The Flinders University of South Australia
School of Education

Spiritual, Moral and Social Development as the Outcomes of a Program for Youth

Thesis submitted for the degree of
Doctor of Philosophy

by
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DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and to the best of my knowledge, it does not contain material previously published or written by any other person except where due reference is made in the text.

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Michael J. Carthew

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ABSTRACT

This study investigates the development of, and relationships between, religiosity, spirituality, moral thinking and social attitudes among religious adolescents participating in an early morning weekday religious education program in Australia.

Students participating in the Early Morning Seminary program of the Church of Jesus Christ of Latter-day Saints form the population of interest for this study. These students demonstrate high levels of religious practice, making them an important group to research when seeking greater understanding of the outcomes of religious and spiritual developmental arising from such programs and when investigating how religiosity relates to moral and attitudinal aspects in the lives of religious youth.

The research is survey based and entails the administering of four waves over a two-year period, enabling longitudinal observations to be examined. A sample of convenience is used consisting of Seminary students from South Australia and Victoria. Various survey instruments are used to measure characteristics such as family background, educational background, student religious activity, Seminary program involvement, relationships with God, moral decision making and social attitudes. Data analysis includes the use of Rasch scaling procedures, path analysis and Hierarchical Linear Modelling software in order to investigate multilevel effects on change in key dimensions over time.

The fact that specific research regarding highly religious youth in Australia is not common and that research regarding Latter-day Saint youth in Australia is almost non-existent makes this study an important and seminal contribution in the Australian religious research field. This study provides several other important contributions to the field as it explores developmental outcomes of a specific religious education program across a range of religious and psychosocial dimensions.

The oft-reported strong influence of the family on the religiosity of teenagers is reflected in the findings of this study. There is also evidence to indicate that private religious activity is especially important for the level of spirituality among students. The findings indicate that spirituality, rather than public or private religious practice, influences moral reasoning. Furthermore, private religious practice tends to have more positive influence than spirituality on social attitudes. Participation in the Seminary program appears to influence religiosity and spirituality significantly and independently of other variables included in the study, although the influence of participation is mediated by the feelings of students concerning the program.

Generally, students show a decline in both participation levels and feelings towards the Seminary program over time. However, there is evidence of increased positive attitude toward a religious lifestyle, religious belief and awareness of God's influence in life. Religious practice appears to influence change in several practical, attitudinal and spiritual dimensions positively. The findings indicate that the developmental role of Seminary participation is largely through the influence of the class environment.

From this study it appears that religious participation in both public and private forms can have a major influence on key dimensions of spirituality and that religious

and spiritual characteristics can have some influence on moral decision making and the forming of social attitudes. Participation in a religious education program, such as the Latter-day Saint Seminary program, can influence these dimensions especially if there is a positive attitude towards the program on the part of students and the class the environment is appropriate.

In recent decades, the role of religion in psychological and social reality has seen greater attention and acceptance in academic circles. Accordingly, the body of academic research regarding religion and associated fields has increased and diversified opening the way for further exploration of the role of religion in the broader context of human life as is found in this study.

CHAPTER 1:
INTRODUCTION

This initial chapter establishes the broad context and structure of this research study. The working environment that gave rise to the interest in the topic being investigated is introduced. Two key aspects of religious life central to this study are proposed, namely the religious and spiritual and the social and moral domains. Recent developments in the current academic environment which makes such a study as this possible are also discussed. Importantly the aims and key questions guiding this study are listed and the structure of the thesis is outlined. Finally, working definitions for several terms used throughout this report are listed and limitations and constraints affecting the scope of this study are outlined.

Connecting Religion and the Natural World

This study is essentially interested in understanding the connections between the spiritual and social world of young people. The topic of religion and spirituality has been a significant aspect of human thought throughout history and, it would seem, is finding increasing attention today. As Spilka, Hood and Gorsuch (1985, p. 2) expressed,

> Few human concerns are more seriously regarded than religion. We surround ourselves with spiritual reference, making it a context in which the birth of a baby is celebrated by means of christening, baptism, or circumcision. Marriages are solemnized by the clergy, and the sacred is continually invoked to convey the significance of almost every major life event. Finally, death is circumscribed by theologies. Images of an afterlife, of 'going to meet one's God,' and of resurrection alleviate to some degree the burden on both the living and the dying.

> Why do we expend so much energy on religion? Simply because it is an extremely important aspect of social and psychological reality.

In today's world environment of sometimes passionate religious-social action and even violence which puts many religious groups under public and media scrutiny, understanding how religiosity or spirituality plays-out as a part of "social and psychological reality" is of great importance. This understanding is needed not only

on a social or psychological utility level, such as Spilka and his colleagues alluded to, but on a deeper, more personal level where spirituality and relationship with deity contribute to the shaping of an individual's view of life, society and mankind; that level where a world view is formed and attitudes, moral frameworks and social paradigms are constructed.

William James, credited as the founder of American Psychology and the first major psychologist to "legitimize the study of faith" (Lownsdale, 1997) expressed the important connection between spirituality, faith and the natural world when he stated,

> The unseen [spiritual] region in question is not merely ideal, for it produces effects in this world. When we commune with it – we are turned into new men, and consequences in the way of conduct follow in the natural world upon our regenerative change. (quoted in Lownsdale, 1997, p. 52)

Human interaction with the two related domains mentioned by James, in his words the "unseen region" and the "natural world," are central to this investigation.

In the Christian tradition (and the sentiment is reflected in many other religious traditions) these two aspects of life were expressed by Jesus in a statement concerning the two great commandments (*The Holy Bible*, p. 1227); namely, to love God (related to religious and spiritual dimensions) and love your neighbour (related to social and moral dimensions). Thus, to the Christian, the separation of the spiritual (God) and social (man) domains of life and the need for attention to both appear to be inherent in the writings and often in the tradition.

It is believed that investigation of the spiritual and social dimensions in the religiosity of individuals may assist in the understanding of how people act in the world as a result of their religious beliefs and practices. Seeking understanding of the development of, and interaction between, the religious-spiritual and the social-moral aspects of life, especially of those who might be considered highly religious, forms the basis of this investigation. Furthermore, implications for religious and spiritual education are of special interest to this study.

Study Background and Conception

Interest in this research project began with the researcher's involvement in coordinating a youth early morning Seminary program for the Church Educational System of the Church of Jesus Christ of Latter-day Saints. At the time this program involved students in School Grades 9 to 12 attending scripture study classes before school each day. Classes generally began between 6:00am and 6:30am and ran for 50 minutes. Classes were taught by volunteers from the respective church congregations and classes were generally held in Latter-day Saint chapels, with a few exceptions held in homes and schools.

Involvement in this program required a great deal of commitment from students and families. Generally these students demonstrated high levels of religious involvement, at least in terms of program participation. Furthermore, a previous study suggested that students were motivated to attend mainly by personal religious and spiritual considerations more than by direct parental or clergy influence (Carthew, 1996). Of particular interest to the researcher was the fact that observation tended to show that although students shared a high level of religious involvement this often translated quite differently when it came to the spiritual, moral and social domains. These observations led to questions regarding the development of spiritual and social dimensions among adolescents showing high levels of religious practice.

With over 200,000 Latter-day Saint early morning Seminary students across the world, it was felt that a study involving these students in Australia would be a valuable undertaking and might yield findings useful to the understanding of not only the focus population of Seminary students but of religious teenagers generally.

Current Academic Environment

Some years ago an inquiry of this kind might have struggled to find a place in academic circles. However, developments in the relevant fields have helped to facilitate such an investigation. It seems that in recent years, scholarship and practice have taken ever-growing steps to address religion and spirituality and their implications for the social domains (see Hall & Edwards, 1999). Such developments

are in the context of an ever-increasing body of academic writing on the measurement of religion, spirituality and related areas of human experience, thus facilitating the academic study of religious development in a wide variety of settings.

Accordingly, a body of research has been developing which has sought to address the more personal, spiritual nature of religion and its psycho-social impacts (Hall & Edwards, 1999). Though often grounded in a psychological or sociological framework, the work has held great interest for religious educators, clergy and social scientists alike. Where once an individual's orientation toward religion was felt to be a sufficient measure of religiosity (eg. Allport & Ross, 1967; Gorsuch, 1984), now measures are being developed to assess such things as the strength and quality of a person's relationship with God (e.g. Hall & Edwards, 1996) or how an individual relates to God in times of crisis (e.g. Pargament et al., 1988).

With the recent advancements in the study of religion in the broader academic world, published research of this nature concerning the Latter-day Saint population, especially outside of the United States has been limited. This lack of international research on Latter-day Saints has been conspicuous enough that, in his entry on 'Mormonism' in the *Encyclopedia of Religion and Society*, Mauss (1998, p. 312-313) commented that,

> Many… potentially interesting aspects of Mormon culture have… been slighted in the social scientific literature. These include anthropological topics such as myth, ritual, values, folk religion, and syncretism… Other neglected topics include organizational governance and control, intellectual history, dissent and defection, education and its impact, crime and deviance among the Mormons, and, perhaps most conspicuous of all in a rapidly growing international religion, any scholarly work to speak of Mormons outside of the United States (in any language). To be sure, there is a smattering of work on these topics, but very little.

Accordingly, published research of this nature has been almost non existent regarding Latter-day Saint communities in Australia. Such a scarcity of existing research makes this study challenging yet significant in what it may contribute.

The Aims of This Study

In general terms, this study seeks to employ some recent developments in religious theory and research to identify and to understand the spiritual and social outcomes of being religious. Such inquiry is approached from a Christian perspective with young adolescents participating in the Seminary program of the Church of Jesus Christ of Latter-day Saints as the focus group.

There are two major goals behind the investigation of this group of youth. They are,

(a) to gain greater understanding of the specific group of Latter-day Saint Seminary students and how their religious involvement relates to spiritual and social dimensions of life and changes over the course of time, and

(b) to gain further insight into the development of relationships among religion, spirituality and social outcomes in the lives of religious teenagers in general.

Two questions directly related to the investigation of relationships between factors are posed in order to provide direction for the design, analysis and reporting for this investigation.

Question 1: What influence does religiosity and spirituality have on the moral and social outlook of religious youth?

Question 2: What effects does the Latter-day Saint Seminary program have on the religious, spiritual, moral and social lives of its participants?

Because this study involves students participating in a religious educational program, information concerning development, or change over time, is of particular relevance. Therefore four more questions are posed in order to provide a basis for investigation of longitudinal data concerning development of religious and spiritual factors.

Question 3: How do religious and spiritual dimensions change over the course of the study?

Question 4: Which initial factors influence the change over time of religious and spiritual dimensions?

Question 5: Are there any class effects on the change in religious or spiritual dimensions?

Question 6: How does the Seminary program influence change in religious and spiritual dimensions?

The process of seeking satisfactory responses to these questions includes creating a relationship model involving a relatively large cross section of related variables and an investigation of a longitudinal nature. These two aspects of this study are seen as making a seminal contribution to the study of religious education of teenagers generally and understanding the nature of the outcomes of involvement in the Latter-day Saint Seminary program.

The research goals and the answering of these questions form the basis of this study and the presentation of the relevant academic literature. In turn, a useful theoretical framework and specific measures are identified, considerations for research on the guiding questions are considered and chosen instruments are utilised to gather relevant data for analysis and discussion.

Because of the breadth of this investigation and the complexity of the various research fields included in this investigation, it is accepted that the presentation of findings and discussion is kept relatively general except when responding to the specific research questions and that discussion of areas not related to the specific goals of the research are kept to a minimum. Therefore, it is acknowledged from the outset that a report of the nature undertaken here cannot deal with all aspects of the relevant theories or findings in an in-depth manner nor can it involve an exhaustive discussion of the wide variety of philosophical or research directions possible. For example, no effort is made in this study to justify the assumption that spirituality ought to have social or moral outcomes even though it would not be a fruitless discussion if had elsewhere.

Outline of this Report

Literature Review

Before proceeding with a consideration of the details of planning, application and discussion of this study it is important that existing academic literature relevant to the field is reviewed.   By doing so a context is set in order to understand better the development of this study and the implications of its findings. Thus, Chapter 2 discusses some relevant theories in the field along with the various relevant approaches for measuring religion and spirituality. A consideration of useful models for measuring social attitudes and moral thinking is presented in Chapter 3. Research addressing useful background factors and previously argued relationships between religious and social factors is also included in this chapter. Since the sample for this study is made up of a group not widely researched or discussed in academic circles, it is considered that a chapter addressing the cultural and religious characteristics of Latter-day Saint teenagers as gleaned from recent studies is also useful in establishing the context for the discussion of this study. This review is contained in Chapter 4.

Study Concept, Methodology and Results

In Chapter 5 the specific model for this investigation is proposed along with justifications for the inclusion of various instruments, scales and background variables. The research questions posed above are used as a basis for discussion. Further discussion on the scope and limitations of this study as well as the identification of possible bias are also addressed in Chapter 5. The process for design and methods of the research is explained in Chapter 6. The results are reported in four chapters. The first results chapter, Chapter 7, reports on the descriptive findings of the study in order to identify certain important characteristics of the sample including background, educational, religious, spiritual, social and moral factors. Chapter 8 identifies characteristics of those who dropped out of the study after completing the first survey, with the argument that a significant number of those dropping out of the study in fact dropped out of the Seminary program. The characteristics of such individuals are therefore presented as relevant to the goals of the study. Chapter 9 reports on important relationships among key factors

investigated in the study and forms a major part of the findings relevant to the key questions of this study. Chapter 10 concludes the reporting of results by presenting findings derived from longitudinal data.

Discussion and Conclusions

Discussions regarding the findings reported are discussed within each results chapter described above. Chapter 11 contains a review of key findings in response to the research questions, proposes implications for the Seminary program and the understanding of youth religiosity generally, and recommends areas for future research related to this investigation.

Definitions

Several terms are used in this report which may not be commonly understood or have unclear definitions in general discussion. Some of these terms are identified below.

The Church of Jesus Christ of Latter-day Saints

The Church of Jesus Christ of Latter-day Saints is alternatively termed the Mormon Church, the Latter-day Saint Church or LDS Church. Accordingly its members may be referred to as Mormons, Latter-day Saints[1] or LDS.

Religiosity and Spirituality

The terms religiosity and religious are used in this report to refer to the collective or private practices and associations concerned with religion, such as public participation in services or meetings, or private prayer and scripture reading. Spirituality on the other hand is more personal and directly experiential as it relates to deity. This is in keeping with the approach used by Tloczynski and his colleagues (1994, p. 208) and Engerbretsen (2003, p. 6), among others, which is described in further detail in Chapter 2 and discussed further in Chapter 5.

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[1] In this sense the term 'saint' means all members of the church rather than a title reserved only for the spiritually elite as used in many mainstream Christian traditions.

Because this study deals with a specific religious group with tightly shared beliefs regarding the nature of God and mankind's relationship with him, it is possible to adopt a specific and practical definition of the concept of 'spirituality'. Although it is acknowledged that spirituality is best considered as a multidimensional construct, according to the Latter-day Saint understanding of the term, 'spirituality' is based to a large degree on an individual's relationship with God. An experiential dimension is also assumed to be present in the spirituality of the population for this study, as such reported experiences of a specifically spiritual nature are considered when seeking understanding of spiritual levels. Further detail concerning the definition of spirituality used in this study is described in Chapter 5.

Moral and Morality

The terms 'moral' and 'morality', as used in this study and moral development literature generally, refer to the concept associated with the reasons why or how an individual judges something as 'good' or 'bad' (Duska & Whelan, 1975). As discussed in Chapter 3, differences of opinion exist on whether considerations of morality, as defined here, ought to include moral content, such as specific situational factors, or only moral structure, where only the cognitive process behind the decision making is considered (e.g. Lee, 1980).

Social

The term 'social' is used in this study to refer to the domain of an individual's interaction with the broader community and those belonging to it. The term in this study is used not so much in relation to the ability to relate in the social setting, but what attitudes are present to form the basis of social outlook and participation.

Limitations and Constraints of Scope

It is hoped that the findings of this investigation are valuable to the LDS Seminary program specifically, as well as to a more generalized field of teenage religious and spiritual life. However, these findings are reported with the understanding that the

sample upon which the findings, discussions and conclusions are based is a sample of convenience, taken from only two Australian states. Further, the population of interest is a very specific and, in some ways, unique group of highly religious teenagers. This implies therefore, that conclusions reached in this report are taken with some degree of caution. This having been said however, there is no reason to believe that the specific focus of this study cannot yield highly relevant and useful findings with significant implications for the wider religious and academic community. In fact, the highly religious and specialized nature of the population under investigation in this study may provide an opportunity to study elements of religious life which are somewhat diluted in more general research populations.

The fact that characteristics relevant to religiosity, spirituality, moral thinking and social attitudes are all studied in this investigation means that the depth of reporting or discussion needs to be limited in order to maintain a workable scope. The goals of this study do not include studying each of these areas in depth, but to gain an overall appreciation for the dynamics of how these factors relate to one another.

Other considerations also influencing the scope and limitations of this study include,

(a) the need to conduct a longitudinal study in order to investigate change in religious and spiritual dimensions;

(b) the need to investigate not only individuals, but also the class groups in which they learn and develop;

(c) the complexity and instability experienced among teenagers and the sometime fluid nature of their participation in a voluntary program such as Seminary; and

(d) the apparent conflict with formal educational efforts and other teenage activities.

These four considerations add greatly to the seminal nature of this study but they impose particular constraints on what can be achieved and how the evaluative nature of the enquiry must be conducted.

Conclusions

This chapter provides a basis for the detailed reporting of this study. Background to the general field is discussed along with a brief description of the current academic environment making this study possible. The specific background and conception of the study is reported and the important key questions guiding the study are outlined. The structure of this report is described and, finally, some relevant terms are defined and limitations are presented.

Having provided this introductory statement, a presentation of selected academic literature related to the study of religion and spirituality is presented in Chapter 2.

CHAPTER 2:
RELIGIOSITY AND SPIRITUALITY - A SELECTIVE REVIEW

Introduction

This chapter reviews foundational and recent literature on the measurement and study of religion and spirituality generally. Because of the many and varied approaches to these fields that now exist in academic and other scholarly writing, only information sufficient to familiarize the reader with this field of research that is important for the development of the model proposed for this study and for the understanding of the implications of any relationships among major characteristics and background variables included in the model is addressed. This chapter begins with the broader sociological findings and discussion before considering the psychological aspects and research in the field. Research involving or relevant to Latter-day Saint youth specifically is addressed in Chapter 4 in order to provide a more focused discussion and to enable considerations of religious and social fields (as addressed in this chapter and Chapter 3) to be introduced.

The Teenager and Religion

Past research has provided some ideas as to the attitudes of adolescents toward religion. Almost three decades ago Hoge and Petrillo (1978b, p. 361), while commenting on several studies in particular, observed,

> Religious interest or a felt need for religion varies from person to person, but past research indicates that it is usually strong among youth. Its main focus among youth tends to be on personal faith and on relationships with family and peers; broader social, political, or theological questions are less pressing.

The fact that religious interest was once perceived as 'strong' among youth is of interest, especially as the casual observer may not give credit for such interest among teenagers. However, the general interest of youth may not have been expressed

necessarily by participation in religious programs, but it appears that contemplation of a religious nature took place nonetheless. Elkind (1970, p. 275) suggested,

> Indeed, some of our research suggests that many young people reject the formal worship service but nonetheless engage in individual worship in the privacy of their rooms.

Though this observation was made some time ago, more recent observations indicate that teenagers are still interested in religious issues, although the nature of that interest appears to have changed and is a topic of ongoing debate.

In a recent major study of the religiousness of youth across the United States entitled the National Study of Youth and Religion (NSYR), Smith and his research team (Smith & Denton, 2005) phone surveyed 3370 teenagers and interviewed 267 youth aged between 13 and 17 years across the country.   Their findings tended to support the idea that a substantial proportion of teenagers in the United States were religious in public and private life. For example, Smith and Denton (2005) reported that 84 per cent of teenagers surveyed believed in God, while only three per cent expressed that they did not believe in God. Further, just over 81 per cent of teenagers surveyed reported affiliation with a particular religion while only 16 per cent reported that they were not religious.

Findings among Australian youth tended to show lower degrees of religious interest however. In a similar study entitled The Spirit of Generation Y conducted in Australia, Mason and his colleagues (Mason, Webber, Singleton and Hughes, 2006) found that only 48 per cent of Australians aged between 13 and 29 years responded 'Yes' to a belief in God. Just under half (48%) of this same age group indicated identification with a religious tradition. In later analysis of the World Values Survey data, Mason (2006) showed that 23 per cent of Australians aged between 15 and 29 years claimed to attend church at least monthly compared to 47 per cent of the same age group in the United States. Accordingly, 20 per cent of Australians in this age group indicated that they did not believe in God compared to just seven per cent in the United States.

Although these Australian studies included a much wider age group than the United States study, it appears to indicate a lower amount of religious association among Australian young people when compared to those in the United States.

The Nature of Teenage Religiosity and Spirituality

A perceived lack of religious participation among young people has for many years been of concern to religious leaders and workers. Mol (1971, pp. 33-34) for example, reported on concerns of teenage "slipperiness" to the clergy, the "age gap" in religious congregations and the "under-representation" of young men in Protestant congregations based on opinions going back as far as 1923. Yet, Mol pointed out that available data at the time for Australian church attendance did not suggest a large "age gap" as had been proposed elsewhere at the time. Drawing on research conducted throughout the 1960s, Mol (1971, p. 37) argued that in Australia, children appeared to go to church more frequently than adults and that adolescent attendance (still proportionally higher than adults) merely reflected an adjustment to the less frequent attendance of adults. To Mol, there appeared to be very little disproportion or anomaly in teenage religious attendance in Australia when compared to adults.

Although it may be argued that Mol's findings are now outdated, a possible modern confirmation of Mol's idea was presented by Mason and his colleagues (Mason, Webber, Singleton and Hughes, 2006). These researchers reached the conclusion, based on their research of 13 to 29 year-old people in Australia, that, "non-religious young people simply reflect the broader secular context and the spirituality of their own parents." If nothing else, Mol alluded to a common and possibly current incongruity between public perception and empirical data regarding religious attitudes and practices.

There has been a growing assertion in recent years that social attitudes toward spirituality and religion have changed and diversified dramatically. Some commentators have recently spoken of a "spiritual revolution" wherein increasing numbers of young people have recognised the existence of a spiritual dimension in their lives and have sought to find spiritual fulfillment while rejecting formal, particularly mainstream, religion (for examples see Smith, Faris & Denton, 2004). Interesting, however, is the fact that the perception was still held that youth were

drifting away from the churches but this rejection of organised religion has been in favour of a kind of experimental, more eclectic, spirituality. A suggested summative phrase describing such young seekers has been "spiritual but not religious" (Smith & Denton, 2005).

For example, Schneider (2000, p. 1) expressed the situation by stating,

> …although the majority of Americans claim some religious affiliation and religion is apparently a permanent feature of American culture, religion as a powerful influence in individual or societal life seems to be in serious trouble.
>
> On the other hand, spirituality has rarely enjoyed such a high profile, positive evaluation, and even economic success as it does among Americans today.

As an Australian voice and with particular focus on older adolescents, Tacey (2003, p. 4) commented,

> The [spiritual] revolution involves a democratizing of the spirit. It is about individuals taking authority into their own hands, and refusing to be told what to think or believe. It is about personal autonomy and experimentation, with the use of direct experience of the world as a kind of laboratory of the spirit…
>
> The spiritual revolution is also about finding the sacred everywhere, and not just where religious traditions have asked us to find it.

Although only implied in this statement, this rejection of mainstream religion particularly, has sometimes been reported to contain a high degree of animosity towards mainstream churches. This idea of the young rejecting mainstream religion has become of particular popular interest among religionists and religious authors who seek to respond to this perceived reality. Arguably, such response has led at times to an overstating of the case that youth are rejecting institutional or organised religion in favour of an "authentic" faith or spiritual journey (Smith, Faris, Denton, 2004, p. 7).

Some researchers have been more cautious about the idea that youth are rejecting traditional religion in favour of a more personalised spiritual journey, while many have outwardly rejected it. Smith, Faris and Denton (2004) have claimed that the empirical evidence for such a popular belief is sparse, especially where teenagers are concerned, and that many of the literary works on the subject are journalistic, impressionistic and semi-autobiographical in nature rather than based on reliable

empirical research. Smith and his colleagues have also claimed that what empirical data does exist is, for the most part, out of date. They also expressed the concern that the teenage rejection of religion idea has aspects of self-fulfilment about it. Smith, Faris and Denton (2004, pp. 7-8) argued,

> …tens – if not hundreds – of thousands of parents, youth ministers, church pastors, denominational leaders, journalists, teachers and others in the reading public consume these books. This, in turn, helps to form a socially constructed reality that might or might not actually match scholars' best understanding of the empirical truth. This might have consequences in forming (and perhaps reproducing through self-fulfilling prophecy) parental expectations, youth self-images and the resource allocations of religious organisations.

Smith, Faris and Denton (2004) reviewed data from the Monitoring the Future (MTF) national representative longitudinal study of high school students in the United States, a part of which focused on Grade 12 students from 1976 to 1996. Though only a small part of this study concerned religious factors, Smith and his colleagues reviewed relevant data to try to understand the attitudes of twelfth graders towards organised religion. They reviewed data on questions measuring youth-parent agreement about religion, youth opinions on the job churches do for the country, desired amount of influence churches should have in society, and plans of youth to contribute financially to a religious organisation. In summary, Smith, Faris and Denton (2004, p. 19) concluded that "simple frequency distributions suggest that the large majority of U.S. twelfth graders in 1996…do not appear to be particularly alienated from or hostile toward organised religion in the United States". In fact, over the 20 years of the study only minor changes in youth opinion existed, nothing like the 'revolution' proposed by many religious commentators today. Smith, Denton, Faris and Regnerus (2004) did find, however, when reviewing the question of church attendance and attitudes to the importance of religion in the same study, that weekly church attendance had dropped by about eight per cent over the 20 years of the study while the 'once or twice per month' attendance category did not change at all. However, those claiming religion to be 'very important' (the most positive category) had in fact increased by three per cent over the same period of time.

In the National Study of Youth and Religion (Smith & Denton, 2005), Smith and his colleagues found that only eight per cent of teenagers claimed it was 'very true' that they considered themselves to be 'spiritual but not religious'. Whereas, 43 per cent

considered this statement 'not true at all' concerning themselves. A further 46 per cent responded that it was 'somewhat true'. However, follow-up interviewing led Smith and his fellow researchers to conclude that most teenagers did not even relate to the notion of being spiritual but not religious. This led them to believe that this middle group represented a large proportion of teenagers that did not even know what the term meant, thus they might have been expressing the fact that they were somewhat spiritual and somewhat religious so as not to exclude one aspect or the other (pp. 77-81).

In the original Conclusions chapter to the Spirit of Generation Y study, Mason and his fellow researchers (Mason, Webber, Singleton and Hughes, 2006) concluded,

> This study did not find that Gen Y are a generation of spiritual seekers; less than one-fifth of Gen Y have a 'mix and match' spirituality, while few are seriously exploring alternatives like Buddhism or Wicca.

However, Mason (Mason, 2006) later argued that young people not understanding the concept or phrase 'spiritual but not religious' did not imply that there was not a significant shift away from religion as a social and communal experience to a variety of spirituality that entailed individualism and moral relativism among these youth. Mason showed that evidence identifying this shift towards a new spirituality was present in Smith and his colleagues National Study of Youth and Religion data (Smith, et al., 2005) as well as the Australian Spirit of Generation Y study (Mason et al., 2006), noting the relatively high number of responses indicating that they agreed with the ideas that "many religions may be true", "that it is OK to pick and choose religious beliefs" and disagree with the idea that "you need to be involved with religious congregations" (Mason, 2006). Mason concluded that,

> It is not the understanding of the word 'spirituality', but the measures of religious and moral individualism…which are the appropriate means for detecting the 'new spirituality', and they are almost as strong in the USA as in Australia, despite the deceptive apparent continuance in the USA of traditional, communal forms of religion. (2006, p. 17)

According to Mason, the symbol of the new spirituality was religious individualism, not the understanding of the word spirituality or even participation in New Age or alternative movements.

In many respects Mason's ideas were congruent with the idea of "Moralistic Therapeutic Deism" proposed by Smith and Denton (2005). The National Study of Youth and Religion inspired an interesting theory about modern teenagers' concepts of God. In the interviews conducted for the study, Smith and Denton (2005) noticed that many youth did not wish to be perceived as "too religious" and in fact although it might be seen as important, generally youth tended to place religion not as a high priority in their conscious lives, but somewhere in the background (p. 129). In trying to piece together what were often very inarticulate expressions of teenage concepts of God and faith, Smith and Denton suggested that the common teenage view of God might be labelled "Moralistic Therapeutic Deism". There were three major concepts involved in this idea. First, teenagers commonly held that life was about being a good and moral person. Second, this belief in God was about providing therapeutic benefits of happiness, security and peace, rather than sacrifice, service or sacred observance. The last aspect to this teenage belief system was the belief in a God who was not particularly personally involved in an individual's affairs unless called upon, usually when a problem needed rectifying, comparable to a "divine butler" (2005, pp. 162-165). In this thesis Smith and Denton were not suggesting that teenagers abandoned religion for such beliefs but that they existed tacitly (in a de facto way) within the current religious adherence of many teenagers today. Parallels between this idea and the conclusions of Mason regarding young people's approaches to religion and spirituality appear to share at least the common element of individualism, relativism and a subjective approach to the sacred.

In summary, the popular current notion of adolescents and religion tends to depict a rejection (with varied degrees of mistrust and animosity) of mainstream and organised religion in favour of an increasingly personal, and perhaps eclectic, spirituality. Recent research in the United States and in Australia tends to help clarify this popular notion. It appears that the 'new spirituality' or 'spiritual revolution' among teenagers does not necessarily involve a hostile rejection of mainstream religion but may even be present in otherwise outwardly traditional believers as they favour a more individualistic and less taxing approach to religion than previous generations.

Factors Important to the Religiosity of Adolescents

Religious research in recent times has presented several major factors which have possibly influenced the participation and motivation of youth in religious programs. Some of these factors and their effects have appeared to be well understood, while others have required further investigation.

Parents and Family Life

Perhaps the most influential factor on youth religious practice and belief was the parent and family influence. On this topic Albrecht (1989, p. 91) made the statement,

> The family is generally seen as the primary force in shaping the attitudes and values of its members, including their religious attitudes and values. Most of us develop our own religious behaviour patterns out of the experiences we have had in the home.

Johnson (1989, p. 141) concluded that,

> …religious students tend to come from religious homes and non-religious students from non-religious homes.

It has seemed that to a large degree parental influence over youth religious attitudes and participation has stemmed from the parents' own attitude, example and the religious practices established in the home rather than more directive means of influence (Hoge & Petrillo, 1978b; Kieren & Munro, 1987). Accordingly, Hoge and Petrillo (1978b) noted some time ago that "the youth's perceptions of parental religion are more determinative [on youth involvement] than the parents' own perceptions" (Hoge & Petrillo, 1978b, p. 366, 368). With this finding there has been evidence to suggest that the father's example has played the greater role, as the father's religious activity has been strongly associated with the activity of adolescents, especially in the case of male children (Kieren & Munro, 1987, pp. 251, 254; Engebretson, 2003, pp. 8-9).

One study (Hoge and Petrillo, 1978b, p. 360) distinguished between parental support and parental control, and it was found that "parental support is clearly the more

important in facilitating religious commitment of children." Engebretson (2003) added further insight with the observation that children could not be forced, coerced or controlled into being religious when observing that parental influence over adolescent religious practice did not guarantee attitudinal compliance. She stated,

> While parents may affect practices such as church attendance, they have less influence over their children's internal attitudes toward Christianity, and children may report regular religious practice but also negative attitude toward Christianity. (p. 9)

Research has also shown that apart from overt family religious practice, a major family influence on a child's religiosity depended on the quality and nature of family relationships. Myers (1996) found that religiosity in children was positively influenced by parents having a happy marriage, displaying moderate levels of strictness, and supporting and showing affection to children. The influence of the parent child relationship to child religious practice was shown in a study by Litchfield, Thomas and Li (1997), which showed that an emotionally supportive relationship between a mother and child tended to lead to an increase in the child's private religiosity. Also, this mother-child relationship contributed almost as much as family religious practice to the public religious practice of the child. In another study, Bao and his colleagues (Bao, Whitebeck, Hoyt & Conger, 1999) found that children who reported parental acceptance were more likely to internalize parental religious beliefs and practices. The mother was seen as especially influential in this study. On this relational level then, it appeared that the mother had a major influence over child religiousness, while the fathers' influence lay more in the domain of setting the example of religious practice.

On a family structure level, Smith and Denton (2005) reported that teenagers with parents who had been divorced, separated, were currently unmarried to partners or were never married expressed lower levels of public and private religious practice and commitment than those of married parents. Interestingly, family income appeared to have no direct correlation with teenage religiosity characteristics. Also, Mason and his colleagues (Mason et al., 2006) found that factors which appeared to influence young people being religiously committed or active depended on such things as parents' attendance and commitment, the family discussing spiritual matters and family integrity which included parents not being divorced or dying.

Gender

There has been a consistent stream of data from related research, which has suggested that females are generally more religious than males (e.g. Sloane & Potvin, 1983, p. 144; Miller & Hoffmann, 1995, p. 63; Regnerus, Smith & Fritsch, 2004, p. 10; Smith & Denton, 2005, p. 279). It has been generally assumed that greater participation levels in religious programs as well as greater levels of private religious practice and devotion were normally expected from females. Engebretson (2003, p. 7), commenting on the findings of Kay and Francis, suggested that this might be due to the churches' focus on terms such as gentleness, compassion, healing and reconciliation which tended to reflect feminine characteristics, though the reasons for greater female religiosity were still not totally clear.

Mason (Mason et al., 2006) and his fellow researchers found recently, however, that there was no difference between genders on religious commitment or activity among Generation Y study participants in Australia. This finding appeared to concur with other recent studies in Australia which indicated that young women were no more religious than young men on many measures (p. 14). If nothing else, these findings have reminded researchers that the commonly held assumption of differences between the genders on issues of religiosity cannot be taken for granted for all ages or for all groups.

Age

It has been generally accepted that adolescent religious participation decreases with age (e.g. Engebretson, 2003, p. 7). Although, Sloane and Potvin (1983, p. 152) showed that this effect might be denominationally dependent with youth from more conservative religions showing less signs of fading religiosity as they got older.

A possible cognitive-developmental explanation for the religious turbulence of the adolescent years was found in the work of Piaget, according to Goldman and his colleagues (Hoge & Petrillo, 1978a, p. 139). Goldman demonstrated that the development of religious thought progressed in three stages not unlike the three stages proposed by Piaget in general cognitive development. Goldman termed the three stages the Intuitive stage, the Concrete Operational stage, and the Formal or Abstract Operational stage. The latter stage involved the ability to think in terms of the abstract and implied the ability to conceptualize spiritual realities, which lay

outside of the material or concrete realm. The transition from the second to the third stage usually occurred around the ages of 13 to 14 ½ years. Scobie (1975, p. 54) suggested that it was at this point in the development that an individual began to challenge the beliefs and values acquired from parents or leaders and question their personal relevance and truth. In other words, the adolescent came to a religious crossroads. For those who underwent some kind of conversion, religiosity might have increased at this point, but for others it appeared that religious enthusiasm continued to decline. Recently, Mason and his colleagues (Mason et al., 2006) identified a category of young people whom they called "Questioners" who had come from traditional forms of religion but who now had drifted away. The typical Questioner was identified as aged between 13 and 17 years, about the age of Scobie's religious crossroads mentioned above. Interestingly, this is also the age group of the Seminary students who are the subject of this study.

Religious Education and Youth Programs

Hoge and Petrillo (1978b) claimed that research relating to the direct impact of formal religious training and youth programs was sparse in their era. However, an interesting finding related to religious training was pointed out in their research. They (Hoge & Petrillo,1978b, p. 370) concluded that,

> …whether the high school student liked or disliked his past religious training is more determinative of his attitudes and behavior than the amount of the training.

Further, Hoge and Petrillo (1978b, p. 361) identified the leaders or teachers of such activities as a factor in youth participation and enjoyment.

> The impact of youth programs sponsored by the church depends greatly on the qualities of the leaders. . . . [Scholars have] found that whether the pastor and the youth leaders were approachable and understanding was a strong factor in youth's participation in church youth programs and satisfaction with the programs.

Regarding religious schooling generally, Kay and Francis (in Engebretson, 2003, pp. 7-8) found that student attitudes toward Christianity were more positive and decreased less with age at denominational schools than at state schools. This finding echoed the conclusion of Mol (1971, p. 195) in his study of the effects of Catholic schools in Australia in the early 1970s in which he said,

> Those who have attended Catholic schools score more highly on the religious variables of the survey than others. More go to church regularly, more pray regularly, more believe strongly in God, more are of the opinion that the Church is appointed by God and more are likely to have had religious experiences.

Likewise the foundational work of Leavey (Flynn, 1985, pp. 297-300) concerning Australian Catholic schools indicated that the school might have influenced religiosity above and beyond the powerful effect of the home, especially when school ethos and climate were considered.

Peers

The influence of peers on the religious attitudes and practices of youth has been considered to be significant in the past. In fact Flynn and Mok (2002) showed that the influence also appeared to be increasing during recent decades. In a 1998 survey of Year 12 Catholic school students in Australia, Flynn and Mok found that friends and peers were second only to parents in the self-reported importance of influence in religious development of students. Furthermore, the percentage of those responding that peers were important to religious development had more than doubled since 1972 and had increased steadily over intervening years (2002, p.239). Interestingly, the influence of parents was reported as having undergone a similar increase, albeit not so uniform in nature.

Accordingly, Smith and Denton (2005, p. 116) found, that the more religious a youth was the more religious their good friends were also. They also found that teenagers in the United States reported that just over half (2.8) of their five closest friends held similar religious beliefs to them and an average of only 1.2 out of their five closest friends belonged to the same religious group. So far as talking about religion, U.S. teenagers speak to an average of 1.8 out of five of their closest friends about religious beliefs and experiences (2005, p. 57).

The Measurements of Religiousness

One of the traditional difficulties in the measurement of religion has been the problem of defining what it meant to be religious (Swatos, 1998). It has been

generally agreed that although people were categorized into denominations or traditions, actual religious commitment and involvement might differ greatly within such categories. Hence other, more meaningful measures of religiosity have been required.

An example of efforts to define and hence measure "what it means to be religious" was the multidimensional '5-D' model proposed by Glock (Glock & Stark, 1965, as sited in Swatos, 1998). Glock and his colleague identified five areas for measuring religious involvement and commitment:

> (1) *ritual* activities (including, but not only, "church" attendance); (2) *ideology* or adherence to the principal beliefs of the religion; (3) *experience* or the "feeling" aspect of religion; (4) the *intellectual* side of religion, which involved religious "knowledge" and was frequently measured by such activities as reading religious publications (including, but not only, sacred texts); (5) the *consequential* dimension, which attempted to measure the "effect" of an individual's religion in its other dimensions upon his or her "life". (sited in Swatos, 1998, p. 406)

While the multidimensional approach to defining religiosity found many adherents, it also had its critics who, through factor analysis, proposed that a single 'world view' belief dimension accounted for all of the dimensions proposed to be a part of religious involvement (Swatos, 1998). However, religiousness has generally been treated as a multidimensional entity in contemporary research (p. 406).

A more psychologically based example of measuring religiosity was found in the foundational work of Allport (Allport and Ross, 1967) who developed the Intrinsic – Extrinsic paradigm of religious orientation. This model was the dominant approach to measurement of religiosity among religious psychologists for many years (Bassett et al., 1991). This paradigm had its beginnings when Allport found in one study on prejudice that religious people were more prejudiced than non-religious people. Allport knew that such a finding would require further investigation so he developed the Intrinsic-Extrinsic model to differentiate between an individual's orientation towards religion. The distinction proved worthwhile as he found intrinsically oriented people were actually less prejudiced than non- religious people, but extrinsically oriented religious people were, in fact, more prejudiced than non-religious individuals.

Allport and Ross (1967, p. 121) described 'intrinsic orientation' in the following terms.

> Persons with this orientation find their master motive in religion. Other needs, strong as they may be, are regarded as of less ultimate significance, and they are, so far as possible, brought into harmony with religious beliefs and prescriptions. Having embraced a creed the individual endeavors to internalize it and follow it fully. It is in this sense that he *lives* his religion.
>
> A clergyman was making this same distinction when he said, "Some people come to church to thank God, to acknowledge His glory, and to ask His guidance… Others come for what they can get. Their interest in the church is to run it or exploit it rather than to serve it."

