious' or 'spiritual' is often largely a matter of opinion, and not particularly important, as the aim is to build a whole picture that will likely incorporate those differences. Consider the example of an individual who initially professes no interest in, or knowledge about, religious/spiritual matters. In the passage of time, that individual

becomes interested in such matters and begins to look for answers to questions such as the reasons for personal existence, and the meaning of life, or the nature and characteristics of God. Growth comes about when the individual keeps searching, looking for answers to these and other questions that arise in the search. For this individual, there may several identifiable phases in their journey. The initial stage is when there was no interest in, and no practice relating to the relationship with God or another deity. The second stage could include the awakening; a growing awareness of questions about personal existence, and the initial searching for answers to those questions. Subsequent stages are associated with growth in knowledge and application of religious practices, for example, the study of religious/spiritual writings, or church or other group attendance. In this example, when that individual began searching, they had no knowledge or experience of religious practices and were not involved in any institutional setting. At this point, would that individual be described as being religious or spiritual? With time, outward expressions of growth become more important for the individual, and they become more proficient and comfortable in the practices of worship and study. At that time, is the individual religious or spiritual, religious without being spiritual, religious and spiritual, or spiritual without being religious? That is, can spirituality exist in the absence of religious expression, or can religious expression exist or be meaningful without spirituality? An alternate scenario arises if the individual ultimately rejects what has been learnt. Is the person then religious, non-religious, spiritual or non-spiritual? Questions of this nature highlight the subtle nature of the issues inherent in the measurement of religion/spirituality.

The Religion Element

Elements from the definitions of religion reported in Chapter 2 have been retained. The focus is on the collective beliefs and practices associated with worship, on the outward expression of a relationship with God or another deity, and on the group support and socialization that arise in an institutional or formal setting.

The study questionnaire included many such elements; religious or group affiliation, church or group attendance, financial contributions, volunteer work, prayer, study of Bible or other religious/spiritual literature, and potentially competing activities such

as television viewing. Prayer and study could perhaps also be included in measures of spirituality.

The Spirituality Element

One difficulty arises from the fact that definitions of spirituality often incorporate the concept of transcendence. What this concept means in practical terms is not clear from the literature, and it possibly means something different to each individual. In this discussion, transcendence is taken as emphasizing the purely individual elements of a relationship with a deity and all it entails, and the idea of a growth in knowledge and experience in that relationship.

The position adopted for this discussion is that spirituality is strictly a phenomenon of the individual. When it is shared, it becomes a religion because every group that meets begins to take on an organizational structure regardless of how small the group is. A consequence of adopting this position is that sometimes, what is described as spirituality, is in essence simply another form of religious expression, because it has the characteristics of a religion in which ideas and practices are shared by a group.

The measures developed in this study reflect the idea that spirituality can be viewed in a number of ways; as the commitment to be religious, as the search for meaning, or as the quality of religion. In a *first* view, practices such as prayer, meditation, or study, that are normally conducted in the context of a shared practice or experience, have earlier been included with religious elements. However, these practices could also be measures of spirituality if they are entirely personal or not connected to wider communal practice. In a *second* view, the search for meaning for his or her existence is inevitably a major element of the individual's relationship with God. The meaning that results from the relationship with God would not be readily discerned through the normal senses, so the relationship is largely a matter of faith and experience. Spirituality then, can be seen in the respondent's efforts to maintain that faith relationship with a higher power or deity. A *third* view of spirituality is as the quality of an individual's religion, as the spirit in which religion is enacted by an individual. The Christian perspective describes a set of ideal outcomes resulting from a relationship with God. For example in the New Testament writings, the so-called fruits of the spirit (Galatians 5:22) include love, joy, peace, patience, kindness,

goodness, happiness, faithfulness, gentleness and self-control. There are also other standards of behaviour related to these, exemplified for instance in the parable of the Good Samaritan (Luke 10: 25-37), 'The Sermon on The Mount' (Matthew 5 – 7), The Golden Rule (Matthew 7:12), or the Ten Commandments (Exodus 20:1 – 17). If spirituality describes the way in which religion is enacted by an individual, then it could be expected that the desirable attributes in these examples would be seen in the behaviour of a spiritual person.

The Complementary Definition of Religion and Spirituality and the Survey Questionnaire.

The complementary definition of religion and spirituality requires further development, but an example of how it might be applied using the available survey data is as follows. Religion encompasses the group involvement and behaviour related to institutional or denominational requirements, so data from the survey could include; group membership, meeting attendance frequency and duration, financial contributions, group Bible studies, and volunteer activities. Spirituality in this definition, addresses those elements of the relationship with the deity that do not specifically require group involvement, or which relates to the quality of the religious experience. Variables in this category are more subjective than those for religion and tend to be tap into the affective (feelings) of attitudes, but might include: personal Bible study, prayer, tendency to indiscriminate pro or anti religious/spiritual behaviour, feelings towards other (altruism), responses to the 'Future', 'Meaning of Life', and 'God' semantic differentials. Questions about 'faith', or the 'intent to act' to achieve spiritual growth, might also be included, but will require further development. Some of these elements are included in the suggested additions to the survey questionnaire discussed later in this chapter.

7.7   Types of Measures: Quantitative or Qualitative?

Within the context of academic research, two issues have arisen out of the study that impact on the measurement methods. The first is a tendency for researchers to consider measures of religion/spirituality as being quantitative, usually ordinal, measures. For example, well known scales such as the Religious Orientation Scale – Revised (ROS-R) (Gorsuch and McPherson 1989) used in this study, the Spiritual

Well-being Scale (Ellison 1983), and the Five-Dimension Scale of Religiosity (Faulkner and De Jong 1966), are each either totally or partially configured as Likert scales or as other forms of quantitative measures. Quantitative measures tend to be built on assumptions such as one numerical value assigned to a category is 'better' or 'worse' than another numerical value. This use and interpretation of ordinal measures may unwittingly have resulted in the misclassification of respondents, and contributed to the uncertainty that prevails in the field. The approach adopted in this study is for measures of religion/spirituality, regardless of the measurement method, to be considered as nominal or qualitative measures. That is, different levels of a measure are interpreted as different types of religion/spirituality, rather than as different quantities of one type of religion/spirituality. This has the effect of removing the element of judgment implicit in the quantitative measures. It is noted that factor analysis used in Chapter 5 assumes ordinal data in the creation of the factor structure, but the factors are interpreted as nominal categories.

The second factor is also a fundamental one; whether the study of religion/spirituality should continue to be conducted from a predominantly nomothetic perspective, or whether there is a place for an idiographic viewpoint. The following section discusses these two ideas with a view to establishing which approach best applies to the study of religion/spirituality.

7.7.1 Defining the Nomothetic and Idiographic Concepts

Each individual has a unique world-view based on his/her experience and beliefs. This uniqueness is only crudely measured in survey results; and as was shown by the results from Group 1 data, there can be numerous combinations of beliefs where only a few would be expected if the assumption of homogeneity were true. The nomothetic approach has dominated research into the measurement of religion/spirituality in epidemiology essentially since the association between religion and health began to be investigated in a systematic fashion over a century ago. The terms describe specific methods used in psychological research, and have their origins in the study of personality traits. The nomothetic approach involves studies on large groups of people with the aim of discovering rules of behaviour that can be generalised on a large scale. In this approach, any particular behaviour identified is assumed to apply in the same way to everyone. Comparisons between

respondents use test scores to quantify variables or dimensions that are analysed statistically. By contrast, the idiographic approach uses qualitative techniques, with a focus on treating respondents as individuals having unique rather than generalised rules of behaviour (Chaplin 1975; de Vaus 1991, p. 32)

The following example compares the nomothetic and idiographic approaches. Mark 12:41 - 44 tells of a poor widow who made a pittance offering of a few small coins to the Temple treasury. Jesus considered this a greater gift than the large pretentious offering made by a wealthy Pharisee. In the nomothetic approach, the poor widow's offering would be measured as a percentage of her total wealth; so too would the wealthy Pharisee's offering. However, such a measure provides no information about the motivations for the offerings, or the respective beliefs, attitudes, and intentions. These can only be adequately obtained by the idiographic approach using interview or open question techniques. These techniques are far more able to provide an adequate explanation for the behaviour rather than the simplistic financial contributions data provided by the nomothetic approach. Although individuals may have much in common, each has some behaviours and traits that are unique. Where the nomothetic approach often uses statistical analysis in the development of the rules of group behaviour, the idiographic approach relies on individual case studies, and is usually conducted in greater depth and over longer periods of time (that is, longitudinal or historical studies.) Outcomes are usually descriptive rather than quantitative, and although they can be difficult to generalise to the wider population, their uniqueness can sometimes provide insights not available from the nomothetic approach.

7.7.2 Applying the Nomothetic and Idiographic Approaches.

This study used the nomothetic approach; a survey questionnaire containing over three hundred items that was administered to over seven hundred respondents. The data was analysed statistically with the aim of generating categories that discriminated between respondents, and which could potentially be used to describe the association between religion/spirituality and health. A role for the idiographic approach using open questions and phone interview was examined, but not pursued because it was considered too difficult to implement given the time and financial

constraints. Subsequently, the belief profiles in Section 1 (Questions 1 to 15) were included in an attempt to address the idiographic element.

The nomothetic approach typically uses a survey questionnaire to collect data, but if the outcome of interest is to discover why certain behaviours arise, then the contribution of very small groups would tend to be under-represented in the outcomes. An idiographic approach using case study interviews or observations would be more effective. For example, the health behaviours of the Seventh-Day Adventists or Mormons are of interest because these groups report markedly better health statistics than the general population. The nomothetic approach would supply such statistics, but would not readily explain the reasons for the better statistics. Interviewing the subjects exhibiting the behaviour of interest would be the only effective way of discovering those reasons. As this study has shown, the groups in the study are not homogeneous in their beliefs, and probably would not be in their health related behaviours either, so the respondents of interest could be drawn from any of the groups, not just Seventh Day Adventists or Mormons.

An integrated method would ideally employ both techniques, but the time and cost constraints may be prohibitive depending on the administration techniques used. A *proposed* method for an integrated approached is as follows. Some elements of survey administration used for this study could also be used to conduct an integrated nomothetic – idiographic survey. Prospective study participants are identified from all groups of interest, and recruited in person. At this time, the respondent is supplied with a survey questionnaire addressing the nomothetic elements of the study. A time for pickup of the questionnaire is arranged for approximately 48 hours later, and consent is also obtained for a brief follow-up interview when the questionnaire was being collected, or at some other suitable time. This interview would address the idiographic elements of the study, in particular the underlying reasons for the formation, conduct and maintenance of those behaviours of interest. Alternatively, the *arranged* interview could be conducted by telephone.

A similar approach adopted for the test - retest of the general population group for this study (N = 89) returned a retest response rate of over 90%. This approach is

more time consuming in the early stages, but the quality of the data would superior to that obtained by questionnaire alone, or by other single methods of administration.

7.8 Addressing the Question of Intent.

An important variable in the study of attitudes and behaviour is the *intention to act* (ITA). A part as the conative component of the tripartite classification discussed in Chapter 3, ITA has a greater significance in the religious/spiritual context, where the involved individual is more likely to be constantly reassessing and modifying their attitudes and behaviours according to their personal experience with their deity, and the prescriptions of their personal or group beliefs. The outcome of this process is an intention to change certain behaviours to conform to the changed attitude.

In this study, the measurement of overt behaviours replaced the ITA because of the perceived difficulties in implementing the latter. However, the concept needs to be re-introduced to provide an additional measure of religion/spirituality. These will be indirect measures, but ones that may be more relevant to the way religion/spirituality work in a person's life because the intention to act is a prerequisite for the resultant behaviours. Cross sectional studies typically do not address the ITA unless incorporated into a longitudinal study. Only in-depth interview techniques can effectively probe the reasons why an individual chooses to initiate and maintain specific behaviours, particularly where the intensely personal religious/spiritual beliefs and behaviours are the subject of study.

Suggestions for incorporating this concept into the revised questionnaire are discussed later in Section 7.9.4 (proposed questions Q40 to Q42).

7.9 Redevelopment of the Measures for Religion/Spirituality

The discussion so far has focused on identifying which of the measures used in the survey questionnaire might provide useful measures of religion/spirituality, and the ability to classify survey respondents into 'religious/spiritual' categories. The measures of religion/spirituality proposed here take into account the following issues raised in the discussion:

- any categories of respondents created are to be treated as having a nominal level of measurement, not ordinal or higher;

- denominational or other groups are heterogeneous with respect to beliefs and attitudes. The denominational label is retained for several specific uses;

- gender can be a significant variable in determining the belief composition of any group;

- the potential for researcher bias is an important factor to be considered in the creation and interpretation of measures of religion and spirituality. As far as possible, the measures created should have a stable meaning across the study population, and between researchers and the study population;

- any measures should reflect an awareness of the likelihood of indiscriminately pro-religious or anti-religious attitudes; not for the purposes of eliminating such responses, but to reliably detect them;

- it needs to be acknowledged that any measure developed must not only be effectual, but have cost-benefit advantages;

- that deities in general, and the God of Christianity in particular, are usually attributed with the properties of omniscience, omnipresence and omnipotence that transcend human abilities. The expectation that the scientific method will provide the basis for understanding the effects of any relationship between that deity and an individual's attitudes and behaviours may not be realised;

- a relationship with a deity exists only to the extent that the individual has faith that the relationship exists. It is futile to attempt to measure something that is almost, by definition, beyond measure. The scientific method cannot explain transcendence, prayer, the Holy Spirit, miracles or angels. However, it can provide rational indicators; and

- it can be argued that every individual, whether they acknowledge a given deity or not, has a measurable relationship with that deity, even if it is to deny its existence.