The spiritual aspects of 'intrinsic orientation' were made a little more clear by Morris and Hood (1981, p. 247) when they stressed the motivational aspects of the intrinsically oriented person by stating,

> …intrinsically religiously oriented persons are not simply satisfied with lives of instrumental achievements but are continually seeking to integrate and perfect themselves in acts of continual 'transcendence' in which they attempt, with true humility, to become more complete and holy.

Extrinsic orientation described those who used religion for their own ends, rather than treating religion itself as the "master motive". As Allport and Ross (1967, p. 121) described,

> Persons with this orientation are disposed to use religion for their own ends. The term is borrowed from axiology, to designate an interest that is held because it serves other, more ultimate interests. Extrinsic values are always instrumental and utilitarian. Persons with this orientation may find religion useful in a variety of ways – to provide security and solace, sociability and distraction, status and self-justification. The embraced creed is lightly held or else selectively shaped to meet more primary needs. In theological terms the extrinsic type turns to God, but without turning away from self.

Although it was first proposed as a one-dimensional bipolar measure, Intrinsic-Extrinsic orientation model has been more recently viewed as two separate dimensions (Hunt & King, 1971, pp. 153-4).

The 'Spiritual Revolution' and Current Research Directions

As discussed above, there has been a widespread acceptance among many academics and religionists that there has been a drift away from formal religion, especially the traditional religions, by young people. It has been suggested however, that this drift away from the churches does not necessarily mean a disinterest in things of a more diverse spiritual nature (see Tacey, 2003; Engebretson, 2003). This claim of a new independence of spirituality from traditional religion, regardless of its true nature, has meant that academic investigation of spirituality has necessitated exploration on a broad front, rather than simply using techniques couched in religious belief or practice. Thus, in recent years there has been a plethora of varied research approaches, paradigms and instruments designed to obtain data on matters related to these more eclectic forms of spirituality. As an example of how prolific work in this area has become, several years ago Hill and Hood (1999) edited a collection of 125 different measures of religion and spirituality. Furthermore, it was observed that such work was moving into investigating the more personal and intimate aspects of being religious, that is, spirituality. Slater, Hall and Edwards (2001) commented that "religion and its post-modern offspring (spirituality) has become intensely personal, and the new measures in the field reflect this shift" (p. 4).

The Measurement of Spirituality

The recent tendency to distinguish spirituality from religiosity in academic research and discussion necessitates clearer differentiation of the two terms than was once deemed necessary. Although there has been deep division in the effort to define spirituality, it is possible to gain at least a broad understanding of common modern uses of the term. It ought to be said from the outset that the widening debate regarding the correct limits and definition of what can be termed spirituality is mostly beyond the purposes of this report. It is necessary however to lay some foundation in order to propose a working definition for the purposes of this study which is not entirely foreign to current academic thought and concept.

Looking back on earlier research, Tloczynski, Knoll and Fitch (1994, p. 209) observed that,

> …fewer studies have examined spirituality than religiosity, especially when taking into consideration that many past studies using the term spirituality were actually investigating religiosity.

It is of value at this point in our discussion to touch on the subtle yet important distinctions between the two terms. Tloczynski and his colleagues (1994, p. 208) made the distinction by stating,

> While both religiosity and spirituality are orientations toward the Ultimate and Absolute (God), we… generally accept religiosity as being more collective and dogmatic (cognitive, reasoned), and spirituality as more individual, personal, direct, and experiential.

Engebretson (2003, p. 6) expressed this differentiation more simply by stating,

> …I distinguish the terms *religiosity*, which I use to refer to church affiliation and public religious practice, and *spirituality*, which involves much more broadly an apprehension of a sacred dimension in life, and the implications that this has for the way one lives. While religiosity and spirituality are often closely connected, this is not always the case, and among people of all ages spirituality can and does exist independently of organised religion.

Clearly, any general definition adopted for modern research of spirituality needs to allow for a relatively diverse approach to spirituality which is not necessarily dependant on traditional religion while resisting the urge to use the term so liberally that it loses all useful meaning.

Some authors and researchers have chosen to take a multi-dimensional approach to understanding spirituality. For example, Elkins (1998) theorised a broad definition of spirituality and listed nine possible dimensions which included,

(a) a transcendent dimension, based actual experience of the transcendent,

(b) a sense of meaning or purpose in life,

(c) a sense of mission in life,

(d) sacredness in life,

(e) spiritual rather than material values,

(f) altruism,

(g) idealism,

(h) awareness of the tragic, and

(i) fruits of the spirit, influencing a persons relation to self, others, nature and the Ultimate. (Phillips, 2005)

Other authors have proposed similar definitions with lists of various dimensions, characteristics or outcomes in efforts to capture the meaning of spirituality. Interestingly, many such lists, as with Elkin's, often contain mostly outcomes of being spiritual, or what spirituality **does**, rather than describing directly what spirituality **is**.

Because spiritual experience, due to its personal and subjective nature, has not lent itself to empirical study *per se*, measurement of spirituality has been very much reliant on examining such outcomes or indicators as attitude, feelings and experience. Recent approaches have sought to deal with the diversity of spiritual experience in various ways. A large number of researchers have responded to the challenge by avoiding broad generalized paradigms, as are common among behaviourist or cognitive developmental theorists, and taking a more specific approach (Hill & Hood, 1999). Many recently developed research approaches have sought to examine very specific religious belief systems enabling more narrow yet detailed examination. For example, several recent studies have focused on working with a just a few or even a single dimension of spirituality such as an individual's relationship with, or feelings toward God or a supreme being. By their very nature such instruments presuppose a certain belief in the nature of God and man's relationship to the ultimate among the research population. Such instruments are generally designed with a particular faith group or religious belief in mind. As might be expected, much of the current psycho-spiritual research of this kind in the Western world is dominated by the Judeo-Christian model of God.

Clearly there are many approaches to measuring spirituality in sociological and psychological fields which could be mentioned here, however, this study investigates a group of youth with very uniform and particular beliefs regarding the personal nature of God and the importance of relationship with deity as a dimension of spirituality. As such research instruments that focus on an individual's relationship with God as a measurable dimension of spirituality are of particular interest to this

study, two such instruments are the *Spiritual Assessment Inventory* (Hall & Edwards, 1996) and the *Religious Problem Solving Scale* (Pargament et al., 1988) both of which are discussed in further detail in Chapter 5.

Conclusion

This chapter discusses some sociological and psychological concepts and research of religiosity and spirituality in order to provide a foundation for establishing the religious aspects of the model for this study. It is understood that only a small selection of the large amount of literature on the subject is included here, however a sufficient amount has been reviewed to enable the reader to understand some foundational and contemporary issues in order to consider this study in context. The next chapter, Chapter 3, discusses research in fields useful for the measurement of social aspects of this study.

CHAPTER 3:
SOCIAL ATTITUDES AND MORAL REASONING - A SELECTIVE REVIEW

Introduction

The decision as to which theoretical frameworks and instruments to use for the measurement of moral and social attitude dimensions in this study is an important one, as these factors are used to measure social outcomes of being religious or spiritual. Consequently an understanding of foundational thought and theory in these relevant areas is required. This chapter introduces some foundational and more recent ideas and research in the fields of attitudes and moral development that are important for the later discussion concerning the design of this study and the selection of specific instruments to be used in the associated surveys which are presented in Chapter 5. It is important to note that the attitude and moral development fields under discussion have seen rigorous and prolific academic contributions over the past several decades and as such an extensive and broad body of literature exists. Since this study involves relatively specific moral and social attitude measurements and considerations, it is appropriate that the scope and depth of this chapter is limited to concepts and research sufficient to illustrate from where such specific approaches are derived.

Attitudes and Behaviour

The link between the workings of the human mind and human action has been an important focus for social scientists and educators for many years. A key concept in the pursuit of understanding of this nature has been the concept of attitudes (Fraser, 2001). From the earliest days of serious research in the field, Allport (1935) asserted that, "the concept of attitudes is probably the most distinctive and indispensable concept in contemporary American social psychology." Though later there were those, including Rokeach (1968), who would give this distinction instead to human values, there have been many who have reasserted Allport's claims and have generated a large amount of scholarly writing on the topic. This research and

thought has usually focused on trying to understand the link between attitudes and action (if it existed) and in searching for the best way to conceptualise the make-up and structure of attitudes as they related to behaviour.

One of the earliest and still most common definitions of an attitude was offered by Allport (1935). He stated,

> An attitude is a mental and neural state of readiness which exerts a directing influence upon the individual's response to all objects and situations with which it is related.

Years later Rokeach (1968, p. 159) gave a similar, yet simpler description alluding to a more structured concept, stating,

> An attitude…is an organisation of several beliefs focused on a specific object (physical or social, concrete or abstract) or situation, predisposing one to respond in some preferential manner…

This approach to the concept of 'attitude' implies the existence of several related dimensions which is elaborated in on more recent scholarly writing on the subject.

One of the foundational issues in the study of attitudes has been what has been termed the attitude-behaviour problem (Fraser, 2001). Although it was usually assumed that attitude related strongly to subsequent behaviour, some early researchers (LaPiere, 1934; Wicker, 1969) in the field produced and focused on research that seemed to suggest that attitude had much less to do with behaviour than might have been first thought. Recently, however, it has been more commonly accepted that these early assertions resulted from not considering situational factors to attitude-behaviour relationships (such as situational, social or peer pressure) which might form a hurdle or barrier between the attitude and expected behaviour. Simply questionable research techniques have also been suggested as an explanation for the early findings of attitude-behaviour inconsistency (Fraser, 2001). Attention to this supposed inconsistency provided a focus for social scientists for many years and allowed attention to be given to some fundamental areas of attitude which might otherwise have been taken for granted.

A Useful Model

Proposed models for how attitudes related to behaviour ranged from the very simple single component model, that treated attitudes as a single emotionally loaded evaluation of a particular object or situation, to very complex models that sought to consider beliefs, normative evaluations, perceived behavioural control, intentions, and the like (e.g. Ajzen, 1985).

It ought to be noted here that, unless a definitive description of attitudes is being sought (which results in a highly complex model), quite often the non-complexity of a model does not make it entirely incorrect or even less useful, it simply may depend on what level of detail the researcher feels is necessary to consider in a given investigation.

A model which has proven successful and useful for linking attitudes to action was the theory of reasoned action (Ajzen & Fishbein, 1980). This model was based upon the idea that attitudes themselves consisted of two important elements. Fraser (2001, p. 239) described these two elements and their relationship this way,

> This conception says that a person's attitude on an issue is a combination of a number of key beliefs or expectations about the attitude object and the corresponding evaluations or values of the belief. The beliefs are thought of by the person in terms of 'true' or 'false' and the evaluations…in terms of 'good' or 'bad'.

According to Ajzen and Fishbein (1980), the forming of attitude involved the combination of elements of beliefs and affectively laden evaluations concerning a particular object or situation. This conception of attitude could be viewed as having brought together the two separate dimensions of value (concerned with right or wrong, and with what **ought** to be) and the world of human belief involving fact (concerned with true or false, and with what **is**) (Hodgkinson, 1978).
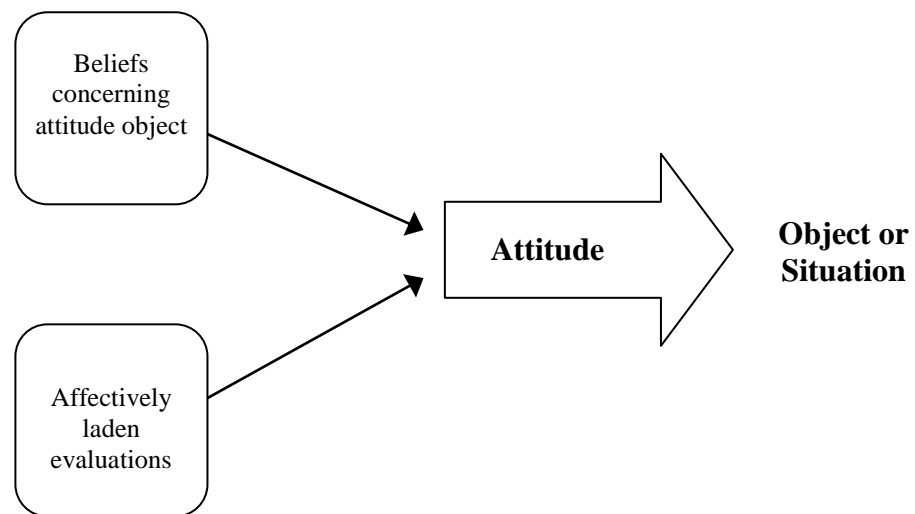
Figure 3.1 A two-component concept of attitude (Ajzen & Fishbein, 1980).

The theory of reasoned action sought to address the link between this concept of attitudes and actions, where actions were considered a particular subset of behaviour by virtue of them being "thoughtful, intentional behaviours which we are consciously in control of" (Fraser, 2001, p. 246) as distinct from other behaviours which might require little or no thought or control.

Ajzen and Fishbein (1980) considered 'intention' as the immediate determinant to action. The first consideration of the theory of reasoned action suggested that a person's attitude influenced their intention which led to a particular action. This simple model alone, however, did not consider the problem of social or normative pressure which was argued to be the cause of attitude-behaviour inconsistencies in early attitudinal research. As a result, a third element was introduced into the model prior to the action outcome which was labelled 'subjective norms'. In summary, the theoretical model consisted of 'attitudes', which influenced 'intention', and 'subjective norms' which also influenced 'intention'. 'Intention', acting as mediator, then directly influenced 'action'.
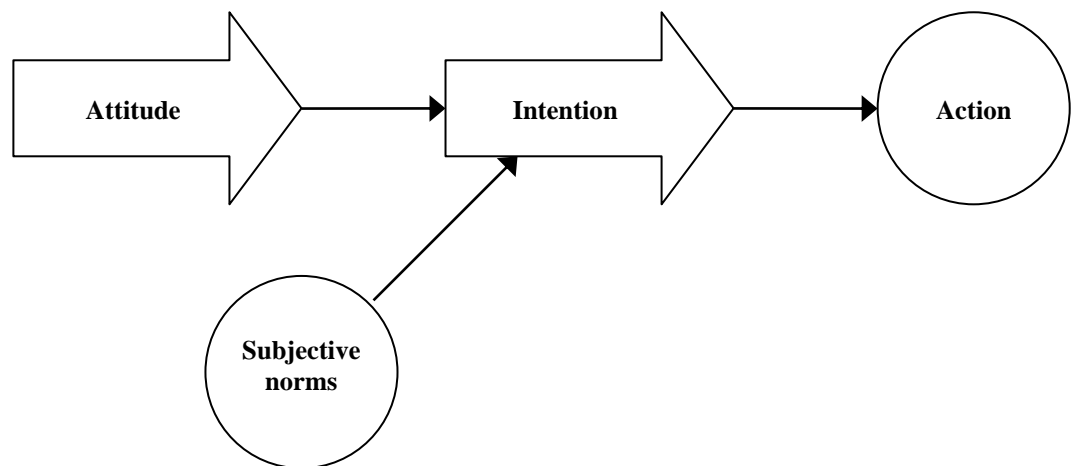
Figure 3.2 An Outline of the theory of reasoned action (from Fraser, 2001).

Therefore, the theory of reasoned action model accounted for the fact that the relationships between attitudes and actions were subject to considerations and perceptions of social and other norms, which at times were strong enough to dominate the intention and resulting action. Although certainly not the only model of this kind, nor all encompassing in its considerations, the theory of reasoned action has been very influential in demonstrating that the complexities of the attitude-behaviour issue can be researched and dealt with in a manageable and useful way (Fraser, 2001).

Measuring Attitudes and Predicting Behaviour

There appears to be at least three major levels of detail that researchers might be interested in concerning attitudes and resultant behaviour. The most basic level is that the researcher is merely interested in predicting how an individual, or group, is about to act or behave with little interest in understanding in detail the underlying attitude.

Fraser (2001, p. 244), while describing Ajzen and Fishbein's ideas concerning the theory of reasoned action, stated,

If all you wish to do is to predict whether or not people will perform A, then you should ask those people if they intend to do A or not. Particularly if there is not much of a time lapse between measuring the intentions and the actions, the prediction is likely to be pretty accurate.

In this way actions might be predicted fairly accurately and supposition regarding underlying attitudes might be made, as some form or another of attitude would appear to lie behind all reasoned action (Chapman, 2001), but little real understanding of the make-up of such attitudes would be available. Gauging the apparent strength of such intent might be a simple matter of seeking response to scales whose items suggested hypothesised courses of action. When such suggested courses of action were scaled to represent a supposed underlying attitude, then the strength of such attitudes as held by the respondent might be measured. This would then become a crude but efficient way to tap into the intent and perhaps attitude of a research sample with primary focus on intentions.

Another level of understanding regarding attitudes is to obtain a sense of what attitude is held by measuring the affective-evaluation aspect of attitude towards the attitude object. This level is commonly dealt with in research as it is what many attitude scales seek to measure. This level of understanding can also be quickly and readily measured by way of an attitude scale which simply gains feedback on agreement or disagreement and level of agreement or disagreement to statements concerning the feelings toward a particular attitude or associated object. The focus of much controversy is the fact that this approach has limitations in predicting behaviour, especially as there is little information provided by associated research instruments concerning the often tenuous link between attitude and intent, and therefore behaviour. Thus, it can be argued, those seeking to understand more fully the make-up and resultant behaviour of attitudes need to measure more aspects of the attitude-behaviour model than just attitude.

A third, and more comprehensive level for measuring and understanding attitudes, therefore, is to gauge information on many aspects in the attitude-behaviour model. For example, according to the theory of reasoned action measures of attitude (including the belief and evaluative levels) and subjectively held norms need to be obtained in order to gain a reasonably thorough understanding of intent before behaviour can be accurately predicted. Such evaluations can take the form of fairly

complex, and problematic, formulae, the discussion of which is beyond the scope of this chapter (e.g. Ajzen, 1985).

The Concept of Moral Development

It is the purpose of this study not only to seek to measure attitudinal intent but also to measure in some way the deeper evaluative processes important in the forming of social attitudes. One academically rich field related to such understanding is the field addressing moral reasoning and development. This field's focus is on the evaluative processes which lie behind the affective-evaluative element of attitude which, in theory, contributes to intent and thus behaviour. This study is interested in social outcomes to the more inward workings of religion, it is reasonable to think that such outcomes may be observed on the moral decision making level, thus providing a convenient window through which to observe the forming of social attitudes and anticipated behaviour.

The study of moral judgement is concerned with how an individual makes moral decisions and how the processes behind those decisions change over time. The term 'moral' may need some defining in order to understand the context in which it is used in this field. Rest (1979, p. 20) stated,

> Note that the word "morality" as used here involves social interaction and does not concern individual values that do not affect other people. For instance, a person's sense of obligation to improve and devotion to actualizing his or her fullest potential are not regarded here as a "moral" value; nor is a preference for "Rock and Roll" over Beethoven. Not all values are moral values.

This clarification is important for an understanding of the field commonly called moral development. The definition of 'morality' here is limited to those values concerning relationships with other individuals and society generally, rather than issues solely concerned with personal goodness. Rest (1979, p 8) alluded to the important role of morality, as defined above, in our social structure when he stated,

> A crucial role of moral thinking is to provide a plan for the distribution of the benefits and burdens of social collaboration. Moral rules and principles regulate the basic relationships among people in terms of allocating rights (what kinds of claims a person can make on others in his own interest) and allocating

responsibilities (the claims that others can make on their behalf from the person). Moral rules and principles regulate which social arrangements, practices, and institutions are permissible in society, what rights and responsibilities are particular to certain social roles, and what rights and responsibilities are common to all members of society. Hence moral thinking has to do with the basic terms of cooperation - what I can expect of you, what you can expect of me.

Particular attention has been given to the field of moral development by those involved in moral and religious education. Understandably, such practitioners have felt a responsibility for assisting the moral well-being of individuals in society and as such, have sought understanding concerning moral development theory and its implications for their profession.

Being morally mature has quite often been thought of as simply being able to identify that which is correct, right and good and to act accordingly. Perhaps, in the minds of many, the actions of an individual are sufficient when seeking to pass judgment on the person's moral maturity. In fact for many years the behaviourist approach to understanding moral values dominate the field.

Consider, however, the example posed by Duska and Whelan (1975) of two young women, one 15 the other 29 years of age. Both are invited on dates and after intimate advances from their respective partners, both refused. The point was made that the fact that both young women made the same decision did not imply the same level of moral maturity. A 14 year-old person might have the reason, "Because my mother told me it's wrong", whereas a more principle based reason might have been expected from a 29 year-old person. The 14 year old girl's reason for her decision somehow did not seem adequate for a 29 year-old woman (1975, pp. 2-3).

Clearly, it is the reasoning behind the decision of what is good and what is not that indicates the level of moral maturity, not just the proposed correctness of the decision itself. So too, the reasoning behind an apparent moral action is indicative of moral maturity, not just the action alone. Those interested in understanding the development of moral maturity must therefore be interested in the development of the processes and reasoning that lie behind moral judgments. In essence, though suppositions may be offered concerning moral maturity based on intent or actions alone, understanding **how** an individual decides what is good and what is not is much

more indicative of such maturity. This is the area of interest when researching moral development.

Piaget on Moral Development – Beginnings of the Cognitive Developmental Approach

As with the field of attitudes, much of the early work in the field of human morality which occurred in the first half of the twentieth century was concerned with analysing the relationships between values and behaviour. As Pittel and Mendelsohn were quoted to have said (in Rest, 1979, p 4),

> Attempts to assess moral values have frequently focused on observable behavior from which values are inferred, or have attempted to predict overt behavior from subjective values. Rarely have subjective values been studied in their own right.

The focused effort on linking values with behaviour has meant that many instruments designed to this end were produced while thought structure and process were neglected in the research. In contrast to this approach, Piaget (see Duska & Whelan, 1975), undertook a cognitive-developmental approach that provided a way to investigate the structure of values and the individual's orientation to the world. As Rest (1979, p 5) stated,

> One fundamental tenet of the cognitive developmental approach…is that a person's perception of reality is cognitively constructed, and one aim of the psychologist is to identify and describe these basic cognitive structures.

From such identification of a person's cognitive structures, Piaget argued, the moral maturity of a child could be investigated.

Piaget began conducting interviews with children about the rules and practices of the game of marbles which, he figured, was a game mainly in the domain of the child. Rarely would an adult be involved with governance or rule making. His purpose was to investigate the child's approach to rules. The basis for the method was Piaget's belief that "all morality consists in a system of rules, and the essence of all morality is to be sought for in the respect which the individual acquires for those rules" (Duska & Whelan, 1975, p 8). Theoretically, from the simple rules of the game of marbles, attitudes to the greater rules of moral conduct could be examined. This

initial study led to further studies wherein the child's attitudes to clumsiness, lying and steeling were investigated, and also the child's attitude to justice. Through these studies, Piaget was able to gain great insight into the process of moral development in children. Generally this work centered on children between the ages of 4 and 13 years. Piaget noticed that there was a definite contrast in thinking between younger children and older children.

Kohlberg on Moral Development – A Foundational Paradigm

Building on the cognitive developmental work of Piaget, Kohlberg has generally been accepted as the major contributor to the field of moral development and has set the scene for the current debate on the topic (Murray, 1997, p 3). Kohlberg, like Piaget, believed that children formed structures of thinking and perception of the world through experiences with life. As Lee (1980, p 327) stated,

> Kohlberg defines development as the consequence of the ongoing interaction between the growing organism and the environment. The human being then is an interactive emergent.

Kohlberg, using this idea as the basis of his research, began replicating Piaget's work with a different data gathering procedure. However, Kohlberg's research involved older children and this led him to propose that the path to moral maturity was more involved and gradual than Piaget believed.

In the early stages of his research Kohlberg spent 18 years interviewing 30 males every three years. During this lengthy study, he proposed that human moral growth took place in the form of stages. Each stage involved a different set of perspectives and organisation of thinking. Each stage made way for a more informed and adequate stage as moral development took place. Kohlberg noticed that the changing perspective of all subjects in his research progressed through the stages in the same manner, though some did not reach the highest stages and the rate of progress varied between individuals.

Like Piaget, Kohlberg focused on the reasons behind a moral decision rather than just the resulting behaviour. This led him to develop an effective questioning technique (the Moral Judgement Interview) which allowed a researcher to understand quickly a subject's moral reasoning process and thus his or her current stage of

development. Kohlberg used a set of hypothetical stories that posed moral dilemmas. These stories were generally used with follow-up questions in an interview format.

Kohlberg's Stages of Moral Development

Kohlberg's theory involved dividing human moral development into six stages grouped into three levels. Each level consisted of two stages. Descriptions of these levels are as follows.

I. Pre-Conventional Level

> At this level a child is responsive to cultural rules and labels of good and bad, right and wrong, but interprets these labels in terms of either the physical or the hedonistic consequences of action (punishment, reward, exchange of favours) or in terms of the physical power of those who enunciate the rules and labels. The level comprises the following two stages:

> Stage 1: punishment and obedience orientation…

> Stage 2: instrumental relativist orientation… (Kohlberg, 1980, p. 91)

The pre-conventional level consists mainly of children around the age of 10 to 13 years, however adults have also been known not to progress beyond this level. The child at this level has quite a narrow and egocentric view of the world. In order to progress beyond this level, the child must develop the ability to empathise with others. Until they can do this, their perception of themselves is as an outsider against society, seeking to avoid punishment and find reward. When the child gains the ability to put themselves in another's 'shoes' they then may gain a concept of what it means to be a part of, and to participate in, a society. They may then realise that rules have a function and are not just arbitrary constraints placed on them by those holding power. This realisation makes way for development into the conventional level of moral maturity.

II. Conventional Level

> At this level, maintaining the expectations of the individual's family, group, or nation is perceived as valuable in its own right, regardless of immediate

and obvious consequences. The attitude is not only of conformity to personal expectations and social order, but of loyalty to it, of actively maintaining, supporting, and justifying the order and of identifying with the persons or group involved in it. This level comprises the following two stages:

Stage 3, interpersonal concordance or "good boy – nice girl" orientation...

Stage 4, "law and order" orientation…   (Kohlberg, 1980, pp 91-92)

Thinking at the conventional level necessitates an appreciation for the group or society generally. This concern for others is more than the egocentric market place relationship of Stage 2. The individual thinking at the conventional level understands that to gain the benefits of **belonging** to a group, self-sacrifice is a necessary contribution by all. This self-sacrifice begins in the form of "whatever it takes to be an accepted and worth-while part of the group" (Stage 3). The group of choice does not have to be family, school or society, but could be a peer group, fan club, gang or the like. As conflicts concerning which actions are most appropriate for the group and conflicts between different valued groups and their expectations occur, the individual begins to see the importance of overarching rules and laws for governing such conflict. It is realised that everyone just being nice and trying to contribute to a group is not enough to maintain social stability. The new focus then becomes centered on law and authority (Stage 4) rather than on perceived niceness or group expectation.

III. Post-Conventional, Autonomous, or Principled Level

At this level there is a clear effort to define moral values and principles that have validity and application apart from the authority of the groups or persons holding these principles and apart from the individual's own identification with these groups. This level again has two stages:

Stage 5, social contract legalistic orientation...

Stage 6, universal ethical-principled orientation… (Kohlberg, 1980, pp 92-93)

Unlike progression through stages one to four, this level does not involve an improving perception of what the social system is. Rather, thinking at the principled level in Kohlberg's view, involved "a postulation of principles to which the society and the self *ought* to be committed" (Duska & Whelan, 1975, p 68). This level of

moral thinking involves not just a concern for rules, but involves the basic universal principles that lie behind all rules.

The transition from Stage 4 to the principled Stages 5 and 6 is not an easy one. Kohlberg called the transition period Stage 4½ and noticed that it resembled Stage 2 thinking in some ways. In this period an individual goes through a period of questioning previously held norms about society and the world. This outlook is characterized by skepticism, egoism, and relativism, and may take on forms of rebellion as the thought processes move away from blind acceptance of things as they are and begin to search for how they ought to be. Moving through this stage is necessary to the attaining of the principled level of moral judgement.

These six stages, as described above, form the basis of Kohlberg's theory of moral development and continue to provide the basis for current work in the field. The framework proposed by Kohlberg provides a conceptual model that has proven foundational in the pursuit of understanding moral development.

Building on the Cognitive Developmental Approach

Since Kohlberg's groundbreaking work in the field, much research has been undertaken concerning moral development. Although some academic work has criticised Kohlberg's theory and some of his assertions, it has become widely accepted that the six-stage model is of great value in gaining an understanding of how individuals develop moral thought structures. As a result, much of the recent work in the field has sought to build on Kohlberg's foundations. As Rest (1979, p 49) conceded, "Kohlberg has been so influential in shaping the field that his views on the stage concept have simply been repeated by virtually everyone else doing moral judgement research." This is not to say, however, that adaptations and alternatives have not been proposed. While working on his dissertation in 1969, Rest considered a reformulation of Kohlberg's stage concept. At the time Rest was concerned with developing a scoring system for moral concept comprehension and interviewed extensively. He began to form concerns with Kohlberg's stage model based on his interview findings. He believed that the stage model ought not be as structured as Kohlberg believed.

Along with some subtle differences in the definition of the stages, such as making the criteria for Stage 6 more lenient, Rest found fault with Kohlberg's fundamental belief in a simple stage model. This model implied certain characteristics, which were not being validated in Rests work. One of Kohlberg's fundamental tenets regarding the moral stages was that normally an individual could only be considered in one stage of thinking at a time and only comprehension of the stage immediately ahead was possible. The implication of this idea was that an individual could only utilize two stages of thinking at a time, and then only while in transition between the two stages. Kohlberg and his followers also implied an even spacing of stages along the continuum with an equal rate of onset and decline.

Rest proposed a more complex model of stage development. His contention was that in reality, an individual operated in more than two stages at once, and though a particular stage might dominate thinking, other stages of thinking might be utilized depending on the situation. This meant that rather than categorizing an individual in a particular stage, it would be more accurate to describe what percentage of time they used a particular stage. For example, Rest proposed that an individual might use Stage 2 thinking 50 per cent of the time, Stage 3, 35 per cent and Stage 4, 15 per cent of the time. Such a concept meant to Rest that it was not entirely accurate to describe these cognitive structures as stages, but as "types," though it would appear that he continued to use the term stage probably due to widespread familiarity with the term (Rest, 1979).

Rest's conception of moral judgement development led to the development of a technique for measuring moral judgment using a survey instrument rather than lengthy interviews. Rest developed the *Defining Issues Test* (*DIT*) (1979) as a relatively quick, consistent and easily administered measure of moral judgement.

Alternative Models for Understanding Moral Thinking

The work of Kohlberg has become so foundational in the moral development field that almost all researchers who have proposed an alternative approach have seemed to feel it necessary to make a comparison or draw distinctions with his stage theory. In fact many alternative approaches have been developed in response to perceived faults in the approach of Kohlberg and supporting researchers.

In the sections that follow are introductions to but a few examples in order to show a development of thought in the forming of such alternative models.

Gender Differences – Considerations of Care

Noting the fact that Kohlberg had only used males in his research which led to the establishment of his moral stages, and her own observations, Gilligan (1982) felt that his theories were biased against women. Through her own research Gilligan found fault with the Kohlberg approach to measuring moral development, especially in the mature levels, by arguing that his basis for the higher moral stages, justice, reflected a basis for male moral decision making more than female moral decision making. She proposed that while males dealt with issues of justice and fairness when making moral decisions females tended to consider principles of care and nurture when making such decisions. Thus she proposed that Kohlberg's stages did not adequately describe or measure the moral development of women. Gilligan found that women she considered to be at higher levels of moral development were only considered to be at Stage 3 by Kohlberg's stage theory due to their evident focus on care and empathy considerations. She argued that women's care orientation was not inferior to the male justice orientation, only different (White, 1996, p.423). As a result of her work in the field, Gilligan presented two separate, yet potentially connected principles for moral reasoning, namely **justice** (treating others fairly) and **care** (not to turn away someone in need).

Though debate still continues concerning this point, recent studies have tended to show that the line of separation between the moral thinking of the genders is not as pronounced as Gilligan had first proposed. What has been found, however, is that both males and females look to justice and care considerations when making moral decisions. Thus Gilligan's contribution has been an important one in pointing out that perhaps considerations beyond issues of justice are required for a more complete understanding of moral development (Murray, 1997).

Domain Theory – Distinguishing Between Morality and Convention

Noticing inconsistencies in Kohlberg's stage theory following ongoing longitudinal investigation in the early 1970s, Turiel (1983), saw the need for adjustment to the theory itself. He drew the distinction between purely **moral** issues, that involved

concepts of harm, welfare and fairness, and **conventions**, which were socially constructed norms without intrinsic consequences. Turiel felt that many of the inconsistencies in the Kolbergian system were due to the fact that the stage theory attempted to account for both moral and conventional thinking within the one system, when really they were distinct and parallel developmental systems (Murray, 1997). The distinction between convention and morality was illustrated with the following example of an interview conducted with a three-year-old girl sited by Nucci (1987, p. 87).

> **Moral Issues:** Did you see what just happened? Yes. They were playing and John hit him too hard. Is that something you are supposed to do or not supposed to do? Not so hard to hurt. Is there a rule about that? Yes. What is the rule? You're not to hit hard. What if there were no rule about hitting hard; would it be all right to do then? No. Why not? Because he could get hurt and start to cry.

> **Conventional Issue:** Did you see what just happened? Yes. They were noisy. Is that something you are supposed to do or not supposed to do? Not do. Is there a rule about that? Yes. We have to be quiet. What if there were no rule; would it be all right to do then? Yes. Why? Because there is no rule.

Nucci made the point that according to Kohlberg (and Piaget) it is only in the later stages of moral development that morality, in terms of fairness, is differentiated from social convention. Whereas, research distinguishing between morality and convention has illustrated that such a distinction is possible at a much earlier stage (Nucci, 1987, p. 88). Further research of Catholic, fundamentalist Christian and Jewish children showed that children also differentiated between religious doctrine and morality at an early age in a similar way to there differentiation of moral and conventional considerations. Nucci concluded from this that "conceptions of morality (justice and beneficence) are independent of religion" (Nucci, 1987, p.88).

Because moral reasoning in reality takes place in often complex social settings, Turiel proposed that a person's reasoning when faced with a decision of right and wrong might require the consideration of any number of domains, from both the moral and conventional spheres. Thus Turiel's idea has been termed Domain Theory. Murray (1997) summarised the distinction between domain theory and Kohlberg's stage theory as follows,

It was Turiel's insight to recognise that what Kohlberg's theory attempts to account for within a single developmental framework is in fact the set of age-related efforts people make at different points in development to coordinate their social normative understandings from several different domains. Thus, domain theory posits a great deal more likelihood of morally (fairness and welfare) based decisions from younger and less developed people than would be expected from within the traditional Kohlberg paradigm.

Moral Authority – A Place for Moral Content

Drawing on a psychodynamic approach to understanding moral reasoning, Henry (1983) called into question one of the very foundations of the cognitive developmental framework by questioning Kohlberg's claims that moral properties might be discovered objectively, independent of social influence or content, during the maturing process (Henry, 1983; White, 1996a). Henry argued that "moral properties are essentially social inventions and thus cannot be objectively discovered" (White, 1996a, p. 423). Thus, she argued, moral structure was not independent from content as Kohlberg and others had claimed. In fact, it was the content of moral reasoning through the "ascribed source of moral authority" (Henry 1980) that differentiated Kohlberg's moral stages rather than the structure of moral reasoning (White, 1996a). Her view of moral reasoning was summarised by the logical expression,

> So and so ought to be done because it is required by *X* (the source), and what *X* requires is right. (in White, 1996a, p. 425)

Henry, in this way, introduced the idea that moral reasoning can be assessed by considering what sources of moral authority an individual draws on when making moral decisions. Five sources of moral authority were identified by Henry:

(a) satisfying self interest,
(b) family expectations,
(c) educator expectations,
(d) society's welfare, and
(e) equality or justice for individuals. (White, 2000, p. 425)

Drawing on the work of Locke (1979) and Trainer (1991, in White, 1996a), Henry also called into question the hierarchical nature of Kohlberg's stages, questioning the

assertion that some types of moral arguments were more advanced than others. Accordingly, Henry did not consider any moral authority source as inherently superior to another, only different, though society, groups or individuals might make judgment as to preferred authority sources. Also, Henry proposed that a person could utilise more than one source of moral authority at a time (White, 2000).

Religion, Attitudes and Moral Development

Religion and Attitude

Since attitudes have been considered a fundamental part of human thought and behaviour, research linking religiousness and attitudes has existed on a broad front for many years. However, most of this research has been concerned with aspects of personal well-being or self concept rather than psychological issues of an attitude construct. Regnerus, Smith and Fritsch (2003) reviewed several studies that investigated well-being and self perception outcomes of religiousness which provided some examples of broad attitudinal effect. In their review they discussed research that found relationships between religiosity (including importance of, and practice) and attitudes concerning healthier diet, more exercise, better sleep habits and even increased wearing of seat belts. Research concerning adolescent self concept was also reviewed showing a modest positive relationship between religiosity and self-esteem, moral self-worth and mastery, and perceived ability to control personal affairs (Regnerus, Smith & Fritsch, 2003, p. 14). More socially relevant attitudes as influenced by religiosity have also been investigated. Regnerus, Smith and Fritsch (2003, p. 15) reported that studies had shown that religiosity was positively linked with higher social adjustment and greater ego strength, will, purpose, fidelity, love and care.

Though research measuring specific psychologically defined attitudinal outcomes of being religious has not been so common, it is clear that a large part of research into the psychology of religion has been at least broadly linked to measuring attitudes in one form or another. Smith (2003) theorised that religion influenced adolescents through various means grouped generally into three headings of Moral Order,

Learned Competencies and Social and Organisational Ties. These specific aspects of influence included moral directive, spiritual experiences, role models, community and leadership skills, coping skills, cultural capital, social capital, network closure and extra-community skills. Other researchers have tended to reduce such categories of religious influence into mere questions of social control or learning. This debate, as to how reducible religious influence is and whether there are uniquely religious or spiritual influences involved with religious-life effects has continued up to the present time (see Regnerus, Smith & Fritsch, 2003, pp.43-45).

Moral Reasoning and Religion

As might be expected, most of the research and debate concerning religious influence on moral development has been centered on the cognitive-developmental approach. This topic, at least since Kohlberg's time, has generated great interest and sometimes strong debate. It is easy to imagine why religionists would be interested in laying claim to furthering the cause of moral development. After all, it has been one of the basic assumptions of religion that following one's God ought to make one a better individual, which would involve, so the assumption goes, being a more moral individual.

Kohlberg did not share the sentiment of the religionists however. One of his basic philosophical statements regarding moral development was concerning the autonomy of moral development from religion. As Lee (1980, p 328) expressed it,

> In Kohlberg's view, the basis or fundamental course of moral judgement lies in the process of human development itself. His research suggests that moral judgement, like overall moral development, is the process of personal self-constructed and self-regulated advance as one interacts with the environment. Thus it is the natural development process and not primarily any extrinsicist system such as theologizing or Christian rules of conduct, which entails in each stage the progressive organization of moral structure for resolving moral problems.
>
> …Kohlberg's fundamental position clearly runs counter to the basic tenets advanced by the advocates of the theological approach to religious education.

Kohlberg did not suggest that religion had no role in moral behaviour, in fact, Wallwork (1980, p 273) suggested that he would be happy to admit that religion

could do much in acting as a motivation for an individual to act against self interest to do what they knew to be the right course of action. In fact Power and Kohlberg (1980) discussed at some length the close relationship of religion to moral judgment development, all the while maintaining "that morality can, in principle, be derived rationally apart from divine revelation" (p. 344). However, Kohlberg's stance was unmistakable; religiosity had no real influence on the development of moral judgment. Such development was purely the result of an individual's experiences with the environment, which affected cognitive responses to moral decision making.

There was no doubt this has been a complex area and one for which empirical research has contributed little due to the caution needed in interpretation of such studies (see Vergote, 1980, p 106). Religionists maintaining a belief in the role of religion in moral development dealt with Kohlberg's claims in various ways, most of which were philosophical. Many simply dismissed Kohlberg's entire paradigm of moral development, while others tried to amend it to accommodate religious factors (eg. Fowler, Nipkow and Schweitzer, 1991). However, there were others, while seeking to leave intact aspects of Kohlberg's stage concept of moral development, suggested that he had overlooked some important ways in which religion affected moral development. Many religionists have criticized Kohlberg's stages on grounds of not considering religious influence seriously enough. An example of such thinking was reflected in the statement of Wallwork (1980, p 291),

> Kohlberg appears to be correct that religion is neither necessary nor sufficient for the derivation of morality. But religion positively affects practical moral reasoning in ways missed by [his] logically sharp delineation of the realms.