7.9.1 Revision of the Questionnaire

In heading to a conclusion to the study, this section examines changes to the format and content of the survey questionnaire indicated by the results of the study. Any changes are in essence another step in the process of developing suitable questions and effective delivery techniques. For example, the study shows some questions provided no useful results and could be deleted, while other questions, also showing little in the way of useful results, could possibly be retained but delivered more effectively using a different technique. Similarly, the study showed that recruiting respondents was no as difficult as was envisaged, indicating that the use of interviews could be considered in future studies.

The previous section listed a number of criteria governing the development of new measures, and Section 3.2.4 criteria to apply to the construction of any new measures. This section presents questions selected from the original survey questionnaire, but modified to incorporate changes based on the survey results, together with additional questions for inclusion in the questionnaire, or in the new interview component.

All these questions together form a set of measures structured around the following elements: The first element is the tripartite classification of attitudes that formed the basis for the theoretical framework in Chapter 4. The second element is the complementary model of religion and spirituality discussed in Section 7.6.2. The nomothetic and idiographic concepts discussed in Section 7.6 are the final structural elements and the basis for the inclusion of most of the new interview type questions.

7.9.2 Questions from Group 1

Of the fifteen questions in Group 1(Section 1, Questions 1 to 15), the response options were modified only for Question 6. The revised question is shown here as it would be used in the questionnaire. New items are in *italics*. More than one response option can be selected.

Question 6

Response Option	The 'soul'...	
1.	I don't know..	
2.	is the connection a person has with the oneness of the Universe..........................	
3.	a person has a soul that lives on after the body dies...	
4.	a person is a soul...	
5	there is no soul that goes on living after the body dies...	
6	*It is possible to communicate with the soul of a deceased person... ... ...*	
7	*All souls go to heaven when a person dies... ... ...*	
8	*Not all souls go to heaven when a person dies, some go to hell or other places.*	
9	none of the above, I have other views...	
	Plaese describe_____	

On analysis, the new items would be allocated to either an existing or a new category. The original response options for the remaining fourteen questions from Section 1 were retained unchanged.

7.9.3   Questions from All Other Questionnaire Sections

The next two questions derived from Section 1 Question 16 ask about religious or spiritual status and self-reported religiosity or spirituality. The response categories are nominal, not ordinal.

Question 16

How *religious* would you say you are?

Not at all religious — and against being religious..........
Not at all religious — and not against being religious...
Undecided about religion....................................
Moderately Religious...
Very Religious..

Question 17

How *spiritual* would you say you are?

Not at all spiritual — against being spiritual..................
Not at all spiritual — not against being spiritual..........
Undecided about being spiritual............................
Moderately spiritual..
Very spiritual..

The next question addresses the question of religious/spiritual group affiliation. It is retained because some behaviours have been shown to be group-specific.

Question 18

Write your religious or spiritual belief type, denominational or group affiliation here.

(For example, Anglican, Assembly of God, Spiritualist, no denomination, New Age)

The next seven questions are slightly modified from their original formats by increasing the number of response options, or providing ordinal rather than continuous responses.

Question 19

Select an option that describes how long you have held your present beliefs?

Less than 5 years..............
5 – 10 years.....................
11 – 20 years....................
21 - 30 years....................
31 – 40 years....................
More than 40 years...........

Question 20

Are you presently *a member* of any religious or spiritual groups?

Yes...
No...

Question 21

What is your *present* attendance at such meetings, such as church services or similar for your group.?

Not at all.............................
Rarely..................................
several times a year...............
several times a month............
once a week..........................
More than once a week..........

Question 22

The religious/spiritually oriented meetings you *presently* attend could best be described as: (Select ONE only).

Fundamentalist................
Conservative....................
Liberal............................
Charismatic.....................
Pentecostal......................
Reformed........................
Contemporary..................
Traditional......................
Spiritualist......................
Evangelical.....................
Meditative......................
Progressive.....................
Other—None of the above....
Please describe:_____

Question 23
Select the range that best describes the percentage of your gross income that is contributed to any religious or spiritual groups.

Nil......................................	
1 – 5%...................................	
6 – 10%.................................	
11 – 20%...............................	
More than 20%......................	

Question 24
How often does physical disability or illness *prevent you* from participating in religious or spiritual activities?

Often.....................................	
Sometimes........................	
Rarely.............................	
Never.............................	
Not Applicable..................	

This item collected only a few respondents in the study, but on a larger or aged population could conceivably collect more respondents.

Question 25
How similar are your spouse or partner's similar religious or spiritual beliefs to yours?

The response options have been increased and presented in a Likert format.

Very similar......................	
Somewhat similar..............	
Don't Know.....................	
Different.........................	
Very different.................	
Not applicable to me..............	

The following three questions address the question of group or denominational recommendations or requirements for members to conform to certain standards of health related behaviours. These would be used in conjunction with questions about actual health behaviours.

If you are a member of a religious or spiritually oriented group, *what is that group's position* for each of the following

Question 26

Drinking alcohol

Not Applicable to me.........	
I don't know...................	
Allows free choice............	
Recommends moderate use...	
Recommends totally abstain..	
Requires totally abstain.......	

Question 27

Smoking

Not Applicable to me.........	
I don't know...................	
Allows free choice............	
Recommends moderate use...	
Recommends totally abstain..	
Requires totally abstain.......	

Question 28

Diet

Not Applicable to me...	
I don't know...	
Allows free choice..	
Recommends vegetarian diet including eggs and diary products.	
Recommends vegan diet...	
Requires another type of diet......................................	
*Please describe*_____	

The next six questions are derived from Section 2 Question 11 – 16. Response options have been change from continuous or ordinal responses to reflect the study results, and in several cases response options have been changed to improve clarity.

Question 29

Please indicate the time you spend in ALL reading, watching videos or TV programs INCLUDING those *having a religious or spiritual content*

None..............................	
Less than 1 hour/day...........	
1-3 hours per day...............	
3.1-5 hours/day.................	
More than 5 hours/day.........	
Not Applicable to me..........	

Question 30

What proportion of this time involves programs *having a religious or spiritual content?*

None.............................. ☐
Up to 25%...................... ☐
26 - 50%........................ ☐
51 - 75%........................ ☐
76 - 100%...................... ☐

Question 31

Indicate the *average* TIME you use Transcendental Meditation(TM), yoga, spirit channelling or similar.

None............................... ☐
At church or other meeting only.. ☐
Several times/WEEK............... ☐
Up to 15 minutes/DAY............ ☐
Up to 1 hour/DAY.................. ☐
More than 1hour/DAY............. ☐
More than 5 hours/DAY........... ☐
Not Applicable to me.............. ☐

Question 32

Indicate the *average* time you spend in personal prayer

None............................... ☐
At church or other meeting only.. ☐
Several times/WEEK............... ☐
Up to 15 minutes/DAY............ ☐
Up to 1 hours/DAY................. ☐
More than 1hour/DAY............. ☐
More than 5 hours/DAY........... ☐
Not Applicable to me.............. ☐

Question 33

Indicate the *average* total time you spend in both personal and group Bible study (Include only Bible study)

None............................... ☐
At church or other meeting only.. ☐
Several times/WEEK............... ☐
Up to 15 minutes/DAY............ ☐
Up to 1 hour/DAY.................. ☐
1 – 2 hours/DAY................... ☐
More than 2 hours/DAY........... ☐
The Bible is not relevant to me... ☐

Question 34

Indicate the *average* total time you spend in both personal and group study of religious/or spiritual material other than the Bible

None...........................	
At church or other meeting only	
Several times/WEEK..............	
Up to 15 minutes/DAY...........	
Up to 1 hour/DAY................	
1 – 2 hours/DAY.................	
More than 2 hours/DAY.........	

Question 35

Indicate the time you spend in any *voluntary* involvement such as teaching, administration, youth leader/helper, welfare, or similar

None............................	
Up to 2 hours/WEEK..............	
2 – 5 hours/WEEK................	
6 – 8 hours/WEEK................	
More than 1 DAY/WEEK.........	
Not Applicable to me............	

The next two questions are derived from the original semantic differentials, Section 3 Questions 1 and 2, and ask about the religiosity or spirituality of the parents or guardians. The response options have been changed from continuous to ordered categories. The study results show respondents did not distinguish between and religion and spirituality in these questions, so they have been combined into a single question.

Question 36

Your Mother 0r female guardian is (or was) religious or spiritual

Strongly agree....................	
Agree............................	
Don't Know......................	
Disagree.........................	
Strongly Disagree................	

Question 37

Your Father or male guardian is (or was) religious or spiritual

Strongly agree....................	
Agree............................	
Don't Know......................	
Disagree.........................	
Strongly Disagree................	

The next four questions are derived from Section 3, Questions 4 and 6 and ask about the influence of religious/spiritual or science/philosophy on the respondents' view of the future, and of the meaning of life. Again, the response options have been changed from continuous to ordered categories, and religion and spirituality have been combined into a single question.

Question 38

The future for me is best described by my religious/spiritual beliefs

Totally Agree.........................☐
Strongly agree.......................☐
Agree.................................☐
Don't Know...........................☐
Disagree.............................☐
Strongly Disagree....................☐
Totally Disagree.....................☐

Question 39

The future for me is best described by scientific or philosophical ideas:

Totally Agree.........................☐
Strongly agree.......................☐
Agree.................................☐
Don't Know...........................☐
Disagree.............................☐
Strongly Disagree....................☐
Totally Disagree.....................☐

Question 40

The day-to-day meaning of life for me is best described by religious/spiritual ideas

Totally Agree.........................☐
Strongly agree.......................☐
Agree.................................☐
Don't Know...........................☐
Disagree.............................☐
Strongly Disagree....................☐
Totally Disagree.....................☐

Question 41

Day-to-day meaning of life for me is best described by scientific or philosophical ideas:

Totally Agree........................	
Strongly agree.......................	
Agree................................	
Don't Know........................	
Disagree............................	
Strongly Disagree...................	
Totally Disagree....................	

The next six questions are modified forms of the semantic differentials from Section 3, Questions 3, 5, 7, 8, 9, and 10. The changes made were to retain only those items the factor analysis indicated were significant, and for practical reasons involving data entry, to change the continuous line to a number line. The number line has been structured to be symmetrical. This is to minimise the implied judgment of the semantic phrases arising from use of a non-symmetrical number line such as $0 - 10$. This structure has its problems, but so do any alternative methods.

Question 42

For me, the future is......

• bright	5___4___3___2___1___0___1___2___3___4___5	dark
• comforting	5___4___3___2___1___0___1___2___3___4___5	not comforting
• full of hope	5___4___3___2___1___0___1___2___3___4___5	full of despair
• peaceful	5___4___3___2___1___0___1___2___3___4___5	not peaceful
• free	5___4___3___2___1___0___1___2___3___4___5	not free
• clear	5___4___3___2___1___0___1___2___3___4___5	unclear
• a matter of fate	5___4___3___2___1___0___1___2___3___4___5	a matter of choice
• mysterious	5___4___3___2___1___0___1___2___3___4___5	not mysterious
•predictable	5___4___3___2___1___0___1___2___3___4___5	unpredictable
• soon to end	5___4___3___2___1___0___1___2___3___4___5	to go on forever
• frightening	5___4___3___2___1___0___1___2___3___4___5	not frightening
•has many goals	5___4___3___2___1___0___1___2___3___4___5	has no goals

Question 43

Life's meaning to me is........

• ever changing	5___4___3___2___1___0___1___2___3___4___5	unchanging
• something I often wonder about	5___4___3___2___1___0___1___2___3___4___5	something I rarely wonder about
• refreshing	5___4___3___2___1___0___1___2___3___4___5	not refreshing
• clear	5___4___3___2___1___0___1___2___3___4___5	unclear
• comforting	5___4___3___2___1___0___1___2___3___4___5	not comforting
• a source of hope	5___4___3___2___1___0___1___2___3___4___5	a source of despair
• satisfying	5___4___3___2___1___0___1___2___3___4___5	not satisfying
• a matter of urgency	5___4___3___2___1___0___1___2___3___4___5	not at all urgent
• mysterious	5___4___3___2___1___0___1___2___3___4___5	not at all mysterious
• meaningful	5___4___3___2___1___0___1___2___3___4___5	meaningless
• predictable	5___4___3___2___1___0___1___2___3___4___5	unpredictable
• happiness	5___4___3___2___1___0___1___2___3___4___5	sadness

Question 44

The poor and the needy in our community........

• are a nuisance	5___4___3___2___1___0___1___2___3___4___5	are not a nuisance
• are deserving	5___4___3___2___1___0___1___2___3___4___5	are undeserving
• are hard to recognise	5___4___3___2___1___0___1___2___3___4___5	are easy to recognise
are the responsibility of gov't and welfare agencies	5___4___3___2___1___0___1___2___3___4___5	are not the responsibility of gov't and welfare agencies
• are the responsibility of every person	5___4___3___2___1___0___1___2___3___4___5	are not the responsibility of every person
• are lazy	5___4___3___2___1___0___1___2___3___4___5	are not lazy
• suffer poverty that is self-inflicted	5___4___3___2___1___0___1___2___3___4___5	suffer poverty that is not self-inflicted
• are valuable	5___4___3___2___1___0___1___2___3___4___5	are worthless
• are not important to our society	5___4___3___2___1___0___1___2___3___4___5	are important to our society
• abuse help given them	5___4___3___2___1___0___1___2___3___4___5	appreciate help given them
• should be content with their lot in life	5___4___3___2___1___0___1___2___3___4___5	should not give up trying to better themselves
• are victims of destiny	5___4___3___2___1___0___1___2___3___4___5	have choices to make in life
• could be me one day	5___4___3___2___1___0___1___2___3___4___5	will never be me.

Question 45

Religion as I see or experience it is.........

• encouraging	5___4___3___2___1___0___1___2___3___4___5	discouraging
• practical	5___4___3___2___1___0___1___2___3___4___5	impractical
• valuable	5___4___3___2___1___0___1___2___3___4___5	not at all valuable
• attractive	5___4___3___2___1___0___1___2___3___4___5	unattractive
• the same as being spiritual	5___4___3___2___1___0___1___2___3___4___5	different to being spiritual
• very caring	5___4___3___2___1___0___1___2___3___4___5	uncaring
• very interesting	5___4___3___2___1___0___1___2___3___4___5	very uninteresting
• reasonable	5___4___3___2___1___0___1___2___3___4___5	unreasonable
• strong	5___4___3___2___1___0___1___2___3___4___5	weak
• hard	5___4___3___2___1___0___1___2___3___4___5	easy
• relevant	5___4___3___2___1___0___1___2___3___4___5	irrelevant
• very meaningful	5___4___3___2___1___0___1___2___3___4___5	meaningless
• happy	5___4___3___2___1___0___1___2___3___4___5	unhappy
• not affected at all by the physical body	5___4___3___2___1___0___1___2___3___4___5	very much affected by the physical body

Question 46

Spirituality as I see or experience it is.......

• encouraging	5___4___3___2___1___0___1___2___3___4___5	discouraging
• practical	5___4___3___2___1___0___1___2___3___4___5	impractical
• valuable	5___4___3___2___1___0___1___2___3___4___5	not at all valuable
• attractive	5___4___3___2___1___0___1___2___3___4___5	unattractive
• the same as being religious	5___4___3___2___1___0___1___2___3___4___5	different to being religious
• very caring	5___4___3___2___1___0___1___2___3___4___5	uncaring
• very interesting	5___4___3___2___1___0___1___2___3___4___5	very uninteresting
• reasonable	5___4___3___2___1___0___1___2___3___4___5	unreasonable
• strong	5___4___3___2___1___0___1___2___3___4___5	weak
• hard	5___4___3___2___1___0___1___2___3___4___5	easy
• relevant	5___4___3___2___1___0___1___2___3___4___5	irrelevant
• very meaningful	5___4___3___2___1___0___1___2___3___4___5	meaningless
• happy	5___4___3___2___1___0___1___2___3___4___5	unhappy
• not affected at all by the physical body	5___4___3___2___1___0___1___2___3___4___5	very much affected by the physical body

Question 47

'God To Me Is.....' ('God' includes any concept about a higher power that you choose to call 'God')

• aware of my thoughts	5___4___3___2___1___0___1___2___3___4___5	not aware of my thoughts
• valuable	5___4___3___2___1___0___1___2___3___4___5	worthless
• worth knowing	5___4___3___2___1___0___1___2___3___4___5	not worth knowing
• interesting	5___4___3___2___1___0___1___2___3___4___5	boring
• caring	5___4___3___2___1___0___1___2___3___4___5	uncaring
• merciful	5___4___3___2___1___0___1___2___3___4___5	vengeful
• personal and very interested in my daily situations	5___4___3___2___1___0___1___2___3___4___5	impersonal and not interested in my daily situations
• a source of happiness	5___4___3___2___1___0___1___2___3___4___5	a source of unhappiness
• readily understood	5___4___3___2___1___0___1___2___3___4___5	cannot be understood
• very meaningful	5___4___3___2___1___0___1___2___3___4___5	meaningless
• very confusing	5___4___3___2___1___0___1___2___3___4___5	not at all confusing
• interested in how I take care of my spiritual self	5___4___3___2___1___0___1___2___3___4___5	not interested in how I take care of my spiritual self
• interested in how I take care of my physical self	5___4___3___2___1___0___1___2___3___4___5	not interested in how I take care of my physical self

ADDITIONAL QUESTIONS

weak	5___4___3___2___1___0___1___2___3___4___5	*strong*
Able to control the forces of nature	5___4___3___2___1___0___1___2___3___4___5	*Not able to control the forces of nature*
I am angry with God	5___4___3___2___1___0___1___2___3___4___5	*I am not angry with God*
I am confused about why God allows people to be killed by war and disasters	5___4___3___2___1___0___1___2___3___4___5	*I am satisfied with my understanding about why God allows people to be killed by war and disasters*

The next four questions ask about gender, weight, height and age and are unchanged from the original questionnaire. Gender and age are required information, but weight and height are included to allow calculation of the Body Mass Index.

Question 48

What sex are you?

Female...　☐　　Male.....　☐

Question 49

What is your Weight?

in (kilograms____) OR (Stone____& pounds____) OR (pounds____)

Question 50

What is your Height?
in (feet____& inches_____) OR (centimetres_____)

Question 51

What is your age? _____ years

7.9.4 Interview Style Questions

These questions have been included to represent the idiographic component of the information to be collected.

The purpose of the *idiographic* approach is to describe unique individual behaviours. Interview techniques used to collect such in-depth information will be more difficult to administer to a large population sample, but it is essential if high quality information is to be obtained regarding the reasons respondents engage in certain behaviours. It is also recommended that a sub-sample of the survey population be selected for interview rather than attempting to interview the entire sample. The process for achieving this, and the sample size required will need to be determined.

The questions that follow have not been piloted or in any way evaluated. They are suggestions based on the results of this study and have been constructed mindful of the many failed attempts to obtain unambiguous study outcomes using survey questionnaires alone. These questions would be incorporated into an interview format that can subsequently be subjected to analysis.

The concepts addressed by the interview include:

- self-report religiosity/spirituality;

- the difference between religion and spirituality;

- denominational or group membership and involvement;

- personal experience with religion/spirituality;

- attitude toward God;

- personal searching;

- the influence of religion/spirituality;

- trust or faith in deity;

- views on other religions; and

- future intentions.

The questions are presented here as the 'Primary' question (PQ) that identifies the concept under question, and the 'Secondary' questions (SQ) that might follow from the answer to the primary question.

The interviewer administers the questions to a sub-sample of the original survey population, either face-to-face, or by telephone, and records the central theme of each set of responses without interpretation. Alternatively, focus groups could be used, but may be logistically difficult to administer. The analysis of interview responses is a highly specialised technique that is beyond the scope of this study.

PQ 1: Do you consider yourself to be religious (as compared to being spiritual)?:
    If Yes
        SQ1: what is it that makes you religious?
        SQ2: what do you do that is part of being religious?
    If No:
        SQ1: Can you explain the reason for this?(e.g.: experience, exposure, present success)
        SQ2: What do think of people who do claim to be religious?
        SQ3: Do you imagine there could come a time when you might consider finding out more about what religion might do for you? (Searching)

PQ 2: Do you consider yourself to be Spiritual (as compared to being religious)?:

 If Yes

    SQ1: what is it that makes you spiritual

    SQ2: what do you do that is being spiritual

 If No:

    SQ1: Can you explain the reason for this?(experience, exposure, present success)

    SQ2: What do think of people who do claim to be spiritual.

    SQ3: Do you imagine there could come a time when you might consider finding out more about what spirituality might contribute for you.

PQ 3: Do you consider religion and spirituality to be the same thing, or to be different?

Response Options
- Totally and completely different ideas
- Are somewhat different
- Are quite similar
- Are the same thing, there is no difference

 SQ1: If at all different, how are they different?

PQ 4: Do you think it is important for a person to be religious

Response Options
- Definitely yes
- Yes
- Don't know
- No
- Definitely not

 SQ1: If Yes, why?

 SQ2: If No, why not?

PQ 5: Do you think it is important for a person to be spiritual

Response Options
- Definitely yes
- Yes
- Don't know
- No
- Definitely not

 SQ1: If Yes, why?

 SQ2: If No, why not?

PQ 6: If you are religious, do you consider belonging to a denominational church group is important?

Response Options
- Definitely yes
- Yes
- Don't know
- No
- Definitely not

SQ1: If Yes, why?
SQ2: If No, why not?

PQ 7: If you belong to, or regularly attend meetings of a religious or spiritual group, do you think that group 'has all the answers'?

Response Options
- Definitely yes
- Yes
- Don't know
- No
- Definitely not

SQ1: If Yes, why?_____

PQ 8: If you belong to, or regularly attend meetings of a religious or spiritual group, why do you continue to do so?

Possible Response Options
- Not Applicable
- I feel comfortable there
- Made welcome there
- Have many friends there
- Good social contacts there
- Good business contacts there
- It provides good networking opportunities
- It helps me to grow religiously or spiritually
- I am involved with activities there.
- It provides me with a break during the week.
- I feel closer to God there.
- Other Reasons?

If you consider yourself to be a religious/spiritual person, and are a member of or attend religious/spiritually oriented meetings, Go To question **PQ 13**

PQ 9: If you *DO NOT* consider yourself to be a religious/spiritual person, or are *NOT* a member or do not attend religious/spiritually oriented meetings, have you ever thought seriously about searching further to learn more about God or another deity?

Possible Response Options

- Yes, seriously
- Yes
- Not really
- No
- Not at all

SQ1: Do you relate to a god or some supernatural something that is important to you?

SQ2: if so, can you describe that god or your concept of god?

SQ3: If not, then how do you deal with the question of your existence or the world around you?

SQ4: If so, when?

SQ5: Did you ever have in-depth studies of a religious/spiritual nature? (For example, with a priest or pastor, or other equivalent person in your field of interest.)?

PQ 10: Have you ever been a member or regularly attended a religious denomination or spiritually oriented group?

- Yes
- No

SQ1: If Yes how long were you / have you been a member?

PQ 11: If you are no longer a member or regularly attend religious/spiritually oriented meetings, why not?

Possible Response Options

- Had an unpleasant experience
- It didn't answer my questions
- I was not happy with their beliefs
- I was not made welcome.
- Other reasons

PQ 12: Do you consider you should share your religious/spiritual beliefs with others who may not already know them.

- Yes
- No

SQ1: If yes, why?

SQ2: If no, why not?

PQ 13: If you are not either religious or spiritual, what do you think of people who are?

Experience With Religion/Spirituality

PQ 14a: How would you describe your experience with religion when you were a young teenager

- very positive
- mostly positive
- somewhat positive
- not relevant to me
- somewhat negative
- mostly negative
- very negative

PQ 14b: At present, is your experience with religion/spirituality:

- very positive
- mostly positive
- somewhat positive
- not relevant to me
- somewhat negative
- mostly negative
- very negative

Attitude toward God

PQ 15: What is your response to the following statements about the God of Christianity

- How can anyone believe in a God that allows innocent people to suffer and die
- If God is real, why doesn't he show himself
- Religion is just an escape for people who can't cope
- Religious people are weak
- God can't even look after those who follow him
- How can a God who claims to love us create a place like hell

SQ1: If you think your selected statements are justified, why?

PQ 16: If someone experiences misfortune, is this because they have sinned or have rejected God or their deity?

> SQ1: If you agree with this statement. why?
> SQ2: If you disagree with this statement. why?

PQ 17: If someone encounters good fortune; whether it be fame or wealth, is this an indication they have found favour with God or their deity?

> SQ1: If you agree with this statement. why?
> SQ2: If you disagree with this statement. why?

PQ 18: Is your god capable of being evil?

Searching

PQ 19: Would you say you are searching for meaning to your life?
- Yes
- No
SQ1: If yes, why?
SQ2: If no, why not? (may be deleted?)

PQ 20: Would you say you are searching for a relationship with a higher power
- Yes
- No
SQ1: If yes, why?
SQ2: If no, why not? (may be deleted?)

PQ 21: Is there anything specific you would say you are searching for?..what is the first thing that comes to mind?

> SQ1: If yes, why?
> SQ2: If no, why not? (may be deleted?)

Influence of Religion/Spirituality

PQ 24: Do you think religion or spirituality has played a positive, or a negative part in making the world what is today?

> SQ1: Please explain your answer (

PQ 25: How much influence do you think religion or spirituality should have on world activities?

SQ1: Please explain

PQ 26: Do your religious/spiritual beliefs influence your relationships with other people?
- Partner
- Children
- Friends
- Fellow employees
- Your employer

SQ1: If so, how?

PQ 27: Do your religious/spiritual beliefs influence the type of employment you engage in?

SQ1: If so, how?
SQ2: to what extent?

PQ 28: Do your religious/spiritual beliefs influence your views on the meaning of life

SQ1:If so, how?
SQ2: to what extent?