As his statement suggested, Wallwork tended not to see religion as entirely necessary for moral development but argued that religion could have a role to play and might provide a moral advantage. One basic way that religion has aided the development of morality, Wallwork argued, was by providing individuals with a concept of human nature and human interests necessary for principled moral judgement. He wrote,

> Religious (and secular) assumptions about human interests play a more significant role in justifying moral judgments than Kohlberg's theory supposes. The equilibrated role reversal [in the higher stages] that Kohlberg talks about only results in interpersonal moral agreement if there is a prior consensus about the relative importance of the fundamental interests of the parties involved…

No determinate moral judgments are generated by the application of rationality to reversible role-taking without making some substantive assumptions about the hierarchy of human interests… In other words, reason and role-taking alone are not sufficient to advance toward Kohlberg's highest stages. Some conception of fundamental human interests is required, and this calls for a conception of human nature, like those offered by traditional religions. (Wallwork, 1980, p 288)

Wallwork's belief lay in an acceptance of religious influence on morality without making sweeping claims that religion was necessary in order to be moral or that morality was entirely autonomous from religious influences.

Another argument for moral development not being totally autonomous from religion was provided by Lee (1980). Lee differed markedly from those religious educators who took a theological stand to the debate and wished to dismiss Kohlberg's development theory in favour of a belief in morality being a sudden mystical gift from God. He defended Kohlberg's theory from such opinions by stating (Lee, 1980, p 329),

To accept Kohlberg's findings is not to de-godize God. Rather, Kohlberg's findings suggest how God works in this world. Kohlberg's research data clearly imply that if God does exist, then he works in and through the process of human development, rather than by some extrinsic 'zap' of grace.

In connection with this suggestion that God works with the human family through the human development processes, Lee suggested that religion had itself a developmental character and as such influenced the environment of an individual from which moral cues were given. The implication of this was explained by him when he wrote,

In order for Kohlberg's claim [of the autonomy of morality] to be true, he first has to deny the developmental character of religion…. The Kohlbergian thesis states that activities engaged in by the self are developmental. But religion is an activity engaged in by the self. Therefore religion is developmental, and hence in Kohlberg's organismic theory of development, cannot be autonomous from morality. (Lee, 1980, p 333)

To Lee then, religious doctrines and practices made up a part of the whole environment influencing the individual. If moral development depended on interaction with a person's environment then, in part at least, moral development was

influenced by the developing religiosity of the person and therefore could not be considered autonomous from it.

With this basic argument, Lee also questioned the validity of Kohlberg's research which, might have in part, led him to speak out so strongly for the separation of morality and religion. Lee claimed that Kohlberg was not measuring religion or religiosity in his research which he referred to in order to defend his stand, but only religious affiliation. Kohlberg's research did not find, therefore, that morality was autonomous from religion, but from the type of religious affiliation (Lee, 1980, p 333). This distinction between religion and religious affiliation was normally an important one to make in the social science field as religious affiliation in itself might have shed little light on the religious beliefs, feelings or practices of the individual (see Spilka et al., 1985, p 6-7). In many ways the debate as to whether religion influences moral reasoning could be seen as a debate on the independence or dependence of cognitive structure from moral content.

Norman, Richards and Bear (1998), raised further doubts as to the independence of moral content and structure on the religious front. They administered three of Kohlberg's moral dilemmas to Year 4 and Year 8 students from public and Christian schools and noted religious references used in the responses. Findings tended to indicate that regardless of the type of school attended, those who used religious terminology to resolve the dilemmas were more likely to fall into stages above Stage 2 than those who did not use religious terminology. Thus, although somewhat cautious due to the limits of their sample, Norman and his colleagues (1998, p. 96) concluded,

> …those who take their religious training seriously are more likely to abandon [Stage 2] thinking during the late elementary school years. Thus, the findings of this study provide argument that, contrary to Kohlberg, content and structure are not independent.

Clearly, religion has been found to influence moral thinking once moral content is considered in conjunction with moral structure. As an example the seminal study of Australian religiosity by Mol (1971) showed that the type and level of religiosity appeared to influence moral outlook. Mol found that disapproval of certain proposed immoral actions increased with religious orthodoxy and involvement. Furthermore, the research found that, regular prayer habits were more likely than regular church-

going habits to contribute to ethical or moral conservatism. On the other hand Mol also found that regular church attendance was more likely to lead to an attitude of greater tolerance towards people and thinking which differed from that of the respondent (1971, pp. 53-54).

Once Kohlberg's strict moral structural approach is adjusted to allow considerations of content, then religious influence can be argued. So too, if an alternate model for measuring moral reasoning is adopted wherein moral content is considered, such as Henry's (1983) moral authority view, then the possible effects of religiousness can be better understood and investigated.

Conclusion

This chapter seeks to provide a brief outline of research and theory related to the academically rich and broad fields of attitudes and moral development as approached from a psychological and social sciences point of view. These fields are chosen as they are seen as appropriate for representing social function as required for this study. Theorised connections between religiousness (a topic of the previous chapter) and these fields are also summarised. The wealth of literature, research and debate in both the attitude and moral reasoning fields provides adequate foundations on which to build on in this current research project. The breadth of past research in these areas necessitates, however, the inclusion of only a brief summary and exploration of theories most appropriate or relevant to the study at hand. As such, it ought to be clearly acknowledged that this review of both attitude and moral reasoning fields of research is quite selective and cannot aspire to be inclusive of all theories, models and research areas of their fields.

The next chapter discusses research, so far as it exists, relevant to Latter-day Saint youth, which is the population of focus in this study, and their relationship to religion, spirituality, family and social experience.

CHAPTER 4:
LATTER-DAY SAINT YOUTH – A REVIEW OF RESEARCH

Introduction

Since members of the Church of Jesus Christ of Latter-day Saints aged between 14 and 18 years make-up the larger population for this study, it is important that this chapter is included as a review of literature and research relevant to this somewhat unique, little known group. This chapter reviews such scholarly writing so as to provide a more specific academic foundation for later discussion and to introduce the reader to some relevant characteristics of Latter-day Saint youth. Connections between the research presented here and the guiding research questions for this study are discussed further in later Chapter 5 and Chapter 6.

As proposed in the introductory chapter, published and publicly available research regarding Latter-day Saint youth has been sparse generally and practically non-existent in Australia. This lack of research, especially on a large scale, may have been due to the relatively small size of the LDS Church population. It was only in recent years in the United States, for example, that the membership of the church had become significant enough that it warranted a distinct category in some large scale research. An example of such research is the National Longitudinal Survey of Adolescent Health, the Monitoring the Future study and the National Survey of Youth and Religion (Smith & Denton, 2005). The latter study being specifically designed to investigate data of a purely religious or spiritual nature. These studies were all conducted in the United States which, it might be argued, was culturally different from Australia, but nonetheless they all revealed information useful to the understanding of Latter-day Saint teenagers as compared to their religious and non-religious peers.

Data from each of these studies, especially the National Study of Youth and Religion, forms the basis of the review of literature in this chapter. Also important to this review is the work of Top and Chadwick (1998) whose study looked in more detail at religiosity and delinquency of LDS youth.

Considerations When Interpreting Research Involving Latter-day Saints

As is the case in most research studies involving samples of specific populations, it is important to be mindful of certain considerations when interpreting data from specific group samples. This is so when considering comparative or even internal research of Latter-day Saints. Two considerations are worth mentioning here as we consider research related to Latter-day Saint youth.

One consideration to keep in mind has to do with problems involving self-identification of Latter-day Saint members compared to that of more mainstream or traditional religions. Affiliation with the Church of Jesus Christ of Latter-day Saints carries with it high religious and spiritual expectations along with a sometimes negative social stigma; both of which may place pressure on an individual's desire to be identified with the LDS church, especially if that individual has casual or limited religious interest. The fact that some people identify themselves as Latter-day Saint members most often means that they are, or have recently been, somewhat actively involved in the religion. In theory this may mean that less religiously inclined people, although on Latter-day Saint church records, will not identify themselves as Latter-day Saints. This does not appear to occur to the same extent with more mainstream and traditional religious groups. For example, it is not uncommon for someone to identify themselves as belonging to a mainstream religion based on family tradition, ancestral affiliation or having been christened as an infant, even though they may not have shown much interest or activity in that religion throughout their life.

The fact that the demands of perceived affiliation with the Latter-day Saint Church are high compared to some other religions may lead to a biasing of the sample category of 'Latter-day Saints' when compared to more traditional or cultural religions. Data from the National Study of Youth and Religion (Smith & Denton, 2005) support this idea as it shows that 79 per cent of those surveyed claiming to be Latter-day Saint members had "been confirmed or baptized as a public affirmation of faith (not infant baptism)" as opposed to only 41 per cent of those claiming Catholic affiliation or 59 per cent of those claiming a Mainline Protestant affiliation. This

effect is mainly of consequence when considering comparisons between religious groups.

Another, somewhat associated, consideration when interpreting data of Latter-day Saint youth is the risk that, due to the high religious demands placed on LDS youth, their responses may be positively exaggerated so as to appear more culturally or spiritually acceptable to church leaders or other possibly influential individuals (such as researchers). This possibility is not unique to this specific group, however, and is often lurking in social science or psychological self-reporting survey research. Assured anonymity of participants may help to alleviate concerns of this nature, though it is still necessary for those interpreting data to be alert to the possibility of exaggeration.

Having mentioned these cautions to do with research of Latter-day Saints it is also worth noting the optimism of Smith and Denton (2005, p. 333) when responding to concerns about the spurious association hypothesis which has been used to question claims of proposed causality between social and religious factors. They argued,

> …this does not paralyze interpretations of research findings generally. For the deadening paralysis of utter skepticism is far less reasonable than advancing the most plausible interpretations of findings, even knowing theoretically that the claimed associations may be potentially spurious. Thus, in practice, scholars generally still use their best available insights and information to develop and sustain their best understandings of the workings of the social world.

Likewise, this sentiment can be expressed regarding research involving Latter-day Saints (or any other specific religion) and the considerations mentioned above. These considerations are important to keep in mind in that they foster caution in interpretation, but they ought not impede empirical and theoretical investigation of the kind found in this chapter, or indeed this study.

Religious Expectations on Latter-day Saint Youth

While commenting on the high ranking of Mormon youth on many items in the National Study of Youth and Religion, Smith (Shimron, 2005), the head researcher for the study said,

> Mormons generally have high expectations of their youth, invest a lot in educating them, and intentionally create social contexts in which religious faith matters a lot… These investments pay off in producing Mormon teenagers who are, by sociological measures at least, more religiously serious and articulate than most other religious teenagers in the U.S.

These observations by Smith identify the high expectations placed on Latter-day Saint teenagers by parents, teachers and church leaders. These expectational aspects of the LDS religious environment are important to note when seeking to understand the religious thought and behaviour of these youth.

Some examples of thought and behaviour expected of Latter-day Saint teenagers are contained in a booklet issued to every active LDS youth. This booklet, *For the Strength of Youth* (The Church of Jesus Christ of Latter-day Saints, 2001), contains direction and encouragement concerning church doctrine and standards on such things as, seeking good education, fostering family relationships, choice of friends, clothing and appearance, choice of music, sexual morality, being honest, observing the Sabbath day, paying a tithe, maintaining physical health, avoiding tobacco, alcohol, coffee, tea and illicit drugs, and serving other people.

Principles regarding these and other aspects of life are taught in Latter-day Saint church meetings, youth group meetings and homes and are an integral part of the environment in which the religiously active LDS youth lives. This is an important cultural consideration when seeking to investigate and interpret the attitudes and behaviours of Latter-day Saint youth.

Religious Practice, Belief and Interest

Public Religious Practice

Latter-day Saint religious tradition places a high amount of importance on Sunday meeting attendance. This emphasis is reflected in the high levels of religious service attendance reported among LDS youth as compared to other religious groups.

Smith & Denton (2005, p. 37) reported that 71 per cent of LDS respondents attended religious services at least once per week as compared to 55 per cent of Conservative Protestants (the next highest category) and an average of 40 per cent of youth surveyed. When asked how often they would attend if it were up to them, 69 per cent of LDS youth responded at least once per week as compared to 63 per cent for Conservative Protestant (the next highest category) and 45 per cent of youth surveyed.

This high level of public religious attendance was also reflected in data measuring religious youth group involvement from the same study (2005, p.51). Seventy-two per cent of Latter-day Saint teenagers indicated that they were currently involved in a religious youth group as opposed to 56 per cent of Conservative Protestants, 55 per cent of Mainline Protestants and 38 per cent of all teenagers surveyed. As far as frequency of attendance at such groups was concerned, Smith and his colleagues (2005) found that 57 per cent of Latter-day Saints attended at least once per week, while 43 per cent of Conservative Protestants and 26 per cent of all teenagers surveyed claimed they attended religious youth groups at least once per week.

It has also been found that LDS teenagers not only rated high in attendance at public religious programs but have also shown high levels of active participation in public religious settings. For example, Smith and Denton (2005, p. 46) found that Latter-day Saint youth surveyed were much more likely to have taught a Sunday School or religious education class (over twice the surveyed average) and to have spoken publicly in a religious meeting (over twice the surveyed average). To a large degree, these high levels of public religious expression might have been due to the Latter-day Saint church's focus on encouraging lay member involvement in teaching and speaking in church meetings. When it came to general public professing of faith, Latter-day Saint youth were more likely to report having shared their beliefs with someone not of their faith (72 per cent compared with overall average of 43 per cent) and were about as likely to express openly their faith at school 'Some' or 'A lot' as Black and Conservative Protestants (about 58 per cent compared to an overall average of 48 per cent of religious teenagers).

In summary, according to the recent National Study of Youth and Religion in the United States, it appeared that LDS teenagers generally exhibited high levels of

public religious practice, both in attendance and active participation, when compared to their peers of other faiths. They also exhibited a higher than average degree of talking openly about their religion with others. One explanation for this level of participation might be due to cultural religious expectations placed on Latter-day Saint youth for both regular church meeting attendance and active participation in church programs. This attitude might be reflected in the Smith and Denton data (2005, p. 62) in which 60 per cent of Latter-day Saint teenagers agreed with the statement, "For believers to be truly religious and spiritual, they need to be involved in a religious congregation" compared to 45 per cent of Black Protestant youth, 35 per cent of Conservative Protestants and 32 per cent of all surveyed. Also, 96 per cent of Latter-day Saint teenagers reported that "regular opportunities exist to get involved in services, such as reading and praying aloud" compared to an average of 82 per cent of those from other religions.

Private Religious Practice

Another major religious dimension addressed in this study was that of personal religious practice. In Latter-day Saint tradition these practices might include such things as personal prayer, private scripture study, fasting (as a form of self denial) or religious pondering or meditation. It is generally accepted that this kind of participation cannot be assumed on the basis of public religious practice alone.

Top and Chadwick (1998, p. 69) found that although over 80 per cent of American LDS teenagers who were registered in the Seminary program participated regularly in Sunday church meetings, only 50 per cent of youth surveyed reported praying regularly and only 33 per cent of them reported reading their scriptures regularly. Concerning the more sacrificial forms of personal religious practice, Top and Chadwick found that 38 per cent of LDS youth reported fasting each month and 56 per cent reported paying a full tithe (ten per cent of income) to the church, both of which were religious expectations for active LDS members. Interestingly, there were generally higher participation rates reported for these more sacrificial practices than for private prayer or scripture reading. In seeking to account for the lower rates of private practices compared to public practices, Top and Chadwick (1998, p. 70) concluded that as opposed to the public religious practices where more public expectation and pressure existed to motivate action, private religious practice,

…is where real religious commitment is manifest, where there is no outward pressure or extrinsic reward. The actions come from within the heart and soul of the individual teenagers.

Smith and Denton (2005, p. 46) presented how Latter-day Saint teenagers compared to teenagers in America in regard to private religious practices. They found that 38 per cent of youth surveyed nationally reported praying at least daily. In comparison, 57 per cent of Latter-day Saint youth, 55 per cent of Black Protestant youth and 49 per cent of Conservative Protestant youth reported praying at least daily. Latter-day Saint teenagers were over twice as likely than all teenagers surveyed to report having fasted in the last year (68 per cent compared to an average 24 per cent) and to have read a devotional, religious or spiritual book other than the scriptures in the last year (68 per cent compared to an average of 30 per cent).

Religious Belief, Spiritual Experiences and Commitment

Belief

Of the Latter-day Saint Seminary students surveyed by Top and Chadwick (1998), a large number of them reported high levels of belief in both general Christian and specifically Latter-day Saint doctrines. They (1998, p.68) reported,

> Over 95 percent of these young men and women reported that they believe that God lives, that Jesus is the Christ, and that Joseph Smith [the founder of the church] was…a prophet of God. Approximately 90 per cent of the youth reported that they plan to marry in [a Latter-day Saint] temple and remain active in the Church. Over 80 per cent reported that their relationship with God was "very important" to them.

It was interesting to note that these high levels of belief and professed devotion exceeded the levels of regular public and private religious practice. Top and Chadwick sought to explain this, at least in part, by acknowledging that it was easier to hold or express a belief than it was to act on it (p. 68).

The broader United States national sample surveyed by Smith and his colleagues (Smith & Denton, 2005) also provided data on the belief and commitment of

teenagers. They found that Latter-day Saint youth generally rated in the top three religions (along with Conservative Protestant and Black Protestant groups) for beliefs such as belief in a "personal [god] involved in the lives of people today" (76 per cent of LDS youth), belief in the "existence of angels" (80 per cent of LDS youth), definite belief in "divine miracles" (73 per cent of LDS youth) and a definite belief in life after death (76 per cent of LDS youth). Somewhat surprisingly, considering the related data, LDS teenagers ranked as one of the lowest religious groups on indicating a definite belief in God. Only 84 per cent of Latter-day Saint teenagers indicated a definite belief in God as compared to 97 per cent of Black Protestants and 94 per cent of Conservative Protestants. In fact the proportion of LDS youth expressing a definite belief in God (84 per cent) was identical to the sample average, which included the Non-Religious category. Of the religious groups, LDS youth rated the second lowest on the belief in God question (72 per cent) (2005, p. 41-43). Given that Latter-day Saint youth rated highly in most other belief categories, the reasons for this finding are unclear.

Spiritual Experience

Research has found that a relatively high number of Latter-day Saint youth have claimed spiritual experiences of one kind or another. Of the Seminary students surveyed by Top and Chadwick (1998, p. 69), approximately 82 per cent of them indicated "I have been guided by the [Holy] Spirit with some of my problems or decisions," while 84 per cent of them indicated, "there have been times I felt the Holy Ghost" and about 67 per cent claimed, "I have felt repentance and forgiveness."

Smith and his team (Smith and Denton, 2005) found a surprisingly high number of American teenagers indicating some spiritual or religious experience generally. Like Top and Chadwick, they also found a relatively high proportion of LDS teenagers indicating having had spiritual experiences (ranked within the top three religious categories for each item). For example, 67 per cent of LDS teenagers indicated that they "have…experienced a definite answer to prayer or specific guidance from God" (compared to 65 per cent of Conservative Protestant, 61 per cent of Black Protestant and a sample average of 50 per cent.). Similarly, 76 per cent of Latter-day Saint youth indicated that they have "had an experience of spiritual worship that was very moving and powerful (compared to 70 per cent of Conservative Protestants, 64 per cent of Mainline Protestants and a sample average of 51 per cent).

Importance of Religion and Religious Commitment

As for the importance of, and commitment to, religion in the lives of LDS teenagers, Smith and his fellow researchers (2005, p. 40, 45) found that 43 per cent of LDS youth, as compared to 31 per cent of Black Protestant youth and 29 per cent of Conservative Protestant teenagers, indicated that religious faith was 'extremely important' in shaping daily life. However, on the other end of the scale, 15 per cent of LDS teenagers indicated that religious faith was 'not very important' or 'not important at all' in shaping daily life as compared to only five per cent of Black Protestant youth and six per cent of Conservative Protestant teenagers expressing the same. Further, when the 'very important' and the 'extremely important' categories were combined, LDS youth responses were very similar to Conservative and Black Protestant youths' responses for this item. Similar results were to be seen in responses to the "importance of faith in shaping major life decisions" item where 52 per cent of LDS teenagers indicated that faith was 'extremely important' in shaping major life decisions. It seemed that on these two items, though most LDS teenagers answered positively, there tended to be somewhat of a polarization between the 'Extremely Important' category and the 'Not Very' or 'No at All Important' categories, at least more so than with other religious groups.

In summary, research has tended to show that Latter-day Saint youth exhibited high levels of orthodoxy and surety with their beliefs. A high proportion of them claimed having had a spiritual experience of some kind and generally indicated that their religious commitment played an important role in their life. When compared with other religious teenagers in these areas, LDS youth tended to be ranked high.

LDS Teenagers and the Family

Research has shown that the religious nature of parents and the home have had a great deal to do with the religious practice and experience of teenagers (Johnson, 1989, Engebretson, 2003). It is reasonable to assume that this is no different for Latter-day Saint teenagers specifically (see Albrecht, 1989). A major emphasis of Latter-day Saint religion is on the home and the conduct of parents in the family. As

an example of this emphasis on religiousness in the home of Latter-day Saints, church world leaders (Hinckley, 1995, p. 102) have stated,

> Parents have a sacred duty to rear their children in love and righteousness…to teach them to love and serve one another, to observe the commandments of God… Husbands and Wives—mothers and fathers—will be held accountable before God for the discharge of these obligations…
>
> Happiness in family life is most likely to be achieved when founded upon the teachings of the Lord Jesus Christ. Successful marriages and families are established and maintained on principles of faith, prayer, repentance, forgiveness, respect, love…

With this strong emphasis of religion in the home, it might be expected that research data would reflect a relatively high level of family religiosity reported by LDS youth. Top and Chadwick (1998, p. 99) found that on average 59 per cent of Seminary students surveyed in the United States reported that their family prayed together 'often' or 'very often' while 27 per cent indicated that their family prayed together 'rarely' or 'never'. They also found that 30 per cent of youth indicated that their family read the scriptures together 'very often' or 'often' and 43 per cent indicated that their family held Family Home Evening[2] 'very often' or 'often'.

These figures took on a new perspective when the data of Smith and his colleagues (Smith & Denton, 2005, p. 55) were considered, allowing comparison between various religious and non-religious youth. They found that 79 per cent of Latter-day Saint youth reported praying with parents, as compared to 56 per cent of Black Protestant youth, 53 per cent of Conservative Protestant youth and 41 per cent of all sampled teenagers. Also, Smith and his fellow researchers found that 50 per cent of Latter-day Saint teenagers reported that their "family talks about God, the scriptures, prayer, or other religious or spiritual things together" every day (74 per cent at least "a few times a week"), while only 27 per cent of Black Protestant youth and 14 per cent of all sampled teenagers reported this as a daily occurrence. It appeared that generally Latter-day Saint teenagers came from family situations demonstrating high levels of religiosity.

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[2] A program of the Church of Jesus Christ of Latter-day Saints wherein each family is encouraged to reserve each Monday evening for religious teaching, discussion and activities in the home.

Another important factor in the transmission of religious values and practices from parent to child was the relationship between parents and the teenagers. Top and Chadwick (1998) found that parents' connectedness with the LDS teenager, parents' regulation of behaviour and parents providing psychological autonomy to the teen all contributed positively to the religiosity of the Latter-day Saint teenager. These findings were more or less in line with other adolescent religious research findings reported in Chapter 2.

LDS Teenagers and their Peers

As with teenagers generally, peers appeared to have a great influence on the behaviour of Latter-day Saint youth. Regarding the make-up of LDS teenagers' peer groups in the United States, Smith and his team (Smith & Denton, 2005) found that on average out of an LDS teenager's closest five friends, 2.7 held similar religious beliefs (only just above the U.S. average), 2.1 were involved in the same religious group (about twice the U.S. average), and the LDS teenagers spoke to 3.1 out of five of their closest friends about religious beliefs and experiences (compared to a U.S. national average of 1.8). The evidence appeared to indicate that Latter-day Saint youth were more inclined to form peer groups among people of their own faith than other religious teenagers. Interestingly, Smith and his team (2005) found that in the school environment, LDS youth tended to feel pressure or be made fun of because of their religious beliefs and practices more than most other faith groups, except for Jewish teens. In fact Jewish and LDS youth were over twice as likely to report at least 'a little' of such pressure at school than the average youth surveyed (2005, p. 59).

Gender Differences

Generally, as found in almost all religious research, LDS females tended to show slightly more signs of religiosity than males (Duke & Johnson, 1996). For example, according to a study conducted by Duke and Johnson (1996), Latter-day Saint females rated themselves higher on factors such as church attendance, private prayer, considering themselves strong in the faith and loving others. Interestingly, Duke and

Johnson also found that in spite of their higher levels of religiosity, females showed less confidence with regard to their standing before God, in terms of their anticipated reward at the final judgment, than did their male counterparts.

The LDS Seminary Program - Religious Education for Teenagers

An indication of participation rates in the Latter-day Saint Seminary program is helpful in gaining a clearer picture of the sample in this study.

As mentioned previously in this report, 2,749 students were enrolled in the Latter-day Saint Seminary program in Australia in 2001. According to Church Educational System enrolment statistics (unpublished records), this enrolment figure was estimated to be 45 per cent of youth between 14 and 17 years of age on the records of the church. Of those enrolled, approximately 1,587 students (57 per cent) attended at least 80 per cent of classes, thus qualifying for course credit.

Concerning why LDS teenagers attended early morning classes, Carthew (1998) conducted research in Australia regarding the question of motivational sources for Latter-day Saint Seminary students attending early morning classes. It was found that out of 21 possible suggested motives, the most influential were of a religious or spiritual nature. For example, the top three motives were "because it is what God would have me do", "because it helps me understand the scriptures" and "because it helps me feel closer to the Lord". Carthew (1996, p. 60) also found that the top 16 individual items, when ranked, could be grouped into categories that tended to indicate a possible priority of motivational influence in the attendance of early morning Seminary students. These categories, in order of motivational strength, were Religious Values, Parental Encouragement, Teacher Influence, Life Issues and Peer Influence.

Carthew (1998) went on to observe that both enthusiasm for, and feelings of the importance of Seminary tended to decline for second and third year (School Grade 10 and 11) students compared to first year (School Grade 9) students. However, fourth year (School Grade 12) students indicated the highest ratings for both enthusiasm for, and feelings of the importance of, Seminary than all other years.

These findings tended to allude to an increase in positive attitude towards attending early morning Seminary between the third and final year of attendance.

A somewhat dated but interesting study conducted by Killian (Payne, 1970, p. 22-23) among youth of The Church of Jesus Christ of Latter-day Saints participating in the church's Seminary program in the United States provided some information on the religious educational expectations of these young people. One of the basic findings of the study was that these students wanted very practical direction on spiritual matters. They wanted to know the so called real life implications of religious principles such as the Holy Spirit, forgiveness, testimony, and knowing what was necessary to be saved. As Payne (1970, p. 23) commented,

> These are practical matters with young people. They want to know how the gospel principles work in their lives more than they want additional basic information . . .
>
> One thing seems clear, however, and that is that with all their other interests and shortcomings, young people have a deep and consistent concern for things spiritual and eternal. Those of us who deal with youth in teaching, leadership and parental relationships might also learn that they seem quite fed up with broad generalization and that they would really like to know how the gospel applies in their lives.

Beyond these few studies mentioned, relevant academic research concerning the religious education of Latter-day Saint youth is rare, and what does exist is rarely published to allow for easy access. The above summary, however, offers some insight into existing understanding of the Latter-day Saint Seminary student useful for discussion in this study.

Latter-day Saint Youth and Social Factors

Latter-day Saints and Measures of Moral Development

It has often been found that conservative Christians have scored lower on principled moral reasoning indicators in Rest's (1986) *Defining Issues Test (DIT)* than the general public. Suggested reasons for this have often centered on a possible stymied moral development of the individual caused by conservative religious views

(Richards & Davison, 1992, p. 467-468). However, Richards and Davison (1992) have suggested that cognitive developmental approaches to measuring moral development (specifically the *Defining Issues Test*) were biased against individuals with conservative Christian backgrounds, such as those in the Latter-day Saint religion.

Using Latter-day Saint university students to test their theory, Richards and Davison (1992) found that, as expected, Latter-day Saint students scored lower on the principled moral reasoning score (P%) of the *DIT* than the normative sample. They also found, however, that up to 25 (34.7%) of the items on the *Defining Issues Test* were found to, "have different meaning, or were not measuring the same construct, for subjects in the Mormon or Normative samples" (1992, p. 476). Further, Richards and Davison found evidence to suggest that the differences in meaning of the *DIT* items for Latter-day Saint and normative samples were due to the items containing religious connotations for Latter-day Saint respondents that might not have been present for others. In conclusion, Richards and Davison (1992, p. 481-482) suggested that,

> …conservatively religious people at various stages of moral development more strongly endorse some Stage 4 DIT items because of the theological connotations of these items, not because of the items' stage-related messages…
>
> Such a finding raises doubts about the construct validity of the DIT for conservative religious people, and casts doubt on how their DIT scores should be interpreted. The low DIT P% scores and high Stage 4 scores frequently obtained by conservative religious people in previous research might, therefore, be artifacts of the cross-cultural and religious limitations in Kohlberg's theory and Rest's DIT.

As a result of their findings, Richards and Davison (1992, p. 482) cautioned against the use of DIT for conservative religious groups. They also argued for researchers to move beyond the Kohlbergian, justice centered, framework for measuring moral development in order to describe more fully other moral concepts which might be more fitting for the understanding of moral thinking of conservative Christian people, including Latter-day Saints.

Delinquency

One area of research regarding Latter-day Saint youth which has been relatively well investigated is that of delinquency. The work of Top and Chadwick (1998) sited earlier in this chapter, focused heavily on delinquency. This topic is worth noting here due to its close relationship to moral reasoning which is a major aspect of the current study.

Top and Chadwick (1998, p. 29) found that levels of delinquency were generally significantly lower among LDS Seminary students in the United States compared to the national average as reported in the 1993 *Monitoring the Future* study (Johnstone, Bachman & O'Malley, 1993, pp. 250, 277). However, they also alluded to the fact that delinquency rates were nonetheless high enough among Latter-day Saint teens to be of some concern to Latter-day Saint parents and leaders. They (Top & Chadwick, 1998, p.29) reported that,

> …nearly 20 per cent [of ninth through twelfth grade teens surveyed] admitted they had cursed or swore at their parents, while 10 per cent acknowledged having shoved or hit their mother or father. Surprisingly, the young women in the study revealed they abused their parents as often as the young men. Fighting and beating up other youth had been participated in by about a fourth of the young men and less than 10 per cent of the young women.
>
> Approximately a third of youth in the study admitted to having shoplifted and over 70 per cent reported they have cheated on tests in school. Over half the young men and a third of the young women admitted they had trespassed on someone's property, and about a fourth of young men and a little over 10 per cent of the young women have vandalized others' property.

Top and Chadwick (p. 27) also compared responses concerning smoking, drinking and illicit drug use of Latter-day Saint high school seniors from three different areas in the United States to the responses of high school seniors from the national sample reported in the *Monitoring the Future* study of 1993 (Johnstone, Bachman & O'Malley, 1993, pp. 250, 277). They found that percentages of Latter-day Saint youth who had ever "smoked a cigarette" (20 per cent), "Been drunk…" (14 per cent), or "Used marijuana" (9 per cent) were generally less than a third of the national averages.

Conclusion

This chapter introduces many characteristics of the sample group and focus population of this study by reviewing academic and other research findings concerning youth from the Church of Jesus Christ of Latter-day Saints. Such a review is considered to be necessary due to the scarcity of available research and public awareness concerning Latter-day Saint youth in Australia as well as in the United States and relevant details important to a more thorough understanding of findings in this study.

Generally, it appears that Latter-day Saint youth demonstrate high levels of religious practice and participation, both private and public. To some degree, this religiosity may be in response to the high expectations of their religious culture, which places heavy emphasis to moral uprightness, religious training and active participation, as well as family enculturation. Sociological research has tended to suggest that Latter-day Saint youth follow many of the patterns of other conservative religious groups. It appears that LDS youth show lower levels of delinquency than average teenagers, at least in the United States. Although Latter-day Saints tend to show lower levels of Stage 5 or 6 thinking when assessed using the Defining Issues Test (Rest, 1986), some findings suggest that this may be due to a bias in the DIT rather than lower levels of moral development among Latter-day Saint or other conservatively religious groups.

The next chapter (Chapter 5) introduces the conceptual framework for this study where models are developed and choices of instruments and theoretical approaches for this study are discussed.

CHAPTER 5:
CONCEPTUAL FRAMEWORK AND INSTRUMENT SELECTION

Introduction

This chapter contains a description of the population of interest and a restating of the research questions posed in the introductory chapter concerning this population. This chapter also establishes the connection between the topics covered in the literature review chapters and the goals of this study. A basic research model is proposed for this study in order to provide data for reasoned response to these research questions. Specific factors representing the general domains of the model are proposed, leading to a more specific explanation of the theoretical framework which is adopted along with the specific instruments employed. A more detailed model is advanced in order to provide a logical link between the theoretical questions and the practicalities of the research investigation discussed in the following chapters. Of special interest is the concern for the development of the effects of the Seminary program which leads to a longitudinal investigation.

The Population of Interest

The specific population of interest for this study consists of students participating in the Early Morning Seminary program of the Church Educational System of the Church of Jesus Christ of Latter-day Saints. These students are generally aged between 14 and 18 years of age, or school Years 9 to 12 in Australia. The program operated in over 123 countries around the world and involved a total of just over 201,000 students at the beginning of this study in 2000, approximately 2,500 of which were in Australia.

In the Latter-day Saint Early Morning Seminary program, students attended early morning classes usually beginning at around six o'clock in the morning which ran for just under an hour. Generally, classes were held whenever school is held but usually concluded several weeks before the end of the school year. Classes were generally

held in Latter-day Saint church buildings but might be held in private homes or even local school classrooms in some cases. Teachers were volunteers selected from local congregations and trained by local LDS Church Educational System personnel.

In the Seminary program the curriculum for the classes over a four year cycle centered on the scriptures used by the Latter-day Saint church. Two of the scriptures studied, The Old and New Testaments were very familiar to Christian religions generally. However, two other books, The Book of Mormon and the Doctrine and Covenants of the Church of Jesus Christ of Latter-day Saints were also accepted as scripture by the Church of Jesus Christ of Latter-day Saints. One of these four books of scripture was taught each year. The teacher curriculum manuals and student study guides were uniform throughout the world. Students were encouraged to read and study the books in their own time as well as attend classes for further study and insight. Furthermore, students were encouraged to memorise 25 key scriptural references each year. Credit for course completion each year was based purely on attendance at classes, 80 per cent being the minimum attendance rate required for credit. The receiving of a graduation diploma at the end of the four-year course was not only dependant on class attendance but also on meeting basic behavioural expectations such as honesty, chastity and abstinence from drugs or other harmful substances.

The specific nature of this population required that some special considerations were made when planning this study. The first consideration was that, in appearance at least, these youth were engaged in a high level of public religious practice and were very frequently exposed (each weekday) to religious education. Another consideration in the design of this study was that concepts of spirituality and the nature of God were relatively uniform across the population and thus could be investigated at a very specific level using survey items and scales. This theological uniformity across this population also meant that specific religious terms and concepts could be included in the items of questionnaires that were administered. However, it was also true that items that may have contained meaningful concepts among other denominations might not be understood or may hold little meaning for this population. The possibility of low variance between students in some characteristics was also possible with a relatively uniform group like Latter-day Saint Seminary students, thus causing possible difficulties when using procedures that

involved maximum likelihood estimation and analysis of variance which were procedures commonly employed in statistical analysis.

The Guiding Questions

Identifying the population of interest allowed for discussion of the key questions being asked of this population in this study and the broader community and how the answers to such questions might be sought.

In general terms, this study was designed to investigate the religious, spiritual, social and moral aspects of the lives of young adolescents demonstrating high levels of religious educational involvement and religious practice as found among students of the Latter-day Saint Seminary program. This broad goal is broken into the two specific goals mentioned in the introductory chapter of this report.

1. To gain greater understanding of the specific group of Latter-day Saint Seminary students and how their religious involvement relates to spiritual and social dimensions of life and changes over time.

2. To gain further insight into the development of relationships among religion, spirituality and social outcomes in the lives of religious teenagers in general.

The guiding research questions proposed in the introductory chapter provide a structure and set the basis for discussion concerning the planning and conduct of this study in addressing these goals. These questions are divided into two categories as follows.

Relationships Among Factors and Dimensions.

Question 1: What influence does religiosity and spirituality have on the moral and social outlook of religious youth?

Question 2: What effects does the Latter-day Saint Seminary program have on the religious, spiritual, moral and social lives of its participants?

Change in Religious and Spiritual Dimensions Over Time.

Question 3: How do religious and spiritual dimensions change over the course of the study?

Question 4: Which initial factors influence the change over time of religious and spiritual dimensions?

Question 5: Are there any class effects on the change in religious or spiritual dimensions?

Question 6: How does the Seminary program influence change in religious and spiritual dimensions?

With a study of this nature comes the acceptance that religious and social life is more complex than simple answers to these questions may indicate. However, in a social research setting this investigation can still shed meaningful light on the topic which may reflect, and carry implications for the more complex realities of life. An investigation that seeks to provide answers to these questions is thought to be not only worthwhile but possibly seminal.

The Scope and Nature of the Study

A Note on the Scope of the Study

Along with the development of guiding questions, one of the dilemmas for any researcher is the need to limit the scope of what is under investigation. Because of the number and complexity of the factors and dimensions being addressed in this study, there is the potential to become daunted by the ever-increasing number of possible measures and relationships to consider as part of the research model. In order to move forward meaningfully however, it is necessary to limit what can be included. By so doing, it is hoped that not only does the investigation become manageable, but the factors chosen will be seen as representative of the broader, more complex dimensions of life from which they are drawn.

Accordingly, this study does not seek to be exhaustive in its findings but serves only to gather sufficient data to allow for a relatively limited, yet meaningful, glance into

the complex world of human religious thought and application. Therefore, it is hoped that the findings do not only provide a link with current and past research, but allow a platform of knowledge and encouragement for further study in the field.

A Note on the Nature of the Study

This study is a longitudinal survey based investigation. The study does not attempt to test the adequacy of a previously devised theory nor does it seek to assert previously made claims. The model presented in this chapter is devised for the purposes of investigating possible relationships between key factors and dimensions. The sample used for this study is considered a sample of convenience as the gathering process only took place on a class-by-class basis and only includes classes of a certain minimum size. Only classes from the states of South Australia and Victoria are included in the major part of this study, even though discussion of findings is cautiously generalized to the broader population.

A Model for Investigation

Four major areas of measurement are considered in this study in order to form the basis of a structured model of religious development to be used in this investigation, they are, Background Factors, Religious Training and Experience Characteristics, Spirituality Dimensions, and Social and Moral Dimensions. These domains involve broad headings for which specific variables and in turn, specific instruments for measuring those variables, are selected. Reasoning behind the selection of such factors and survey instruments include considerations such as whether the resulting data is likely to assist in answering the research questions, whether the concept and items are understandable and relevant to the students being surveyed and whether the length of time to complete each set of items or instrument is appropriate for the survey administration method being adopted. Where it is possible, previously developed survey instruments are used in order to allow for some subsequent comparisons with earlier research findings.

Details of items and scale reliability are discussed in Chapter 6, which addresses the specific methods of inquiry employed in this investigation including the specific survey items and scales used.

Relationships Among Factors and Dimensions

Research Questions 1 and 2 under the category of Relationships Among Factors and Dimensions are designed to support the investigation of relationships between certain background factors, religious practice, religious education (Seminary), spirituality, moral thinking aspects and social attitudes included in the study. In order to test for such relationships a proposed order of influence needs to be established and the model tested.

Figure 5.1 is designed to help clarify the key areas of investigation in this study and the theoretical order of influence in forming a research model for the purposes of responding to the research questions. The arrows indicate the possible general relationships investigated in responding to the first two research questions. Background variables are considered to be exogenous and the influence of other aspects of the model on them is not relevant to this current investigation, if they exist. It is assumed that religious training and experience factors primarily influence spirituality variables for the purposes of this cross sectional model; although in reality the relationship is probably more cyclical. Because this study is concerned with the effects of religious and spiritual variables on moral and social factors, the moral and social aspects of the study are treated as criterion variables. The examination of relationships between key dimensions is presented in Chapter 9.
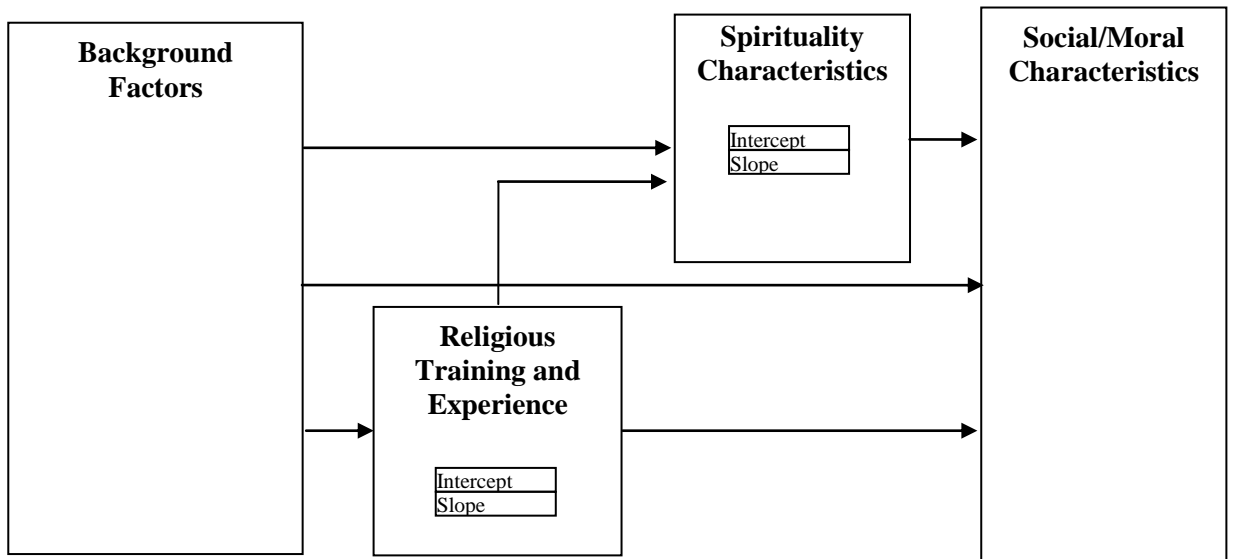
Figure 5.1 A graphical representation of the factors and dimensions investigated in this study.

Accounting for Student Dropout

In order to gain a greater understanding of the sample over the course of a longitudinal study, as is necessary in responding to Research Questions 5 to 9, some analysis regarding those individuals who dropped out of the study is considered necessary. This makes it possible to have not only a better understanding of the nature of students who dropped out of the study but also of the nature of those who remained. It is felt that such information is important when drawing inferences from the sample, especially in later survey waves. The direct benefits of better understanding dropout from the Seminary program to the aims of the study are also important. As such analysis to identify student and class level characteristics of those who dropped out, as opposed to those who remained, in the study is addressed as part of this report. The examination of students discontinuing the study after the first survey is presented in Chapter 8.

Change in Religious and Spiritual Dimensions Over Time

A major aim of this study is to investigate the factors leading to religious and spiritual development among Seminary students. Research Questions 5 to 9 are designed to guide the investigation of change over time of religious and spiritual

factors in the lives of Seminary students. These questions provide for an inquiry into the influences of personal level, class level and Seminary experience factors on the religious and spiritual development of students. The inclusion of the terms intercept and slope in the Religious Training and Experience and Spirituality categories of Figure 5.1 indicates the longitudinal nature of the data required for the respective variables in order to answer the final four research questions. The examination of change over time of religious and spirituality variables is presented in Chapter 10.

Background Factors

It is important to this study that relevant background factors are chosen in order to create a meaningful context for the primary factors in the model. By so doing the effects within the model of other specific factors can be more confidently hypothesized and understood in a broader context. Ideally it would have been of interest to include far more detail in many of the background factors, however, this is not possible if a manageable scope is to be maintained.

Based on previous research in the relevant fields, some of which is presented in previous chapters, several background factors are identified for inclusion in this study. They are discussed below.

Age

Many studies have found that attitudes toward religion and religious practice changed with age (Engebretson, 2003; Sloane & Potvin, 1983; Hoge & Petrillo, 1978a). Age has also been argued to be linked with the development of social attitude and moral thinking (Duska & Whelan, 1975). Three aspects of age are measured in this study; date of birth, year in school and number of years in the Seminary program. Each of these measures of age or experience contains subtle yet possibly important differences.

Gender

Like age, gender differences in relation to religious, spiritual, social and moral research have been well documented (e.g. Miller & Hoffmann, 1995, p. 63; Regnerus, Smith & Fritsch, 2004, p. 10; Sloane & Potvin, 1983, p. 144; Smith & Lundquist Denton, 2005, p. 279). Thus, gender differences are important in establishing a useful model for this study and an item to differentiate gender is included as a background factor accordingly.

Socio-Economic Status

Socio-economic status (SES) may have an influence over educationally relevant aspects contained in this study, as well as religious, spiritual, social and moral dimensions. Because of the high educational expectations placed on Latter-day Saint youth, it is thought that the socio-economic status of the home may show effects in this study which have not been commonly investigated. Primarily, the father's occupation is used to gain a simple yet useful gauge of home SES for the purposes of this study (see Keeves, 1972, p. 69).

School Experience

Research regarding cultural or ethos influences of school life on youth religiosity in Australia has been far more common than research investigating the influence of school achievement on religious life and spirituality (Flynn, 1985; Flynn & Mok, 2002; Mol, 1971). It is conceivable however that educational experience may have an influence on religious, spiritual, social or moral aspects in this study. This is considered a strong possibility especially concerning elements of religious practice involving study or Seminary involvement as their very nature requires certain educational competencies. Hence, several self-evaluative measures of educational achievement and attitude are included in order to include a dimension of educational experience in the background factors involved in this study. Items related to student involvement in extra curricular activities such as sport, music and homework are also included in order to investigate whether time spent in such activities influences other aspects of the model.

LDS Peers

Previous research has made it clear that peers have an influence on the religious attitudes of youth (e.g. Flynn & Mok, 2002). In light of the findings of Smith and Denton (2005, p. 116) that religious youth tended to have religious peers, and that Latter-day Saints tended to have a high proportion of their peers who were Latter-day Saints, a simple indication of the number of fellow Latter-day Saint youth involved in the peer group of Seminary students is included among background factors. Although it may be considered worthwhile to include many more measures related to peer groups, it is considered that this study is already comprehensive enough without a detailed investigation of peer influence and such investigation can be reserved for a future time.

Family Religious Practice

The religious practice of the family has been shown to have a very significant impact on the strength and nature of religious practice of an individual (e.g. Albrecht, 1989; Johnson, 1989; Hoge and Petrillo, 1978b; Kieren & Munro, 1987; Engebretson, 2003) and therefore a measure of family religious practice is included in this investigation model. Family religious practice has been measured in various ways, however, the items used by Top and Chadwick (1998) have been shown to be valid and are employed in this study. Family religious practice is reported by the individual based on the frequency of several religious behaviours that may occur in the home. This method has the advantage that it is specifically designed for a Latter-day Saint investigation and includes practices that are culturally expected to occur in the home. This method may not be as accurate or as objective as surveying parents or other family members directly, however, such thorough, and perhaps more objective, methods requires efforts that pose considerable challenges given the scope of this study.

Parent-Child Relationships

The relationships between youth and parents have been shown to be important in the formation of the religious attitudes and behaviours of youth (e.g. Myers 1996; Litchfield, Thomas and Li 1997; Hoge and Petrillo, 1978b; Engebretson, 2003; Bao

et al. 1999). It was also considered likely that parent-child relationships had an effect on social and moral development (White, 1996b). Although, like family religious practice, measuring parents' perception might have been advantageous for measuring such relationships, it would have, again, proven a problem for this study. Also, it is arguable that when considering the effect of the parent-child relationship on the child, the child's subjective perception is of primary importance. Accordingly, an instrument for ascertaining parent-child relationships based solely on the child's perception is used in this study.

The Parental Bonding Instrument (Parker, Tupling & Brown, 1979) is seen as an appropriate means for gathering information concerning the parent-child relationship in this study. Although originally designed for use with adult subjects (post graduate medical students, for example) who were asked to recall their perceptions of their parents in their first 16 years of life, in this study this instrument is used with youth aged between 14 and 18 years and as such is amended to ask for current perceptions of parent-child relationships.

This instrument is designed to measure two specific dimensions of parental bonding; **caring** and **over-protection** of parents as perceived by the child. These two dimensions are found to show signs of inter-dependence (overprotection was linked to lack of care) and to be bi-polar in nature. Parker and his colleagues (Parker, Tupling & Brown, 1979, p. 8) described the bi-polar nature of the two factors as follows:

> The first derived factor in the present study involved one pole defined by affection, emotional warmth, empathy and closeness, and the other by emotional coldness, indifference and neglect. Its items appeared to measure the presence or absence of care and formed the care scale… The second factor has one pole defined by control, overprotection, intrusion, excessive contact, infantilization and prevention of independent behaviour, and the other defined by items that suggest allowance of independent autonomy.

The Parental Bonding Instrument relies on the acceptability of two assumptions. The first is that the subjective recollections or perceptions of the child are of value in studying parental care or over-protection. The second assumption is that parental bonding has some thread of consistency and therefore can be recalled by the child in a relatively consistent and meaningful manner. In the opinion of the developers,

measurement of reliability and validity finds that the scores obtained from the use of the scales are acceptable and independent of the sex of the child (1997, p. 9).

Religious Training and Experience

Religious Practice

The items chosen for use in this study to measure private and public religious practice are based on the items used in Top and Chadwick's study of Latter-day Saint youth (Top & Chadwick, 1998). Nine items are used in this study, each indicative of what is reasonably familiar to the religious life of young members of the Church of Jesus Christ of Latter-day Saints, although not necessarily familiar to those of other faiths. The items are originally designed to form a single religious practice scale. However, items can be grouped into private and public religious practice scales, if scale reliability measures are satisfactory.

Seminary Experience

Although it may be considered that Seminary attendance is a part of religious practice as a whole, it is argued that more detail regarding Seminary participation and experience is needed for this study. Therefore, two related measures for the Seminary experience of the youth involved in this study are included. The first relates to the frequency of attendance and participation levels of the student while the other relates to the outcomes and resultant feelings of participation in the Seminary class. As no existing instruments of this nature could be found at the time of planning, the items used are devised for this study. The resulting items can be considered to form a single scale, but are more meaningfully separated into two sub-scales which appear to represent the level of participation in Seminary class and feelings regarding the Seminary experience.

More detail regarding the trial testing and suitability of these scales is included in Chapter 6, where the development of these scales is discussed in greater detail.

Religious Belief and Feelings

The religious beliefs and feelings of Seminary students are of particular interest with any effort to understand the outcomes of Seminary attendance. Thus it is important in this study to include some measures of religious beliefs and feelings.

Top and Chadwick (1998) have conducted several studies of Latter-day Saint youth and have developed items for the measurement of beliefs that would be expected of a Latter-day Saint teenager. The items chosen for inclusion in this study appear to form several useful factors. These factors include measures of belief in certain Latter-day Saint doctrines, interest in living and pursuing the Latter-day Saint religion, discontent with Latter-day Saint religious lifestyle and the degree to which youth have had experiences which may be considered spiritual.

Spirituality Characteristics

Factors considered as spiritual are distinguished from factors related to religious training and experience in this study by the fact that they primarily relate to the respondents' relationship with God and the deeper, less observable aspects of being religious (e.g. Tloczynski et al. 1994).

Spirituality

Because of the broad and varied definitions of spirituality existing in the religious, secular and academic circles, it is important to understand and express clearly how the population of interest, in this case members of the Church of Jesus Christ of Latter-day Saints, perceive spirituality in order to seek appropriate ways of identifying and measuring that spirituality as well as to have it relate to the framework set by current academic discussions.

Of all the possible dimensions considered in recent academic literature to relate to spirituality, two key dimensions tend to be emphasised in Latter-day Saint belief. Spirituality among members of the Church of Jesus Christ of Latter-day Saints tend to involve at least two related aspects; a person's mastery of self and a person's

relationship with God. For example, McKay (1969, p.135), expressed a simple definition of spirituality as Latter-day Saints related to the term:

> Spirituality is the consciousness of victory over self, the consciousness of being above the passions… It is the realization of communion with Deity.

McConkie's (1966, p. 760) definition of spirituality was a little more technical and yet still contained both the self-mastery and the relationship with God aspects of the Latter-day Saint understanding of the concept. McConkie (1966, p. 760), considered by many an authority on Mormon doctrine, described spirituality as,

> …that state of holiness, purity, and relative perfection which enables men to enjoy the near-constant *companionship* of the Lord's Spirit; truly spiritual [people] walk in the light of *personal revelation* and enjoy the *frequent promptings* of the Holy Ghost (Italics added).

Emphasising the relational aspects of spirituality as conceived by Latter-day Saint members, Ivins (1955, p. 76), made the statement:

> The recognition that we are the sons and daughters of God, spiritually born of him… is a starting place if you are going to try to define spirituality. Then it seems to me to be a feeling of nearness to God, our Heavenly Father, a devotion to his cause, and a determination to acquit ourselves to the utmost of our ability, of the responsibility he has given us in life.

The purpose of understanding spirituality as thought of by members of the Church of Jesus Christ of Latter-day Saints is to find appropriate ways to measure that spirituality using survey techniques. The fact that the generally held Latter-day Saint concept of God is quite uniform across the population and that a major dimension or outcome of spirituality as considered among Latter-day Saints has to do with a person's relationship with God. It is thought that measuring the strength and quality of an individual's relationship with God provides considerable insight into spirituality among the Seminary students. It is understood that this is only one dimension of the several proposed in modern academic circles, but this dimension is considered to be fundamental in its indication of spirituality among Latter-day Saint youth. It is argued that this, combined with the spiritual experience sub-scale which measures an experiential dimension of spirituality, provides valid measurement of the spirituality in this study.

The Spiritual Assessment Inventory

In response to the feeling that many current measures of spirituality had significant theoretical and psychometric weaknesses, Hall and Edwards (1996) developed the *Spiritual Assessment Inventory* (SAI) as a sound instrument for "clinical use by pastoral counselors and clinicians working with religiously-oriented clients" (Hall and Edwards, 1996, p. 234).

The theory behind the instrument involved a model of spiritual maturity,

> …which incorporates two distinct but related dimensions of one's self-God relationship. The first dimension is that of self-God relationship awareness. It addresses the question, 'To what degree is a person aware of God in his or her daily life?' The second dimension is the experienced quality of one's relationship with God. It addresses the question, "What is the quality of one's relationship with God?" (Hall and Edwards, 1996, p. 234)

Hall and Edwards were concerned to make sure that the resulting scales were distinct from Allport's I-E scales which, in agreeing with Kirkpatrick and Hood, they felt merely "boiled down to a measure of religious **commitment**, which had provided theoretically impoverished data and contributed little to the psychology of religion" (Hall & Edwards, 1999, p. 5). They argued that those showing high levels of intrinsic commitment might vary widely in their Awareness and Quality of the relationship with God. They also felt that measures of self-God relationship were more explanatory and theoretically interesting than measures of religious commitment.

Using this theoretical basis, 20 items for each dimension, namely Quality and Awareness, were included in the *SAI* and initial exploratory factor analysis was conducted. Three levels of the Quality dimension were developed – **Instability** ("I am very afraid that God will give up on me."), **Grandiosity** ("God recognises that I am more spiritual than most people."), **Realistic Acceptance** ("There are times when I feel angry at God, but when this happens, I still have the sense that God will always be with me."). The Awareness dimension was measured by 20 items designed to investigate the subject's perception of God's presence and influence in his or her life ("I am frequently aware of God prompting me to do something.").

As part of the development of the *Spiritual Assessment Inventory* (SAI), research was conducted to compare findings to those of pre-existing scales commonly used in psychological and religious research. For example, correlations of the *Spiritual Assessment Inventory* scales with the scales of the *Bell Object Relations Inventory* (BORI) showed positive correlation between SAI quality scales of Instability, and Disappointment and BORI Alienation, Insecure Attachment and Egocentricity scales, as might be expected. Correlations with scales from the *Spiritual Well-Being Scale* (SWBS), the *Intrinsic/Extrinsic Revised Scale* (I/E-R), the *Narcissistic Personality Inventory* (NPI) among others generally illustrated sound theoretical basis for the SAI scales. Furthermore, the findings suggested that the categories of the SAI were not duplicates of existing scales but assessed relational aspects of spirituality not measured elsewhere (Hall & Edwards, 1999).

This instrument is a good example of many recent efforts to measure spirituality as it is designed to cater for a specific belief system and seeks to tap into a very personal, relational spirituality. The items for these scales assume a belief in a personal God with whom mortals can have a recognisable relationship. The categorising of the scales narrow the target population further as it implies judgment concerning the psychological appropriateness or otherwise of the nature of that relationship with God. These aspects of this instrument make it particularly suitable for assessing aspects of the spirituality of Latter-day Saint youth.

Religious Problem Solving

Part of the purpose for this study is to try to investigate whether there is a measurable relationship among social attitudes, moral thinking, religious life and spirituality. Therefore, a measure that reflects a very practical aspect to spirituality is required in order to improve the chances of identifying relationships if they exist. One such concept of practical implications of spirituality is the Religious Problem Solving Scale developed by Pargament and his colleagues (1988). The concept of religious problem solving not only addresses a very practical aspect of spirituality but lends itself to the very personable relational dimension of spirituality as emphasised in the Latter-day Saint religion.

The Religious Problem Solving Scale

As part of an effort to understand the effects of religion on life coping skills in individuals, Pargament and his colleagues (1988) theorised that religion played a significant role in human problem-solving skills and coping with events in life, but suggested that the relationship was not clear. After conducting interviews and a literature review, they formulated three theoretical styles that religiously oriented people used when dealing with life problems: Self Directing, Deferring, and Collaborative. Regarding these styles Pargament and his fellow researchers (1988, p 91) stated,

> These three styles vary on two key dimensions underlying the individual's relationship with God: the locus of responsibility for the problem-solving process, and the level of activity in the problem-solving process.

A set of research items was developed to identify the presence of each style in the problem solving approach of individuals. Twelve items were included for each problem-solving style, making 36 items in all, and were mixed together to form a questionnaire. In total, 197 church members responded to each item on a five-point Likert scale ranging from 'Never' to 'Always.' Initial factor analysis of the scales revealed that the three subscales appeared to be valid constructs as theorised and also helped identify more clearly what each style entailed (Pargament et al., 1988, p 95). More recently Fox, Blanton and Morris (1998) reexamined the factorial structure of the scale and also found the scales to be sound.

The work of Pargament and his colleagues suggested the following three styles which religious people adopted when seeking to solve problems in their lives.

Self Directing - From this perspective of problem solving the individual felt that they were mainly responsible for solving their own problems. Although it was perceived that God was not directly involved in the process, the individual might still be religious but might have felt that God gave freedom and resources to people to deal with their own problems. This attitude might be similar to a humanistic religious approach wherein God played a passive role in human affairs and the power of man was the primary force in an individual's life.

Pargament and his team (1988) found that this style of problem solving correlated negatively with Frequency of Prayer, Intrinsic Religiousness and Doctrinal Orthodoxy, but correlated positively with Self-esteem. They suggested that the self directing style of problem solving was not an ideal one to have for traditional forms of religious expression among Christian groups (1988, p 92). Rodgerson and Piedmont (1998) found that the Self Directing style had positive correlations with Emotional Exhaustion, Depersonalisation and Neuroticism in their study of factors relating to clergy burnout.

Deferring - This style was in direct contrast to the Self Directing style of problem solving. The individual in this case deferred the responsibility for solving life's problems to God. Rather than seeking to solve their own problems, they waited for God to provide a sign or solution. Clearly, from this perspective God was the main source of solutions to life's problems rather than the person. This style might be linked to a religious attitude which "stresses the passive personal approach to the problems of this world, problems which will be resolved ultimately by God" (Pargament et al., 1988, p 92).

From a theoretical perspective, Pargament and his colleagues (1988) hypothesized that the Deferring style of problem solving would ultimately hinder the individual from confronting and dealing with personal problems, the fear being that this in turn would hinder the development of competence. This style might also be related to many of the traditional psychological criticisms of religion as a crutch. After their initial research of the problem solving styles, Pargament et al. (1988, p. 101) concluded,

> This problem-solving approach was related significantly to a lower sense of personal control, lower self-esteem, less active planful problem-solving skills, less tolerance for individual differences, and a greater sense of control by chance. Thus, this study empirically identified what may be the generally dysfunctional religious problem-solving style often alluded to in criticisms of religion. The Deferring approach seems to be part of a passively-oriented life style in which the individuals rely on external structures and authority to deal with problems which they are less able to resolve.

Collaborative - Pargament et al. (1988) noted that the most common of the responses to questioning about religious problem solving was the attitude of God being a joint

partner, working together in the solving of life's problems providing support and strength. This attitude identified the **Collaborative** style. This style could clearly be seen in the doctrine of many religions such as that of the Jewish and Christian traditions.

The study of Pargament and his colleagues (1988) reported positive correlations between the Collaborative style and Intrinsic Religiousness, Frequency of Prayer, Religious Salience, Personal Control and Self-esteem. To a lesser degree this style of problem solving was also correlated with Competence in a positive way. In the discussion of the 1988 study Pargament and his colleagues suggested that the Collaborative problem solving style reflected a more mature and balanced approach to religion and suggested that it was "an efficacious style of religious problem-solving" (p. 101).

Interestingly, Kaiser (1991) found that of all the styles the Collaborative style of problem solving correlated most with guilt feelings. However, he also found that those adopting this style were more inclined to have a sense of being forgiven. This led Kaiser to speculate that perhaps those adopting this style perceived guilt more as a step to spiritual improvement than as a negative force. Generally this would appear to be a healthy approach to the feelings of guilt normally attributed to religious life.

As the study of moral thinking and this approach to religious problem solving are both concerned with the decision making process and how decisions are made, it is thought that there is a strong possibility of finding a relationship between the two fields. Thus it is considered that the inclusion of the Religious Problem Solving Scale in this study is beneficial in seeking answers to the research questions.

Social and Moral Factors

As discussed in Chapter 3, the fields of research related to social attitudes, and thinking, including moral reasoning, is addressed on a broad front. For the purposes of this study it is necessary that a useful theoretical framework and related survey instruments are selected. Generally the survey instruments included in this study need to be valid measures of social or moral thought dimensions that are meaningful

for the answering of the key questions. Useful instruments also need to be simple and brief enough that they can be completed within a time limit and with minimal instruction. These limitations are inherent in the data collection method used in this study. It is readily acknowledged that many instruments may meet the criteria for use in this study and that those selected may not be the only useful measure in existence.

Social Attitudes and Values

In order to measure social attitudes it is clear that the already broad scope of this study does not allow for a comprehensive and in depth study of the anatomy of attitudes held by students. However, it is felt that attitudes are most important to this study in so far as they can be assumed to imply certain social actions. Therefore, in working with the theory of Ajzen and Fishbein (1980), that intention has an immediate influence on action, it is considered that the measurement of feelings or attitudes influencing intention or hypothesized action concerning certain specific behaviours may be sufficient to gain meaningful information on social attitudes and values.

The Attitudes and Values Questionnaire produced by the Australian Council for Educational Research (ACER) (1999) was seen to be appropriate for use in this study in measuring attitude toward certain desirable social values and behaviours even though only a pilot version of the instrument was available at the time this study was planned. This instrument was made up of items involving Likert scale responses of 'agreement' or 'disagreement' to a hypothesized course of action. In its complete form items were devised to reflect value dimensions such as Conscience, Compassion, Emotional Growth, Social Growth and Service to Others. Items related to Commitment to God and Commitment to Jesus could also be included.

Owing to the need to limit the length of the survey, three scale dimensions are included in this study. The dimensions selected for use are Conscience, which reflects a sense of conscience in the face of situations involving injustice or honesty, Social Growth, which reflects a social confidence and awareness aspect, and Service to Others, which reflects an intention to be aware of and concerned for the needs of

other people. These dimensions are considered to be of greatest relevance to the desired outcomes of a program such as the Latter-day Saint Seminary program.

Moral Thinking

The Defining Issues Test (DIT) (Rest, 1979) was originally considered for use in this study, however, it soon became clear that the DIT would not be the most appropriate method for gauging moral reasoning in this case. One substantial reason was simply the fact that the DIT took a large amount of time for adequate responses and required a lot of support and explanation during administration. These two requirements alone created a problem for inclusion in this study. The concerns raised by Richards and Davison (1992) that the Defining Issues Test was biased against conservative religious groups because of the nature of some of the social dilemmas included in the instrument also influenced the decision not to use the DIT in this study. Apart from these practical concerns, more theoretical concerns also played a part in deciding that this instrument unsuitable for use here, most of which had to do with the Kohlbergian basis upon which the concept of the Defining Issues Test rested.

As outlined in Chapter 3, some researchers have argued that Kohlberg's strict adherence to justice as being the only basis upon which moral decision-making was based was too confining. This was also seen as an unnecessary limitation to place on the measurement of moral thinking in this study. The assertions of Gilligan (1982), Turiel (1983), Henry (1983) and others were convincing enough to cast doubt on the sufficiency of justice as the sole basis for understanding moral thought. Hence, the theoretical basis of the DIT was called into question. Another major assertion of Kohlberg's cognitive developmental approach to moral reasoning was that the structure of moral thinking was independent of moral content. Hence, a major aim of the Defining Issues Test was to understand the structure of moral thinking independent of moral content. This again seemed to apply unnecessary restrictions on this study if the DIT were to be used. Arguably, religious influence over moral thinking would be most observable in the domain of moral content (Lee, 1980; Wallwork, 1980) and as such, it would be a mistake not to consider ways of including moral content when trying to ascertain religious or spiritual influence over moral thinking.

Henry (1980) also argued that moral structure was not independent from content and that a more reasonable basis for understanding moral reasoning was to investigate the source of moral authority referred to when moral decisions were made. Henry (see White, 2000) identified five possible sources for moral authority;

  (a) Satisfying self interest,
  (b) Family expectations,
  (c) Educator expectations,
  (d) Society's welfare, and
  (e) Equality of individuals.

Henry argued that it was the ascribed sources of moral authority, associated with what a person reasoned about rather than the way the person reasoned that really differentiated Kohlberg's stages (White, 1997). According to Henry, unlike the stage theory of Kohlberg, one authority source could not be considered superior to another, at least without reference to social norms (White, 2000).

White (1996b), wanting to investigate the contribution of family toward moral reasoning, used Henry's content sensitive moral authority approach. She argued that Kohlberg's formalistic approach and lack of content considerations in his model were too restrictive, especially when content or socialization considerations needed to be taken into account, such as when investigating family influence on moral development, for example (White, 1997, p. 322).

White (1996a) employed Henry's moral authority categories to devise a survey based instrument to measure the strength of moral authority sources. The *Moral Authority Scale (MAS)* and later the revised version (*MAS-R*) (White, 1997) involved asking a simple moral question, requesting a 'Yes – No – Can't Decide' response and then an explanation as to why the particular decision was made. The true measurement of interest was taken however, when respondents were then asked to rate how strongly certain people or principles influenced their decision in responding to the moral question. The scale consisted of six questions for which each had the response process just described.

Comparisons between Rest's Defining Issues Test (DIT) and the Revised Moral Authority Scale (MAS-R) showed some small but significant correlations between moral stages and moral authority categories (White 1997). The DIT Stage 2, for example, had a small but significant correlation with the MAS-R Educators category (r=0.14) and DIT Stage 5 also had a similar correlation with the MAS-R Society's Welfare and Equality categories (r=0.15 for both). Of interest also was the fact that both Society's Welfare and Equality authority categories correlated significantly with DIT P-index scores, which was a summing of Stages 5 and 6 scores in order to provide a generalized high moral reasoning index (r=0.17 and 0.13, respectively). White concluded that such correlations, although not strong, demonstrated that the moral authority and the DIT stage constructs had both associated and distinct aspects to them. Thus the *Moral Authority Scale* was not merely a replication of the DIT but was a valid instrument for measuring moral authority sources, providing an opportunity to investigate and argue for socialization and content consideration in moral development research (White, 1997).

The Moral Authority Scale and the concept of seeking understanding of moral thinking through identifying a morally authoritative source appears to be extremely useful to this study. It overcomes the problems and limitations of a purely cognitive structural approach while offering some consideration to moral content and socialization factors important to assessing religious education outcomes.

Considering Change Over Time

An important aspect of the final four research questions is their reference to development and change, implying change over time. This is a significant aspect of this study as it means that considerations for measuring change over time need to be included in the proposed model and the research methods adopted. The inclusion of change over time considerations in the present study means that the associated model, data gathering techniques and data analysis become much more complex and intensive than they may otherwise be, if change over time is not an element of investigation.

Although it leads to much greater complexity, it is considered that when dealing with education and training, which are primarily concerned with learning and development, a meaningful understanding cannot be reached unless some aspect of change over time is considered. Willett (1998) expressed this point clearly:

> Why is the measurement of change over time so important in educational research? The answer is straightforward. When people acquire new skills, when they learn something new, when they grow intellectually and physically, when their attitudes and interests develop, they are changing in fundamental and interesting ways. By being able to measure change over time, it is possible to map phenomena at the heart of the educational enterprise. Education is intended to foster learning, to bring about changes in attitude, achievement, and values. Only by measuring individual change is it possible to document each person's progress and, consequently, to evaluate the effectiveness of educational systems.

The educational entity in this study is the early morning Seminary program. Accordingly, the major developmental goals of this primarily religious training program are in the religious and spiritual domain. Hence, it is considered that the aspects of primary concern for this study and those most likely to yield results of greatest importance when considering change over time are the religious and spirituality dimensions. Hence, a longitudinal investigation of these dimensions is included as part of this study. It is considered that measuring these dimensions four times (i.e. in four waves) over a two year period is sufficient to allow meaningful observation while maintaining an appropriate scope for the study.

A More Detailed Investigative Model

Figure 5.2 presents the more detailed model for this study and includes the factors selected for inclusion, as discussed above, under each major area. The dimension of change over time is also represented by reference to the four survey waves or occasions the factors are measured with reference to intercepts and slopes. Background aspects to this study are represented by age, gender, home socio-economic status, family religious practice and parental bonding. The religious training and experience aspects are represented by personal religious practice, Seminary experience and religious belief dimensions. The belief and spirituality aspect of the study are represented by spirituality (relationship with God) and

religious problem solving dimensions. Finally, the social and moral aspects to this study are represented by factors concerned with social attitudes and values and moral thinking (moral authority source). It is argued that the measurement of these factors is possible within the limitations inherent in this study and can provide the necessary data to enable a meaningful contribution to understanding the answers to the research questions.
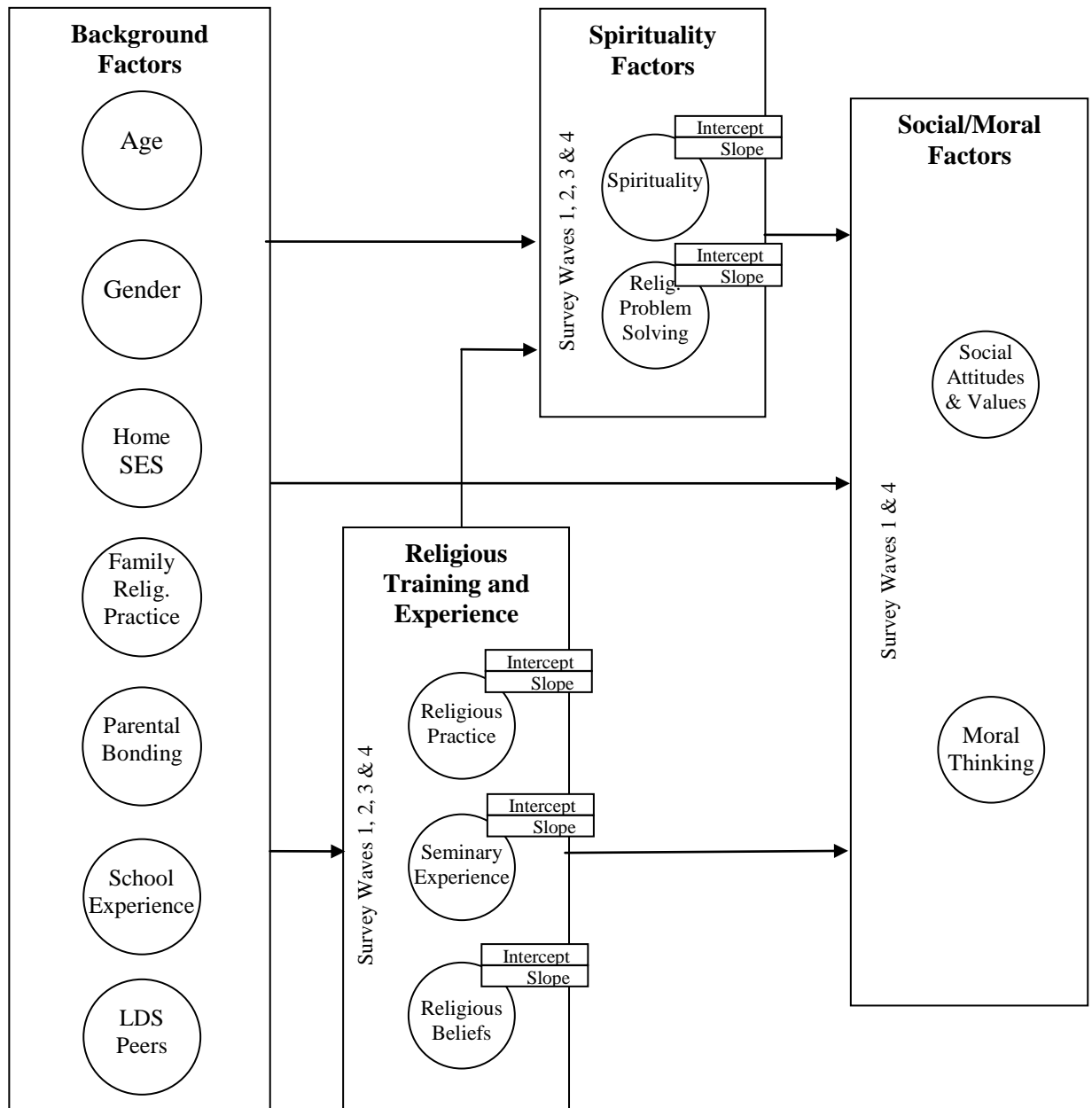
Figure 5.2 A graphical representation of the variables and proposed relationships investigated in this study.

Conclusion

In this chapter the population of interest is defined, the research questions are restated and a general model for investigation is proposed. General discussion concerning the selection of key factors, theories and survey instruments to be included in this study is also presented. Finally, a model, including specific factors to be considered in answering the research questions is presented. In many ways, this model is still not in its final form. However, the purpose for the presentation of this chapter is to enable a basic conceptual model for the investigations undertaken in response to the research questions and presented in subsequent chapters. More detailed discussion regarding the design of study, the resulting survey instruments, the methods for data gathering and possible tools for data analyses are discussed in Chapter 6.

CHAPTER 6:
STUDY DESIGN AND ADMINISTRATION

Introduction

This chapter contains a description of the design considerations and instruments chosen for the survey questionnaires used in this study based on the discussion of scales and instruments presented in Chapter 5. Considerations relevant to the design of the questionnaires are noted. An explanation of the distribution and administration of the surveys is provided. Specific scales and sample items are also presented including amendments, where necessary, resulting from scale and item analysis of piloting and subsequent survey responses. Scales are evaluated based on construct reliability as measured by reliability coefficients and person separation measures as well as Rasch model criteria such as item fit and category characteristics.

Considerations for Instrument Design and Administration

Two major considerations when designing the questionnaire for this study were to make sure that the resulting data were sufficient to address the research questions and that the model was represented adequately by the instruments and scales chosen for inclusion. However, there were also some important things to consider while designing the instruments for this study related to the circumstances of administration, especially with regard to size and complexity of the survey instrument itself.

Questionnaire Brevity

First, in order to reach as many students as possible it was expected that surveys would be completed within the 50 minutes allotted for Seminary class time. This meant that the questionnaire needed to be completed within 40 to 50 minutes. As a result the scales needed to have as few items as an adequate level of reliability would

allow. Thus, some items and scales were excluded from the questionnaire following the pilot and early surveys. Another motive for making the questionnaires as short as possible was the fear that students might become bored while completing them and either give less meaningful responses or stop participation altogether. This was also a risk in conducting four surveys over a two-year period.

Questionnaire Simplicity

Because of the large number of classes being surveyed concurrently and the geographical distances between them, it was necessary for class teachers to administer the questionnaires. This meant that any instructions to students needed to be written directly to them or conveyed by means of the teacher. As a result, complex instruments, such as those requiring detailed oral instruction, were avoided in favour of more simple, Likert style response items that were basically self explanatory.

Selecting the Sample

This study took the form of an investigation with a sample of convenience taken from the population of interest, namely, students of the Seminary program of the Church of Jesus Christ of Latter-day Saints. Every early morning Seminary class in South Australia and Victoria was invited to participate in the study provided it had an initial enrolment of at least six students. Smaller classes were excluded in order to contain costs and in an effort to improve the chances that the class would be represented adequately throughout the duration of the study.

The selection of which Australian states to include in the study was mainly on a basis of convenience. The researcher was personally involved in the Seminary program in South Australia which meant that issues of permission, questions, distribution and collection of surveys could be easily handled. Also, as well as Victoria's closer proximity to South Australia, the program coordinator in Victoria had conducted similar research previously, was very supportive of this study and had the necessary experience to deal with local issues concerning the survey completion, administration and collection.

Scheduling the Surveys

The study was designed to entail four surveys to be administered over a two-year period. It was decided that the best times to administer the surveys would be near the beginning of the Seminary year, following the initial settling in period, and towards the end of the Seminary year, before a winding down period. Accordingly, in keeping with the Seminary calendar, which normally had classes running from the beginning of February to the end of October each year, the surveys and accompanying documentation were sent according to the schedule outlined in Figure 6.1.

Slight variation in dates of corresponding surveys occurred in order to coincide with regularly held faculty meetings, wherein completed surveys could more easily be returned by teachers. It was considered that such a strategy would improve return rates. This was especially important in Victoria where teachers would otherwise have had to return the surveys by post.

PILOT	**SURVEY 1**	**SURVEY 2**	**SURVEY 3**	**SURVEY 4**
16th July 2001 All Scales	16th Feb 2002 Background Factors, Religious Training & Experience, Belief /Spirituality Factors, Social/Moral Factors	18th Sep 2002 Religious Training & Experience, Belief /Spirituality Factors.	5th Mar 2003 Religious Training & Experience, Belief /Spirituality Factors.	4th Sep 2003 Background Factors, Religious Training & Experience, Belief /Spirituality Factors, Social/Moral Factors

Figure 6.1 Diagrammatical illustration of survey administration dates and content.

Ethics Committee

The study plan was presented to the Flinders University Social and Behavioural Research Ethics Committee. Permission was granted to administer the study provided individual envelopes were issued to every respondent so that completed surveys could be immediately enclosed for privacy and anonymity purposes. It was also required that parents were informed of the research being conducted in advance so that any concerns could be voiced and students be withdrawn from participation if desired. These two requirements were met in the administering of the surveys.

Administering the Surveys

Once potential classes were identified, each teacher of those classes was sent a packet that contained letters addressed to the teacher and parents along with a sufficient number of survey forms for students in the class. Sealable envelopes were also included for students to enclose completed surveys.

Teachers were instructed as to the purpose of the study, the manner of administration, including the need for students to seal the completed forms in the envelopes provided, and the need for parents to be given a copy of an explanatory and introductory letter and to grant permission for their child to take part. Teachers allowed a full class session (50 minutes) for Survey 1 and Survey 4 and were invited to set aside part of a class session for Survey 2 and Survey 3 which only contained the religious elements of the study.

The order of items and instruments was varied from survey to survey in order to assist students to respond with thoughts that were as independent as possible from the influence of previous surveys.

Testing and Developing the Scales

Pilot Testing

It was planned that the major surveys for this study would be conducted in South Australia and Victoria, therefore classes in a different Australian state were chosen to participate in the pilot study and Seminary classes in Queensland were invited to participate in the piloting phase of the study. In an effort to provide socioeconomic and cultural variety, The Church Educational System coordinator in Queensland nominated four general areas from which all classes with more then six students enrolled were selected for participation. A total of 31 classes were invited to participate.

A draft survey questionnaire was prepared, which included all scales and instruments expected to be used for the major survey phases. Each class was posted a package which contained instructions for the teacher, survey instruments for students and other necessary documentation.

The resulting sample consisted of 245 students from 24 classes with an average responding class size of 10.2 students. Of the student sample, 111 (45 per cent) were male and 134 (55 per cent) were female. The average age of students was just over 15 years old.

A copy of the pilot study instrument is included in Appendix A.

The piloting process led to several minor changes to scales and items, the details of which are included in the description of scales and items below.

The Use of Rasch Scaling

It was decided when planning this study that the value of using the item response theory based Rasch modelling technique for data analysis would be investigated.

Although the Rasch model has been used sufficiently in recent research to make a full explanation unnecessary here (see Bond & Fox, 2001; Wright & Linacre, 1989),

a review of the benefits of using this model for the forming of scales in this study may be useful.