PQ 29: Do your religious/spiritual beliefs influence your views on the future …both your own future and the world's future

SQ1:Your own future - if so, how?
SQ2: to what extent?

SQ3:The world's future - if so, how?
SQ4: to what extent?

PQ 30: Do your religious/spiritual beliefs influence your ability to cope with the pressures of life you face every day …

SQ1:if so, how?
SQ2: to what extent?

PQ 31: In a normal day, how often would you think about religious/spiritual things
- Never
- Rarely
- Sometimes
- Several times a day
- Many times a day

SQ1: If you do, when is this most likely to be?
SQ2: Is there a common theme to those thoughts?

Trust or Faith

PQ 32: How much would you say you trust your god
- Completely
- Mostly
- Somewhat
- Not at all

SQ1: When do you trust your god the most?
SQ2: When do you trust your god the least?

PQ 33: When do you pray?
- when you need to?
- regularly?,
- when things are going well, or not?

SQ1: Please explain in each case

PQ 34: If you are religious or spiritual, how does it show in your life?...

SQ1: what do you do that is different to most people and is the result of your religious/spiritual belief.

Other Views

PQ 35: Are there any specific issues/problems you can identify about people with a religious/spiritual affiliation?

PQ 36: There are reported to be over 1500 different Christian groups....why do you think this might be the case.?

PQ 37: Do you think there is only one truth? That there can be only one correct interpretation of religious or spiritual truth?

SQ1: If yes, what do you think it is?
SQ2: is it part of your groups beliefs?

PQ 38: What do you think of the non-Christian religions such as Buddhism, Hinduism, Islam.?

PQ39: Are the Ten Commandments important to you?

SQ1: How many of them do you know something about?
SQ2: Do you think they should be included in the laws of the land.

Intentions

PQ 40: Do you intend to change the extent to which religious/spiritual beliefs influence you, or your level of religious/spiritual involvement?

SQ1: If so...why, how, and to what extent
SQ2: If not...why not

PQ 41: Do you expect to still be attending religious or spiritually oriented meetings in five years time?
Yes
No

SQ1: If yes, why?
SQ2: If no, why not?

PQ 42: Do you intend to search for answers to religious/spiritual questions?

SQ1: to continue searching if you already are
SQ2: to start searching if you are not already doing so

Questions About Health Related Behaviours

What is your position on the following statements:

PQ 43: drinking alcohol
1. Drink regularly..... ☐ Go To PQ 44
.2. Drink Occasionally. ☐ Go To PQ 44
3. Totally Abstain..... ☐ Go To SQ1

SQ1: You have indicated you abstain from drinking alcohol. Is this for religious or spiritual reasons?

PQ 44: smoking
1. Smoke regularly.... ☐ Go To PQ 45
.2. Smoke Occasionally ☐ Go To PQ 45
3. Totally Abstain..... ☐ Go To SQ1

    SQ1: You have indicated you abstain from smoking. Is this for religious or spiritual reasons?

PQ 45: drinking coffee or tea
1. Drink regularly...... ☐ Go To PQ 46
.2. Drink Occasionally. ☐ Go To PQ 46
3. Totally Abstain...... ☐ Go To SQ1

    SQ1: You have indicated you abstain from drinking coffee or tea. Is this for religious or spiritual reasons?

PQ 46: eating any meat
1. Eat regularly ☐
.2. Eat Occasionally ☐
3. Totally Abstain ☐ Go To SQ1

    SQ1: You have indicated you abstain from eating meat. Is this for religious or spiritual reasons?

This modified questionnaire will need to be tested and modified many times before the different types of questions are satisfactory for use. This is particularly the case for the suggested interview questions and responses, neither of which have been piloted, and which represent an approach not evident in the literature on the measurement of religion and spirituality.

The next chapter presents the conclusions from the study, and recommendations for further enhancing the content and methodology

CHAPTER 8

Conclusions and Recommendations

8.1 Conclusions

8.1.1 Findings

This chapter concludes the findings from the study, and presents a number of recommendations to assist with future research designs incorporating the findings of this study. These findings reveal that:

- religious/spiritual groups or denominations are not homogeneous with respect to a number of core beliefs. The implication of this finding is that religious affiliation is not a valid means of classifying survey respondents. It was found that categories of respondents could be created based on the similarities in their beliefs about core religious/spiritual concepts, and that the respondents in each of these new categories come from different groups or denominations;

- there are significant variations in beliefs between genders. It is possible that these differences may be the major contributor to group heterogeneity;

- empirically, religion and spirituality tend to be considered as different concepts, with spirituality possibly being portrayed more positively. The nature of the differences has not been revealed by this study;

- there was a clear relationship between adherence to certain lifestyle related behaviours (drinking alcohol, smoking and exercise) and *some* denominational affiliations. This specific context is one of few in which the denominational affiliation may clearly associated with a measurable outcome. This is because denominations such as Mormons and Seventh-Day Adventists have strong prescriptive beliefs about the example lifestyle related behaviours and the majority of members follow those prescriptions. However, even this application may be limited by the fact that not all members of these groups practice the prescriptive lifestyle, which introduces heterogeneity into the group; and

- factor analysis of the semantic differential reveals a number of interpretable factors addressing concepts such as of life's meaning, feelings about the future, perceived differences in the religious/spiritual influence of male/female parents or guardians. This method also provided supporting results for paired t-test results showing religion and spirituality to be empirically different concepts.

8.1.2 The Questionnaire Structure and Analytical Methods

As important as the findings of the study are, the aim of the this study was to explore measurement methods. The results reported are not the end in themselves, but are examples of the information the methods can generate. Conclusions drawn regarding the theoretical structure and the analytical methods are as follows:

- The theoretical framework provided by the tripartite classification of attitudes into cognitive, conative, and affective elements not only provided a sound structural foundation for the study, but also allowed meaningful interpretation of the results by constraining and focusing what might otherwise have been an unstructured collection of concepts. The different measurement techniques required for each element produced results that together, provide a broader complementary picture than is available from a single measurement method;

- The analytical method developed for the Section 1 belief questions allows multiple response options to be integrated into a single number that describes the individual's belief pattern or profile for any given concept. Together with the odds ratios, the method demonstrated the failure of homogeneity of beliefs amongst the religious denominations. Similarly, the analytical methods developed for empirically discriminating between religion and spirituality, and for investigating indiscriminately pro-religious and anti-religious tendencies offer possibilities not before reported in the literature; and

Factor analysis of the ordinal data derived from the semantic differentials in Section 3 of the questionnaire produced meaningful factor structures in each instance where it was used. Its successful use appears to hinge on the word and phrase pairs selected to represent a concept; for example, Section 3

Question 10 ('God to me is...') returned only two factors rather than the three or four expected, indicating different types of the word and phrase pairs were required to improve the sensitivity of the measures.

8.1.3 Defining Religion and Spirituality

Throughout the study, the expression religion/spirituality has been used when referring to the religion and spirituality. This was done to avoid any impression that definitions of the concepts were implied by their use as is often the case in the literature. The definition of religion and spirituality proposed incorporates the individual concepts into a single complementary and indivisible concept that takes into account the empirical finding that many consider religion and spirituality to be different ideas. Based on this complementary model and the results of the study, it is proposed that spirituality be considered as:

> *the individual's search for meaning and purpose, in whatever way*
> *they chose to search, and whether it overtly includes a deity or not.*
> *Spirituality is a strictly personal attribute that is not shared, and*
> *when it is shared, it becomes a religion, having a more defined*
> *structure that is necessary if the sharing between individuals is to be*
> *sustainable.*

In this definition, there is no need for ideas such as transcendence, and spirituality is removed from the realm of the supernatural, and given a practical framework within which it can be developed. It also allows religion and spirituality to each make both unique and common contributions to the composite concept. This definition has not yet been operationalised, but a preliminary conceptual framework has been created.

8.2 Recommendations

Recommendations arising from the surveys findings are as follows:

Recommendation 1

Analysis of the selected scales reveals a number of common problems with the way in which some scale items are constructed. These problems include embedded values, which are possibly unintended, and point to a need for consensus regarding core Christian beliefs. Scales employed should not contain embedded values likely

to lead to misclassification of respondents, and questions addressing beliefs, behaviours and feelings should allow respondents adequate opportunity to respond.

Recommendation 2

The issue of embedded values has other subtle manifestations, such as in the interpretation of ordinal data such frequency of 'church' attendance. Typically, more frequent attendance would probably be interpreted as greater religiosity. This interpretation is not imposed by statistical methods, but by the researcher. It is recommended that ordinal categories generated by the measures be interpreted as nominal categories. For example, a higher level of church attendance indicates a different attitude, not necessarily more or better religion. This approach has implications for the planning and design of research programs.

Recommendation 3

There should be recognition that any defined group could be heterogeneous with respect to a concept of interest.

Recommendation 4

Both the nomothetic and idiographic approaches should be incorporated into any study of religion and spirituality. The nomothetic, or broad statistical approach is sometimes inappropriate because it often fails to explain a person's motivation to behave in a certain way. The idiographic approach allows questions of motivation and intent to be more effectively explored. It almost certainly requires respondents be interviewed, but the better quality of information obtained could justify the greater effort required. It is suggested that implementation of this combined approach requires both questionnaire and interview style elements, and that focus group testing be included.

Recommendation 5

The question of intent can be an important one. It is recommended that consideration be given to its inclusion in exploring the mechanism for change to an individual's lifestyle habits. It would require a longitudinal study, or other timed test procedure, to establish the association between an indicated intention to change, and actual

change. Depending on the object of interest (for example, this could be a lifestyle, an attitude or belief) the time span could be relatively short.

Recommendation 6

The results of the study suggest gender may be the dominant explanatory variable in the group heterogeneity. In conjunction with this recommendation, it is also recommended that the age of the respondent be given greater attention than it was given in this study.

REFERENCES

Abelin, T 1991, 'Health promotion' in Holland, W, Detels, R. & Knox, G (eds), *Oxford textbook of public health*, Vol. 3, Oxford University Press, Oxford, pp. 557-603

Adamson, G, Shevlin, M, Lloyd, N & Lewis, C 2000, 'An integrated approach for assessing reliability and validity: An application of structural equation modeling to the measurement of religiosity', *Personality and Individual Differences*, vol. 29, pp. 971-979.

Afifi, A & Breslow, L 1994, 'The maturing paradigm of public health', *Annual Review of Public Health*, vol. 15, pp. 223-235.

Aiken, L 1980, 'Attitude measurement and research', *New Directions for Testing and Measurement*, vol. 7, pp. 1-22.

Ainlay, SC & Smith, R 1993, 'Aging and religious participation', *Journal of Gerontology*, vol. 39, no. 3, pp. 357-363.

Ajzen, I (ed.) 1987, *Attitudes*, Wiley-Interscience, London.

Ajzen, I 2001, 'Nature and operation of attitudes', *Annual Review of Psychology*, Annual, 27.

Albaum, G, Best, R and Hawkins, D 1981,' Continuous vs discrete semantic differential rating scales', *Psychological Reports*, vol. 49, pp. 83-86.

Allport, GW & Ross, JM 1968, *The person in psychology: selected essays by Gordon. W. Allport*, Beacon Press, Boston, pp. 237-268.

Allport, GW 1950, *The individual and his religion*, Macmillan, New York.

Alster, K 1989, *The holistic health movement*, University of Alabama Press, Tuscaloosa.

Altman, DG 1991, *Practical statistics for medical research*, Chapman and Hall, London.

Angeli, EAG 2001, 'Spiritual care in hospice settings' in Moberg, D. O. (ed.), *Aging and spirituality*, The Haworth Pastoral Press, New York, pp. 113-124.

Australian Bureau of Statistics 1993, *Perth - a social atlas: census of population and housing, 6 August 1991*, Australian Bureau of Statistics, Canberra.

Australian Bureau of Statistics 2001, *Census of population and housing: selected social and housing characteristics for statistical local areas: Western Australia, Cocos (Keeling) and Christmas Islands, cat. no. 2015.5*, Australian Bureau of Statistics, Canberra

Australian Film Commission n.d., *What Australians are watching*, Retrieved May 16, 2006, from http://www.afc.gov.au/gtp/wftvviewage.html

Baird, RM 1985, 'Meaning in life: discovered or created?', *Journal of religion and Health*, vol. 24, no. 2, pp. 117-124.

Banks, R 1980, 'Health and the spiritual dimension: Relationships and implications for professional preparation programs', *The Journal of School Health*, April, 195-202.

Barna 2004, *Only half of Protestant pastors have a biblical world view*, Retrieved July 7, 2004, from http://www.barna.org/Flexpage.aspx?page=BarnaUpdate&barnaUpdateID=15 6

Bassett, RL, Camplin, W, Dennis, H, Dorr, C, Biggs, S, Distaffen, R, Doxtator, I, Flaherty, M, Hunsberger, PJ, Poage, R and Thompson, H 1991, 'Measuring

Christian maturity: a comparison of several scales', *Journal of Psychology and Theology*, vol. 19, pp. 84-93.

Batson, CD & Schoenrade, P.A. 1991, 'Measuring religion as quest: (1) validity concerns', *Journal for the Scientific Study of Religion*, vol. 30, no. 4, pp. 416-429.