Ordinal Versus Interval Data

Rasch scaling is a means of converting ordinal data, such as that gathered by rating scale survey techniques similar to those used in this study, into interval data through application of the logistic function.   The resulting interval data is more appropriate for use in statistical analysis that involves the measurement of change over time (Wright & Linacre, 1989). An added benefit to such a transformation is that the resulting interval data has the effect of extending the scale beyond the limitations of the ordinal categories, particularly at the extremes, which can provide a more meaningful discrimination of cases, assist the strength of scale relationships as well as assist in alleviating any ceiling effects caused by extreme responses to scale items.

Specific Objectivity

The fact that Rasch scaling provides independent estimates of both person location and item difficulty (Green & Frantom, 2002) creates a measure that treats a person's characteristic or ability independently from the specific items used to measure it. One advantage of this independence of item location from sample characteristics is that the results of separate samples using the same items (or even some of the same items) can be equated. This is particularly useful when considering change over time as data from non-identical samples of items can be compared on a seemingly objective measure and equated in a statistically meaningful way. Another advantage related to the specific objectivity characteristic of Rasch scaling is the fact that, within reason, missing data does not affect the usefulness of a measure because scale scores can be based solely on existing valid item responses. Therefore, to a large degree, the need for missing data replacement techniques is removed.

In order to use the Rasch model appropriately for collected rating scale data some requirements regarding the nature and structure of the data must be satisfied.

Unidimensionality

In order for the Rasch model to be meaningful it is important that every scale reflects only a single construct or attribute. Without this single dimension within scales using the Rasch model, measures of person ability or item difficulty have unclear

meaning and therefore are of little use when relating such measures to the real world (Bond & Fox 2001, pp 24-25).

Item Fit

One possible indication of whether items form a unidemensional construct is the degree to which items and cases fit the statistically ideal Rasch model. Rasch infit and outfit statistics assist in ascertaining to what degree items or cases fit expected responses. Infit statistics give more weight to on-target responses as opposed to outfit statistics which are more sensitive to outlying scores. Items are considered to fit the model if the level of discrimination lies within a specified band of acceptability, that is, they neither over discriminate nor under discriminate. Statistics that assist in ascertaining level of fit in the Rasch model include the infit mean square and outfit mean square statistics. Although opinion varies, it is generally considered that items (or cases) with infit or outfit mean square values of between 0.77 and 1.30 (Masters & Keeves, 1999; Adams & Khoo, 1993) can be assumed to fit the model, a value of 1.00 indicating ideal fit. More recently, less stringent ranges for mean square values have been proposed as a rule of thumb for rating scale type survey items (Bond & Fox, 2001, p. 179). Standardized infit and outfit statistics, for example infit t, can also be used to indicate item fit with an expected value of zero and variance of one. Generally, standardized fit values of between -2.00 and 2.00 are accepted as sufficiently fitting the model (2001, p. 230). Standardized fit statistics are not considered in evaluating item fit in this study owing to their tendency to be overly rigorous for larger sample sizes.

Rating Scale Categories

Where rating scales are used, such as in this study, it is important that certain basic principles regarding categories are adhered to in order to improve the likelihood that Rasch measures are meaningful and consistent. Category responses need to reflect the intended progressive nature of the levels of the rating scale. This can be examined by analysing the mean ability, or measure, of cases on the logit scale for each category of an item. Person mean ability ought to progress along the continuum implied by the category labels. Related to the observation of case ability within categories is the analysis of threshold or step calibration values, which indicate the point at which the probability of a person choosing a particular category becomes higher than for adjacent categories (see Bond & Fox, 2001, p. 163). As with

category ability, thresholds need to increase monotonically along the underlying continuum, ideally with regular and sufficient spacing. If category thresholds or mean ability scores are not in correct theoretical order, then it may be necessary to collapse categories and reanalyze the data in order to meet the requirements of the model better. Underlying much of what can be analysed regarding the acceptability of rating categories is the need for each category to have a high enough number of responses in order to provide adequately reliable observations regarding those categories. Too few responses within a category may also provide grounds for collapsing adjacent categories, although this is generally considered to be undesirable.

The Survey Instrument: The Selection of Items, Scales and Instruments

Specific items, scales and instruments were selected to represent each factor included in the research model described in Chapter 5 as part of the survey instrument for this investigation (see Figure 5.2). Several other background variables were included in the survey instrument, although not discussed as part of the model, in order to provide contextual information for a more thorough description of the sample as well as the option to investigate other possible relationships. Theoretical descriptions and justifications for the inclusion of each instrument are outlined in this study are considered in Chapter 5. A copy of the questionnaire and a list of scale items used in this study are included in Appendix B. Descriptions of instruments, scales and items, along with the decisions for inclusion of specific scales or items, are discussed below. Relevant details regarding the statistical acceptability of the scales are also presented.

Test of Scale Structure, Reliability and Fit

Scales were subjected to the following analyses in an effort to assess scale structure, reliability and fit.

Principle Components Factor Analysis

Item loading and scale structure were analysed using principle components factor analysis using the SPSS (version 11.5) statistical analysis computer package. Missing items were deleted list wise. A single factor with an eigenvalue significantly larger than other proposed factors and item loadings demonstrating meaningful contribution to a single factor (loading > 0.30) were considered to be evidence for an acceptably unidimensional scale. This was not sufficient alone, however, to imply fit for the Rasch model until further analysis was conducted. Principal components factor loadings for each item are listed in Table B.1 of the Appendices.

Cronbach α Scale Reliability Test

Scales were tested using the classical test theory Cronbach α scale reliability analysis in the SPSS (version 11.5) statistical analysis computer package. Cronbach α values greater than 0.70 were considered acceptably reliable in this study (de Vaus, 1995).

Rasch Scale Analysis

Data from the four survey waves were pooled together and, because intervals between surveys were considered to be sufficiently long, cases were treated as independent (see Bond & Fox 2001, p. 135). This allowed longitudinal data to be compared on the same logit scale and permitted direct comparisons to be made. Rasch scale measures were calculated using RUMM 2010 software (Andrich, Lyne, Sheriden & Luo, 2000). Tests of reliability and observations of goodness of fit were also conducted using the QUEST (version 2.1) software (Adams & Khoo, 1993) with the exception of person separation index which was obtained from the RUMM (version 2010) Rasch modelling software. Case and item reliability measures greater than or equal to 0.70 were considered indicative of a reliable scale. Infit mean square and outfit mean square indices were used to ascertain item fit and values values between 0.77 and 1.30 (Masters & Keeves, 1999; Adams & Khoo, 1993) were considered to indicate acceptable fit to the model. Appropriateness of category order and structure was also considered based on observations of category mean ability levels and threshold (Tau) values.

Table 6.1 contains general information regarding the structure and reliability of each scale. The information contained in each column of Table 6.1 is explained below.

Number of Valid Cases – Reported from RUMM 2010 output, indicating the number of non-extreme cases available for reliability and fit analysis. Since socially based items were only included in Survey 1 and Survey 4, fewer valid cases are reported for these scales.

Number of Items – This column contains the number of items for each scale meeting the criteria of Infit Mean Square greater than 0.77 and less than 1.30, as calculated by QUEST (version 2.1) software, and are subsequently included in the scale used in this study.

Cronbach α – This column contains values obtained from the Classical Test Theory measure of scale reliability calculated from raw data using the SPSS (version 11.5) software, prior to Rasch scaling.

RUMM Person Separation – The RUMM 2010 Rasch scaling software reports an internal consistency statistic labelled Person Separation Index bounded by 0 and 1. This appears to be the measure referred to in other literature (see Bond & Fox, 2001) as the Person Reliability Index, rather than the common concept of the Person Separation Index which can range from 0 to infinite. As a result, reference to the Person Separation Index reported by the RUMM software is labelled the RUMM person separation index in this study. Values in this column reflect RUMM person separation values based on the final model containing the number of items reported in the Number of Items column.

Case and Item Reliability – These columns contain case and item estimate reliability measures as reported by QUEST (version 2.1) analysis. The QUEST case reliability measure is included in the table for comparison reasons and is not used as the primary source of Rasch model reliability information.

Person Mean – This column contains the mean logit score of all cases or students examined. Although the mean measure of cases (person mean) is preferably close to the item mean of zero, the actual mean value is included in this column as an indication of skewness in the scale with respect to item difficulty levels.

<u>Item Thresholds</u> – This column contains threshold values as obtained from the QUEST report of Tau statistics. The Rasch rating scale model is used for this analysis, therefore the spacing of thresholds is held to be the same for each item.

More specific item level information, including factor loadings, Rasch item difficulty measures and fit statistics is contained in Table B.1, which is included in Appendix B of this volume.

Antecedent and Background Factors

Single Item Variables

Variables were categorized as antecedent variables if they were not expected to change significantly over the four survey process or were mainly relevant in the initial phase of the study in order to provide relevant contextual information. Many of these variables were represented in the survey by single items. These single items were designed to gather information on such things as gender, date of birth, student employment, family circumstances (including parents' employment status), time as a church member, feelings and plans about school, hours spent watching television and the proportion of peers who were Latter-day Saints. Apart from the inclusion of a question asking for date of birth in order to assist in matching longitudinal data to specific students, these items remained unchanged following the pilot study. In Appendix B a full list of these items as used in the main surveys for this study is given.

Family Religious Practice

A single scale of seven items was designed to measure the religious practice occurring in the homes of students. This measure was also considered as part of the background information, although it was included in all four survey waves. Five items were taken from the Religion and Family Survey conducted by Top and Chadwick (1998). These items addressed such practices as family prayer, family scripture study and family religious discussions in the home. Participants responded by identifying how often certain practices occurred in their home using a five category Likert scale with descriptions ranging from 'Never' to 'Very Often'. The five item version of this scale yielded a Cronbach α reliability coefficient of 0.79 after piloting, suggesting that this scale was acceptable in terms of reliability

Table 6.1 Scale Person, Item and Reliability Data

Scale Description	Number of valid cases	Number of Items	Cronbach α	RUMM Person Sep'n	Case Reliab'y	Item Reliab'y	Person (Case) Mean	Item Thresholds			
								1	2	3	4
Family Religious Practice	1012	7	0.88	0.89	0.80	0.97	1.06	-1.2	-0.7	0.5	1.3
Mother's Care	528	10	0.84	0.87	0.75	0.94	1.02	-0.8	-0.1	0.9	
Mother's Overprotection	565	8	0.81	0.82	0.77	0.97	-0.55	-1.2	0.1	1.1	
Father's Care	523	11	0.87	0.88	0.82	0.94	0.75	-0.9	-0.1	1.0	
Father's Overprotection	532	8	0.79	0.82	0.76	0.96	-0.47	-1.1	0.2	0.9	
Private Religious Practice	958	5	0.75	0.78	0.69	0.93	0.54	-1.1	-0.3	0.7	0.7
Public Religious Practice	1042	4	0.60	0.66	0.56	0.99	1.91	-2.1	-0.2	0.7	1.6
Seminary Participation	1026	4	0.71	0.75	0.62	0.97	1.15	-1.5	-0.7	0.6	1.7
Seminary Quality	1012	4	0.87	0.88	0.81	0.98	1.20	-2.6	-1.1	1.0	2.7
Religious Belief	437	7	0.89	0.92	0.68	0.86	1.93	-1.7	1.7		
Religious Discontent	1030	5	0.93	0.77	0.63	0.95	-0.55	-1.1	-0.1	1.2	
Spiritual Experience	907	6	0.83	0.84	0.67	0.98	1.05	-1.2	1.2		
Religious Interest	915	6	0.87	0.84	0.72	0.98	2.51	-2.2	-0.2	2.4	
Self Directing – RPS	1009	6	0.87	0.85	0.83	0.84	-0.12	-2.3	-0.9	0.8	2.3
Deferring – RPS	1006	5	0.82	0.92	0.76	0.84	-0.84	-2.5	-0.6	1.2	1.9
Collaborative – RPS	1033	5	0.91	0.89	0.87	0.89	0.41	-3.7	-1.1	1.4	3.4
Awareness of God	985	10	0.94	0.94	0.89	0.95	1.15	-2.4	0.2	2.2	
Disappointment with God	822	7	0.90	0.90	0.76	0.95	-1.42	-1.5	0.3	1.3	
Insecurity with God	1034	9	0.84	0.83	0.76	0.97	-0.85	-0.8	0.1	0.7	
Conscience - Attitude	570	10	0.80	0.79	0.76	0.94	1.13	-1.2	-0.5	1.7	
Social Growth – Attitude	572	10	0.61	0.67	0.64	0.93	0.76	-1.2	-0.4	1.7	
Service to Others - Attitude	567	9	0.85	0.82	0.81	0.76	1.50	-2.6	-0.5	3.1	
Justice – Moral Authority	525	6	0.85	0.86	0.73	0.89	0.95	-1.1	-0.4	0.2	1.3
Family – Moral Authority	556	6	0.86	0.88	0.81	0.90	0.00	-1.4	-0.5	0.3	1.6
Society – Moral Authority	592	5	0.80	0.83	0.75	0.72	0.29	-1.4	-0.4	0.4	1.4
Others – Moral Authority	512	5	0.88	0.89	0.79	0.19	-0.61	-1.7	-0.5	0.5	1.8
Self – Moral Authority	566	6	0.80	0.82	0.79	0.89	0.06	-1.3	-0.3	0.3	1.3

if left as it was, however, one item was amended and two other items were added following piloting in order to add an element which considered parental interest in the child's religious life. The amended scale appeared to yield what was considered to be reliable and valid scores for ascertaining family religious practice.

Table 6.1 shows that pooled data from the four surveys for this scale has a Cronbach α reliability coefficient of 0.88 indicating that reliable scores are being obtained from the scale. Furthermore, factor analysis results reveal evidence of a unidimensional scale with all items loading significantly. Rasch scale analysis also indicates that the resulting scale is adequate (all reliability measures above 0.70) and that all five categories are discriminating in an acceptable manner. Overall, the data appear to indicate that this scale has more than acceptable levels of reliability and fits the Rasch model to an acceptable level.

Parent-Child Relationship: Parental Bonding Instrument

Another set of background variables included in the survey was termed the 'Parental Bonding Instrument' (Parker, Tupling & Brown, 1979). This instrument was included in the questionnaire to provide an indication of the quality of the relationship between Seminary students and their parents. The instrument, as used in this study, initially consisted of 50 items. Twenty-five items related to the mother and 25 identical items related to the father. After piloting, the number of items was reduced to 24 because to one item did not contributing conceptually or to scale reliability. Four scales were tested for reliability after piloting and subsequent surveys; Father's and Mother's Caring (12 items each), and Father's and Mother's Over-Protection (12 items each). A reliability analysis of the pilot study data showed the Cronbach α indices were greater than 0.79 for all scales.

Observations of the pooled data from the four surveys suggest that all scales are composed of a single factor (although there is a slight tendency for reversed items to load slightly onto a second factor) with all items contributing. Scale reliabilities using both Cronbach α and Rasch case reliability measures indicate acceptable levels (see Table 6.1). Some items are excluded from each scale due to poor Rasch model fit leaving 10 items in the Mother's Care scale, eight items in the Mother's Overprotection scale, 11 items in the Father's Care scale and eight items in the

Father's Overprotection scale. All remaining items in the four scales appear to meet the requirements of the Rasch model.

Religious Practice and Training

Two factors were included in the model for this study to indicate the religious activity of Seminary students. These factors sought to measure personal religious activity, both public and private, and the quality of the Seminary experience, which sought to measure Seminary participation and feelings.

Religious Practice

The original scale used to identify religious practice consisted of 11 items. Students indicated the frequency of participating in the religious activity identified by each item by way of a five-category Likert scale ranging in frequency categories of 'Never' to 'Very Often'. Items addressed such practices as church attendance, private scripture study, payment of church donations, fasting and private prayer. After piloting, two items were removed, because of poor fit to the scale, leaving nine items. The resulting single scale appeared to be reliable, having a reliability coefficient (Cronbach α) of 0.79, when data from the four major surveys were analysed together, and having a RUMM person separation index of 0.79 for the Rasch scaled version.

Although the Religious Practice scale could possibly be satisfactorily used as an indication of student religious practice, it became clear that two distinct scales existed among the items and that it would be more appropriate and meaningful to split the scale into two scales which differentiated between public religious practice and private religious practice. Using two separate scales also improved the likelihood of meeting the scale unidimensionality requirement of the Rasch model.

Public Religious Practice - The four items of the Public Religious Practice scale yielded a reliability coefficient of less than 0.70 (Cronbach α = 0.60) using combined major survey data, suggesting that this scale's reliability was marginal. The corresponding measure of the Rasch scaled data (RUMM Person Separation) was 0.66 which is just below the generally accepted level of 0.70. Apart from the relatively low reliability values, the Public Religious Practice scale met all other

criteria for a usable scale in this study, including Rasch model fit and response category requirements. Because this scale represented an important aspect of this study, it was considered that, in spite of marginal reliability statistics, the scale would continue to be used in this study, albeit with caution.

Private Religious Practice - The five items of the private religious practice subscale had a Cronbach α of 0.75 using pooled data from the four major surveys, which indicated a relatively moderate yet acceptable level of reliability. The Rasch scaled version of the scale had a RUMM person separation index of 0.78. The scale and category structure appeared to be appropriate and item fit mean square values were within the acceptable range (see Table 6.1).

Seminary Experience

The instrument used to measure Seminary participation and experience in the pilot questionnaire contained Likert scale items with four categories ranging from 'Strongly Disagree' to 'Strongly Agree'. The items sought to gauge such things as participation in class discussion, learning of key scriptures, attentiveness in class and feelings about Seminary attendance. Response data from the pilot study indicated that the single scale of 13 items was sound in terms of reliability (Cronbach α = 0.87).

For purposes of clarity and consistency the response categories were modified following the pilot study to measure frequency of practices or feelings rather than agreement with suggested practices or feelings. It was also thought that such response categories were more in line with meeting the research requirements. The new scale consisted of 12 items, one item was dropped because of poor fit in the pilot version, with five Likert response categories that ranged from 'Never' to 'Very Often'. Data collected during the first survey indicated that the new version of the scale was quite reliable (α = 0.89) but consisted of two distinct scales representing Seminary participation and what might be called Seminary quality factors. When broken into these separate scales of Seminary Participation and Seminary Quality both subscales had satisfactory levels of reliability with α = 0.78 and α = 0.83 respectively using the pilot data.

Using pooled data from the four major surveys the two scales, Seminary Participation and Seminary Quality, required items to be dropped because of poor Rasch model fit. The resulting scales both contained four items and had satisfactory reliability levels according to both Cronbach α ($\alpha = 0.71$ and 0.87 respectively) and Rasch scale statistics included in Table 6.1, with the exception of the QUEST case reliability measure that showed a value of 0.62 for Seminary Participation. Both scales also met scale and category criteria for the use of the Rasch model as described above.

Religious Feelings and Beliefs

Four scales were included in the part of the questionnaire used for measuring religious belief and related aspects. These items were largely based on items used by Top and Chadwick (1998) which, in the current study, were categorised into scales representing Religious Belief, Religious Interest, Spiritual Experience and Religious Discontent. Items included such statements as, "There is life after death," "There have been times in my life when I felt the Holy Ghost," "My relationship with God is an important part of my life," and "I just can't measure up to Church standards." Participants responded to items by registering their agreement level using a four category Likert scale ranging from 'Strongly Disagree' to 'Strongly Agree'.

Religious Belief - The Religious Belief scale was designed to assess the degree to which a student held to orthodox Latter-day Saint beliefs in areas ranging from accepting books of scripture to the existence of the devil. A generally high level of doctrinal agreement among the members of the pilot sample meant that many items were skewed, when analysing the pilot data. In order to try to resolve the issue of high skewness in items, two items were dropped while other items were more thoroughly intermingled among other scale items in the instrument. This had a marginal effect on solving the skewness problem.

Reliability measures of the pilot study data suggested a high level of reliability ($\alpha = 0.87$). Following all four surveys it was noted that some item response categories had an insufficient number of responses to satisfy Rasch model criteria. As a result the two lowest categories were collapsed together leaving three categories (two thresholds) for the scale. Reliability analysis using data from the four major surveys

suggested that similar levels of reliability were maintained throughout the study (Cronbach $\alpha = 0.89$ and person separation index $= 0.92$).

Religious Interest - Items designed to indicate the level of current and long-term commitment of students to their religious life were grouped to form the Religious Interest scale. The scale originally consisted of five items, but a further item was added following the pilot study. Scale reliability analysis after the four major surveys using combined data indicated a reliable scale with a Cronbach α coefficient of 0.87 and a Rasch model RUMM person separation index of 0.84. Item infit and outfit mean square statistics indicated a sufficient level of fit to the Rasch model and item categories met the requirements of increasing monotonically along the scale.

Spiritual Experience - Items that described experiences of a spiritual nature such as answers to prayer, having felt the Holy Spirit and feelings of repentance were grouped to form the Spiritual Experience scale. Initially, this scale consisted of only four items and yielded a Cronbach α reliability coefficient of 0.74, which was marginally acceptable. Two more items were added to the scale in order to improve reliability and theoretical content. Following the four major surveys it was noted that the lowest categories of at least two items had mean ability scores out of sequence. The solution was to collapse the lowest two categories of all items and reanalyze the scale. All other requirements for the Rasch model were met. The resulting reliability measures of 0.83 for the Cronbach α coefficient and 0.84 for the RUMM person separation were estimated.

Religious Discontent - Items that carried implications of negativity or discontent towards religious expectations or lifestyle were grouped to form the Religious Discontent scale. The scale showed an acceptable level of reliability with pilot data yielding a Cronbach α coefficient of 0.80. Following the major surveys, the pooled data yielded a Cronbach α of 0.93 and a RUMM person separation index of 0.77. All other requirements for a meaningful Rasch scale were met (see Table 6.1).

Spirituality

Variables designed to account for the religious belief and spirituality aspect of this study included Spirituality, which was associated with the awareness and quality of

an individual's relationship with God, and Religious Problem Solving, which involved identifying how an individual related to God while solving problems in life.

The *Spiritual Assessment Inventory* (Hall & Edwards, 1996), discussed in Chapter 5, was used in the questionnaire to gauge the spirituality of Seminary students on the basis of their awareness of God playing a role in their lives and the quality of their relationship with God. Students responded to items by way of a four category Likert scale with responses ranging from 'Not at all true' to 'Very True'.

The pilot version of the instrument consisted of 49 items in five scales; Awareness of God, Disappointment with God, Insecurity with God, Realistic Acceptance of God, and Spiritual Grandiosity. It became evident following the pilot study that the number of items needed to be reduced and that the Realistic Acceptance scale items involved concepts that the Latter-day Saint students had trouble relating to. Following the first two major surveys it was also decided that the Grandiosity scale ought to be dropped because of the high number of inconsistent responses. Adding to the decision to exclude the two scales was the fact that neither scale specifically contributed to investigating the specific research questions. The Awareness of God scale was reduced from 19 items to 11 and the Realistic Acceptance and the Spiritual Grandiosity scales were excluded from the major surveys. As a result of these changes the Spiritual Assessment Inventory was reduced to 33 items for the first two major surveys and 27 for the remaining two surveys.

Awareness of God

The Awareness of God scale was designed to measure the quality of the relationship with God by seeking responses concerning a person's awareness of God being present in their lives. Items included such phrases as, "I have a sense of how God is working in my life," and "I am aware of God attending to me in times of need." Reliability analysis of the 19 item version of the scale used for the pilot study yielded a Cronbach α coefficient of 0.96, suggesting a very reliable scale. It was found however, that the number of items could be reduced to 11 with very little loss in reliability or the conceptual meaning of the scale (Cronbach α = 0.94 and RUMM person separation index = 0.94 using combined major survey data). The emphasis of Hall and Edwards (1996) on the psychometric quality of the scale appeared to be

reflected in the sound scale structure and Rasch model fit observed in this analysis (see Table 6.1 and Table B.1).

Insecurity with God

The Insecurity with God scale was designed as a quality measure of a person's relationship with God. The nine items in the scale addressed such issues as feeling God is angry, worrying about being left out of God's plans, and fearing God's retributions for sin. Reliability analysis of the pilot study and major surveys suggested that the scale was reliable with pilot data yielding a Cronbach α coefficient of 0.82 and subsequent combined survey data yielding a reliability coefficient of 0.84 using either Cronbach α and RUMM person separation index of 0.83 for Rasch scaled data. Item fit and category structure was considered to be acceptable for Rasch model use.

Disappointment with God

The Disappointment with God scale was designed to measure the quality of the relationship with God by gauging a person's disappointment with God. The seven items composing the scale addressed such feelings as feeling angry with God, feeling betrayed by God, frustrated at God and let down by God. The reliability coefficient for the scale using pilot data (Cronbach $\alpha = 0.86$). Following the four major surveys, the reliability coefficient using pooled survey data was $\alpha = 0.90$ and Rasch model RUMM person separation index of 0.90, indicating a very reliable scale. Rasch model item fit and category structure were also found to be acceptable.

Religious Problem Solving

The Religious Problem Solving Scale was included in the questionnaire for this study to gauge the practical interface between spirituality and problem solving in life. Three scales were included in the instrument, each representing a particular style of relating to God when dealing with life's problems. The short 18 item version of the scale (Pargament et al., 1988) was used for this study because of considerations of questionnaire brevity. The three scales, Collaborative, Self Directing and Deferring religious problem solving styles, each consisted of six items. Participants responded to items by way of a five category Likert scale with response statements ranging in frequency descriptions from 'Never' to 'Very Often'. Reliability analysis suggested that all three scales, Self Directing, Collaborative and Deferring, were reliable

according to pilot data (Cronbach α = 0.76, 0.92 and 0.83 respectively). Similar analysis following the four major surveys showed similar reliability coefficients for the three scales (Cronbach α = 0.87, 0.91 and 0.82 respectively). The reliability of Rasch scaled measures was confirmed by the corresponding RUMM person separation indices that were calculated to be 0.85, 0.89 and 0.92. Although one item was deleted from both the Collaborative and Deferring scales because of poor Rasch model fit, all item fit statistics and category progression for remaining items were sufficient for meeting the requirements of the Rasch model.

Social Attitudes and Moral Thinking

The social and moral dimensions were included in this study in order to provide some measure of adherence to generally accepted positive social and moral attitudes and behaviours. The instruments designed for inclusion served to measure several favourable attitudes and behaviours treated as indicators for the purposes of responding to the study questions. The ACER Attitudes and Values Questionnaire (ACER, 1999) was selected to provide information on students' attitude and intent towards social conscience, service to others and social confidence issues. The Revised Moral Authority Scale (White, 1997) was selected for inclusion in the study to provide a measure of moral thinking based on what authority or influence was referred to by an individual when making moral decisions.

Social Attitudes: The ACER Attitudes and Values Questionnaire

The *Attitudes and Values Questionnaire* (ACER, 1999) was designed to measure specific socially desirable values by asking respondents for their level of agreement to certain relevant statements or proposed actions. Students responded to each item by way of a four category Likert scale ranging in agreement level from 'Strongly Disagree' to 'Strongly Agree'. Thirty-two items were selected for inclusion in the pilot study version of the instrument, although the original version of the instrument contained many more items. One item was dropped following the pilot survey because it did not contribute to the reliability of the scale, leaving 31 items for inclusion in the major surveys.

Service to Others - The Service to Others scale consisted of ten items initially and was reduced to nine items following the pilot study. Items in this scale included

statements such as, "I have a responsibility to help others," and "I would be willing to donate money to a needy cause." Reliability analysis of the pilot data suggested that the scale was reliable (Cronbach $\alpha = 0.87$). Reducing the number of items by one for the major survey meant only a slight decrease in reliability ($\alpha = 0.85$ and person separation index = 0.82) when using pooled data from the first and last surveys. All other criteria for acceptable item fit and category characteristics appeared to be met for use of the Rasch model.

Conscience - The conscience scale consisted of ten items in the major surveys. Items in this scale consisted of phrases such as, "I would feel bad if I had been involved in bullying another person," and "If I saw someone trying to steal a car, I would alert someone." Combined major survey data suggested that the scale was reliable (Cronbach $\alpha = 0.80$ and RUMM person separation index = 0.79) and item characteristics appeared to be satisfactory for Rasch model requirements.

Social Growth - The Social Growth scale consisted of 12 items in the major surveys. Items included such statements as, "I like meeting new people," "I feel confident to express my opinion," and "I am loyal to others even when they're not around." The results of reliability analysis indicated marginal reliability ($\alpha = 0.68$) using pilot study data. Because the α coefficient was close to the acceptability threshold of 0.70 and the fact that after Rasch scaling the person separation index was calculated as 0.72 (just above the critical value) it was decided to continue using the Social Growth scale in the major surveys, with the understanding that caution was required when drawing conclusions based on the scale. However, analysis using pooled data from the first and last surveys showed that reliability as measured by both Cronbach α and Rasch reliability measures all showed reliability statistics below 0.70 (see Table 6.1). Furthermore, the unidimensionality of the scale was in doubt following the principle component factor analysis, in which evidence suggested that at least two dimensions existed in the scale. Because of confidence in this scale's structure and reliability, and the fact that it was not essential to the aims of the study, it was considered best to exclude the Social Growth scale from further analysis.

Moral Thinking: The Revised Moral Authority Scale

The Revised Moral Authority Scale (White, 1997) was used in the survey instrument to collect data relevant to the Moral Thinking factor of the model. The instrument

consisted of six simple moral questions such as, "Should scientific research which harms people or natural environment be allowed?" Participants then responded to each question by circling 'Yes', 'No' or 'Can't Decide'. Space was then provided for participants to write why they had selected a particular answer. This initial process acted as an introduction to the final part of each question. Participants were then required to respond to a series of statements that represented various types of moral influence such as self interest (Self), the needs of society (Society), a sense of fairness (Justice), family (Family) or others including friends, media, and teachers (Others). A statement regarding the influence of God's view on the moral decision making of participants was added for the pilot version of the study. However, the results suggested that responses to this statement were too strong and the inclusion of this statement tended to detract from other statements. The statement relating to God's will was therefore excluded from the instrument used in the major surveys.

Participants responded to these items using a latent characteristic that involved the amount of influence each consideration had on their decision in responding to the moral question. Initially the scale consisted of 11 categories, zero to ten, representing 'No Influence' to 'A Powerful Influence'. Piloting revealed that the items became more useful by collapsing 11 categories into seven categories. As a result the version of the instrument used in the first wave of the major survey contained seven response categories, coded zero to six. Related statement items were combined to form five scales of six items with the labels of Society, Justice, Family, Others and Self Interest. All five scales yielded evidence that indicated a sound level of reliability, especially when the seven response categories were used. Combined major survey data showed Cronbach α values for all five scales greater than 0.80. The Rasch scaled version of these scales yielded RUMM person separation indices of greater then 0.82 suggesting all scales were very reliable (see Table 6.1). One item was excluded from each of the Society scale and the Others scale because of poor fit to the Rasch model. All other requirements for the Rasch model were met.

A Note on the Level of Explanation of Data Analysis Procedures

The subsequent chapters involve analysis of data using computer programs that are increasingly being employed in the multilevel and multivariate analysis of survey data and brief references are provided to the source and method of analyses and operations undertaken. It may be expected that a more detailed account of these analytical procedures is given in this or other chapters. However, due to the breadth of this study and because appropriate articles providing such information are now readily available (see Keeves, 1997), a detailed explanation of each analysis technique is not provided here.

Conclusion

This chapter provides details regarding the distribution and administration of the survey questionnaires used in this study, providing a context for the reader prior to the analysis of data and the discussion of findings that are presented in later chapters. The initial inclusion and subsequent refinement of scales are also discussed. Results from both classical test theory and Rasch scale statistical techniques are reported and indicate that the final forms of the scales included in this study are adequately reliable and meaningful for investigating the proposed model and responding to the research questions. However, it ought to be noted that the pooling of data from more than one administration of the same items serves to inflate the estimates of reliability recorded when compared with a single administration of a scale, because the responses of the students is correlated through replication. Nevertheless many of the analyses involve replication of measures with the use of so-called 'dummy variables' to separate out the effects of replication in the analyses, therefore the inflated reliabilities reflect in these cases the ways in which the scales are employed. Consequently, the estimates of reliabilities have relevance in these analyses.

The next chapter contains a description of students' participation in the study by way of an analysis of background and other descriptive variables.

CHAPTER 7:
AN ANALYSIS OF ANTECEDENT VARIABLES DESCRIBING THE SAMPLE

Introduction

In this chapter data gathered on antecedent variables are discussed so as to provide a descriptive profile of the sample. These data are important to consider when making inferences about the population and when seeking to answer the research questions. The variables considered in this chapter are those that normally would not be expected to vary over the course of the study.

Counts and percentages are given for each survey in which each antecedent variable was included. An 'Individuals' column is included in some tables in order to identify the number of individuals who completed at least one survey in the entire four wave study. In the case of items present only in Survey 1 and Survey 4, the 'No Response' category of the Individuals column includes those only completing Survey 2 or 3, thus this category is inflated for these items. In order to provide greater understanding of the structure of the sample, some basic correlations or relationships between antecedent variables and other study factors are also presented in this chapter.

Study Participation

The first survey was important to the entire study as it was the main opportunity to gather most of the antecedent variables, as well as the social and moral related data. Therefore an important count of survey participants for the purposes of this study was the number of participants who completed Survey 1 and went on to complete at least one other survey, thus, making it possible to relate social data to religious and spiritual growth data. In order to provide this information, two sample sizes were considered when reporting on participants; total valid responses for each survey and valid responses of those completing Survey 1 and at least one other survey.

Survey Sample Participants
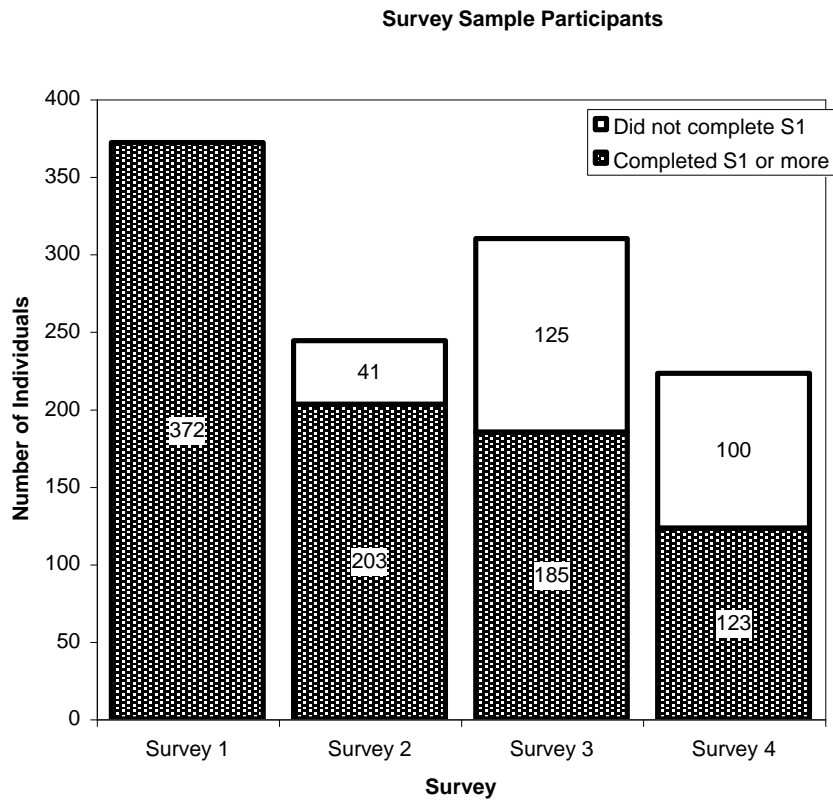
Figure 7.1 Total participants for each survey showing those also completing Survey 1.

Figure 7.1 shows the numbers completing each survey divided into a tally of participants who completed Survey 1 (shaded area) and those who did not (un-shaded area). Of the 372 participants who responded to Survey 1, 203 went on to complete Survey 2, 185 completed Survey 3 and 123 completed Survey 4. A total of 365 students completed at least two surveys while 295 students completed Survey 1 and at least one other survey.

Location of Participants

The major research phase of this study involved Seminary students from South Australia and Victoria. According to Table 7.1, Victorian participants averaged approximately 61 per cent of the sample for each survey while South Australian participants averaged approximately 39 per cent of the sample for each survey. A higher proportion of Victorians participated in the surveys conducted at the

beginning of each year than in those conducted towards the end of each year. Of the total individuals participating in at least one of the surveys, as identified in the Individuals column, just over 67 per cent were from Victoria while approximately 33 per cent were from South Australia.

Table 7.1 Total participants completing each survey by state

State	Survey 1 Total	Survey 1 %	Survey 2 Total	Survey 2 %	Survey 3 Total	Survey 3 %	Survey 4 Total	Survey 4 %	Individuals	Individuals %
Victoria	**244**	65.4	**143**	58.6	**202**	65.2	**128**	57.5	**393**	67.4
South Australia	**128**	34.4	**101**	41.4	**108**	34.8	**95**	42.6	**190**	32.6
Total	**372**		**244**		**310**		**223**		**583**	

Teachers were responsible for the administration, collection and return of survey forms, therefore it was important to consider the response rate on a class level. Table 7.2 shows the number of classes invited to participate in each survey along with the number of classes that responded to each survey.

Response rates gradually decreased for each survey varying from 90 per cent for Survey 1 to 61 per cent for Survey 4. Respondents from Victoria were distributed throughout 33 classes (an average of 11.9 respondents per class) while those from South Australia were distributed throughout 18 classes (an average of 10.6 respondents per class).

Table 7.2 Number of classes invited to participate and those responding to study survey

	Survey 1	**Survey 2**	**Survey 3**	**Survey 4**
Classes Invited	52	52	55	55
Classes Responding	47	36	40	33
Return Rate (%)	90	69	74	61

Differences Between the States

Differences between responses to items and scales from each state were investigated by way of a t-test (using the SPSS version 11.5 statistical package) in order to compare group means. Significance was assumed at the p=0.05 level. Rasch scaling was used for the calculation of all scale scores. The following significant outcomes were observed between South Australian and Victorian responses:

Students in South Australia reported achieving slightly higher marks at school (p<0.01), indicated expecting slightly higher levels of education in the future (p<0.05), and indicated having slightly more Latter-day Saint friends (p<0.01) on average. South Australian students scored higher than Victorian students on the Conscience Social Attitudes scale (p<0.01), the Religious Practice scale (p<0.01), and the Seminary Participation scale (p<0.01).

Victorian students reported slightly more Overprotection from both mother and father (p<0.01 for both scales). Victorian students scored higher than South Australian students on the Spiritual Experience scale (p<0.01), the Deferring mode of Religious Problem Solving (p<0.01), and the Insecurity in the Relationship with God scale (p<0.05).

Differences between the states on these scales may be reflective of some cultural or even class differences between the states. However, the further investigation of such differences, so far as it is beyond the immediate aims of this study, is not pursued here.

Gender

Table 7.3 shows the breakdown of male and female participants for each survey as well as the total number of participants. The table shows that there were slightly higher proportions of females responding to all four surveys with the percentage of females ranging from 53 per cent in Survey 1 to about 55 per cent in Survey 3. Overall there were 320 female participants (54.9%) in the study compared to 261 male participants (44.8%).

Table 7.3 Participants in each survey by Gender

Gender	Survey 1 Total	Survey 1 %	Survey 2 Total	Survey 2 %	Survey 3 Total	Survey 3 %	Survey 4 Total	Survey 4 %	Individuals	Individuals %
Male	**175**	47.0	**111**	45.5	**138**	44.5	**102**	45.7	**261**	44.8
Female	**197**	53.0	**133**	54.5	**170**	54.8	**119**	53.4	**320**	54.9
Not Indicated	**0**		**0**		**2**	0.7	**0**		**2**	0.3
Total	**372**		**244**		**310**		**223**		**583**	

Differences Between the Genders

Differences between responses to items and scales from each gender were investigated by way of a t-test (using the SPSS version 11.5 statistical package) in order to compare gender mean scores. Significance was accepted at the $p=0.05$ level. Rasch scaling was used for the calculation of scale scores. Combined data from all four surveys were used to gain a general and overall picture of relationships. The following significant outcomes were observed between male and female respondents:

Female students reported feeling more positive about school ($p<0.01$), achieving slightly higher marks at school ($p<0.01$), spending more time involved with drama activities ($p<0.01$), and indicated higher levels of mothers' care ($p<0.01$) than males. Female students scored higher then male students on the Conscience, Social Growth and Service Social Attitude scales ($p<0.01$ for all scales), the Religious Practice scale ($p<0.01$), both the Seminary Participation and the Seminary Feeling scales ($p<0.01$ for both scales), the Spiritual Experience scale ($p<0.01$), and the Religious Interest and Religious Belief scales ($p<0.01$ for both scales). Female students were also more inclined to rank Justice slightly higher as a source of Moral Authority than males were, on average ($p<0.01$).

Male students reported spending more time involved in sport ($p<0.01$), and spending more time on homework ($p<0.01$) than female students. Male students scored higher then female students on both the Deferring and Self Directing modes of the Religious Problem Solving scales ($p<0.01$ for both scales), and the Insecurity and

Disappointment in the Relationship with God scales ($p<0.05$ for both scales). Male students were also more inclined to rank the influence of others and self serving reasons slightly higher as sources of Moral Authority than females were ($p<0.05$ and $p<0.01$ respectively).

Age and Seminary Year of Participants

Table 7.4 shows the number of participants by their reported age responding to each survey. Each age was recorded as at the time of each survey, which means that the age of an individual will change over the course of the study. This form of measuring age has no detrimental effects on the findings for change over time because only the age of students at the time of the first survey is considered as a possible factor.

Generally there is some variation in the most common ages of respondents from survey to survey. Of particular note is the large decrease in the proportion of 14 year olds between Survey 1 (22.8% of respondents) and Survey 2 (15.2% of respondents). Also worth noting is the increase of the proportion of 17 year olds in Survey 4 compared to other surveys.

Table 7.4 Participants in each survey by Age

Age (Years)	Survey 1 Total	Survey 1 %	Survey 2 Total	Survey 2 %	Survey 3 Total	Survey 3 %	Survey 4 Total	Survey 4 %
13	31	8.3	0	0	20	6.5	0	0
14	85	22.8	37	15.2	86	27.7	52	23.3
15	108	29.0	66	27.0	67	21.6	48	21.5
16	85	22.9	77	31.6	83	26.7	52	23.3
17	59	15.9	45	18.4	49	15.8	60	26.9
18	3	0.8	19	7.8	2	0.6	10	4.5
Unknown	1	0.3	0	0	3	1.0	1	0.5
Total	372		244		310		223	

A breakdown of which year of Seminary participants were in at the time of completing each survey is given in Table 7.5. For Survey 1 and Survey 2, which were conducted in the first year of the study, it can be seen that fourth year Seminary students were in the minority compared to the other years, whose proportions were relatively similar to each other. In Survey 3 and Survey 4, which were conducted in the second year of the study, it is interesting to note that fourth year students were no longer in the minority and that there was a higher proportion of first year students compared to all other Seminary year levels.

The number of students in each category completing the first survey but not the second survey conducted each year could possibly be a reflection of drop out rate. When this drop out rate was calculated by subtracting the number of participants in the second survey of each year from the number participating in the first survey of each year it was interesting to note that those in the first year of Seminary for Surveys 1 and 2 had the highest drop out rate (41%), while those in their second year of Seminary the following year, for Surveys 3 and 4, had the highest drop out rate (42%) of all the year levels for that year. These students were essentially the same age group participating in their first year of Seminary during Surveys 1 and 2 and their second year of Seminary during Surveys 3 and 4. This was contrasted by the fact that for the second year of surveys the first year Seminary students had the lowest drop out rate of all the year levels (16%).

Table 7.5 Participants in each survey by Year in Seminary

Seminary Year	Survey 1 Total	Survey 1 %	Survey 2 Total	Survey 2 %	Survey 3 Total	Survey 3 %	Survey 4 Total	Survey 4 %
1	107	28.8	63	25.8	93	30.0	78	35.0
2	97	26.1	64	26.2	66	21.3	38	17.0
3	96	25.8	64	26.2	70	22.6	49	22.0
4	72	19.4	53	21.7	76	24.5	56*	25.1
No Response	0	0	0	0	5	1.6	2	0.9
Total	372		244		310		223	

* = One individual indicated 5th year but was included in 4th year students for this summary.

Age and Seminary Year Basic Correlations

In order to understand better the possible relationships between these background variables and other factors, both age and Seminary year were tested for significant correlations with other items and scales used in this study. Correlations were tested using Pearson Correlation coefficients with the SPSS statistical package (version 11.5). Significance of correlations were tested using a two-tailed test of significance at the p=0.05 level. Combined data from all four surveys were used in order to provide a general and overall picture of relationships. It ought to be noted that some inflation of correlations existed in the reporting below arising from some students being involved in the estimated correlations on more than one occasion.

Several factors correlated significantly with the age of students. Student age significantly and positively correlated with time spent doing homework ($r=0.18$, $p<0.01$), and the higher ranking of social considerations as a source of moral authority ($r=0.12$, $p<0.05$). Student age significantly correlated negatively with time spent watching television ($r=-0.13$, $p<0.05$), Mothers' Overprotection ($r=-0.12$, $p<0.05$) and Fathers' Overprotection ($r=-0.09$, $P<0.05$), Seminary Participation ($r=-0.09$, $p<0.05$) and Feeling ($r=-0.06$, $p<0.05$), Religious Interest ($r=-0.06$, $p<0.05$), Deferred Religious Problem Solving ($r=-0.10$, $p<0.05$), Family Religious Practice ($r=-0.12$, $p<0.05$) and the ranking of Family influence as a source of Moral Authority ($r=-0.13$, $p<0.05$).

Five of the 12 factors which correlated significantly with age did not correlate significantly with students' year in Seminary. These five were Fathers' Care and Overprotection, Seminary Participation and Experience and Family Religious Practice. The most striking difference between Age and Seminary Year correlations was found when comparing Family Religious Practice correlated with Student Age ($r=-0.12$, $p<0.05$) and Family Religious Practice correlated with Year in Seminary ($r=-0.04$, $p>0.05$).

Home Life of Participants

The following background variables were included in Survey 1 and Survey 4. They were designed to gain an indication of the home environment of the participants. Other variables involving family which might have changed over the period of the study, such as Family Religious Practice and Parental Bonding, are addressed in later chapters reporting results.

Because these variables were not expected to change over time it was assumed that it did not make a meaningful difference whether they were completed during Survey 1 or Survey 4. Thus the 'Individuals' column in each of the following tables represents the number of respondents from Survey 1 or Survey 4.

Siblings

Table 7.6 shows the average number of siblings reported for each survey, which shows very little variation between surveys.

The number of siblings reported by participants was an indicator of the size of the students' families. Participants reported an average of just less than four siblings.

Table 7.6 Mean number of siblings reported with standard deviation.

	Survey 1	Survey 4	Individuals
Mean Number Of Siblings	**3.89**	**3.88**	**3.88**
Standard Deviation	1.90	2.06	1.96

Interestingly the number of siblings reported had no significant correlation with any other factor considered in this study.

Parental Circumstances of Participants

Table 7.7 shows the frequency of responses for each category of parental circumstances divided between the two surveys as well as the number of total study

participants reporting each parental circumstance. The large number of participants reported as not responding included those not responding to Surveys 1 or 4 and thus not having the opportunity to respond to this item.

By far, the large majority of students lived with both a mother and father (almost 87% for Survey 1 and just over 84% for Survey 4). Approximately 86 per cent of individuals responding to this item at some stages reported living with both a mother and a father. Just over nine per cent of those responding to the item reported living with only a mother and only three (less than 1%) of the 482 participants responding reported living with only a father. Approximately four per cent of participants responding to this item reported living with someone other than a mother or father.

Table 7.7 Participants in each survey by parenting circumstance

Live with…	Survey 1 Total	Survey 1 %	Survey 4 Total	Survey 1 %	Individuals	Individuals %
Mother & Father	323	86.8	188	84.3	415	71.2
Mother Only	34	9.1	17	7.6	45	7.7
Father Only	3	0.8	1	0.4	3	0.5
Other	11	3.0	16	7.2	19	3.3
No Response	1	0.3	1	0.4	101*	17.3
Total	372		223		583	

* Including individuals completing only Survey 2 and/or Survey 3

Observed Differences Between Parental Circumstances

Because of the limited number of cases in three of the four categories of parental circumstances it was difficult to discuss with any degree of certainty the differences between them. However, using Oneway ANOVA testing (using SPSS for Windows, version 11.5), at least two possible effects were observed.

Those students who indicated living with both mother and father scored significantly higher than all other categories on the Family Religious Practice scale ($p<0.01$). Also, those indicating living with other than mother or father appeared to have higher

scores on average for the Awareness of God scale than all other groups, especially those indicating living with a mother only (p<0.01).

Father's and Mother's Occupation

A measure of a father's occupation has been shown to reflect to a reasonable degree of accuracy the socio-economic status of a home (see Broom, Jones & Zubrzycki 1965). Tables 7.8 and 7.9 show frequencies for classification categories describing general occupation levels of Seminary students' father's and mother's respectively. Students wrote a brief description of their fathers and mothers occupation which was later coded into categories that were ranked according to prestige, which considered education and skill requirements as well as assumed earning capacity (Broom, Jones & Zubrzycki 1965; Keeves, 1972, p. 69).

Father's Occupation

Table 7.8 shows that the majority of respondents indicated fathers having employment which was categorised as Professional (16% of responding individuals), while the Managerial category had the next highest rate of response (14% of responding individuals) closely followed by the Labourer category (13% of responding individuals).

Table 7.8 Participants in each survey by Father's Occupation

	Father's Occupation	Survey 1 Total	Survey 1 %	Survey 4 Total	Survey 4 %	Individuals	Individuals %
1	(Professional)	74	20	55	25	95	16
2	(Managerial)	60	16	42	19	80	14
3	(Clerical)	37	10	17	8	49	8
4	(Craftsman)	24	6	3	1	24	4
5	(Worker)	35	9	16	7	43	7
6	(Labourer)	51	14	39	17	78	13
7	(Other)	18	5	8	4	21	4
No Response		73	20	43	19	193*	33
Total		372		223		583	

* Including individuals completing only Survey 2 and/or Survey 3

Father's Occupation Basic Correlations

Since the categories for father's occupation were ranked in order of prestige and could be used to reflect an indication of the families' socio-economic status (SES) (Broom, Jones & Zubrzycki 1965), testing for significant correlation with other variables was seen as an adequate way of investigating relationships with other factors, although the data for the occupational scale were rank scaled scores. As with testing correlations for student age, described above, correlations were tested using Pearson Correlation coefficients with the SPSS statistical package (version 11.5). Significance of correlation coefficients were tested using a two-tailed test of significance at the $p=0.05$ level. Combined data from all four surveys were used in order to provide a general and overall picture of relationships. This testing showed several important relationships,

The higher the prestige of the father's occupation, or in other words the higher the family socio-economic status (SES), the higher the reported marks at school, the higher the level of education expected to be achieved, the lower the homework hours, and the higher the Religious Family Practice.

Mother's Occupation

Table 7.9 shows frequencies reported for mother's occupational categories. By far mothers were most frequently categorised as performing Home Duties (28% of responding individuals). The next most frequently reported employment categories for mothers were the Professional and Managerial categories, followed by the Labourer category. Interestingly, this order of frequency of occupational categories reported for mothers followed the same pattern as those reported for fathers, with Professional being the most frequent, followed by Managerial level occupation and then Labourer level occupation.

Mother's Occupation Basic Correlations

Students who reported their mothers having Home Duties or being in the home full time were compared to students who reported mothers with other employment by way of a t-test using the SPSS statistical package. Tests for significance were conducted at the $p=0.05$ level. Data from combined surveys were used and the following relationships were observed.

Students who reported mothers having Home Duties as their role tended to report having more siblings ($p<0.01$), tended to indicate having slightly more of their friends as Latter-day Saints ($p<0.05$), scored slightly higher on the Conscience Social Attitude scale ($p<0.01$), scored higher on the Religious Practice scale ($p<0.01$), scored lower on the Disappointed with God scale ($p<0.01$), scored higher on the Family Religious Practice scale ($p<0.01$), and tended to rank concern for society's well-being higher and self interest lower as sources of Moral Authority ($p<0.05$ and $p<0.01$ respectively) than other students.

The prestige levels of working mothers were also tested for significant correlations with other factors using similar techniques as were used for testing relationships with father's occupation, discussed above. It was not surprising to find the mother's level of occupation strongly correlated with the father's level of occupation ($r=0.34$, $p<0.01$). As such, similar correlations, as father's occupation had with other factors, were found including those related to student schooling marks and expectation for future education. The mother's level of occupation also correlated significantly and positively with the level of student Religious Practice ($r=0.19$, $p<0.01$).

Table 7.9 Participants in each survey by Mother's Occupation

	Mother's Occupation	Survey 1 Total	Survey 1 %	Survey 4 Total	Survey 4 %	Individuals	Individuals %
1	(Professional)	39	10	23	10	52	9
2	(Manager)	23	6	7	3	28	5
3	(Clerical)	25	7	16	7	32	5
4	(Craftswoman)	2	1	4	2	4	1
5	(Worker)	8	2	9	4	14	2
6	(Laborer)	35	9	21	9	44	8
7	(Other)	21	6	12	5	28	5
8	(Home Duties)	132	35	74	33	165	28
No Response		87	23	57	26	216	37
Total		372		223		583	

Age When Students Joined the LDS Church

One item considered in the antecedent variable group asked whether students were a convert to the Latter-day Saint church, meaning they were not born into a Latter-day Saint home. Table 7.10 shows the number of positive responses to the question of conversion along with the average age of these students when they joined the church.

Forty students in the first survey and 15 students in the fourth survey responded that they were converts, in other words, they were not born into an LDS home. Almost 11 per cent of respondents in Survey 1 (40 respondents) and almost seven per cent of respondents to Survey 4 (15 individuals) indicated that they were converts. Of all those participating in the study who completed either Survey 1 or Survey 4, 50 identified themselves as converts. It would seem that only five of the converts responding to Survey 1 responded to Survey 4, which reflects a very high dropout among converts. The follow-up item asked at what age the students joined the church. Of those converts completing Survey 1 or Survey 4, the average age at the time of conversion to the Church was about nine and a half years old.

Table 7.10 Number of converts for Surveys 1 and 4 with average age of conversion.

	Survey 1	Survey 4	Individuals
Number of Converts	40	15	50
Average Age when Baptised	9.3	9.4	9.6

Differences Between Converts and Life Long Members

Tests were conducted to investigate any significant differences between those students who identified themselves as converts and other students with respect to other factors in the study. The t-test was used to compare means using the same combined surveys data as was used for similar analyses above. The following significant (at $p=0.05$ level) correlations were found.

Students indicating themselves as converts tended to have slightly fewer siblings ($p<0.01$), tended to have slightly less positive feelings about school ($p<0.01$), tended

to indicate fewer of there friends as Latter-day Saint ($p<0.05$), scored lower on the Father's Care scale ($p<0.05$), scored lower on the Religious Practice scale ($p<0.01$), scored higher on the Religious Discontent scale ($p<0.05$), scored higher on the Deferring mode of Religious Problem Solving scale ($p<0.01$), scored lower on the Family Religious Practice scale ($p<0.01$), scored higher on the Disappointed with God scale ($p<0.01$), and scored slightly higher on the Insecurity in their Relationship with God scale ($p<0.05$) than other students.

Conclusion

This chapter describes the sample of students involved in this study by providing an examination of data obtained for antecedent background variables and presenting relationships between these variables and other factors relevant to this study. This information may be useful as a reference when considering reporting and analysis of data more directly related to the research questions as reported in later chapters.

In the next chapter, Chapter 8, analyses of data regarding student dropout is reported and discussed.

CHAPTER 8:
CHARACTERISTICS OF STUDENTS DISCONTINUING THE STUDY WITHIN THE FIRST YEAR.

Introduction

In this chapter the characteristics of students who completed the first survey but no other surveys are investigated. The importance and relevance of this group of students is based on the assumption that many of those discontinuing the study after the first survey may have done so because they dropped out of the Seminary program. Correlations between dropout and characteristic variables obtained in Survey 1 are discussed along with the presentation of a Bernoulli HLM model that indicates the importance and interaction of some key factors associated with student dropout from the Seminary program on an individual as well as a class level basis.

Characteristics Correlated with Student Dropout

A variable was created to indicate which of the students completing Survey 1 did not go on to complete Survey 2 and beyond. Cases of students who did not complete Survey 2 or any future surveys were coded with '1' while those who returned to complete Survey 2 were coded with '0'. Because the return of surveys depended on classes completing and returning the survey, any class that did not have any respondents for Survey 2 was excluded from this analysis. Only classes that were represented in both Survey 1 and Survey 2 were included. Of the 284 valid cases in the Dropout variable, 64 students did not return to complete Survey 2 or any subsequent surveys, while 220 students went on to complete at least Survey 2. Because survey questionnaires were offered to all students attending the Seminary program on a particular day and only classes represented for both Survey 1 and Survey 2 were considered in this analysis, however, it was likely that most of those shown to have dropped out of the study in fact dropped out of Seminary classes. Indeed it was considered that the proportion of students discontinuing their participation in Seminary among those discontinuing the study was sufficiently high that some useful observations regarding factors leading to Seminary dropout could be

advanced, albeit in a cautious way, using the Dropout variable. As such, the characteristics of this dropout group were important for an understanding of the Seminary program and the religious practice and spiritual development of this group of highly religiously involved youth.

All relevant background, religious, spiritual and social scale variables were examined for their correlation with the Dropout variable. Pearson correlation coefficients were calculated using the SPSS (version 11.5) statistics package with statistical significance assessed at the $p=0.05$ level (using a two-tailed test). Several variables correlated significantly with Dropout. Many of these variables appeared to relate to factors that could be categorised as home environment, educational background, religious practice and spirituality.

Dropout and the Home Environment

It appears that the parental structure in the home is, to some degree, important in predicting dropout as the variable indicating the parental circumstances of students correlates with the Dropout variable. In fact, when means are compared, those students who report living with only their mother (n=27, $\bar{x}=0.44$) appear to be about twice as likely to discontinue their involvement in the study after the first survey as those who live with both a mother and a father (n=245, $\bar{x}=0.19$). Other parental circumstances, such as living with just a father or others, are not analysed due to insufficient responses.

This finding may indicate that those in a traditional parental environment with both mother and father are more likely to stay involved in the Seminary program. The reasons for this is not clear, but when some of the challenges of a single parent home are considered, such as the burden of parental support for the child's participation or practicalities like transportation being the responsibility of just one parent rather than two, this finding can be more readily understood.

The level of religious practice occurring in the home also appears to influence whether a student participates in the study beyond the first survey or not ($r=-0.21$, $p<0.001$). The correlation between Family Religious Practice and Dropout is

negative, indicating that higher religious practice in the home tends to lead to students who are less inclined to drop out.

This correlation appears to make sense at an intuitive level as families showing greater levels of religious practice are expected to demonstrate higher levels of encouragement, expectation and support for Seminary.

In summary, students who indicate coming from homes with two parents present and higher levels of religious practice are less likely to drop out of the study after the first survey, and thus if the initial assumption is correct, are less likely to drop out of the Seminary program.

Dropout and Educational Background

Two of the variables that correlate significantly with dropout are related to the education of the student. The students self-reported overall grades at school correlate negatively with Dropout ($r= -0.14$, $p<0.05$) as does the level of students' expected educational attainment ($r= -0.12$, $p<0.05$). It seems that the higher the educational abilities and goals of students, the less likely they are to drop out of Seminary program.

When extracurricular activities are considered, those who spend more hours doing music appear to be slightly more prone to dropout ($r= 0.12$, $p<0.05$). Other than to speculate that the time and commitment required for musical pursuits discourages ongoing Seminary attendance, the reasons for this effect seem to require further investigation before conclusions can be drawn.

Dropout, Religious Practice and Spirituality

As might be expected, several religious and spiritual variables correlate significantly with student dropout. Private Religious Practice ($r= -0.15$, $p<0.05$) correlates negatively with Dropout. This correlation appears to indicate that higher levels of private religious practice mean that a student is less likely to drop out of the study and hence the Seminary program. Not surprisingly, a student's discontent with religious expectations and lifestyle correlate positively with dropout ($r=0.12$,

p<0.05), indicating that those students with higher levels of Religious Discontent are more inclined to drop out of the study and probably the Seminary program.

The Self-Directing Religious Problem Solving variable correlates positively with Dropout (r= 0.13, p<0.05). This finding suggests that the higher the level of the self-directing style of religious problem solving the greater the likelihood of the student dropping out of the Seminary program. This style of solving life's problems appears to indicate a preference to act without God in solving life's problems. This correlation appears to indicate an extension of the underlying attitude behind the self-directing religious problem solving preference as a general move away from other aspects of spiritual or religious life, such as the Seminary program. This idea is supported by the fact that Self-Directing Religious Problem Solving correlates negatively with both private and public religious practice as well as Seminary participation and Seminary Feeling variables (p<0.001 for all).

Of interest in this analysis is the fact that the strength and quality of the students' relationship with God, which are both proposed as indicators of spirituality for this study, are not correlated significantly with Dropout. This is an interesting finding as it suggests that dropout occurs independently of how strongly students are aware of God in their lives or the perceived quality of their relationship with God.

In summary the basic correlation aspect of this analysis, whether a student is a convert to the Latter-day Saint church or not appears to be a major factor influencing dropout from the study. A convert in this case is considered to involve someone who is not born into a practicing Latter-day Saint family or born into the church. Those students indicating that they are converts to the church (n=36; $\bar{x} = 0.47$) are more than twice as likely to drop out of the study, and probably Seminary, than those who do not indicate that they were converts (n=248; $\bar{x} = 0.19$). Further, when considering dropout beyond the first year, 85 per cent of those indicating that they are converts to the church drop out of the study before the final survey (that is, they do not complete the final survey after completing at least the first survey) compared to 56 per cent of non-converts.

Although the number of converts is relatively small, a little less than 15 per cent of the sample used for this analysis, the fact that those in this minority group show a

high tendency to drop out of the study is of interest. The reasons for this dropout rate among converts may be many and varied.

Apart from the class effects identified in the HLM analysis discussed below, the reasons for convert dropout would form an interesting study for future research. This research would need to address such issues as whether Seminary is not meeting the needs of converts adequately, the role of Latter-day Saint enculturation in Seminary attendance and completion or, the relationship between Latter-day Saint convert retention generally and Seminary attendance and completion.

A Hierarchical Linear Model to Assist in Explaining Dropout

Developing the Model

The variables tested for correlation with the Dropout variable were examined using two-level Hierarchical Linear Modelling (HLM) software. One of the advantages of using the HLM statistical technique for developing a relational model was the ability to investigate more than one level of effects on student dropout. This meant that not only could characteristics of individual students be tested for influence on dropout, but the influence of aggregated Seminary class characteristics could also be examined. The HLM for Windows version 6.01h software package (Raudenbush, Bryk & Congdon, 2005) was used to develop and test the model. Because of the binary nature of the Dropout variable and the fact that each student corresponded to a single binary outcome, the distribution of the outcome variable was considered to reflect a Bernoulli distribution for purposes of developing and testing the model.

It is beyond the focus of this study to present the theoretical basis of the Hierarchical Linear Modelling analysis method (see Bryk & Raudenbush, 1992 for further information). It may be helpful, however, to express a generic form of the equation used to model and test the relationships between the variables to be included.

A basic model with an outcome variable fitting the Bernoulli distribution can be expressed as,

Prob(Y=1|0) = P   (1)

Log[P/(1–P)] = $\beta_0 + \beta_1(VAR_1) + \beta_2(VAR_2) + \ldots + \beta_i(VAR_i) + r$ (2)

P represents the probability of a particular binary outcome, one or zero. In the case of this study, the variables to be included in the place of VAR_1 to VAR_i can be identified through trial using HLM. The β coefficients in the model indicate the relative strength of influence the corresponding variable has on P and significance of such influence on the model is tested using t-ratio statistics.

A second level of analysis can be introduced by forming the following equations for each first level coefficient in the following form.

$\beta_0 = \gamma_{00} + \gamma_{01}(VAR_{01}) + \gamma_{02}(VAR_{02}) + \ldots + \gamma_{0k}(VAR_{0k}) + \mu_0$ (3)

$\beta_1 = \gamma_{10} + \gamma_{11}(VAR_{11}) + \gamma_{12}(VAR_{12}) + \ldots + \gamma_{1k}(VAR_{1k}) + \mu_1$ (4)

$\beta_2 = \gamma_{20} + \gamma_{21}(VAR_{21}) + \gamma_{22}(VAR_{22}) + \ldots + \gamma_{2k}(VAR_{2k}) + \mu_2$ (5)

:

$\beta_i = \gamma_{i0} + \gamma_{i1}(VAR_{i1}) + \gamma_{i2}(VAR_{i2}) + \ldots + \gamma_{ik}(VAR_{ik}) + \mu_I$ (6)

The γ coefficients can be used as a measure of influence on the intercept or the corresponding first level variables influence on the model.

In order to develop the model, a step down approach was taken. All variables that had correlated significantly ($p<0.05$) with the Dropout variable were included as predictor variables in an initial trial model. The unit specific model with robust standard errors was used to obtain variable coefficient estimates. Each time the model was analysed the variable with the lowest significance in contributing to the model according to the t-ratio, was deleted and the model reanalyzed. This process occurred until all variables remaining in the model showed significant contributions to the model according to the t-ratios ($p<0.05$). Once an acceptable student level model had been identified, class level variables, which consisted of class aggregated scores for all scales, were tested for inclusion in the model using the exploratory analysis feature of the HLM software program. This analysis provided estimates for coefficient and t values for each potential predictor variable if it was to be included in the model. Where a significant effect of a variable in the model was indicated by

the exploratory analysis, that variable was examined for a significant effect at the class level. Except for the dichotomous variables, predictor variables were grand mean centered when tested and included in the model.

An HLM Model for Dropout

At the student level of the model, both the Convert variable (whether a student was a convert or not) and the Private Religious Practice variable contributed significantly as predictor variables in helping to explain variance in the Dropout variable ($p<0.05$). At the class level, it was found that two class aggregate variables influenced the effect of the Convert variable significantly ($p<0.05$). These two class level variables represented a class's average Self-directing Religious Problem Solving and class average Insecurity with God.

The relevant sections of the HLM output are provided in Appendix C. The mathematical form of the resulting Bernoulli distribution model can be expressed as,

Prob(Y=1|0) = P

$Log[P/(1–P)] = −1.48 + \beta_1*(Convert) – 0.38*(Private\ Religious\ Practice)$

$\beta_1 = 2.39 + 8.09*(Class\ Self\text{-}Directing\ RPS) + 2.98*(Class\ Insecurity\ with\ God),$

where Convert indicates whether a student is a convert to the Latter-day Saint church (0=No, 1=Yes), Private Religious Practice represents the self rated level of private religious practice of a student (Rasch scaled), Class Self-Directing RPS represents the class average for Self Directed Religious Problem Solving (Rasch scaled) of students in the class and Class Insecurity with God represents the class average for the self rated level of insecurity in the students' relationship with God (Rasch scaled). The reliability estimates of the two Level 1 predictor variables are greater then 0.10 which indicates an adequate level of reliability for this analysis.

The Influence of Private Religious Practice

Private Religious Practice has a small but significant coefficient in the model equation. The fact that the coefficient is negative suggests that the higher the level of private religious practice of a student, the lower the chance of dropout from the study. Figure 8.1 shows the relationship estimated by the HLM analysis, the

negative slope indicating the inverse relationship between Dropout and Private Religious Practice. This relationship seems to suggest that the personal level of religiosity is important in motivating students to continue their attendance at Seminary.
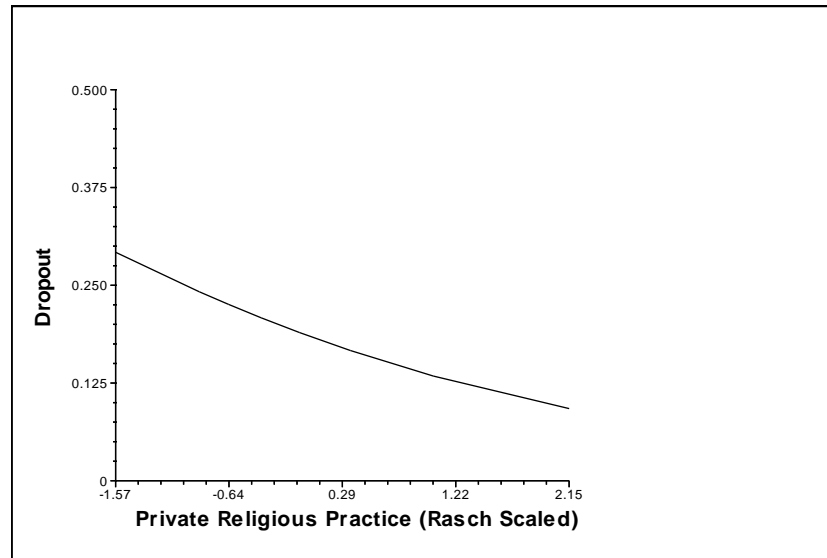
Figure 8.1 Graph indicating the relationship between Dropout and Private Religious Practice (HLM Analysis with Bernoulli Distribution).

The Convert, Dropout and the Influence of the Class Environment
The positive coefficient of the Convert variable in the model equation indicates that being a convert increases the chances of dropout. The degree to which being a convert increases the chance of dropping out of Seminary is moderated by both the average class tendency to be self-directing when solving life's problems and the level of insecurity in the class students' relationships with God.

Figure 8.2 shows the difference in likelihood of dropout between non-convert students and convert students. Convert and non-convert categories are divided into the bars representing students in the 25th, 50th and 75th percentile of the aggregated class scores for Self-Directing Religious Problem Solving. The chart shows that for non-converts, the average level of self-directing religious problem solving does not have a large influence on dropout. In fact higher levels of self-directing appear to decrease dropout slightly, though not significantly. However, for converts, the average level of

140
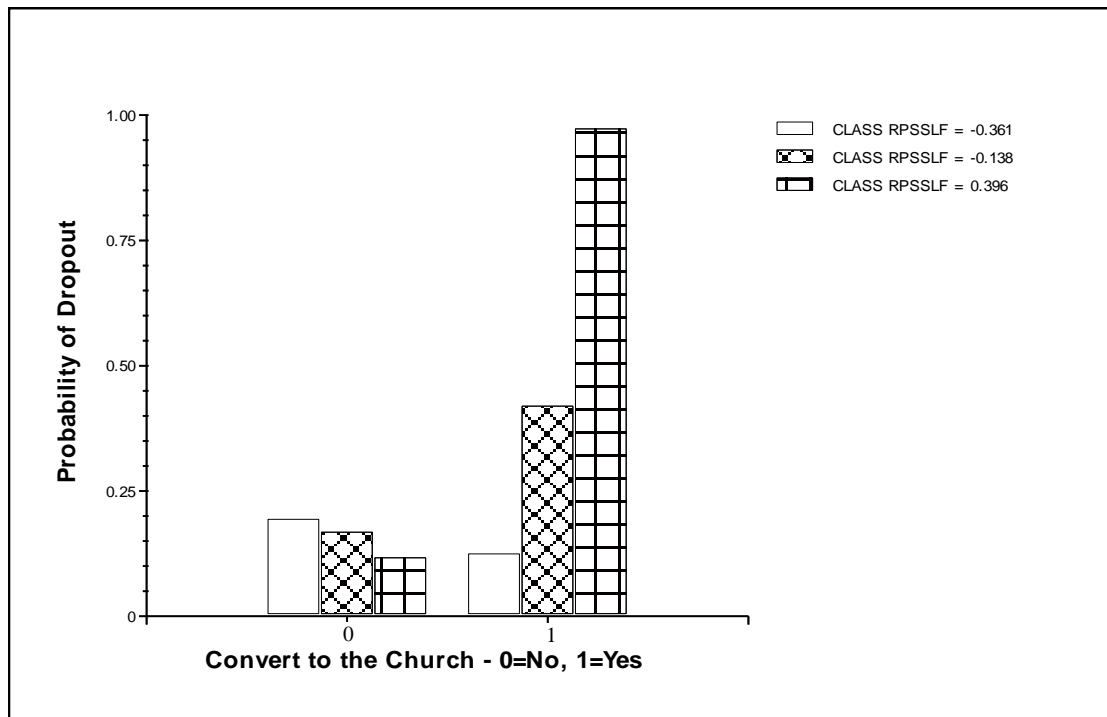
Figure 8.2 Chart comparing Dropout and Convert variables showing the influence of class aggregate Self-Directing Religious Problem Solving on Convert categories at 25th, 50th and 75th percentiles.

Self-Directing Religious Problem Solving in their class appears to have a dramatic influence on whether they drop out or not. It is of interest that converts in classes indicating a low level (bottom 25 per cent) of self-directing religious problem solving actually demonstrate no more of a tendency to drop out than non-converts. However, the tendency for converts to drop out dramatically increases in classes which have an average to high level of self-directing religious problem solving reported by students.

In general, the model appears to indicate that converts more frequently drop out of Seminary than non-converts, especially if they are in classes with students that indicate mid to high average levels of Self-Directing Religious Problem Solving. Although caution is needed when interpreting these findings due to the small number of cases (34 classes and 36 converts) used in this analysis, the general principle appears to be statistically significant.

In a similar way to Figure 8.2, Figure 8.3 shows the difference in probability of dropout between non-convert students and convert students. However, convert and non-convert categories in this chart are divided into the bars representing students in the 25th, 50th and 75th percentile of the aggregated class scores for Insecurity with God. The chart shows that for non-converts, the average level of Insecurity with God in class appears to have minimal influence on dropout. However, for converts, the average level of Insecurity with God in their classes appears to have a large influence on whether they dropout or not. In a similar way to the Self-Directing Religious Problem Solving variable affect, the tendency for converts to drop out dramatically increases as aggregate class levels of Insecurity with God increase.

In summary, the HLM analysis of the Dropout variable indicates that at least two variables influence student dropout from this study, and as is assumed, the Seminary program. Private Religious Practice appears to be an important factor in the prevention of such dropout as students with higher levels of private religious practice show less tendency to drop out. Whether a student is a convert to the LDS church is another important factor involved in dropout, with converts showing a much greater tendency to drop out than non-converts generally. The class environment appears to be particularly important to whether converts drop out or not, with higher levels of self-directing religious problem solving and insecurity in the relationship with God in the class appearing to lead to convert dropout.
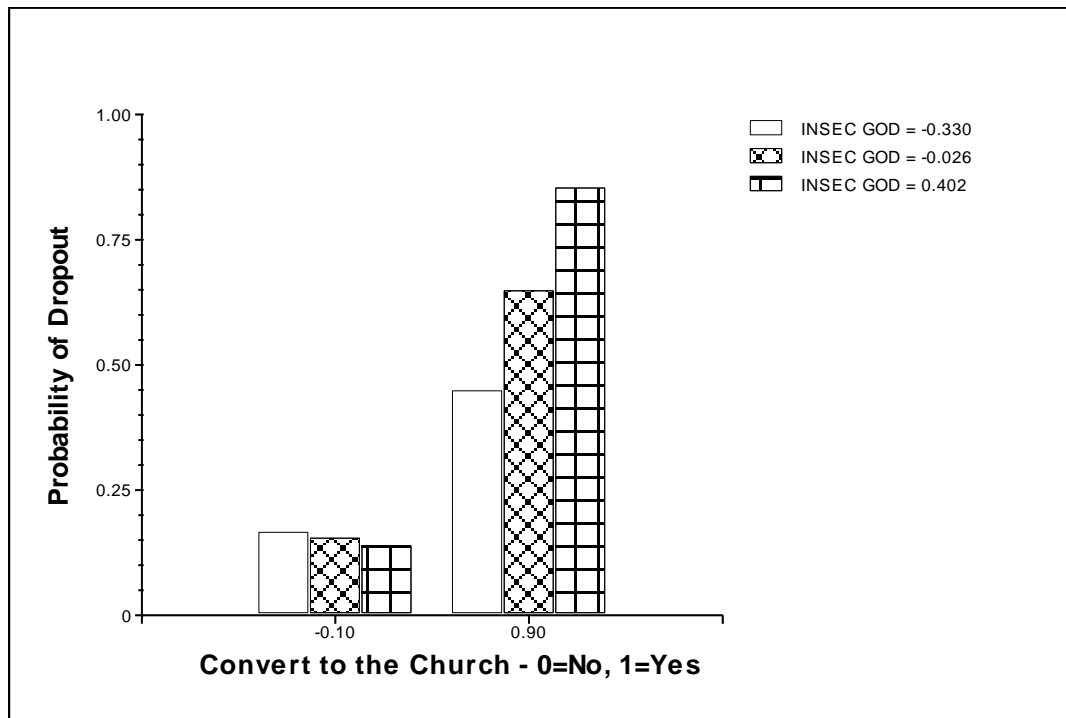
Figure 8.3 Chart comparing Dropout and Convert variables showing the influence of class aggregate Insecurity with God on Convert categories at 25th, 50th and 75th percentiles.

Summary of Findings

In terms of the basic correlations presented above, there appears to be observable differences in the characteristics of those who drop out of the study and those who do not. These correlations suggest that those who drop out of the study after the first survey generally (in order of correlation strength),

(a) have lower levels of family religious practice (r= –0.21, p<0.001);

(b) have lower levels of private religious practice (r= –0.15, p<0.05);

(c) achieve lower marks at school (r= –0.14, p<0.05);

(d) have higher levels of Self-Directing Religious Problem Solving (r=0.13, p<0.05);

(e) anticipate lower levels of education for themselves (r= –0.12, p<0.05);

(f) show higher levels of discontent with the lifestyle and expectations of the LDS religion (r=0.12, p<0.05), than continuing Seminary students.

Along with these basic correlation findings, analysis of the data also reveals that the likelihood of dropout approximately doubles for those who live with only a mother ($\bar{x} = 0.44$), rather than mother and father ($\bar{x} = 0.19$), as well as for those who describe themselves as converts to the Latter-day Saint Church ($\bar{x} = 0.47$) rather than non-converts ($\bar{x} = 0.19$).

At the student level, two variables contribute significantly to the HLM Bernoulli model. These variables are Convert, which measures whether a student has joined the LDS church from a previously non-LDS background, and Private Religious Practice. Class level variables do not appear to have an effect on Dropout directly; however two class level variables do moderate the nature of the Convert variable's influence on Dropout. Converts belonging to classes with higher aggregate levels of Self-Directing Religious Problem Solving and Insecurity with God show greater tendency to drop out. This finding appears to show that the class environment is important to the ongoing participation of students who are considered converts to the Latter-day Saint religion.

Further implications of these findings are addressed in Chapter 11 of this report.

Conclusion

This chapter contains a report on the characteristics of those who continue the study (and Seminary involvement) and those who do not. Influences at the class level are also investigated. In summary, certain characteristics appear to influence student dropout from the study after the first survey. These characteristics, listed above, seem to relate to three general fields that can be described as home environment (family religious practice and parental circumstance), religious practice and attitudes (private religious practice, self-directing religious problem solving, religious discontent and convert status), and educational achievement and goals (marks at school and educational expectations). These three aspects of student life appear to be important considerations when investigating dropout from this study and are likely to be involved when considering dropout from the Seminary program generally.

Further discussion of the implications for this study and the Seminary program, is undertaken in Chapter 11. In the next chapter, Chapter 9, attention is turned to investigating relationships between student religious, spiritual and social aspects in order to respond to the first two research questions.

CHAPTER 9:
INVESTIGATING RELATIONSHIPS AMONG KEY DIMENSIONS

Introduction

This chapter contains a presentation of the religious and social variables investigated in this study and the examination of the relationships between them. Summaries of responses to each scale related to background, religious and social factors are presented. Descriptive reporting of responses is brief due to the fact that the main focus of this study is not the responses to individual scales, but the relationships between them. Once responses to each scale are briefly presented, the formation of proposed latent variables devised from inter-related scales is described. The ordering of these variables to seek possible explanations of relationships of influence in a path model is then discussed. Relationships between these latent variables are then investigated using a Partial Least Squares Path model. In conclusion, a summary designed to respond to the first two research questions is undertaken.

A Descriptive Summary of Responses to Background Scale Variables

The background variables reported in this chapter are different from the antecedent variables reported in Chapter 7 because responses to these scales are considered to be likely to change over the duration of this study. Responses to items designed for the purpose of providing background information are collected in Survey 1 and Survey 4 of the study. For the purpose of these descriptive statistics, all valid responses are included in order to provide a cross-section of responses for each survey. Information regarding response rates to each survey is set out in Chapter 7.

Table 9.1 Mean scores of background variables for Survey 1 and Survey 4

Item or Scale	Possible Score Range	Survey 1		Survey 4	
		Mean	Valid n	Mean	Valid n
School Life Categories: Various – Did not form a scale					
Feelings about School	0 – 4	**2.48**	371	**2.51**	219
Marks at School	0 – 4	**2.78**	372	**2.71**	217
Important to Do Well at School	0 – 3	**2.31**	370	**2.18**	219
Educational Expectations	0 – 4	**2.54**	369	**2.53**	219
Parental Bonding Categories: 0 = *Very Unlike* to 3 = *Very Like*					
Mother's Care	0 – 3	**2.19**	356	**2.24**	212
Mother's Overprotection	0 – 3	**1.10**	357	**1.06**	213
Father's Care	0 – 3	**1.95**	331	**2.07**	205
Father's Overprotection	0 – 3	**1.11**	333	**1.03**	206

Table 9.1 lists the school life items and the Parental Bonding scales which are considered as background variables in the study. Mean scores and the number of valid responses are recorded in order to summarise responses to each scale. A general observation regarding the responses of students to background scale items that can be made is that mean scores are higher than the category mid point for all scales except Mother's and Father's Overprotection.