Batson, CD & Schoenrade, PA and Ventis, WL 1993, *Religion and the individual: a social-psychological perspective*, Oxford University Press, New York.

Bayne, A 2002, *Evidence behind claims of religion-health link is shaky, researchers say.*, Retrieved 15 December 2005, 2005, from http://hbns.org/newsrelease/religion3-11-02,cfm

Bearon, LB & Koenig, HG 1990, 'Religious cognitions and the use of prayer in health and illness', *Gerontologist*, vol. 30, pp. 249-254.

Benner, DG 1991, 'Understanding, measuring, and facilitating spiritual well-being: introduction to a special issue', *Journal of Psychology and Religion*, vol. 19, no. 1, pp. 3-5.

Bensley, RJ 1991a, 'Defining spiritual health: A review of the literature', *Journal of Health Education*, vol. 22, no. 5, pp. 287-290.

Bensley, RJ 1991b, 'Spiritual health as a component of worksite health promotion/wellness programming: A review of the literature', *Journal of Health Education*, vol. 22, no. 6, pp. 352-353,394.

Bergin, AE 1983, 'Religiosity and mental health: A critical reevaluation and meta-analysis', *Professional Psychology: Research and Practice*, vol. 14, no. 2, pp. 170-184.

Bergin, AE, Stinchfield, RD, Gaskin, TA, Masters, KS & Sullivan, CE 1988, 'Religious lifestyles and mental health: An exploratory study', *Journal of Counselling Psychology*, vol. 35, no. 1, pp. 91-98.

Berman, BM & Swyers, JP 1998, *Applying alternative medical approaches to managing chronic pain syndromes: If not now, when?*, Retrieved 1st January 2006, from http://209.61.175.160/pub/bulletin/mar98/resupdate.htm

Bogdan, R & Taylor, SJ 1975, *Introduction to qualitative research methods: A phenomenological approach to the social sciences*, John Wiley & Sons, New York.

Bradley, DE 1995, 'Religious involvement t and social resources: Evidence from the Americans' changing lives data', *Journal for the Scientific Study of Religion*, vol. 34, pp. 259-267.

Breen, F 1992, 'Does religion affect health', *Medical Observer*, 30 October, pp. 5.

Breslow, L 1990, 'The future of public health: Prospects in the United States for the 1990's', *Annual Review of Public Health*, vol 11, pp. 1-28.

Brown, SC 2001, *Philosophy of religion: An introduction with readings*, Routledge, London.

Calian, CS 1978, 'Theological and scientific understandings of health', *Hospital Progress*, December, pp 45-47,61-62.

CAM 2001, *CAM in self-care and wellness*, Retrieved 5th August, 2003, from http://www.whccamp,hhs,gov/tc.html

Carey, L 1993, 'Religiosity and health: A review and synthesis', *New Doctor*, Summer, pp. 26-32.

Carmines, EG and Zeller, RA 1988, *Reliability and validity assessment*, Sage Publications Inc, Beverly Hills.

Castles, I 1991, *Census characteristics of Australia: 1991 census of population and housing - catalogue no 2710.0*, Australian Bureau of Statistics, Canberra

Celestial Burial in Tibet 2003, Retrieved May 15, 2006, from
http://www.en.chinabroadcast.cn/636/2003-12-8/14@67567.htm

Chalmers, AF 1999, *What is this thing called science?*, Third edn, University of
Queensland Press, St Lucia.

Chamberlain, K and Zika, S 1992, 'Religiosity, meaning in life, and psychological
well-being', in Schumaker, J. F (ed), *Religion and mental health*, Oxford
University Press, New York, pp. 138-147.

Chaplin, JP 1975, *Dictionary of psychology*, Dell Publishing Co Inc, New York.

Chapman, LS 1986, 'Spiritual health: A component missing from health promotion',
American Journal of Health Promotion, Summer, pp. 38-41.

Chatters, LM 2000, 'Religion and health: Public health research and practice', *Annual
Review of Public Health*, vol. 21, pp. 335-367.

Chopra, D 2003, *The spontaneous fulfillment of desire*, Harmony Books, New York.

Clack, B & Clack, B 1998, *The philosophy of religion: A critical introduction*
Blackwell Publishers, Cambridge.

Cogliser, CC & Schriesheim, CA 1994, 'Development and application of a new
approach to testing the bipolarity of semantic differential items', *Educational
and Psychological Measurement*, vol 54, no. 3, pp. 594-605.

Cooper, JB and McGaugh, JL 1966, 'Attitude and related concepts' in Jahoda, M. and
Warren, N. (eds), *Attitudes*, Penguin Books, Baltimore, pp. 26-31.

Corsini, RJ (Ed.) 1987, *Concise encyclopaedia of psychology*, Wiley -Interscience,
London.

Courtenay, BC, Poon, LW, Martin, P, Clayton, GM & Johnson, MA 1992, Religiosity and adaption in the oldest-old', *International Journal of Aging and Human Development*, vol. 34, no. 1, pp. 47-56.

De Marco, DG 2000, 'Medicine and spirituality', *Annals of Internal Medicine*, vol. 133, no. 1, pp. 920-1.

de Vaus, DA 1991, *Surveys in social research*, 3rd edn, Allen & Unwin, London.

Diaz, DP 1993, 'Foundations for spirituality: Establishing the viability of spirituality within the health disciplines', *Journal of Health Education*, vol. 24, no.6, pp. 324-326.

Diener, E 1994, 'Assessing subjective well-being: Progress and opportunities', *Social Indicators Research*, vol. 31, pp. 103-157.

Diener, E and Emmons, RA 1985, 'The independence of positive and negative affect', *Journal of Personality and Social Psychology*, vol. 47, no. 5, pp. 1105-1117

Durkheim, E 1995, *The elementary forms of religious life*, Fields, K (translator), Free Press, New York.

Dwyer, JT 1988, 'Health aspects of vegetarian diets', *American Journal of Clinical Nutrition*, vol. 48, pp. 712-738.

Eisenberg, DM, Kessler, RC, Foster, C, Norlock, FE, Calkins, DR, Delbanco, MPP & Delbanco, TL 1993, 'Unconventional medicine in the United States', *New England Journal Of Medicine*, vol. 328, no. 4, pp. 246-252.

Eliade, M 1973, *Australian religions*, Cornell University Press, Ithaca.

Ellis, A 1992, 'Do I really hold that religiousness is irrational and equivalent to emotional disturbance?', *American Psychologist*, March, pp. 428-429.

Ellison, CG and George, LK 1994, 'Religious involvement, social ties, and social support in a South Eastern community', *Journal for the Scientific Study of Religion,* vol. 33, no. 1, pp. 46-61.

Ellison, CW 1983, 'Spiritual well-being: Conceptualization and measurement', *Journal of Psychology and Theology,* vol. 11, no. 4, pp. 330-340.

Emblen, JD 1992, 'Religion and spirituality defined according to current use in nursing literature', *Journal of Professional Nursing,* vol. 8, no. 1, pp. 41-47.

Emmerson, GJ &Neely, MA 1988, 'Two adaptable, valid, and reliable data-collection measures: Goal attainment scaling and the semantic differential', *The Counselling Psychologist,* vol. 16, no. 2, pp. 261-271.

Encarta Dictionary 2005, Retrieved 2 January 2006, from http://encarta.msn.com/dictionary_/religion.html

English, HB and English, AC 1958, *A comprehensive dictionary of psychological and psychoanalytical terms,* Longmans, New York.

Fairchild, M 2005, *Christian denominations,* Retrieved 15 May 2006, from http://christianity.about.com/od/denominations/a/denominations.htm

Farley, SD and Stasson MF 2003, 'Relative influences of affect and cognition on behaviour: are feelings or beliefs more related to blood donation intentions', *Experimental Psychology* vol 50, no.1, pp.

Faulkner, JE & De Jong, GF 1966, 'Religiosity in 5-D: An empirical analysis', *Social Forces,* vol. 45, pp. 246-254.

Fawcett, J & Downs, FS 1986, *The relationship of theory and research,* Appleton-Century-Crofts, Norwalk, CT.

Fordham, F 1966, *An introduction to Jung's psychology,* 3rd edn, Penguin Books, Ringwood, Australia.

Fountain, DE 1989, *Health, the Bible and the Church; Biblical perspectives on health and healing*, The Billy Graham Center, Wheaton.

Francis, L.J. & Stubbs, M.T 1987, 'Measuring attitudes towards Christianity: from childhood into adulthood', *Personality and Individual differences*, vol. 8, pp. 741-743.

Frankel, BG & Hewitt, WE 1994, 'Religion and well-being among Canadian university students: The role of faith groups on campus', *Journal for the Scientific Study of Religion*, vol. 33, no. 1, pp. 62-73.

Frankl, VE 1985, *Man's search for meaning*, First Washington Square Press, New York.

Freud, S 1985, *Civilization, society and religion: A group psychology, civilization and its discontents and other works*, Penguin, Harmondsworth.

Fullerton, J 1993, 'Evaluation of research studies: Part iv: Validity and reliability-concepts and application', *Journal of Nurse-Midwifery*, vol. 38, no. 2, pp. 121-125.

Gartner, J, Larson, DB & Allen, GD 1991, 'Religious commitment and mental health: A review of the empirical literature', *Journal of Psychology and Theology*, vol. 19, no. 1, pp. 6-25.

Gill, NS n.d., *The Code of Hammurabi*, Retrieved October 15, 2004, from http://ancienthistory.about.com/library/bl/bl_hammurabi.htm

Glock, C & Stark, R 1966, *Christian beliefs and anti-Semitism*, Harper and Row, New York.

Goerke, LS & Stebbins, EL 1968, *Mustard's introduction to public health*, Fifth edn, The Macmillan Company, New York.

Goodloe, NR & Arreola, PM 1992, 'Spiritual health: Out of the closet', *Journal of Health Education,* vol. 23, no. 4, pp. 221-226.

Gorsuch, RL & McPherson, SE 1989, 'Intrinsic/extrinsic measurement and single item scales', *Journal for the Scientific Study of Religion,* vol. 28, no. 3, pp. 348-354.

Gorsuch, RL 1984, 'The boon and bane of investigating religion', *American Psychologist,* vol. 39, no. 3, pp. 228-236.

Gorsuch, RL 1990, 'Measurement in psychology of religion revisited', *Journal of Psychology and Christianity,* vol. 9, pp. 82-92.

Gould, J & Kolb, W (Eds.) 1964, *A dictionary of the social sciences,* The Free Press, New York.

Green, LW & Kreuter, MW 1991, *Health promotion planning: An educational and environmental approach,* 2nd edn, Mayfield Publishing Company, Mountain View.

Habenicht, DJ 1994, *How to help your child to really love Jesus,* Review and Herald Publishing Association, Hagerstown MD.

Haggerty, RJ 1977, 'Changing lifestyles to improve health', *Preventive Medicine,* vol. 6, pp. 276-289.

Hair, JF & Anderson, RE, 1995, *Multivariate analysis with readings,* 4th edn, Prentice Hall, New Jersey.

Hanlon, JJ & McHose, E 1971, *Design for health,* 2nd edn, Lea and Febiger, Philadelphia.

Hanlon, JJ 1974, *Public health: Administration and practice,* 6th edn, The C.V. Mosby Company, Saint Louis.

Hartenian, LS, Bobko, P & Berger, P 1993, 'An empirical validation of bipolar risk perception scaling methods', *Journal of Applied Social Psychology,* vol. 23, no. 5, pp. 335-351.

Head, J 2002, *Alternative therapies,* Retrieved 20th March 2006 from http://www.abc.net.au/health/cguides/alternative.htm

Heliker, D 1992, 'Re-evaluation of a nursing diagnosis: Spiritual distress', *Nursing Forum,* vol. 27, no. 4, pp. 15-20.

Hick, J 1973, *Philosophy of religion,* 2nd edn, Prentice-Hall, Englewood Cliffs, N.J.

Hilgard, ER 1980, 'The trilogy of mind: Cognition, affection, and conation,' *Journal of the History of Behavioural Sciences,* vol. 16, pp. 107-117.

Hill, P. C. and Hood, R. W. (eds) 1999, *Measures of religiosity,* Religious Education Press, Birmingham, Alabama

Hill, PC & Pargament, KI 2003, 'Advances in the conceptualization and measurement of religion and spirituality', *American psychologist,* vol. 58, no. 1, pp. 64-74.

Hilty, DM, Morgan, RL & Burns, JE 1984, 'King and Hunt revisted: Dimensions of religious involvement.', *Journal for the Scientific Study of Religion,* vol. 23, no. 3, pp. 252-266.

Hood, RW, Spilka, B, Hunsberger, B & Gorsuch, RL 1996, *The psychology of religion: An empirical approach,* 2nd edn, Guildford Press, New York.

Horsfall, S 1997, *The challenge of spirituality to western science,* Retrieved 6th April, 2003, from http://web.txwesleyan.edu/sociology/Science.html

Hovde, P 1999, *Putting spirituality to work,* Retrieved 19 May 2006, from http://www.findarticles.com/p/articles/mi_qa3942/is_199909/ai_n8861588/

301

Hubbard, RA & Hawley, D 1983, *Health secrets of the Bible,* Loma Linda University, Loma Linda.

Hunsberger, B 1989, 'A short version of the Christian Orthodoxy Scale., *Journal for the Scientific Study of Religion,* vol. 28, no. 3, pp. 360-365.

Idler, EL 1987, 'Religious involvement and the health of the elderly: Some hypotheses and an initial test', *Social Forces,* vol. 66, no. 1, pp. 226-238.

Idler, EL, Musick, MA, Ellision, CG, George, LK, Krause, N, Ory, MG, Pargament, KI, Powell, LH, Underwood, LG, Williams, DR 2003, 'Measuring multiple dimensions of religion and spirituality for health research', Research on Aging, vol. 25, no. 4, pp. 327-365.

Jackson, N 2002, 'Dunmyer lectures pay tribute to David Larson, *Science and Theology News,* June 1.

Jacox, A 1974, 'Theory construction in nursing', *Nursing Research,* vol. 23, no. 1, pp. 4-13.

James, W 1994, *The varieties of religious experience: A study in human nature,* Modern Library, New York.

Jarvis, GK & Northcott, HC 1987, 'Religion and differences in morbidity and mortality', *Social Science and Medicine,* vol. 25, no. 7, pp. 813-824.

Jarvis, WT (1993) 'Quackery, Pantheism and the Occult', In Durand, E. and Swanson, G (eds), *Health 2000 and Beyond,* Signs Publishing Company, Warburton, Victoria, pp. 233-263.

Jehovah's Witnesses Opposition to Blood Transfusions n.d., Retrieved May 15, 2006, from www.religioustolerance.org/witness5.htm

Jones, PS (1993) 'A Christian paradigm of personal wholeness' In Durand, E. and
Swanson, G (eds), *Health 2000 and Beyond*, Signs Publishing Company,
Warburton, Victoria, pp. 79-87.

Jung, CG 1988, *Psychology and western religion*, Ark Paperbacks, London.

Kass, JD, Friedman, R, Leserman, J, Zuttermeister, PC & Benson, H 1991, 'Health
outcomes and a new index of spiritual experience', *Journal for the Scientific
Study of Religion*, vol. 30, no. 2, pp. 203-211.

Katz, D and Stotland, E 1959, "A preliminary statement to a theory of attitude
structure and change', in Koch, S (ed) *Psychology: A study of a science*, Vol. 3
McGraw-Hill, New York, pp. 423-475.

King, M, Speck, P & Thomas, A 1995, 'The royal free interview for religious and
spiritual beliefs: Development and standardization', *Psychological Medicine*,
vol. 25, pp. 1125-1134.

King, MB & Hunt, RA 1972, Measuring the religious variable: Replication', *Journal
for the Scientific Study of Religion*, vol. 11, pp. 240-251.

King, MB 1967, 'Measuring the religious variable: Nine proposed dimensions',
Journal for the Scientific Study of Religion, vol. 6, pp. 173-185.

Kluckhohn, FR and Strodtbeck, FL 1961, *Variations in value orientations*, Row,
Peterson and Co, Evanston: Illinois.

Koenig, HG 1992, 'Religion and mental health in later life, in Schumaker, JF (ed)
Religion and mental health, Oxford University Press, New York, pp. 177-188.

Koenig, HG 1993, 'The relationship between Judeo-Christian religion and mental
health among middle-aged and older adults', *Advances, The Journal of Mind-
Body Health*, vol. 9, no. 4, pp. 33-37.

Koenig, HG, George, LK, Meador, KG, Blazer, DG & Dyck, PB 1994, 'Religious affiliation and psychiatric disorder among protestant baby boomers', *Hospital and Community Psychiatry*, vol. 45, no. 6, pp. 586-597.

Koenig, HG, Kvale, JN & Ferrel, C 1988, 'Religion and well-being in later life', *The Gerontologist*, vol. 28, no. 1, pp. 18-28.

Koenig, HG, McCullough, ME & Larson, DB 2001, *Handbook of religion and health*, Oxford University Press, New York.

Koenig, HG, Parkerson, GR & Meador, KG 1997, 'Religion index for psychiatric research: A 5-item measure for use in health outcome studies', *American Journal of Psychiatry*, vol. 154, no. 6, pp. 885.

Kozier, B, Erb, G & Blais, K 1992, *Concepts and issues in nursing practice*, Addison-Wesley Nursing, Redwood City.

Krause, N 2004, 'Religion, aging,and health: Exploring new frontiers in medical care', *Southern Medical Journal*, vol. 97, no. 12, pp. 1215-1222.

Larson, BD & Larson, SS 1992, 'Clinical religious research: Who cares and what does it show', *CMDS Journal*, vol. 23, no. 2, pp. 18-22.

Lawrence, RT 1997, 'Measuring the image of God', *Journal of Psychology and Theology*, vol. 25, no. 2, pp. 214-226.

Leann, C 1988, 'Spiritual and psychological life cycle tapestry', *Religious Education*, vol. 43, no. 1, pp 45-51.

Levin, JS & Schiller, PL 1987, 'Is there a religious factor in health?', *Journal of Religion and Health*, vol. 26, no. 1, pp. 9-36.

Levin, JS & Vanderpool, HY 1989, 'Is religion therapeutically significant for hypertension?', *Social Science and Medicine*, vol. 29, no. 1, pp. 69-78.

Levin, JS 1994, 'Investigating the epidemiologic effects of religious experience' in Levin, JS (ed), *Religion in aging and health* Sage Publications, Thousand Oaks, pp. 3-17.

Levin, JS 1996, 'How religion influences morbidity and health: Reflections and natural history, salutogenesis and host resistance', *Social Science and Medicine,* vol. 43, no. 5, pp. 849-864.

Lindzey, G & Aronson, E (Eds.) 1968, *The handbook of social psychology,* Addison-Wesley Publishing Company, Reading, MA.

Lyon, JL, Gardner, K and Gress, RE 1994, 'Cancer incidence among Mormons and non-Mormons in Utah (United States) 1971-85, *Cancer Causes and Control,* vol. 5, no. 2, pp. 149-56.

Maddi, SR 1970, 'The search for meaning' in Arnold, WJ. and Page, MM (eds), *Nebraska symposium on motivation* University of Nebraska Press, Lincoln, pp. 137-185.

Maguire, TO 1973, 'Semantic differential methodology for the structuring of attitudes', *American Education Research Journal,* vol. 10, no. 4, pp. 295-306.

Mansen, TJ 1993, 'The spiritual dimension of individuals: Conceptual development', *Nursing Diagnosis,* vol. 4, no. 4, pp. 140-147.

Marschall, K n.d., *Australian aboriginal mourning rituals,* Retrieved 3 November 2004, from www.angelfire.com/ms/perring/marschall.html

McKenna, HP 1997, 'Theory and research: A linkage to benefit practice', *International Journal of Nursing Studies,* vol. 34, no. 6, pp. 431-437.

McSherry, W & Cash, K 2004, 'The language of spirituality: An emerging taxonomy', *International Journal of Nursing Studies,* vol. 41, pp. 151-161.

Meador, KG, Koenig, HG, Hughes, DC, Blazer, DG, Turnbull, J & George, LK 1992, 'Religious affiliation and major depression', *Hospital and Community Psychiatry,* vol. 43, no. 12, pp. 1204-1209.

Meddin, J 1975, 'Attitudes, values and related concepts: A system of classification', *Social Science Quarterly,* March, 889-900.

Melton, JG, Clark, J & Kelly, AA 1990, *New age encyclopedia,* Gale Research Inc, Detroit.

Miller, WR & Thoresen, CE 2003, 'Spirituality, religion and health - an emerging research field', *American Psychologist,* vol. 58, no. 1, pp. 24-35.

Mindak, WA 1969, 'Fitting the semantic differential to the marketing problem', in Snider, J. and Osgood, C. (eds) *Semantic differential technique: A source book* Aldine Atherton, Chicago, pp. 618-623.

Moberg, DO & Brusek, PM 1978, 'Spiritual well_being: A neglected subject in quality of life research', *Social Indicators Research,* vol. 5, pp. 303-323.

Moberg, DO (Ed.) 2001, *Aging and spirituality,* The Haworth Pastoral Press, New York.

Moberg, DO 1984, 'Subjective measures of spiritual well-being', *Review of Religious Research,* vol. 25, no. 4, pp. 351-355.

Murray, RB and Zentner, JB 1989, *Nursing concepts for health promotion,* Prentice Hall, London.

Nagle, C 2001, *Census of population and housing: Selected social and housing characteristics for statistical local areas: Western Australia, Cocos (Keeling) and Christmas Islands,* cat. no. 2015.5, Australian Bureau of Statistics , Canberra

National Church Life Survey 2001 n.d., Retrieved May 15, 2006, from
http://www.ncls.org.au/default.aspx?sitemapid=93

Nelson's New Illustrated Bible Dictionary 2000., Libronix Digital Library System
(Version 1.0c) CD-ROM (Also known as Nelson eBible)

New Testament Greek Lexicon n.d., Retrieved 10 August 2003, from
http://bible.crosswalk.com/Lexicons/Greek/grk.cgi?number=4151&version=kj
v

Niebuhr, R 1964, *Karl Marx and Friedrich Engles on religion,* Schocken, New York.

Nieman, DC 1988, 'Vegetarian dietary practices and endurance performance',
American Journal of Clinical Nutrition, vol. 48, pp. 754-761.

Nunnally, JC 1967, *International Encyclopedia of Psychiatry,Ppsychology,
Psychoanalysis, and Neurolohy,* Vol. 11 (Ed, Wolman, B.) Aesculapius
Publishers, Inc., New York.

Nunnally, JC 1967, *Psychometric theory,* McGraw Hill, New York.

Nunnally, JC 1978, *Psychometric theory,* 2nd edn, McGraw-Hill Book Company,
New York.

Osgood, CE, Suci, GJ & Tannenbaum, PH 1957, *The measurement of meaning,*
University of Illinois Press, Urbana, Ill.

Osman, JD & Russell, RD 1979, 'The spiritual aspects of health', *The Journal of
School Health,* June, pp. 359.

Pepper, SC 1958, *The sources of value,* University of California Press, Berkeley.

Petty, RE, Wegener, DT & Fabrigar, LR 1997, 'Attitudes and attitude change',
Annual Review of Psychology, vol. 48, pp. 609-47.

Pilch, J 1988, 'Wellness spirituality', *Health Values,* vol. 12, no. 3, pp. 28-31.

Pojman, LP (Ed.) 1997, *Philosophy of religion: An anthology,* Wadsworth Publishing Company, Belmont CA.

Poloma, MM & Pendleton, BF 1990, 'Religious domains and general well-being', *Social Indicators Research,* vol. 22, pp. 255-276.

Powell, LH, Shahabi, L & Thoresen, CE 2003, 'Religion and spirituality: Linkages to physical health', *American Psychologist,* vol. 58, no. 1, pp. 36-51.

Provonsha, J (1993) 'Conceptual foundations of our health message' In Durand, E. and Swanson, G (eds), *Health 2000 and Beyond,* Signs Publishing Company, Warburton, Victoria, pp 9-15

Pulling, P & Cawthon, K 1990, *The devil's web: Who is stalking your children for satan?,* Word Publishing, Kilsyth, Australia.

Putney, S & Middleton, R 1961, 'Dimensions and correlates of religious ideologies', *Social Forces,* vol. 39, no. 4, pp. 285-290.

Reker, GT and Wong, PTP 1988, 'Aging as an individual process: Toward a theory of personal meaning', in , Bilner, J. E. and Bengtson, V. L (eds), *Emergent theories of aging* Springer, New York,pp. 214-246

Robinson, JP, Shaver, PR & Wrightsman, LS (Eds.) 1991, *Measures of personality and social psychological attitudes,* Academic Press Inc, San Diego.

Rogers, ML 1992, 'A call for discernment-natural and spiritual: An introductory editorial to a special issue on SRA', *Journal of Psychology and Theology,* vol. 20, no. 3, pp. 175-186.

Rokeach, M 1968, *Beliefs attitudes and values : A theory of organization and change,* Jossey-Bass Inc, San Francisco.

Rokeach, M 1973, *The nature of human values,* Collier-Macmillan Canada Ltd, New York.

Rosenberg, M & Hovland, CI 1960, Cognitive, Affective, and behavioral components of attitudes', in Rosenberg, M., Hovland, C., McGuire, W., Abelson, R. and Brehm, J.(eds) *Attitude organization and change: An analysis of consistency among attitude components.* Yale University Press, New Haven, pp. 1-14

Rosenberg, M 1968, *The logic of survey analysis,* Basic Books, Inc., New York.

Schibeci, RA 1982,' Measuring student attitudes: Semantic differential or Likert instruments?', *Science Education,* vol. 66, no. 4, pp. 565-570.

Schultz-Hipp, P 2001, 'Do spirituality and religiosity increase with age?' in Moberg D (Ed.) *Aging and spirituality: Spiritual dimensions of aging theory, research, practice, and policy* The Haworth Pastoral Press, Binghamton, pp. 249.

Seawood, BL 1991, 'Spiritual wellbeing: A health education model', *Journal of Health Education,* vol. 22, no. 3, pp. 166-169.

Seeman, TE, Dubin, L & Seeman, M 2003, 'Religiosity/spirituality and health', *American Psychologist,* vol. 58, no. 1, pp. 53-63.