A Descriptive Summary of Responses to Religious and Spiritual Variables

As might be expected from corresponding research involving Latter-day Saint youth (see Smith & Lundquist Denton, 2005; Top & Chadwick, 1998), responses to religious and spiritual variables indicate a high level of religiosity and spirituality generally.

Table 9.2 shows the scales categorised as religious and spiritual in this study. Mean scores are given as a brief summary of responses to each scale for each of the four surveys. Mean scores for scales differ somewhat between surveys, quite markedly at times. However, it is difficult to identify any order to the differences from a table of scale means, and hence offer any explanations other than the fact that each survey sample has slightly different characteristics from the others. Generally, the change between consecutive surveys in each variable does not appear to be linear across the

four surveys (increasing or decreasing) with the exception of Awareness of God which has mean scores increasing across surveys. Change over time is investigated more fully in Chapter 11, where linear trends are examined using Hierarchical Linear Modelling.

Table 9.2 Mean scores of religious and spiritual variables for Survey 1 to 4.

Scale	Possible Score Range	Survey 1		Survey 2		Survey 3		Survey 4	
		Mean	Valid n	Mean	Valid n	Mean	Valid n	Mean	Valid n
Religious Practice and Seminary Experience Categories: 0 = *Never* to 4 = *Very Often*									
Private Relig. Practice	0 – 4	**2.55**	372	**2.52**	244	**2.47**	310	**2.54**	223
Public Relig. Practice	0 – 4	**3.54**	372	**3.61**	244	**3.62**	310	**3.55**	223
Family Relig. Practice	0 – 4	**2.77**	337	**2.90**	243	**2.93**	305	**2.81**	218
Seminary Participation	0 – 4	**3.10**	341	**3.03**	240	**3.05**	309	**3.04**	218
Seminary Feeling	0 – 4	**2.74**	341	**2.61**	240	**2.68**	309	**2.67**	218
Religious Beliefs and Experience Categories: 0 = *Strongly Disagree* to 3 = *Strongly Agree*									
Religious Belief	0 – 3	**2.76**	327	**2.79**	243	**2.81**	307	**2.80**	203
Religious Interest	0 – 3	**2.40**	324	**2.46**	240	**2.53**	303	**2.49**	206
Religious Discontent	0 – 3	**1.24**	324	**1.04**	241	**1.04**	305	**1.14**	204
Spiritual Experiences	0 – 3	**2.37**	326	**2.36**	241	**2.39**	304	**2.43**	204
Relationship With God Categories: 0 = *Not at All True* to 3 = *Very True*									
Awareness of God	0 – 3	**1.77**	324	**1.91**	239	**2.06**	293	**2.19**	202
Disappointed with God	0 – 3	**0.69**	322	**0.61**	239	**0.65**	298	**0.65**	202
Insecure with God	0 – 3	**0.92**	322	**0.83**	239	**0.94**	293	**1.00**	202
Religious Problem Solving Categories: 0 = *Never* to 4 = *Very Often*									
Collaborative R.P.S.	0 – 4	**2.06**	321	**2.02**	243	**2.10**	302	**2.20**	196
Deferring R.P.S.	0 – 4	**1.43**	318	**1.28**	243	**1.42**	300	**1.43**	195
Self Directed R.P.S.	0 – 4	**1.94**	319	**1.90**	243	**1.96**	302	**2.05**	195

A Descriptive Summary of Responses to Social and Moral Variables

The mean scores and number of valid responses (valid n) are presented in Table 9.3 as a summary of responses for the social and moral scales in Survey 1 and Survey 4. Generally responses for both surveys are similar, with only slight differences existing between response means. The only noteworthy difference between surveys occurs for the Moral Authority Scale scores, which show a notable increase in the Family Influence scale between Survey 1 and Survey 4.

Table 9.3 Mean scores of social and moral variables for Survey 1 and 4

Scale	Possible Score Range	Survey 1		Survey 4	
		Mean	Valid n	Mean	Valid n
Social Attitudes Categories: 0 = *Strongly Disagree* to 3 = *Strongly Agree*					
Conscience	0 – 3	**2.09**	360	**2.12**	211
Social Growth	0 – 3	**1.98**	351	**2.06**	210
Service to Others	0 – 3	**2.00**	351	**2.09**	209
Moral Authority Scale Categories: 0 = *No Influence* to 6 = *Powerful Influence*					
Justice or Fairness	0 – 6	**4.84**	372	**4.86**	223
Society's Wellbeing	0 – 6	**4.10**	372	**4.20**	223
Others, Friends, Media	0 – 6	**3.15**	372	**3.26**	223
Family Influence	0 – 6	**3.79**	372	**4.02**	223
Self Interest	0 – 6	**3.92**	372	**3.90**	223

The Use of Path Analysis

Path analysis provides a means of testing theorised influence in relationships between sets of theoretical constructs. Inter-related observed variables, otherwise called manifest variables, can be grouped to form latent variables in order to simplify what might otherwise be an overly complex model. The defining of relationships among manifest variables in forming the respective latent variables is often called the outer model, while the description of relationships among latent variables, represented by paths, comprises the inner model.

The partial least squares (PLS) procedure of path analysis can be described in simple terms as a merging of regression analysis, principal components and factor analysis with path analysis for the estimation of path models with latent variables (Sellin & Keeves, 1994). Partial least squares estimation employs cyclical and iterative procedures, that are similar to those used in regression and factor analysis, to estimate the latent variables derived from corresponding manifest variables. The inner path model is estimated by means of standard least squares methods. The PLS technique for estimating path models is straight forward, suitable for large models, and does not require stringent assumptions of any particular variable distributions (Sellin, 1989), which is an important trait when dealing with sometimes positively

skewed data as might exist when dealing with specific interest groups like Latter-day Saint youth.

The complex statistical calculations associated with PLS, and path analyses generally, are facilitated greatly by computer technology. PLSPATH (Sellin, 1989) is a computer program designed for the estimating of path models using PLS methods in an interactive environment making experimentation and the testing of models relatively simple. PLSPATH version 3.01 is employed for the path analysis in this study.

The Selection of Latent Variables for Path Analysis

The strengths and significance of correlations between variables (see Appendix D for correlation tables) and theoretical relationships as outlined in relevant reviews presented in earlier chapters, are considered when deciding which variables and scales to include in a relational model in order to respond to the first two research questions. Fourteen latent variables are selected in order to investigate relationships between religious and social factors as a response to Research Questions 1 and 2. Latent variables are ordered in a reasoned sequence of influence in order to set up a PLS Path model for analysis. In this ordering process it is understood that many possibilities for argued order of variables in the model exist, however, the logical order thought to respond best to the research questions and purposes of the study is chosen. Generally, relevant background variables are selected to precede religious variables followed by variables related to spirituality and finally moral and social variables followed all others in a logical order of influence.

When considering the order of influence of religious and spiritually related variables, for the purposes of providing a snapshot of variable relationships it is assumed that the order of influence is best considered to follow a general pattern of beginning with public religious participation which influences private religious participation which in turn influences the inner or spirituality domain. Although in reality it may be argued that these domains are possibly more cyclical in nature, or possibly inter-dependant, for the purposes of this exploratory analysis the above pattern is

considered most useful in responding to the research questions, which require investigation of religious and spiritual influence over social and moral dimensions.
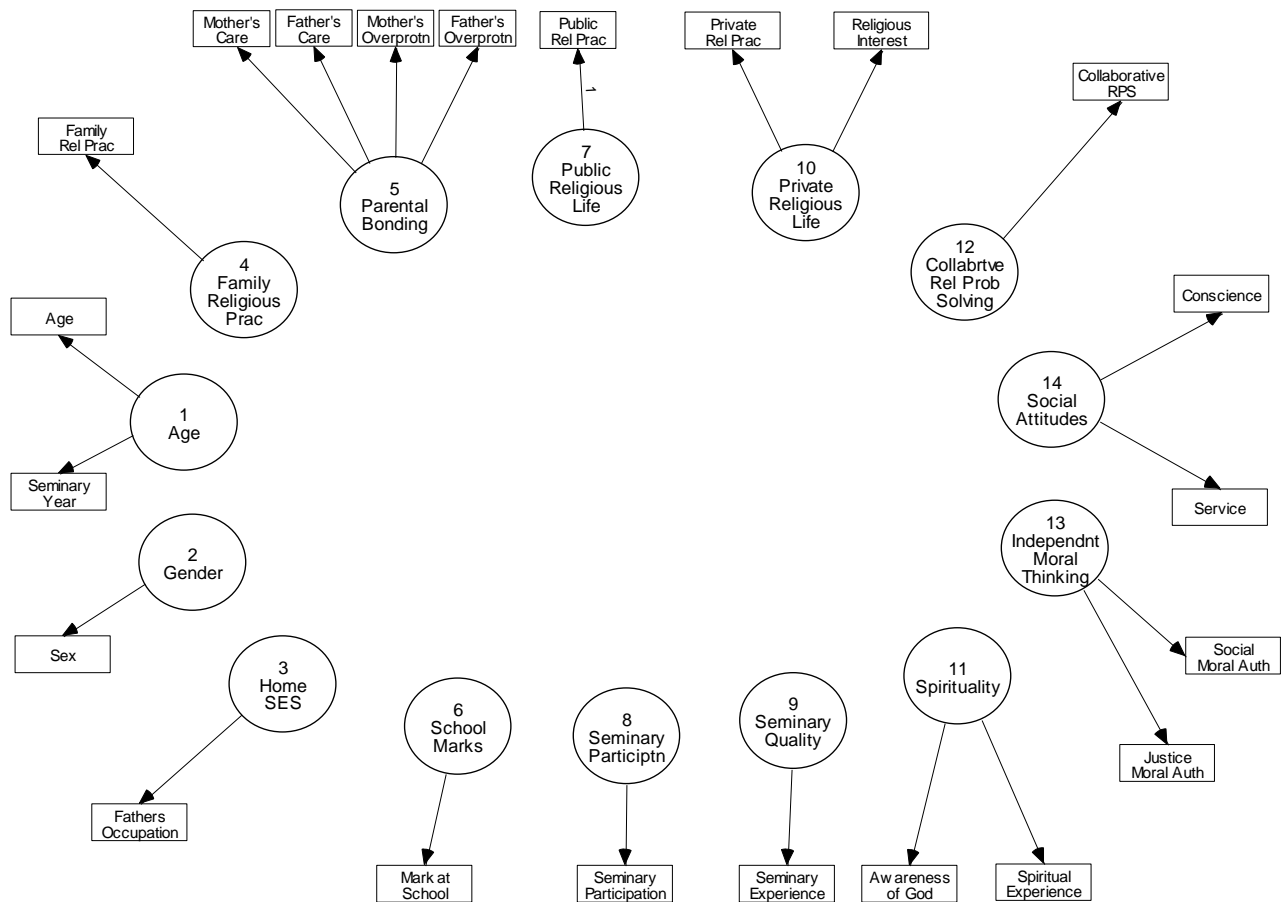
Figure 9. 1: Latent and Manifest Variables in Order As Used in Model

The selections of latent variables along with their representative manifest variables and arguments for ordering are discussed below. Figure 9.1 shows these latent variables in their proposed order of influence along with their associated manifest variables. The possibility of relationships between all variables in the model is considered to exist prior to the exploratory analysis.

Age

The latent variable for Age consists of outward loading of variables of student age and student year in Seminary. Age, along with gender, is first in the model and therefore considered exogenous in nature.

Gender

Gender is simply represented by the Sex variable where boys are coded as '0' and girls are coded as '1'. Gender stands beside Age in order of influence in this model and is therefore exogenous in nature.

Home Socio-Economic Status

A latent variable representing a measure of socio-economic status of student homes is derived from the father's occupational background variable (Keeves, 1972). This variable follows age and gender in order in the model.

Family Religious Practice

The religious practice of the families of the students is thought to have a potentially major influence over key dimensions in this model (see Johnson, 1989). The Family Religious Practice latent variable is derived directly from the associated Family Religious Practice scale.

Parental Bonding

The latent variable measuring the relationship of parents with students is labelled Parental Bonding and is composed of the four scales of the Parental Bonding Instrument (Parker, Tupling & Brown, 1979). These scales measure mother's care, father's care, mother's overprotection and father's overprotection as perceived by the child. The choice to place this variable after Family Religious Practice in order is based on the general aim of the study to investigate the influence of religious factors on social and relationship factors. It is thought that the religious practice in the home is an indicator of the religiosity of parents, which may arguably have an influence on the nature of parental relationships with students.

School Marks

The single variable of students' self-reported average school grade is used to form the School Marks latent variable. In its simplest form the School Marks variable

appears to represent a background dimension not accounted for by other variables in the model. The School Marks variable is placed after the variables related to home life in order to reflect the possible influence of the home environment on school success. The School Marks variable precedes the Seminary and religious factors so that the influence of education level on Seminary, religious, spiritual and social factors can be examined.

Public Religious Life

A scale representing the more public religious practices of students is formed by grouping items which deal with public forms of religious life, that is the Public Religious Practice scale. This single scale is used as the Public Religious Life latent variable in the model. This variable precedes other religious and spiritual variables in the model because it can be argued that, for Latter-day Saint youth, these public practices are designed to encourage and lead to the more private aspects of religious and spiritual life.

Seminary Participation

The Seminary Participation variable consists of the Seminary Participation scale as devised from items concerned with the level of participation and attentiveness of students in the Seminary classroom. This variable follows Public Religious Life because it is considered that public religious involvement precedes and tends to lead to Seminary involvement, which is a more specific yet rigorous aspect of religious life.

Seminary Quality

The quality of the Seminary experience of students is gauged by the Seminary Feeling scale devised from items referring to the effects and benefits of Seminary involvement reported by students. In this model, the latent variable, Seminary Quality, consists of the single Seminary Feeling scale. It is separated from Seminary Participation in the model to reflect the impact and students' perceptions of enjoyment and meaningfulness of the Seminary experience. It is considered that the level of participation in the Seminary classroom affects the perceived quality and life

impact of the experience, which in turn may influence further religious, spiritual and social factors in the model.

Private Religious Life

A variable in the model representing the private religious practices and interests of students is labelled Private Religious Life. This latent variable consists of the Private Religious Practice scale, which is a collection of items gauging the more private religious practices of students such as personal prayer and private scripture study, and the Religious Interest Scale, which is a collection of items concerned with the current and future interest in maintaining a religious life. It is considered that private religious practices and attitudes are best assessed separately from public practices (Smith & Denton, 2005) and are an important gauge when considering the outcomes of the Seminary program. It is also thought that private religious practices have an important influence on measures of spirituality, and perhaps measures of moral and social attitudes.

Spirituality

Spirituality has proved to be a difficult concept to define let alone to measure (see Tloczynski et al., 1994). For the purposes of this study involving Latter-day Saint youth and this model specifically, spirituality is considered to be at least indicated by the awareness of a relationship with God and the reporting of experiences which are best categorised as spiritual in nature. Accordingly, the Spirituality latent variable in this model consists of the outward loading of the Awareness of God scale and the Spiritual Experience scale. Although many have argued that spirituality can be considered independent of religious practice (e.g. Tacy, 2003) this study is concerned with spirituality as an outcome of the Seminary program of the church, as well as other forms of public and private religious practices, and as such the Spirituality variable is positioned after these variables in the model enabling a testing of the idea that spirituality is an outcome of religious practice in the case of LDS students.

Collaborative Religious Problem Solving

The Religious Problem Solving Scale (Pargament et al., 1988) measures three distinct approaches to relating to God when solving life's problems. The Collaborative Religious Problem Solving approach is argued to be the most psychologically beneficial (Kaiser, 1991) and can be considered to reflect a well developed and mature approach to seeking divine assistance. As such, a latent variable labelled Collaborative Religious Problem Solving is included in the study to represent the level of this cooperative approach to seeking divine assistance in life's trials. The variable consists of a single scale, the Collaborative Religious Problem Solving scale. Because this construct presupposes a relationship with God and is an attempt to provide detail related to the nature of that relationship, it is positioned following the Spirituality variable as a measure of spiritual maturity and a possible link to moral and social thinking, both of which follow this variable in the model.

Independent Moral Thinking

The Revised Moral Authority Scale (White, 1997) is used in this study to indicate an aspect of moral reasoning based on which principle or which people students refer to when making moral choices. Although Henry (see White, 1996a) argued that no particular moral authority source is superior or inferior to others in and of itself, for the purposes of this model it is considered that individuals drawing on concepts such as justice and public welfare when considering moral decisions as opposed to drawing on other authority sources such as self interest, media, teachers, friends or even family, indicate a more socially advanced and desirable mode of moral reasoning. Accordingly a latent variable labelled Independent Moral Thinking is included in the model as an indicator of moral reasoning based on justice, or fairness, and society's well-being. This variable consists of two manifest variables with outward loadings; namely, the Justice and Social Moral Authority scales.

One of the basic focuses of this investigation is that religious and spiritual factors in life may have some influence on moral decision making and social attitudes. Accordingly, this model, shown in Figure 9.1, is designed with the moral and social attitude variables as criterion variables following the antecedent, home, religious and spiritual variables. It is also considered that moral reasoning has an influence on

social attitudes as it conceivably plays a role in the cognitive and affective evaluation toward an attitudinal object (see Ajzen and Fishbein, 1980). It can also be argued that moral reasoning plays a role in the forming of subjective norms which operate alongside attitudes in the development of intention (Fraser, 2001), which is one aspect measured by the *Attitudes and Values Questionnaire* (ACER, 1999) used in this study.

Social Attitudes

The fact that the Social Growth scale is found to be questionable in terms of scale reliability meant that it is excluded from this model. It is considered that the two remaining social attitudes scales of Conscience and the Service to Others (ACER, 1999) are sufficient to represent socially desirable outcomes of religion and spirituality.

Accordingly the Conscience and Service to Others scales are combined in the model to form the Social Attitudes latent variable. This variable represents a possible social outcome of all other variables in the model and therefore is positioned last in order of influence as the final criterion variable for the model.

The Path Model: A Snapshot of Relationships

The path model is estimated using PLS Path version 3.01 software (Sellin, 1989). Because social aspects of this study are only included in the first and fourth waves, data from students completing Survey 1 and those completing Survey 4 that did not complete Survey 1 are used for this model in order to provide as large a cross-section as possible of those participating in both the religious and social portions of the surveys. This data gathering provides a sample size of 488 students. The fact that the sample for this analysis comes from two different time points may be argued to influence its validity negatively. However it is considered that the sample represents a broad collection of independent experiences and that the analysis yields sufficiently representative and meaningful findings. The model results are evaluated using the Jackknife routine (Tukey, 1977). Following a recommended rule of thumb and the principle of parsimony, relationships with a Jackknife mean, or standardized

coefficient, of a magnitude less than of 0.10 are deleted from the inner model leaving only those relationships, or paths, where a latent variable can be said to represent at least one per cent of the variance of the associated latent variable.

To justify this rule of thumb, it can be considered that with a sample of approximately 400 cases, taking into account effects of clustering both over time and over class groups, the standard error of a correlation coefficient is given by,

$$SE_{Corr} = \frac{1}{\sqrt{n}} = \frac{1}{\sqrt{400}} = \frac{1}{20} = 0.05$$

Consequently a correlation coefficient in excess of 2 x SE = 0.10 can be considered to provide an upper bound for a significant standardized regression coefficient at the five per cent level. Thus the cut off point of β = 0.10 is generally appropriate for the acceptable path weight that can be considered both practically and statistically meaningful (Sellin & Keeves, 1994). However, it must be noted that this approach to statistical significance does not take into consideration the clustering of students within Seminary classes.

Table 9.4 lists the estimated influence of each latent variable on the other variables in the model, including direct, indirect and total effects. Figure 9.2 is the graphical representation of the path model produced for this analysis. Although it is considered that this model contains much useful information applicable to a wider population, caution is needed when interpreting the results especially when seeking to generalize the findings beyond the specific group of Latter-day Saint Seminary students.

Table 9.4 PLSPath Model: Direct, indirect and total Inner model effects.

Latent Variable	Direct Effect	Total	Indirect Effect	Correlation	Fit
Effects of GENDER on					
School Marks	0.13	0.13	-	0.13	-
Seminary Participation	-	0.02	0.02	0.04	0.02
Seminary Quality	-	0.01	0.01	0.07	0.05
Private Religious Life	-	0.02	0.02	0.10	0.08
Spirituality	-	0.02	0.02	0.05	0.04
Collaborative RPS	-	0.01	0.01	-0.05	-0.06
Independent Moral Thinking	0.26	0.26	0.00	0.27	-
Social Attitudes	0.13	0.23	0.09	0.26	-
Effects of AGE on					
Family Religious Practice	-0.15	-0.15	-	-0.15	-
Parental Bonding	-	-0.04	-0.04	-0.00	0.04
School Marks	-	-0.01	-0.01	0.00	0.01
Public Religious Life	-	-0.07	-0.07	-0.10	-0.03
Seminary Participation	-	-0.04	-0.04	-0.13	-0.09
Seminary Quality	-	-0.04	-0.04	-0.06	-0.02
Private Religious Life	-	-0.06	-0.06	-0.05	0.02
Spirituality	-	-0.05	-0.05	-0.04	0.01
Collaborative RPS	-	-0.03	-0.03	-0.05	-0.02
Independent Moral Thinking	-	-0.02	-0.02	-0.03	-0.02
Social Attitudes	-	-0.03	-0.03	0.02	0.05
Effects of HOME SES on					
School Marks	-0.12	-0.12	-	-0.11	-
Public Religious Life	0.11	0.11	-	0.08	-
Seminary Participation	-	0.03	0.03	0.04	0.01
Seminary Quality	-	0.04	0.04	0.06	0.03
Private Religious Life	-	0.03	0.03	0.06	0.03
Spirituality	-	0.03	0.03	0.10	0.07
Collaborative RPS	-	0.02	0.02	0.01	-0.01
Independent Moral Thinking	-	0.01	0.01	0.03	-0.00
Social Attitudes	-	0.02	0.02	0.04	0.01
Effects of FAMILY RELIGIOUS PRACTICE on					
Parental Bonding	0.27	0.27	-	0.27	-
School Marks	-	0.06	0.06	0.14	0.08
Public Religious Life	0.40	0.44	0.04	0.43	-
Seminary Participation	-	0.25	0.25	0.31	0.06
Seminary Quality	-	0.24	0.24	0.29	0.05
Private Religious Life	0.17	0.43	0.26	0.46	-
Spirituality	-	0.31	0.31	0.35	0.04
Collaborative RPS	-	0.23	0.23	0.33	0.11
Independent Moral Thinking	-	0.12	0.12	0.16	0.04
Social Attitudes	-	0.22	0.22	0.21	-0.01
Effects of PARENTAL BONDING on					
School Marks	0.22	0.22	-	0.21	-
Public Religious Life	0.14	0.14	-	0.25	-
Seminary Participation	0.15	0.24	0.09	0.29	-
Seminary Quality	0.11	0.28	0.17	0.32	-
Private Religious Life	0.10	0.28	0.19	0.38	-
Spirituality	-	0.24	0.24	0.38	0.07

Table 9.4 (Continued) PLSPATH Model: Direct, Indirect and Total Inner Model Effects.

Latent Variable	Direct Effect	Total	Indirect Effect	Correlation	Fit
Effects of PARENTAL BONDING (Cont.) on					
Collaborative RPS	-	0.19	0.19	0.29	0.05
Independent Moral Thinking	0.10	0.18	0.08	0.22	-
Social Attitudes	0.13	0.31	0.18	0.36	-
Effects of SCHOOL MARKS on					
Seminary Participation	0.13	0.13	-	0.21	-
Seminary Quality	-	0.09	0.09	0.13	-0.02
Private Religious Life	0.14	0.18	0.04	0.27	-
Spirituality	-	0.12	0.12	0.14	-0.04
Collaborative RPS	-	0.09	0.09	0.17	0.04
Independent Moral Thinking	-	0.03	0.03	0.16	0.06
Social Attitudes	-	0.07	0.07	0.16	-0.01
Effects of PUBLIC RELIGIOUS LIFE on					
Seminary Participation	0.45	0.45	-	0.50	-
Seminary Quality	0.12	0.42	0.30	0.48	-
Private Religious Life	0.27	0.45	0.17	0.59	-
Spirituality	-	0.37	0.37	0.47	0.01
Collaborative RPS	-	0.30	0.30	0.40	0.04
Independent Moral Thinking	-	0.12	0.12	0.22	0.04
Social Attitudes	-	0.23	0.23	0.32	0.00
Effects of SEMINARY PARTICIPATION on					
Seminary Quality	0.65	0.65	-	0.74	-
Private Religious Life	-	0.27	0.27	0.54	-0.00
Spirituality	-	0.34	0.34	0.50	-0.02
Collaborative RPS	-	0.33	0.33	0.47	0.02
Independent Moral Thinking	-	0.14	0.14	0.25	0.03
Social Attitudes	-	0.24	0.24	0.42	0.03
Effects of SEMINARY QUALITY on					
Private Religious Life	0.42	0.42	-	0.65	-
Spirituality	0.29	0.52	0.23	0.65	-
Collaborative RPS	0.20	0.50	0.30	0.58	-
Independent Moral Thinking	0.10	0.22	0.12	0.29	-
Social Attitudes	0.19	0.36	0.17	0.50	-
Effects of PRIVATE RELIGIOUS LIFE on					
Spirituality	0.56	0.56	-	0.75	-
Collaborative RPS	-	0.32	0.32	0.63	0.07
Independent Moral Thinking	-	0.11	0.11	0.29	0.02
Social Attitudes	0.24	0.28	0.04	0.52	-
Effects of SPIRITUALITY on					
Collaborative RPS	0.58	0.58	-	0.71	-
Independent Moral Thinking	0.13	0.20	0.06	0.32	-
Social Attitudes	-	0.06	0.06	0.49	0.05
Effects of COLLABORATIVE RPS on					
Independent Moral Thinking	0.11	0.11	-	0.27	-
Social Attitudes	-	0.04	0.04	0.42	0.05
Effects of INDEPENDENTMORAL THINKING on					
Social Attitudes	0.33	0.33	-	0.52	-

The Outer Model

Generally, all manifest variables appear to show meaningful loadings in their relationship with latent variables that are well in excess of the required ratios proposed by Sellin and Keeves (1994) of 0.30. This tends to indicate that the theoretical meanings placed on the latent variables in planning the model are being represented meaningfully by the associated manifest variables.

The Inner Model

Although there are many relationships that are shown to be significant in the model (see Table 9.4 and Figure 9.2) there are some that are of particular interest, especially when considering responses to the first research question that is concerned with the influence of religious and spiritual dimensions on moral reasoning and social attitude dimensions. Although all observable relationships are mentioned in this chapter, greater emphasis is placed on those most relevant to the research questions and of interest generally. To assist with interpreting the diagram three thicknesses of line are used to identify relationships in the inner model. The thinnest lines are used to indicate relationships with Betas greater than 0.10 and less than 0.20. Lines of medium thickness are used to identify relationships with Betas greater than or equal to 0.20 and less than 0.40. Lines of greatest thickness indicate relationships with Beta greater than or equal to 0.40.
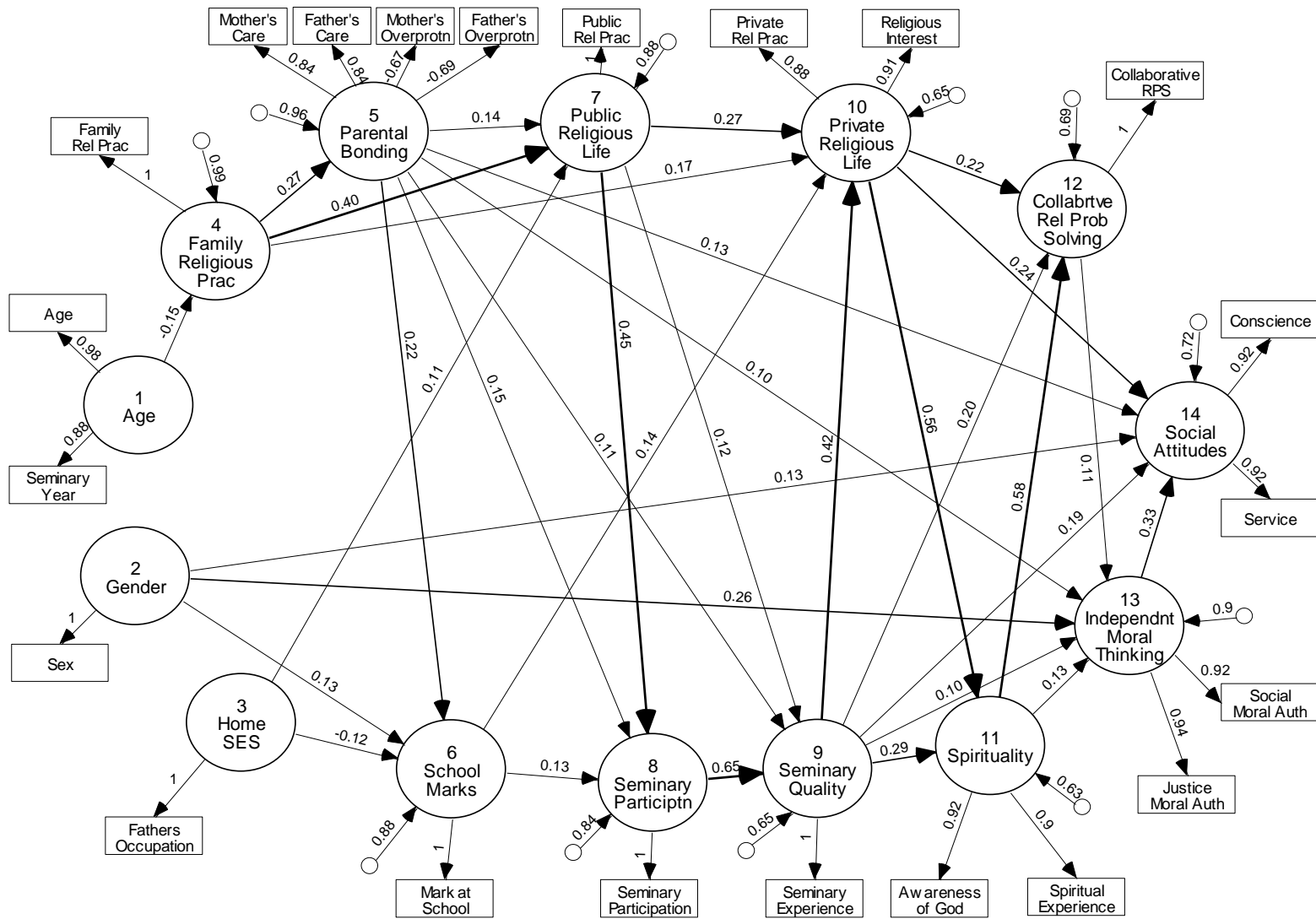
Figure 9.2 PLS Path Model of background, religious, spiritual and social variables from Survey 1 (or Survey 4) data.

Age

Age relates significantly to the Family Religious Practice latent variable in the model ($\beta = -0.15$) suggesting that to a slight degree, the younger the student the higher the level of family religious practice reported by the student. A relationship of influence (represented by a single headed arrow) is theorised between Age and Family Religious Practice and reflects the idea that the age of the youth may have influence on particular practices, in this case religious practices, in the home.

It is of interest that age is not shown to relate to any other variable in the Figure 9.2 model, especially considering the generally held view that religious practice, in particular, tends to fade with age (see Engebretson, 2003). See below for further discussion concerning possible reasons for the small influence of age on other variables.

Gender

Gender is related significantly to three other variables in the model, although the relationship strengths tend to be small. Gender relates positively ($\beta = 0.13$) with School Marks, suggesting that girls tend to score higher when reporting their overall school grades. Gender is also related positively ($\beta = 0.26$) to Independent Moral Thinking, indicating that females tend to rate Justice and Society's Wellbeing higher as sources of moral authority than do males. Finally, Gender relates positively ($\beta = 0.13$) with Social attitudes, suggesting that females tend to score higher on the social attitudes of Conscience and Service to Others. The fact that gender is not shown to have a major direct influence over the religious or spiritual aspects of the model is interesting, particularly in light of the descriptive data that tend to show females scoring slightly higher in many religious variables. It is possible that these gender differences observed previously are not strong enough to be observable when considered in conjunction with other factors, as is the case in the path model.

Home SES

Home Socio-Economic Status (SES) is correlated significantly with two other variables in the model. Home SES relates negatively with School Marks ($\beta = -0.12$), suggesting that the higher (1 = highest and 6 = lowest) the Home SES, that is the fathers' occupation prestige, the higher the students rate their overall school marks.

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However, Home SES also relates positively with Public Religious Life (β = 0.11) which tends to indicate that the lower the Home SES of the student, the more they indicate participating in public religious life.

Family Religious Practice

The Family Religious Practice latent variable shows relatively strong relationships with three other variables in the model. It relates positively with Parental Bonding (β = 0.27) which tends to indicate that the higher the amount of family religious practice in the home, the more the reported relationship between parents and student is of a caring and less over-protective nature. Family Religious Practice also relates positively with the students' Public Religious Life variable (β = 0.40). This relationship indicates that higher levels of Family Religious Practice lead to higher levels of Public Religious Life of students. The other variable with which Family Religious Practice relates significantly is Private Religious Life (β = 0.17). This relationship tends to suggest that the more the family of a student practices religion in the home the higher the levels of private religious participation and interest that are reported by the student.

Parental Bonding

The Parental Bonding variable relates significantly with more variables than any other variable in the model. Although relationships are relatively modest, Parental Bonding relates positively with School Marks (β = 0.22), Seminary Participation (β = 0.15), perceived Seminary Quality (β = 0.11), Independent Moral Thinking (β = 0.10), Social Attitudes (β = 0.13), and Public Religious Life (β = 0.14). These relationships tend to indicate a widespread contribution of the parent-child relationships, as seen by the students, on some key components of the model. Basically, the more caring (and less overprotective) the perceived relationships with the parents are, the better the reported Seminary participation and experience, the higher the score on the social and moral indicators of the model and the more public religious practice reported by the students. This finding concurs with Albrecht's (1989) observation that the family is the primary force in shaping the attitudes and values of its members. The influential nature of supporting parents over controlling parents when it comes to religion also seems to be confirmed by this model (see Hoge & Petrillo, 1978b; Engebretson, 2003).

School Marks

The School Marks variable relates positively with Private Religious Life in the model ($\beta = 0.14$). This relationship suggests that the higher the reported School Marks the higher the Private Religious Life of the student. School Marks also relates positively with Seminary Participation ($\beta = 0.13$) which tends to indicate that general academic ability has an effect on Seminary participation levels. It is reasonable to assume that the higher Seminary classroom participation of higher achieving students is due, in part, to the educational nature of the Seminary classroom. Further, the small but positive relationship between higher School Marks and Private Religious Life may be due to such things as the emphasis on reading scriptures and other such activities related to private religious practice as well as a general motivational or discipline factor of the students that is reflected in both educational ability and private religious activities.

Public Religious Life

The Public Religious Life variable contributes significantly to three other variables in the model. Public Religious Life relates positively with Seminary Participation ($\beta = 0.45$) which, as may be expected, indicates that the higher the levels of public religious activity of a student, the higher the levels of participation in the Seminary classroom. Public Religious Life relates positively to Seminary Quality ($\beta = 0.12$) indicating that higher levels of public religious activity contributes to the impact and quality of the Seminary experience. Unsurprisingly, Public Religious Life also has a positive relationship with Private Religious Life ($\beta = 0.27$), which tends to confirm an anticipated positive relationship between public and private aspects of religious life.

Seminary Participation

The Seminary Participation variable relates only to Seminary Quality in the model ($\beta = 0.65$). This relationship is a strong positive relationship indicating the anticipated link between the level of participation in Seminary classes and the quality of the Seminary experience for the student.

Seminary Quality

The Seminary Quality latent variable relates to four other variables in the model. The strongest of these relationships is with Private Religious Life ($\beta = 0.42$). This

relationship suggests that the better the perceived quality of the Seminary experience, the higher the level of private religious activity and interest. Seminary Quality is also related positively with the Spirituality variable ($\beta = 0.29$) which suggests that the quality of the Seminary experience positively affects the level of awareness of God and reported spiritual experiences. Seminary Quality also contributes positively to the Collaborative Religious Problem Solving variable ($\beta = 0.20$) in the model. The Social Attitudes variable is also influenced directly by Seminary Quality in the model ($\beta = 0.19$) which suggests that the higher the quality and reported effects of the Seminary experience, the higher the sense of conscience and service to others.

Private Religious Life

The Private Religious Life variable is related positively with three other variables in the model. This variable has a strong positive influence on the Spirituality variable ($\beta = 0.56$) as well as the Collaborative Religious Problem Solving variable ($\beta = 0.22$) and the Social Attitudes variable ($\beta = 0.24$). These relationships tend to imply that the higher the level of the private religious activity and interest of students, the higher the level of spirituality, the higher the level of cooperation with God in solving problems and the higher the self reported levels of an attitude of conscience and service to others.

Spirituality

The Spirituality variable relates strongly and positively with the Collaborative Religious Problem Solving variable ($\beta = 0.58$), which suggests that spirituality has a positive effect on students working cooperatively with God in solving problems in life. Spirituality also has a positive relationship with the Independent Moral Thinking variable ($\beta = 0.13$) which suggests that Spirituality has a positive influence on justice or societal considerations being a source of moral authority in the lives of students.

Collaborative Religious Problem Solving

In this model, the Collaborative Religious Problem Solving variable only relates to the Independent Moral Thinking variable ($\beta = 0.11$). The positive relationship indicates that higher levels of the cooperative approach to God in solving problems, the higher the levels of independent moral thinking. This relationship, theorised

from the outset of this study, suggests that the Religious Problem Solving construct reflects a practical aspect of spirituality related to moral decision making.

Independent Moral Thinking

The Independent Moral Thinking variable appears to have a direct influence on Social Attitudes ($\beta = 0.33$). This finding helps to support the theory that moral thinking has some influence on the process of developing social attitudes such as conscience and service to others.

Summary of Influence on Social Attitudes

Since the Social Attitudes variable is the main criterion variable in this model, relationships between it and other variables in the model are important and worth emphasizing in this report. The Social Attitudes variable is influenced directly by five other variables in the model. The model shows a positive influence on Social Attitudes with females slightly more likely ($\beta = 0.13$) to score higher on the Social Attitudes scales of Conscience and Service, as are those reporting higher levels of parental care and lower levels of parental overprotection ($\beta = 0.13$). The fact that higher levels of Private Religious Life are shown to have positive influence ($\beta = 0.24$) on desirable social attitudes is an important indicator of religious influence on social attitudes in this model, and accordingly in this study. The influence of the Seminary program on other variables in this model is of particular interest in this research study and as such the positive effect of Seminary Quality on Social Attitudes ($\beta = 0.19$) is of great importance in responding to the research questions and is a focus of discussion later in this chapter. Finally, Independent Moral thinking is shown to influence Social Attitudes positively ($\beta = 0.33$) possibly indicating a link between the moral and social attitude psychological concepts.

Discussion: Responding to the Research Questions

The presentation of the data in this chapter is designed to enable a reasoned response to be provided for the first two research questions posed for this study.

Question 1:   What influence does religiosity and spirituality have on the moral and social outlook of religious youth?

Question 2:   What effects does the Latter-day Saint Seminary program have on the religious, spiritual, moral and social lives of its participants?

The first point of interest from the path model is that there are clearly relationships between background factors, religious and spiritual factors, and social and moral factors. Some of these relationships manifest themselves in the model as minor in strength, such as the influence of Gender or Home SES, while other relationships appear to be quite influential, both directly and indirectly within the model and provide added evidence for the case that these relationships operate in the lives of the students.

Personal Background Factors

The first group of variables considered when seeking to analyze the model includes those that may be described as personal background factors. This group includes Age, Gender and Marks at School, which relate primarily to the individual. Of interest is the fact that the influences of these factors on the model generally, with the possible exception of Gender, are quite small ($\beta s < 0.20$).

It is surprising that Age does not appear to have much of a direct influence on key factors in the model at all, with the exception of a relationship suggesting that younger students report slightly higher levels of family religious practice in their homes. Generally past research has shown that religious participation and interest decreases with age (Engebretson, 2003). However, perhaps the lack of age related influences observed among these Latter-day Saint Seminary students is a reflection of the observation made by Sloane and Potvin (1983 p. 152) that youth from the more conservative religions have shown less signs of fading religiosity as age increases.