Sherrill, KA and Larson, DB 1994, 'The anti-tenure factor in religious research in clinical epidemiology and aging, in , Levin, J. S. (ed), *Religion in aging and health,* Sage Publications, Thousand Oaks, pp. 149-177.

Shott, S 1990, *Statistics for health professionals,* W.B.Saunders Company, Philadelphia.

Sloan, RP & Bagiella, E 2001, *Spirituality and medical practice: A look at the evidence',* Retrieved 1 January 2006, 2006, from http://www.aafp.org/afp/20010101/editorials.html

Spencer, W n.d. *Don't believe everything you feel. The need for critical thinking and proper testing in complementary medicine,* Retrieved 1st January 2006, from http://www.goethe.de/br/sap/macumba/spe2lon/htm

SPSS Inc. 2000, *SPSS 10.0 for Windows (version 10.0),* SPSS Inc., Chicago, Illinois.

Strahan, BJ & Craig, B 1995, *Marriage, family and religion,* Adventist Institute of Family Relations, Sydney.

Strawbridge, WJ, Cohen, RD, Shema, SJ & Kaplan, GA 1997, 'Frequent attendance at religious services and mortality over 28 years', *American Journal of Public Health,* vol. 87, no. 6, pp. 957-961.

Strayhorn, JM, Weidman, CS & Larson, D 1990, 'A measure of religiousness, and its relation to parent and child mental health variables', *Journal Of Community Psychology,* vol. 18, January, 34-43.

Tacey, DJ 2000, *Re-enchantment: The new Australian spirituality,* HarperCollins, Pymble, N.S.W.

Testerman, JK 1997, *Spirituality vs religion: Implications for health care,* Retrieved 25 June 2004 from http://www.aiias.edu/ict/vol 19/19cc 283-297.htm

The Macquarie Dictionary 2001, 3rd edn, The Macquarie Library Pty Ltd, Sydney.

Triandis, HC 1979, 'Values, attitudes and interpersonal behavior', in Page, M. M.(ed), *Nebraska symposium on motivation 1979,* Vol. 27, University of Nebraska Press, Lincoln, pp. 195-259

Unruh, AM, Versnel, J & Kerr, N 2002, 'Spirituality unplugged: A review of commonalities and contentions, and a resolution', *Canadian Journal of Occupational Therapy,* February, pp. 5-19.

Vogt, TM 1993, 'Paradigms and prevention', *American Journal of Public Health,* vol. 83, no. 6, pp. 795-796.

Wahlqvist, ML (Ed.) 1988, *Food and nutrition in Australia,* Thomas Nelson, Melbourne.

Williams, DR, Larson, DB, Buckler, RE, Heckmann, RC & Pyle, CM 1991, 'Religion and psychological distress in a community sample', *Social Science and Medicine,* vol. 32, no. 11, pp. 1257-1262.

Witter, RA, Stock, WA, Okun, MA & Haring, MJ 1985, 'Religion and subjective well-being in adulthood: A quantitative synthesis', *Review Of Religious Research,* vol. 26, no. 4, pp. 332-342.

World Health Organization 1978, *Declaration of Alma-Ata,* Retrieved 11 September, 1999, from http://www.who.dk/policy/AlmaAta.htm

World Health Organization 1986, *Ottawa charter for health,* Retrieved May 15, 2006, 2006, from http://www.euro.who.int/AboutWHO/Policy/20010827_2

World Health Organization 1997, *Jakarta declaration on leading health promotion into the 21st century,* Retrieved 12 November 2005, 2005, from http://www.who.int/health promotion/conferences/previous/declaration/en/print

Yinger, JM 1970, *The scientific study of religion,* The Macmillan Company, New York.

Zika, S & Chamberlain, K 1992, 'On the relation between meaning in life and psychological well-being', *British Journal of Psychology,* vol. 83, pp. 133-145.

LIST of APPENDICES

curtin

University of Technology
Western Australia

School of Public Health

The Religious And Spiritual Factors Questionnaire

PLEASE READ THE FOLLOWING NOTES

- Information gathered from this
  questionnaire will remain confidential.

- All respondents will remain anonymous.

- Your participation in this study is
  appreciated, but you may withdraw at any
  time.

CONTACT DETAILS
Geoff Browne
School of Public Health
Curtin University of Technology:
GPO Box U 1987, Perth 6845
Direct Phone: 9266 2081
        Fax: 9266 2958

SECTION 1

The questions in this section ask your views about a number of religious or spiritual ideas or concepts.

* In *each* question, tick the boxes for *ALL* the statements that agree with your view.
* Please answer all questions.

Q1.   "God" is...
1.   I don't know........................... ☐
2.   there is no God..................... ☐
3.   a single being...................... ☐
4.   described by the Trinity........... ☐
5.   an energy field.................... ☐
6.   material/physical................. ☐
7.   spiritual/non-material........... ☐
8.   within every person............. ☐
9.   a symbol only.................... ☐
10.   None of the above, I have other views........☐

Q2.   "Jesus Christ"...
1.   I don't know about Jesus Christ................☐
2.   never existed...................... ☐
3.   was an enlightened master-but not God ......☐
4.   was God in the flesh........... ☐
5.   was an ordinary man and not God.............☐
6.   is dead............................. ☐
7.   is alive today.................... ☐
8.   is a symbol only................. ☐
9.   is none of the above, I have other views.....☐

Q3.   The "Holy Spirit" is...
1.   I don't know...................... ☐
2.   does not exist................... ☐
3.   a real person .... ☐
4.   God.............................. ☐
5.   an energy field in the Universe.............☐
6.   a symbol only................... ☐
7.   none of the above, I have other views........☐

Q4.   The origin of the human race on Earth is best described by...
1.   I don't know...................... ☐
2.   evolution by natural selection.................☐
3.   evolution under God's control.................☐
4.   creation on a literal sixth day.................☐
5.   creation at an unknown time....................☐
6.   none of the above, I have other views........☐

Q5.   The Bible...
1.   I don't know...................... ☐
2.   is not relevant today............. ☐
3.   both Old and New Testaments are relevant today................................ ☐
4.   only the New Testament is relevant today................................ ☐
5.   contains errors and contradictions.......... ☐
6.   is of no more value than many other books...................................... ☐
7.   is true and infallible............................☐
8.   is the final word on moral issues............. ☐
9.   none of the above, I have other views...... ☐

Q6.   The "soul"...
1.   I don't know...................... ☐
2.   is the connection a person has with the oneness of the Universe......................☐
3.   a person has a soul that lives on after the body dies....................................... ☐
4.   a person is a soul..............................☐
5.   there is no soul that goes on living after the body dies....................................... ☐
6.   none of the above, I have other views....... ☐

Q7.   "Sin" is...
1.   I don't know...................... ☐
2.   a natural part of the Universe...................☐
3.   disobedience to God's laws.....................☐
4.   ignorance of our inner divinity................☐
5.   not a relevant idea today.......................☐
6.   still a relevant idea today......................☐
7.   none of the above, I have other views........ ☐

Q8.   "Satan or the Devil" is...
1.   I don't know...................... ☐
2.   still a real, living being........................☐
3.   imaginary and does not exist...................☐
4.   a name for the dark force in the Universe.....☐
5.   symbolic only.................................☐
6.   none of the above, I have other views.........☐

Q9.   When I think about "being saved", I believe...
1.   I don't know about being saved................☐
2.   it has no relevance for me......................☐
3.   I am saved.....................................☐
4.   I can be saved.................................☐
5.   I am too bad to be saved.......................☐
6.   I cannot be lost...............................☐
7.   I can again be lost............................☐
8.   being a good person is more important than what I believe............................ ☐
9.   none of the above, I have other views.........☐

Q10.   "Heaven" is...
1. I don't know.............................☐
2. a real physical place....................☐
3. a real spiritual state...................☐
4. not real, but is a symbol or concept.........☐
5. none of the above, I have other views........☐

Q11.   "Hell" is...
1. I don't know............................☐
2. a real place of punishment of the body.......☐
3. a real place of punishment of the soul........☐
4. a tormented state of mind...............☐
5. a name for the grave....................☐
6. only a symbol or concept................☐
7. none of the above, I have other views........☐

Q12.   "Purgatory" is...
1. I don't know............................☐
2. a real physical place...................☐
3. a real spiritual state..................☐
4. a symbolic idea only...................☐
5. imaginary and does not exist...............☐
6. None of the above, I have other views.......☐

Q13.   The "Ten Commandments" are...
1. I don't know...........................☐
2. not at all relevant today..............☐
3. partly relevant today..................☐
4. are all relevant today.................☐
5. now replaced by other laws.............☐
6. none of the above, I have other views.......☐

Q14.   "Angels"...
1. I don't know...........................☐
2. do not exist...........................☐
3. exist and are real.....................☐
4. are all good...........................☐
5. are our guides to the spiritual realm.........☐
6. are symbolic only......................☐
7. none of the above, I have other views.......☐

Q15.   "Miracles"...
1. I don't know...........................☐
2. do not happen..........................☐
3. involve magical powers.................☐
4. are real supernatural events...........☐
5. miracles are all good..................☐
6. all have a rational or natural explanation ...☐
7. I have personally experienced a miracle......☐
8. none of the above, I have other views........☐

Q 16. What type of religious or spiritual beliefs do you PRESENTLY hold?

1. No religion — against religion..... ☐
2. No religion— not against religion. ☐
3. Write your religious or spiritual belief type, denomination etc. here.....................

_____

_____

Q 17. Indicate with a cross(X) on the line, how long you have held these PRESENT beliefs?

0	1	5	10	20	30	40	50+
				YEARS			

Q 18. Are you presently a member of any religious or spiritual groups?

Yes.........☐
No.........☐

Q 19. Have you ever, at any time in your life, attended church services, mass, or similar religious or spiritually oriented meetings?

No......☐   GO TO Q23

Yes.... ☐   GO TO NEXT QUESTION

Q 20. What is your present attendance at such meetings?

1. Not at all.....................☐
2. Rarely........................☐
3. several times a year........☐
4. several times a month.....☐
5. once a week.................☐
6. More than once a week....☐

Q 21. Indicate with a cross(X) on the line, how long you have maintained this present level of attendance.

0	1	5	10	20	30	40	50+
				YEARS			

Q 22. The meetings you *presently* attend could best be described as:

1. Fundamentalist...................☐
2. Conservative.......................☐
3. Liberal................................☐
4. Charismatic........................☐
5. Pentecostal........................☐
6. Reformed............................☐
7. Contemporary.....................☐
8. Traditional.........................☐
9. Spiritualistic.......................☐
10. Evangelical........................☐
11. Meditative........................☐
12. Progressive.......................☐
13. Other—None of the above.....☐

Q 23. Indicate with a cross(X) on the line, the % of your income that is contributed to any religious or spiritual groups.

nil	1	5	10	15	20	25+

(% of gross income)

Q 24. Are there any religious, denominational or spiritual groups you *previously or at one time* belonged to?

No....... ☐

Yes....... ☐ Please specify below

_____

_____

_____

Q 25. Does physical disability *at all prevent you* from participating in religious or spiritual activities?

Yes...... ☐

No...... ☐

Q 26. Does your spouse or partner hold similar religious or spiritual beliefs to yours?

Not applicable to me.... ☐
Yes.... ☐
No.... ☐

SECTION 2

The questions in this section look at a number of day-to-day activities and lifestyle factors

In QUESTIONS 1-6, tick *only* the box that best describes the *influence your religious or spiritual beliefs* have on your approach to the type of activity in each question.

Q1. Your use of conventional medical practitioners and therapies (GP's, prescription drugs etc)

1. Strong influence *toward* their use.... ☐
2. Moderate influence *toward* their use. ☐
3. No real influence at all...................... ☐
4. Moderate influence *against* their use ☐
5. Strong influence *against* their use.. ☐

Q2. Your use of natural remedies or therapies such as diet, massage, hydrotherapy etc.

1. Strong influence *toward* their use.... ☐
2. Moderate influence *toward* their use. ☐
3. No real influence at all...................... ☐
4. Moderate influence *against* their use ☐
5. Strong influence *against* their use.. ☐

Q3. Your use of alternative medicine practitioners and therapists (naturopaths, chiropractors, herbalists etc.)

1. Strong influence *toward* their use.... ☐
2. Moderate influence *toward* their use. ☐
3. No real influence at all...................... ☐
4. Moderate influence *against* their use ☐
5. Strong influence *against* their use.. ☐

Q4. Your use of spiritual aids such as astrology, numerology, clairvoyants, channelling, etc.

1. Strong influence *toward* their use.... ☐
2. Moderate influence *toward* their use. ☐
3. No real influence at all...................... ☐
4. Moderate influence *against* their use ☐
5. Strong influence *against* their use.. ☐

Q5. The type of employment you can engage in.

1. Strongly Influences the type of employment................................. ☐
2. Moderately influences the type of employment................................. ☐
3. No real influence at all........................ ☐

Q6. General health and lifestyle choices.

1. Strongly influences lifestyle choices ☐
2. Moderately influences lifestyle choices ☐
3. No real influence at all ☐

Q7. Please tick the boxes that apply to you

1. eat meat-frequently............☐
2. eat meat-often........ ☐
3. eat meat-occasionally........ ☐
4. eat meat-rarely........ ☐
5. vegan -vegetarian..............☐
6. other vegetarian................☐

1. non-drinker.....................☐
2. moderate drinker............... ☐
3. heavy drinker................... ☐
4. binge drinker................... ☐
5. ex-drinker................... ☐

1. non-smoker.....................☐
2. occasional smoker............ ☐
3. moderate smoker............. ☐
4. heavy smoker................. ☐
5. ex-smoker................... ☐

1. exercise rarely................. ☐
2. exercise occasionally......... ☐
3. exercise often...................☐
4. exercise frequently............ ☐

Q8. Indicate with a cross(X) on the line, the years you have maintained your present type of DIET

0   1 · 5   10   15   20   30   40+
Years

Q9. Indicate with a cross(X) on the line, the years you have maintained your present approach to the USE OF ALCOHOL

0   1   5   10   15   20   30   40+
Years

Q10. Indicate with a cross(X) on the line, the years you have maintained your present approach to the USE OF TOBACCO

0   1   5   10   15   20   30   40+
Years

Q11. Indicate with a cross(X) on the line, the *average* HOURS per WEEK you spend in reading, watching videos or TV programs *having a religious or spiritual content*

Nil   2   4   6   8   10+
HOURS/WEEK

Q12. Indicate with a cross(X) on the line, the *average* HOURS per DAY you spend in watching *general* television, videos, movies, playing video games, non-work Internet time, etc.

Nil   1   2   3   4   5+
HOURS/DAY

Q13. Indicate with a cross(X) on the line, the *average* TIMES each WEEK you use meditation(TM), yoga, or related techniques.

Nil   2   4   6   8   10   12   14+
TIMES /WEEK

Q14. Indicate with a cross(X) on the line, the *average* TIMES each WEEK you use personal prayer

Nil   2   4   6   8   10   20   30+
TIMES /WEEK

Q15. Indicate with a cross(X) on the line, the *average* TIMES each WEEK you have personal and/or group Bible study

Nil   2   4   6   8   10   12   14+
TIMES /WEEK

Q16. Indicate with a cross(X) on the line, the *average* HOURS per WEEK of *voluntary* involvement you have in "church" or similar activities such as teaching, administration, youth leader/helper, music, welfare, etc

Nil   2   4   6   8   10+
HOURS/WEEK

Questions continue on next page

SECTION 3

PLEASE READ THESE INSTRUCTIONS

(i)   Work through the following questions in the order they appear.

(ii) Work as quickly as you can through the questions. It is your first impressions about each question that are important.

(iii) Please attempt all items in all questions. Do not leave any lines unmarked

(iv) Put only one cross(X) on each line.

Please attempt all items on this page

Q1.   YOUR MOTHER (OR FEMALE GUARDIAN) IS (OR WAS)

very religious	_____	not at all religious
supports religion	_____	against religion
very spiritual	_____	not at all spiritual
supports being spiritual	_____	against being spiritual

Q2.   YOUR FATHER (OR MALE GUARDIAN) IS (OR WAS)

very religious	_____	not at all religious
supports religion	_____	against religion
very spiritual	_____	not at all spiritual
supports being spiritual	_____	against being spiritual

Please attempt all items on this page. Do not leave any lines unmarked

Q3. FOR ME, THE FUTURE IS......

• bright	_____	dark
• comforting	_____	not comforting
• full of hope	_____	full of despair
• peaceful	_____	not peaceful
• ever changing	_____	unchanging
• free	_____	not free
• clear	_____	unclear
• a matter of fate	_____	a matter of choice
• mysterious	_____	not mysterious
•predictable	_____	unpredictable
• soon to end	_____	to go on forever
• frightening	_____	not frightening
•has many goals	_____	has no goals
•free of nuclear weapons	_____	nuclear war

Q4. THE IDEAS THAT DESCRIBE THE FUTURE FOR ME ARE....

• totally described by *religious* beliefs	_____	not at all described by *religious* beliefs
• totally described by *spiritual* beliefs	_____	not at all described by *spiritual* beliefs
• totally described by *science or philosophy*	_____	not at all described by *science or philosophy*

Questions continue on the next page

Please attempt all items on this page. Do not leave any lines unmarked

Q5. LIFE'S MEANING TO ME IS........

• ever changing	_____	unchanging
• a daily struggle	_____	a source of hope each day
• very important	_____	not important
• something I often wonder about	_____	something I rarely wonder about
• refreshing	_____	not refreshing
• clear	_____	unclear
• comforting	_____	not comforting
• a source of hope	_____	a source of despair
• satisfying	_____	not satisfying
• a source of torment	_____	not a source of torment
• very uncertain	_____	very certain
• about free choice	_____	about little choice
• a matter of urgency	_____	not at all urgent
• mysterious	_____	not at all mysterious
• meaningful	_____	meaningless
• predictable	_____	unpredictable
• happiness	_____	sadness
• about meeting the needs of others	_____	not about meeting the needs of others

Q6. THE DAY-TO-DAY MEANING OF LIFE FOR ME IS.........

• totally described by *religious* beliefs	_____	not at all described by *religious* beliefs
• totally described by *spiritual* beliefs	_____	not at all described by *spiritual* beliefs
• totally described by *science or philosophy*	_____	not at all described by *science or philosophy*

Please attempt all items on this page. Do not leave any lines unmarked

Q7.   RELIGION AS I SEE OR EXPERIENCE IT IS.........

• encouraging	discouraging
• practical	impractical
• valuable	not at all valuable
• attractive	unattractive
• the same as being spiritual	different to being spiritual
• very caring	uncaring
• very interesting	very uninteresting
• reasonable	unreasonable
• strong	weak
• tolerant	intolerant
• sick	healthy
• hard	easy
• relevant	irrelevant
• very meaningful	meaningless
• readily understood	not readily understood
• wise	unwise
• threatening	non-threatening
• happy	unhappy
• not affected at all by the physical body	very much affected by the physical body

Questions continue on the next page

Please attempt all items on this page. Do not leave any lines unmarked

Q8.   SPIRITUALITY AS I SEE OR EXPERIENCE IT IS.......

• encouraging	_____	discouraging
• practical	_____	impractical
• valuable	_____	worthless
• attractive	_____	unattractive
• same as being religious	_____	is different to being religious
• very caring	_____	uncaring
• very interesting	_____	very uninteresting
• reasonable	_____	unreasonable
• strong	_____	weak
• tolerant	_____	intolerant
• sick	_____	healthy
• hard	_____	easy
• relevant	_____	irrelevant
• very meaningful	_____	meaningless
• readily understood	_____	not readily understood
• wise	_____	unwise
• threatening	_____	non-threatening
• happy	_____	unhappy
• not affected at all by the physical body	_____	very much affected by the physical body

Q9.   THE POOR AND THE NEEDY IN OUR COMMUNITY.......

• are a nuisance	_____	are not a nuisance
• are deserving	_____	are undeserving
• are hard to recognise	_____	are easy to recognise
• are the responsibility of gov't and welfare agencies	_____	are not the responsibility of gov't and welfare agencies
• are the responsibility of every person	_____	are not the responsibility of every person
• are lazy	_____	are not lazy
• suffer poverty that is self-inflicted	_____	suffer poverty that is not self-inflicted
• their need is a punishment	_____	their need is not a punishment
• are valuable	_____	are worthless
• are not important to our society	_____	are important to our society
• abuse help given them	_____	appreciate help given them
• should be content with their lot in life	_____	should not give up trying to better themselves
• are noticed by God	_____	go unnoticed by God
• are victims of destiny	_____	have choices to make in life
• could be me one day	_____	will never be me.

Please attempt all items on this page. Do not leave any lines unmarked

Q10. In this question, "GOD" includes any concept about a higher power that you choose to call "GOD". If you believe *there is definitely no God*, then tick the box......☐ **And go to the next question**

"GOD TO ME IS....."

• approachable	_____	is unapproachable
• practical	_____	is impractical
• a good listener	_____	doesn't listen
• ready to send illness to punish	_____	reluctant to send illness to punish
• aware of my thoughts	_____	not aware of my thoughts
• always seeking me	_____	never seeking me
• valuable	_____	worthless
• worth knowing	_____	not worth knowing
• interesting	_____	boring
• caring	_____	uncaring
• providing direction in life	_____	does not provide direction in life
• merciful	_____	vengeful
• always fair	_____	never fair
• personal and very interested in my daily situations	_____	impersonal and not interested in my daily situations
• a source of happiness	_____	a source of unhappiness
• able to solve my problems	_____	not able to solve my problems
• tolerant	_____	not tolerant
• always first in my life	_____	never first in my life
• readily understood	_____	cannot br understood
• very meaningful	_____	meaningless
• very confusing	_____	not at all confusing
• unforgiving	_____	forgiving
• a source of well-being	_____	a source of anxiety
• interested in how I take care of my spiritual self	_____	not interested in how I take care of my spiritual self
• interested in how I take care of my physical self	_____	not interested in how I take care of my physical self

Questions continue on the next page

Q11. Circle only one response to each of the following questions.

		Strongly Agree	Agree	Not Applicable/Don't Know	Disagree	Strongly Disagree
1	I enjoy reading about my religion..	SA	A	DK	D	SD
2	I go to church because it helps me to make friends..	SA	A	DK	D	SD
3	It doesn't much matter what I believe so long as I am good..............................	SA	A	DK	D	SD
4	It is important to me to spend time in private thought and prayer....................	SA	A	DK	D	SD
5	I have often had a strong sense of God's presence...	SA	A	DK	D	SD
6	I pray mainly to gain relief and protection..	SA	A	DK	D	SD
7	I try hard to live all my life according to my religious beliefs.........................	SA	A	DK	D	SD
8	What religion offers me most is comfort in times of trouble and sorrow............	SA	A	DK	D	SD
9	Prayer is for peace and happiness..	SA	A	DK	D	SD
10	Although I am religious, I don't let it affect my daily life...............................	SA	A	DK	D	SD
11	I go to church mostly to spend time with my friends.......................................	SA	A	DK	D	SD
12	My whole approach o life is based on my religion...	SA	A	DK	D	SD
13	I go to church mainly because I enjoy seeing people I know there.......	SA	A	DK	D	SD
14	Although I believe in my religion, many other things are more important in life.	SA	A	DK	D	SD

Please proceed to the final section

SECTION 4

This final section asks for some personal details including; age, gender, education and employment history, and marital status

Q1. What sex are you?

    Female... ☐   Male..... ☐

Q2. What is your WEIGHT

    in (kilograms_____) OR (Stone____& pounds_____) OR (pounds_____)

Q3. What is your HEIGHT

    in (feet____&inches_____) OR (centimetres_____)

Q4. What is your age (in years) _____ years

Q5. What is the *highest* level of education you have either attained or will almost definitely attain this year. Tick one box only.

    1. Primary...☐
    2. Secondary Year 10...................................☐
    3. Secondary Year 12...................................☐
    4. Secretarial or Business Course......................☐
    5. Technical college.....................................☐
    6. Apprenticeship...☐
    7. Single undergraduate degree or equivalent........☐
    8. Double undergraduate degree or equivalent......☐
    9. Honours or Post graduate Diploma................☐
   10. Master's Degree.....................................☐
   11. Doctoral Degree.....................................☐

Q6. What is your marital status?

    1. Never married........................ ☐
    2. Married .... ☐
    3. Widowed .... ☐
    4. Divorced .... ☐
    5. Separated not divorced .... ☐
    6. De facto/living together........... ☐
    7. Other relationships................. ☐

Q7. How many dependent children do you have in *each* age group. Tick the box if none

1. in age group 0-5 years...... (...........) or NONE ☐

2. in age group 6-10 years... (...........) or NONE ☐

3. in age group 11-17 years.. (...........) or NONE ☐

4. in age group 18 and older.. (...........) or NONE ☐

Q8.   **Your street name*(not number)*:**   _____

Q9.   **Your suburb:**   _____

Q10.   **Your postcode:**   _____

Q11. What is your employment status? Tick as many boxes as necessary.

1. Employed Full-time.......... ☐

2. Employed Part-time.......... ☐

3. Employed Casual.............. ☐

4. Not employed................... ☐

5. Retired.............................☐

6. Volunteer........................ ☐

7. Full-time Student...............☐

8. Part-time student.............. ☐

Q12. What is your *present* occupation

_____

Q13. What *previous* occupations have you had? If none, leave blank.

_____

_____

_____

Q14. Place a cross(X) on the line to indicate the average *total hours* you would spend *each week* in your main occupations or activities (include any time that is paid or unpaid work, study, volunteer activities etc. Do not include home-duties or recreational activities)

```
|.........|.........|.........|.........|.........|.........|.........|.........|.........|.........|........
0         20        40        60        80        100 +
                          hours/week
```

Questions continue on the next page

Q15. Place a cross(X) on the line to indicate the estimated total income (before tax), from all sources, for you and your partner.

```
|.........|.........|.........|.......|.........|.........|.........|.........|.........|.......|........
0         20        40        60        80        100 +
              Estimated total income ($ Thousands)
```

Q16. Please write down the names of any clubs, volunteer or self-help groups, or other organisations that you belong to.

None.... ☐

1. _____

2. _____

3. _____

4. _____

5. _____

THANK YOU FOR YOUR TIME AND EFFORT