Goldman's theory of stages of religious thinking (see Hoge & Petrillo, 1978a p. 139) suggested that some of the normal decline in religious interest among youth occurred around age 13 to 14 ½ years as youth tended to move beyond the concrete operational stage of thinking and began to challenge parental and leader imposed

values and beliefs. However, Scobie (1975, p. 54) suggested that youth who experienced some kind of conversion during their teenage years might not experience the decline in religious interest and involvement that tended to occur normally once they moved beyond the concrete operational stage of religious thinking but might in fact show an increase in religious interest. It is of interest that those youth (generally aged over 13 years) participating in the Seminary program were a select group demonstrating, by their Seminary involvement (and thus their inclusion in this study), high levels of religious practice.

It is possible that most of those involved in this study have experienced some kind of religious conversion and therefore do not demonstrate a general decline in religious participation and interest but remain relatively constant throughout the period of the study. This idea is supported by the fact that the mean score for items included in the Spiritual Experience scale is quite high (2.35 out of a possible score of 3.00). More specifically, over 80 per cent of survey participants express agreement with the statements, "God really does answer prayers", "I have a testimony of the truthfulness of the gospel", and "There have been times when I have felt the Holy Ghost," for which agreement tends to imply that students have experienced a religious conversion to some degree.

Caution is needed before settling on this point as several other plausible explanations exist for the lack of age related influence in this model. For example, another plausible explanation has to do with the possibility that dropout of less religiously inclined individuals from the program causes an age related bias in the sample as a higher concentration of religiously inclined students remain in the sample. This explanation implies, however, that each successive year of Seminary would have fewer students enrolled. Table 7.5 appears to show that although there are generally more students in the first year for each survey, for all but the first survey there is no apparent uniform decrease in numbers for successive years. This finding tends to reduce the plausibility of the explanation that age influence is countered by dropout of less religious students.

An investigation of a longitudinal nature is also needed before discussing this issue further. Change in religious factors over time is a key topic for this study and further discussion is taken up in Chapter 10.

The findings suggest that Gender influences Independent Moral Thinking and Social Attitudes, with females scoring slightly higher for both of these variables. The fact that most of the Gender influence among these students is on the moral and social factors is worth noting. The well-accepted effect of gender on religiosity and spirituality (e.g. Miller & Hoffmann, 1995, p. 63; Regnerus, Smith & Fritsch, 2004, p. 10; Sloane & Potvin, 1983, p. 144; Smith & Lundquist Denton, 2005, p. 279) is not reflected in this model. Apart from the direct influence on Independent Moral Thinking and Social Attitudes, the only influence of Gender on variables in this model is indirect through School Marks, as females tend to rate themselves as receiving higher grades generally. School Marks then influences Private Religious Life directly as well as influencing levels of Seminary class participation, which in turn influences the quality of the Seminary experience and outcomes strongly. Clearly, the influences of Gender on religious and spiritual related variables in this model are minimal. This finding is not without precedent, however (see Mason et al., 2006).

The effect of School Marks on Seminary Participation may well reflect the academic nature of the Seminary classroom, indicating a bias toward those more capable and comfortable in an academic setting. School Marks may also reflect not only academic achievement but also a personal discipline characteristic among students. It may be argued therefore that those possessing greater personal discipline, who tend to achieve higher grades, are also more inclined to accommodate, not only high levels of Seminary participation, but also the rigors of private religious practice in their lives.

Family Background Variables

Family Religious Practice, Parental Bonding and Home Socio-Economic Status (SES) each represent an aspect of the influence of the family in the model. Home SES does not appear to have a great influence on religious or social factors, with the exception of a small relationship with Public Religious Life which suggests that to a very slight degree students coming from homes with lower SES tend to report higher levels of Public Religious Life. Smith and Denton (2005) reported a similar lack of

significant relationships between family income and teenage religiosity factors in their study.

Family Religious Practice and Parental Bonding appear to have a large influences in the model, especially with regard to religious factors. This finding appears to add support to a considerable body of past research which has tended to find that home and parent factors are among the most influential when it comes to a child's religious values and practices (e.g. Albrecht, 1989; Johnson, 1989).

Family Religious Practice directly influences both public and private religious life, although the influence is much stronger on public religious life. Interestingly, any direct influence of the religious life of the family on religious, spiritual or social factors of the student occur only through the two religious life aspects of the model. This tends to suggest that family religious practice does not, of itself, create spirituality or even social maturity in children. It is more likely that spirituality is a product of family religious practice only when that practice is translated into personal and private practices and attitudes.

Parental Bonding has a broad contribution to the model influencing aspects of public religious life, Seminary participation and quality, as well as both moral thinking and social attitudes. It is clear from the model that generally, the more caring and less overprotective the child perceives their parents' relationships with them, the higher the child scores in each of these religious and social variables.

In support of this finding, Hoge and Petrillo (1978b) have previously found that parental support, rather than parental control, is most influential when it comes to child religiosity. Similar findings regarding the importance of a caring and supportive parent-child relationship for the development of child religious practice and interest have also been published (see Myers, 1996; Litchfield, Thomas & Li, 1997; Bao et al., 1999).

The combined effects of family religious practices and the nature of the parental relationship with the child clearly make the most significant contribution of all background variables to the model, which suggests the importance of the parent and home influence on the religious and social life of youth.

Relationships among Religious and Spiritual Factors

The assumption is made in formulating the order of latent variables for this model that the more public and outward religious practice variables (Public Religious Life and Seminary Participation) influence the more private religious variables which in turn influence the variables related to spirituality. Although these relationships are likely more cyclical in nature over time, for the purposes of this snapshot model this idea appears to be supported by the findings. For example Public Religious Life, apart from influencing Seminary Participation which may be considered a specific aspect of public religious practice, influences only Private Religious Life. Private Religious Life then relates to Spirituality and Collaborative Religious Problem Solving, as well as Social Attitudes. Accordingly, Seminary participation only influences Seminary Quality, which in turn influences Spirituality, as well as Independent Moral Thinking and Social Attitudes. Hoge and Petrillo (1978b) once stated that whether a student liked or disliked their religious training (a reflection of quality) was more influential on attitudinal and behavioural outcomes than the amount of training, that was arguably comparable to the amount of participation in Seminary. It is possible that Seminary Quality, not Seminary Participation, leads directly to spiritual and social outcomes in this path analysis is a confirmation of Hoge and Petrillo's observations.

A general principle may be argued from the model and its estimated paths involving relationships between religious and spiritual factors. Figure 9.3 is a graphical representation of the generalized relationships derived from the model. In this summary spirituality is influenced most by the private or inward religious practices and feelings which are in turn influenced by the more public or outward religious practices. Background variables have influences at various levels in this process, however, their influence tends to be strongest at the public religious practice level and barely existent at the spiritual level once religious variables are taken into consideration. Generally, these religious variables mediate the influence of background and even family variables on spirituality.
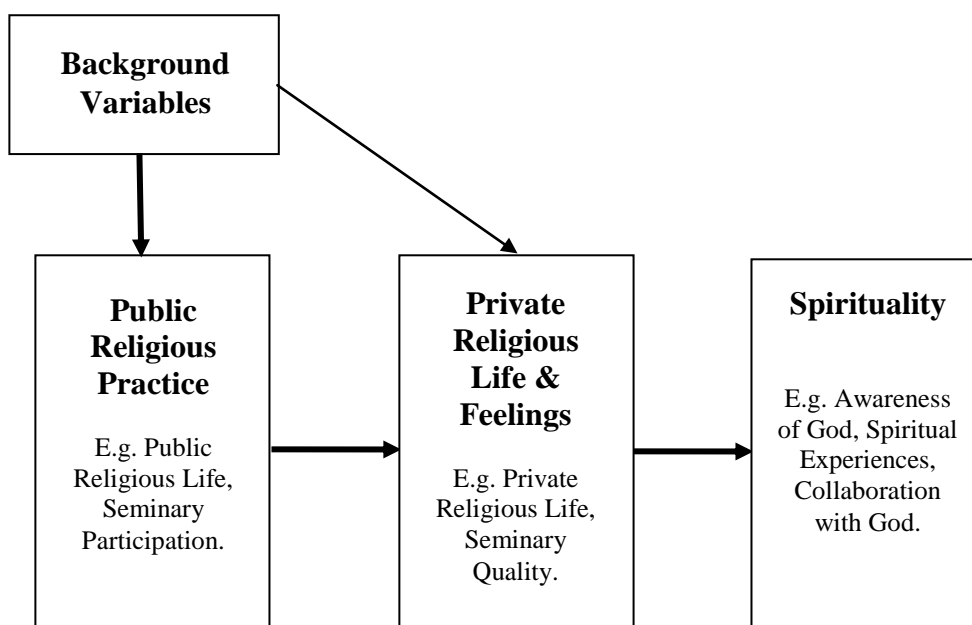
Figure 9.3 General Relationships Among Religious and Spiritual Factors.

Relationships between Religious, Spiritual, Moral and Social Factors

One of the key areas of investigation from the inception of this study is concerned with the relationships between religiosity, spirituality and social outcomes. It is clear from the model that there are relationships between religious, spiritual, moral and social factors. From the path model (Figure 9.2) certain observations concerning just how these factors relate can be proposed.

Religion and Moral Thinking

Only two background variables relate directly to the Independent Moral Thinking variable in the model. These are the Gender and Parental Bonding variables. In order to summarise these effects, females and those reporting parents as more caring and less overprotective are slightly more inclined to score higher on the Independent Moral Authority variable.

Of the religious and spiritual factors in the model, only the Spirituality ($\beta = 0.13$), Seminary Quality ($\beta = 0.10$) and Collaborative Religious Problem Solving ($\beta = 0.30$) variables show signs of influencing moral thinking.

The Independent Moral Thinking variable reflects the strength of justice and society's well-being considerations, in other words considerations centered on principles, as moral authorities in making moral decisions as opposed to guiding authorities which include family, friends, teachers, media and self-interest. The Spirituality variable is designed to reflect the strength of a student's relationship with God as well as past spiritual experiences. How these two variables relate to each other in life is of considerable interest in responding to the first research question.

It is important to note that, akin to Kohlberg's claims of the autonomy of moral reasoning from religion (Lee, 1980), religious life, whether public or private, does not appear to influence principle based moral thinking directly in this model, with the exception of Seminary Quality. The purely religious aspects of the model mainly relate to moral thinking through the more personal, direct and experiential dimensions of Spirituality and Collaborative Religious Problem Solving (see Tloczynski et al. 1994).

This finding points to the fact that although, in accordance with the cognitive developmental view, religiosity does not directly influence moral thinking, perhaps spirituality, as measured by the Spirituality and Collaborative Religious Problem Solving constructs, does. Moreover, it is possible that spirituality provides a mediating effect for the influence of religion on moral thinking. It is possible that Mol (1971) was observing this relationship when he found that prayer habits of young people, shown to be closely linked to spirituality in this study, were more likely to contribute to moral conservatism than church attendance, an aspect of religious practice. This appears to be a significant finding for this study, although further research is required in order to understand more fully the reasons behind this interesting relationship.

Religion and Social Attitudes of Service and Conscience

Two background variables relate directly to the Social Attitudes variable in the model. These relationships appear to reflect the influence of parents and gender on attitudes of service and conscience. Females and students reporting more caring and less overprotective parents tend to score slightly higher on service and conscience social attitude scales than others. As discussed above, Independent Moral Thinking also relates to the Social Attitudes variable.

Of the religious and spiritual factors, the Private Religious Life and the Seminary Quality variables appear to influence the Social Attitudes variable directly ($\beta = 0.24$ and 0.19 respectively). These observed relationships provide evidence for the idea that there **are** social outcomes to religious living and learning.

In the case of Private Religious Life, this finding supports the idea that when religion is practised and internalised as a part of personal life and interest, there are greater levels of intention towards conscience and service to others. A similar thing may be said of Seminary Quality, that is, when the Seminary (or religious learning) experience is of a meaningful nature or accepted in a meaningful way then attitudes of conscience and service to others are increased.

These observations are reflective of the findings of Regnerus, Smith and Fritsch (2003) who reported studies showing relationships between religiosity and higher levels of social adjustment, fidelity, love and care. The more recent findings of Mason and his colleagues (2006) also confirm this relationship between religious and social dimensions suggesting that those of their Australian Generation Y sample who were actively involved in community service and had positive civic values were far more likely to come from the ranks of those who had spiritual and religious beliefs and actively practised them.

It seems evident that religious influence is at its strongest when the religion is personalized and internalized, perhaps in ways measured by the Private Religious Life and Seminary Quality variables. In such a form, religion can influence an individual's perception of right and wrong (belief), and true or false (evaluation) which, along with an individual's religiously laden perception of subjective norms, leads to intent and action (Ajzen and Fishbein, 1980). In theory, religious life can be argued to permeate the process of forming attitudes, intent and subsequent action. The results of this study tend to support such a theory.

Summary - What influence does religiosity and spirituality have on the moral and social outlook of religious youth?

From the PLS Path model (Figure 9.2) there is evidence to suggest that the public participation aspects of religious practice, including those in the family, tend to lead

to more private, personal and inward forms of religious practice. These private dimensions of religious practice, for example private prayer and personal scripture study, tend to lead to higher levels of spirituality which in turn lead to a stronger inclination to work with God in a cooperative way when dealing with problems in life.

It also appears that there is a relationship between this religious and spiritual domain and moral reasoning, as measured by modes of referring to moral authority centered on principles of justice and society's well-being. This relationship appears to exist through the domain of spirituality rather than as a result of public or private practice of religion. In other words, the practice of religion alone, whether public or private, does not appear to relate to change in moral thinking driven by principles of justice or social well-being. However, if religious practice leads to higher levels of spirituality, the model indicates that the amount of independent moral thinking also tends to be higher.

Positive social attitudes, as represented by conscience and service, also appear to be related to the religious and spiritual domain. Specifically, there is evidence to suggest that, as well as being female and feeling that your parents are more caring and less overprotective, higher levels of both private religious life and meaningful religious education lead to higher levels of conscience and service centered social attitudes.

Summary - What effects does the Latter-day Saint Seminary program have on the religious, spiritual, moral and social lives of its participants?

It is clear from the path diagram (Figure 9.2) that the level of participation in Seminary classes greatly influences the quality of the Seminary experience but, independent of this, does not influence any other factor in the model directly. Importantly however, the model also provides evidence to suggest that the higher the quality and impact of the Seminary experience, the higher the level of private religious activities, the higher the level of spirituality, the higher the level of cooperation with God, the higher the level of independent moral thinking and the higher the level of positive social attitudes. These relationships in the model suggest that Seminary experience has a contribution to religiosity, spirituality and social attitudes independent of all other factors in the model, including family factors,

educational ability and other forms of religious practice measured. This is the case only as students feel that the Seminary experience is significant enough to impact on their lives in a meaningful way beyond the immediate classroom experience. This major focus of this study is discussed further in Chapter 11 where implications for the Seminary program are considered.

Conclusion

This chapter contains responses to the first two research questions guiding this investigation.

Question 1: What influence does religiosity and spirituality have on the moral and social outlook of religious youth?

Question 2: What effects does the Latter-day Saint Seminary program have on the religious, spiritual, moral and social lives of its participants?

Assuming that the model construction is both sound and meaningful, it is likely from these findings that relationships **do** exist between religious, spiritual, moral and social factors, at least in the forms presented in this study and that religiosity and spirituality do have an influence on the social and moral outlook of religious youth. These relationships are summarized above and clarification added so far as the evidence and data available for the analysis and reasonable argument allow. It is also apparent that the Seminary program contributes to some key religious and social variables considered in this investigation.

The findings presented in this chapter clearly have implications for the development of understanding concerning the nature of religious practice, Seminary participation and moral and social attitudes. These implications are discussed further in Chapter 11 following Chapter 10, which responds to the remaining research questions concerning change over time of religious and spiritual dimensions.

CHAPTER 10:
CHANGE OVER TIME OF RELIGIOSITY AND SPIRITUALITY VARIABLES

Introduction

The investigation of change over time of certain key religious and spiritual dimensions is an important aspect of this study. In this chapter, the change over the two years of the study of key religious and spiritual variables is investigated. Hierarchical Linear Modelling (HLM) is used to test for significant change over the four-survey period and factors influencing that change. Although challenging in practice and concept, the investigation of change over time of certain variables, particularly of religious or spiritual nature, can assist in the understanding of the development of Seminary students and perhaps shed some light on factors that are important for such development.

The Research Questions

The research questions related to the investigation of change over time of religious and spiritual variables in this study are as follows.

Question 3: How do religious and spiritual dimensions change over the course of the study?

Question 4: Which initial factors influence the change over time of religious and spiritual dimensions?

Question 5: Are there any class effects on the change in religious or spiritual dimensions?

Question 6: How does the Seminary program influence change in religious and spiritual dimensions?

In order to respond to these questions information was obtained on whether religious and spiritual factors changed significantly over the course of the four survey, two year, study. Further information was then obtained concerning which variables at a

student level and class aggregate level influenced change over time of the variables being analysed.

Measuring Change Over Time

As discussed in Chapter 5, a significant aspect of responding to the research questions for this study involved investigating change in certain student attitudes and dimensions over time. Much discussion has occurred during recent decades regarding the difficulties of assessing change over time. Generally, simply relying on pre and post measurements, or a two-wave design, to provide a complete picture of change has been accepted as inadequate (Willett, 1998).

Willett (1998), among others, asserted that effective measurement of change over time requires more than two data points. Three, four or even five data points, or survey waves, allow observations to be made of not only the magnitude of change between two time points but the linearity or non-linearity of that change. The measuring of at least three data points over the allotted time for each individual being researched enables the estimation of the level and slope coefficients for each characteristic under investigation.

For cases where sufficiently steady change over time takes place the characteristic growth can be plotted against time and estimated by either a linear trend line generated by using least squares regression analysis or maximum-likelihood analysis. These linear profiles of change over time can then be used to investigate the effects of change **within** individual dimensions (micro level) as well as the effects of factors that can explain differences **between** individuals (macro level).

Because educational and social change often takes place in a world involving the nesting of different layers of effects, such as in a school where the class level and the school level may be influential, the ability to account for these various levels in the analysis of change over time is desirable. Hierarchical Linear Modeling (HLM) (see Bryk & Raudenbush, 1992) enables the analysis of multilevel data, such as nested data described above. For example, in the case of measuring change over time of certain student characteristics, HLM enables change in the characteristic over time

(within student level), the influence of student characteristics on that change (between student level) and the influence of class characteristics on that change (class level) to be estimated using either maximum-likelihood or least-squares regression estimation techniques.

The Basic Model

In this study, HLM for Windows version 6.01h (Raudenbush, Bryk & Congdon, 2005) computer software is used in order to investigate the magnitude and direction of change in certain factors over the four survey waves. The resulting model is a three level model designed to investigate change across the four survey waves. Each level is designed to account for nested effects as follows:

Level-1: change within students across the four survey period,
Level-2: influence of between student characteristics at Survey 1 on the slope (rate of change) of the Level-1 equation,
Level-3: influence of class aggregated characteristics on the slope (rate of change) of the Level-1 equation.

At the first level, change within an individual of a specific measured characteristic can be expressed as a regression equation. Hence, the basic model for measuring change over the four survey occasions in this study can be expressed by the equation,

$$Y = \pi_0 + \pi_1 \text{ (SURVEY)} + e, \tag{1}$$

where Y is the variable or characteristic for which change is being assessed, SURVEY represents the number of the survey for which Y is assessed and therefore represents consecutive time points (coded 1 to 4), π_0 is the value of the estimated intercept, and π_1 coefficient represents the slope of the linear estimate of the change of Y over the four survey periods. Finally, the error term is denoted by e.

At Level-2 the coefficients for intercept (π_0) and slope (π_1) become the outcome variables and are expressed as functions of specific Survey 1 variables (VAR) that, through exploratory analysis, are shown to have statistically significant influence over the intercept or SURVEY coefficient. The equations can be expressed as,

$$\pi_0 = \beta_{00} + \beta_{01}(VAR_{01}) + \beta_{02}(VAR_{02}) + \ldots + \beta_{0j}(VAR_{0j}) + r_0 \qquad (2)$$

$$\pi_1 = \beta_{10} + \beta_{11}(VAR_{11}) + \beta_{12}(VAR_{12}) + \ldots + \beta_{1j}(VAR_{1j}) + r_1, \qquad (3)$$

where the intercept and slope coefficients from the Level-1 equation become functions of certain Survey 1 variables. In the case of this study, the variables to be included in the place of VAR_{0j} can be identified through exploratory analysis in HLM. The β_{0j} coefficients influence the intercept of the Level1 equation while the β_{1j} coefficients influence the slope of the Level-1 equation or rate of change over time as SURVEY is the Level-1 predictor variable.

The Level-3 model can only be expressed here in very general terms until specific variables for inclusion in the Level-2 model are identified. A separate Level-3 equation is set up for each β_{0j} and β_{1j} in the same form as the Level-2 equations, with the Level-2 coefficients becoming the Level-3 outcome variables with intercept and slope coefficients γ_{1jk} and an error term μ_{ab}.

For example, a possible set of equations related to the π_1 equation above, which relates to the slope of the Level-1 equation, can be stated as follows.

$$\beta_{10} = \gamma_{100} + \gamma_{101}(VAR_{101}) + \gamma_{102}(VAR_{102}) + \ldots + \gamma_{10k}(VAR_{10k}) + \mu_{10} \qquad (4)$$

$$\beta_{11} = \gamma_{110} + \gamma_{111}(VAR_{111}) + \gamma_{112}(VAR_{112}) + \ldots + \gamma_{11k}(VAR_{11k}) + \mu_{11} \qquad (5)$$

:

$$\beta_{1j} = \gamma_{1j0} + \gamma_{1j1}(VAR_{1j1}) + \gamma_{1j2}(VAR_{1j2}) + \ldots + \gamma_{1jk}(VAR_{1jk}) + \mu_{1j} \qquad (6)$$

By default, the HLM for Windows software estimates three level models, such as the model given above, using a full maximum-likelihood method which involves using an empirical Bayes method to estimate the Level-1 (within student) and Level-2 (between student) coefficients and the maximum-likelihood method to estimate Level-3 (class level) coefficients (see Raudenbush, Bryk & Congdon, 2005, Help Contents).

It is worth noting here that β_{10} is the intercept term of the π_1 equation and therefore the variables contained in equation (4) influence the slope of the Level-1 equation

directly, whereas the other Level-3 equations influence the Level-1 equation only through the coefficient of respective second level variables. In other words, the significant class level variables included in equation (4), VAR_{101} to VAR_{10k}, have a direct influence on rate of change of Y, whereas other third level variables influence the rate of change of Y only through influencing Level-2 variables.

Using the HLM for Windows software it is possible to set up a model similar to the model outlined above in order to investigate the magnitude and direction of change over time (slope) of particular variables as well as the student characteristic and class characteristic influences on that change. Although investigation of Level-2 and Level-3 influences on the intercept of the Level-1 linear equation and Level-3 influences on Level-2 variables is possible using this technique, it is considered that such analysis is not required in order to respond to the research questions and to meet the goals of this study.

Therefore, this chapter contains reporting of analyses confined to investigating the Level-1 change over the four survey period of religious and spiritual variables, the influence of student characteristics (Level-2), as measured in the first survey, on the slope of the Level-1 equation, and the direct first survey class effects (Level-3) on the slope of the Level-1 equation. Any influences of Level-3 variables on Level-2 variables and their relationships to the Level-1 equation have not been reported in this chapter, in the main because of problems caused by relatively small numbers of students in some classes who responded to the surveys and the lack of reliability on the slopes of the Level 2 variables that needed to be fixed in the analysis.

A Note on Suppressor Effect using HLM

Aside from the inherent complexities of estimating change over time, an effect known as 'suppression' (see Thorndike, 1949; Wuensch, 2007) can cause some distortion of results, especially when aggregates are used, as in the HLM model applied in this study. A paradox, sometimes called the Reversal Paradox (Messick & van de Geer, 1981), arises when an aggregated variable provides a different relationship to other variables than the segregated parts of that variable do, even to the point where there is a reversal of sign for the correlation. In the case of HLM analysis for example, the combination of certain Level-2 or Level-3 variables can

mean that a suppressor variable has a correlation with the outcome variable and other criteria variables opposite to that observed with a simple bivariate correlation.

This effect is observed in this study resulting in the exclusion of some variables suspected of suffering from suppressor effects. If variables are suspected of suffering from a suppressor effect, bivariate correlations are checked in order to see whether the coefficient in the multivariate model is of the expected sign. Suspect variables are also tested in the model with no other criteria variables included in order to observe whether the direction of the correlation in the model is as expected. In the event of an obvious change in direction of the variable correlation purely due to the inclusion of other variables in the model, the variable suspected of suffering suppressor effect is dropped from the model, unless the effect can be shown to have strong meaning. The grounds for removing the suppressor effects are considered to arise from measurement error in the measurement of the variables involved (Thorndike, 1949).

A Model to Investigate Change in Religious and Spiritual Variables Over the Study Period

In order to respond adequately to the survey questions concerning change over time a three level HLM model (using HLM for Windows version 6.01h) was created and tested for each religious or spiritual variable. An exploratory analysis was undertaken for each model in order to examine which variables significantly influenced the slope of the outcome variable under investigation.

Data Used for the Three-Level Model

The data used for this analysis has been Rasch scaled using the processes reported in Chapter 6. Dimensions measured by variables categorised as religious or spiritual, which were included in all four survey waves, were tested for evidence of change over time. The data used for this first (within student) level of the model included all cases and occasions over the four-survey period. It was not necessary to replace missing data for use with HLM at the first level. The data file used for the HLM

analysis contained 483 valid records for the Level-1 analysis. Variables investigated for change over time included:

(a) Private Religious Practice,

(b) Public religious Practice,

(c) Seminary Participation,

(d) Seminary Feeling,

(e) Spiritual Experience,

(f) Religious Interest,

(g) Religious Belief,

(h) Collaborative Religious Problem Solving (RPS),

(i) Awareness of God.

These variables were specifically studied as they were the variables included in the PLS Path model discussed in Chapter 9. Other variables were also analysed but were not of primary focus. These other variables included:

(a) Religious Discontent,

(b) Self-Directing Religious Problem Solving (RPS),

(c) Deferring Religious Problem Solving (RPS),

(d) Disappointment with God,

(e) Insecurity with God.

In order to investigate the Level-2 (between student) effects, data from only the first survey were used. Only using data from the first survey meant that some degree of influence could be implied for any growth that would take place after the between student characteristics were measured. The data file used for the Level-2 HLM analysis contained 214 valid records. In a similar way, only data from the first survey were aggregated into class means in order to investigate Level-3 (class) effects as at the initial survey on the slope of the variable under investigation. The data file used for the HLM analysis contained 45 valid records for the Level-3 analysis. The criterion variables used to investigate second and third level effects in the model were identical, other than the fact that cases were aggregated into class groups for the third-level data. The variables included in the exploratory investigation to search for significant relationships to the slope of each outcome variable included,

(a) Sex,
(b) Age,
(c) Year in Seminary,
(d) Year at School,
(e) Hours Worked,
(f) Father's Occupation (Family SES),
(g) Converted to the Church,
(h) Feelings About School,
(i) Marks at School,
(j) Importance of Doing Well at School,
(k) Educational Expectations,
(l) Homework Hours,
(m) TV Hours,
(n) Mother's Care,
(o) Mother's Overprotection,
(p) Father's Care,
(q) Father's Overprotection,
(r) Conscience Social Attitude,
(s) Service Social Attitude,
(t) Justice Moral Authority,

(u) Society's Wellbeing Moral Authority,
(v) Private Religious Practice,
(w) Public religious Practice,
(x) Seminary Participation,
(y) Seminary Feeling,
(z) Spiritual Experience,
(aa) Religious Discontent,
(bb) Religious Interest,
(cc) Religious Belief,
(dd) Collaborative Religious Problem Solving,
(ee) Self-Directing Religious Problem Solving,
(ff) Deferring Religious Problem Solving,
(gg) Awareness of God,
(hh) Disappointment with God,
(ii) Insecurity with God,
(jj) Class Size (Level-3 only).

Second and third level variables were excluded from exploratory analysis in cases where the associated Level-1 variable was the outcome variable in order to avoid possibly high correlations overshadowing other important relationships.

The Exploratory Method

Each outcome variable was modelled in turn. Level-2 variables to be considered for inclusion in the π_1 equation were included in the HLM for Windows (version 6.01h) exploratory analysis window for each outcome variable model. The HLM for Windows exploratory analysis provided a t-ratio as an estimate of model fit and influence for each tested variable. The variable with the highest t-ratio was tested in the model. If the variable coefficient estimate fitted the model to a sufficient degree, that is, had a t-ratio score with p-value less than 0.10 (the standard considered acceptable for this analysis) then the variable was allowed to remain in the model, otherwise the variable was deleted from the model. Each variable was successively tested in the model in this way until the exploratory t-ratio score of remaining variables was too low to provide any chance of successful inclusion in the model. This so-called 'bottom up' approach continued for Level-2 and then Level-3

variables until all options for inclusion were exhausted. Level-3 variables were only considered for inclusion in the β_{10} equation which related directly to the π_1 (slope) coefficient as the same process was followed. All other residual terms were fixed, as no estimation was required for those equations. It should also be noted that the Survey variable for the Level-1 equation was not grand mean centered, while other criterion variables were grand mean centered.

Reporting Change Over Time in Religious and Spiritual Variables

Tables 10.1 to 10.14 show the resulting HLM model coefficients for each of the religious and spiritual variables analysed for change over time. Because this analysis is only concerned with rate of change over time, Level-1 intercept and slope coefficients are reported, along with Level-2 intercept (β_{10}) and slope coefficients (β_{1j}) that are related to π_1, the slope coefficient at Level-1. Because of low reliability, all other residuals at Level 2 and Level 3 that do not relate directly to π_1 are fixed. The Level-2 and Level-3 criterion variables contributing to the rate of change over time of outcome variables can be considered as forming an initial environment of characteristics for the sample which influences the rate of growth or decline of particular outcome variables. Random coefficient reliability estimates are also reported as they refer to each level of the model. Generally, reliability estimates greater than 0.1 are considered acceptable in this analysis. Where variables are deleted from the analysis due to suspected suppressor effects, a note is contained at the foot of the table. The HLM output printouts for each analysis conducted are presented in Appendix E.

Change in Private Religious Practice

Table 10.1 shows the results of the HLM model run for change in Private Religious Practice including significant (p<0.10) between student and class level variables.

Table 10.1 Private Religious Practice as outcome variable in a 3-level HLM model

Level 1 (Within Student) Variable	Coefficient	Significance (p value)	Effect on Slope
Intercept	$\pi_0 = 1.30$	*0.00*	
Survey (Time)	$\pi_1 = -0.03$	0.42	No Significant Slope
Level 2 (Between Student) Survey 1 Variables		π_1 Random Coeff. Reliability Est. = 0.14	
Public Religious Practice	$\beta_{11} = 0.08$	0.00	Positive
Religious Discontent	$\beta_{12} = -0.08$	0.00	Negative
Religious Interest	$\beta_{13} = 0.06$	0.00	Positive
Level 3 (Between Class) Survey 1 Class Mean Variables	β_{10} Random Coeff. Reliability Est. = 0.19		
TV Hours	$\gamma_{101} = -0.09$	0.01	Negative
Deferring RPS	$\gamma_{102} = 0.12$	0.00	Positive

Note: *Service Social Attitude* (Level 3 predictor) deleted from results due to sign reversal possibly due to suppressor effect.

Occasions = 4, Classes = 45, Students = 214, Units = 483
See Appendix E for HLM Output

No significant change in Private Religious Practice ($\pi_1 = -0.03$, p>0.10) is observed in the sample as a whole over the two years of the study. It is observed however that the higher the levels of Public Religious Practice ($\beta = 0.08$) and Religious Interest ($\beta = 0.06$) and the lower the levels of Religious Discontent ($\beta = -0.08$), the more positive is the rate of change of Private Religious Practice. Also, the higher the average class levels of Deferring Religious Problem Solving ($\gamma = 0.12$) and the lower the average time spent by class members watching television ($\gamma = -0.09$), the more positive is the rate of change of Private Religious Practice.

The Private Religious Practice variable is shown to play a pivotal role in the spiritual life of Seminary students in the path analysis discussed in Chapter 9 of this text and therefore is an important variable to observe in this study. Generally, prior research concerning the religiosity of teenagers has found a decline in religiosity for youth over time (see Engebretson, 2003).

The fact that there is a slight, although not significant, decline in private religious practice among the members of the sample in this study appears to support these past findings. In fact, when all possible cases are used in a reduced model, the decline in

religiosity is found to be statistically significant (n=1018, π_1=-0.04, p<0.10). This appears to suggest that even for what may be considered a highly religiously active group of youth, there is still a general decline in private religious activity as time passes.

Figure 10.1 shows the 25th, 50th and 75th percentile scores for Religious Interest and the effect that these scores have on the slope of Private Religious Practice as it changes over time. The interesting observation in this graph is the confirmation that those with high levels of Religious Interest demonstrate growth over the study period in Private Religious Practice. This pattern holds true for each of the significant second and third level variables in this model. This finding also has precedence in past research, Scobie's (1975) observation that decline in religiosity among youth does not necessarily occur if some kind of conversion takes place, being an example.
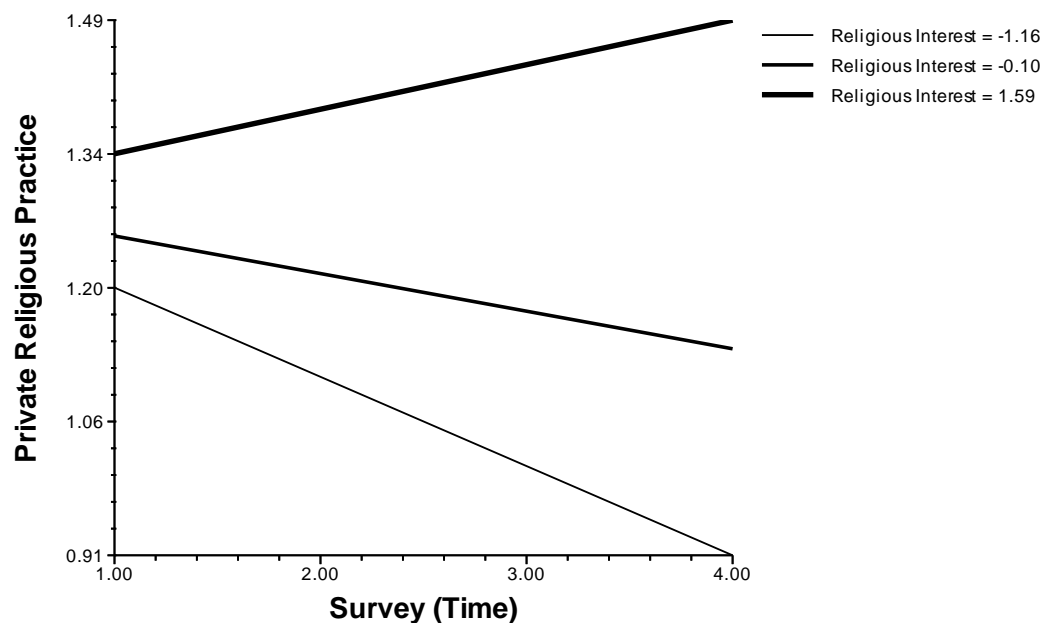
Figure 10.1 Graph showing the influence of Religious Interest (at the 25th, 50th and 75th percentile) on the change of Private religious Practice over time.

In the case of Private Religious Practice, the Public Religious Practice of individuals appears to influence the rate of change of private religious practice positively. It also appears that the attitude of individuals (Religious Discontent) towards the religious life of Latter-day Saints is important for the rate of change of Private Religious Practice. The findings of this analysis indicate that individuals with positive attitudes towards their religion as indicated by higher initial levels of Religious Interest and lower levels of Religious Discontent show less decline, and even an increase, in Private Religious Practice over the course of the study.

The class level variables showing significant influence in the model are an indication of the class environment which has an effect on the rate of change of the outcome variable. It appears that the amount of time, on average, that fellow class members spend watching TV has a negative influence on the rate of change of Private Religious Practice. Trying to establish reasons behind this relationship is difficult. The class level results also show that classes with a higher average of Deferring Religious Problem Solving tend to encourage a more positive rate of change in Private Religious Practice among its individual members. This appears plausible as the deferring mode of religious problem solving requires a focus on God. Therefore it is possible that individuals in a God focused class environment may demonstrate more positive rate of change in Private Religious Practice than others.

Change in Public Religious Practice

Table 10.2 shows the results of the HLM model run for change in Public Religious Practice including significant (p<0.10) between student and class level variables.

Table 10.2 Public Religious Practice as outcome variable in a 3-level HLM model

Level 1 (Within Student) Variable	Coefficient	Significance (p value)	Effect on Slope
Intercept	$\pi_0=$ *1.94*	*0.00*	
Survey (Time)	$\pi_1=$ −0.06	0.34	No significant slope

Level 2 (Between Student) Survey 1 Variables		π_1 Random Coeff. Reliability Est. = 0.37	
Educational Expectation	$\beta_{11}=$ −0.06	0.01	Negative
Home Work Hours	$\beta_{12}=$ −0.07	0.01	Negative
Service Social Attitude	$\beta_{13}=$ 0.07	0.00	Positive
Private Religious Practice	$\beta_{14}=$ 0.07	0.01	Positive
Seminary Participation	$\beta_{15}=$ 0.05	0.03	Positive
Spiritual Experience	$\beta_{16}=$ 0.03	0.04	Positive

Level 3 (Between Class) Survey 1 Class Variables		β_{10} Random Coeff. Reliability Est. = 0.34	
No significant effects			

Occasions = 4, Classes = 45, Students = 214, Units = 483
See Appendix E for HLM Output

No significant change in Public Religious Practice ($\pi_1=$ −0.06, p>0.10) is observed in the sample as a whole over the two years of the study. It is seen, however, that the higher the levels of a Service Social Attitude ($\beta=$ 0.07), of Private Religious Practice ($\beta=$ 0.07), of Seminary Participation ($\beta=$ 0.05) and of reported Spiritual Experience ($\beta=$ 0.03), and the lower the levels of future Educational Expectation ($\beta=$ −0.06) and Homework Hours ($\beta=$ −0.07), the more positive is the rate of change of Public Religious Practice. No significant class level effects are found to have an influence on the rate of change of Public Religious Practice.

The overall change of Public Religious Practice over time appears to take a similar path to Private Religious Practice. The significant student effects appear to be derived from three areas that influence the rate of change of Public Religious Practice. Although the model shows a slight and non-significant decline generally, it seems that certain behaviours or characteristics can influence the rate of decline and perhaps even bring about growth in public religious behaviour. In general terms, a religious-spiritual dimension involving Private Religious Practice, Spiritual Experience and Seminary Participation affect the rate of change positively with students scoring high on these variables actually showing growth in Public Religious Practice rather than decline. The variable Service Social Attitude also has a positive influence on the rate of change of Public Religious Practice. There is also an

educational dimension that appears to influence the rate of change of Public Religious Practice, but the influence is such that those with higher future educational plans (Educational Expectation) and those spending longer doing homework (Homework Hours) have a more negative slope on change in public religious activities than others, when other significant indicators are taken into consideration. These findings suggest that there is some degree of conflict between attendance at Seminary and efforts made to perform well in school.

Table 10.3 Seminary Participation as outcome variable in a 3-level HLM model

Level 1 (Within Student) Variable	Coefficient	Significance (p value)	Effect on Slope
Intercept	$\pi_0 = 1.53$	*0.00*	
Survey (Time)	$\pi_1 = -0.09$	0.09	Negative slope
Level 2 (Between Student) Survey 1 Variables		π_1 Random Coeff. Reliability Est. = 0.18	
Feelings About School	$\beta_{11} = 0.08$	0.01	Positive
Public Religious Practice	$\beta_{12} = 0.06$	0.01	Positive
Seminary Feeling	$\beta_{13} = 0.07$	0.00	Positive
Religious Belief	$\beta_{14} = 0.04$	0.01	Positive
Level 3 (Between Class) Survey 1 Class Mean Variables		β_{10} Random Coeff. Reliability Est. = 0.26	
Seminary Feeling	$\gamma_{101} = 0.06$	0.03	Positive

Occasions = 4, Classes = 45, Students = 214, Units = 483
See Appendix E for HLM Output

Change in Seminary Participation

Table 10.3 shows the results of the HLM model run for change in Seminary Participation including significant ($p<0.10$) between student and class level variables.

A general decline in Seminary Participation ($\pi_1 = -0.09$, $p<0.10$) is observed in the sample as a whole over the two years of the study. It is seen, however, that the higher the levels of Feelings About School ($\beta = 0.08$), of Public Religious Practice ($\beta = 0.06$), of Seminary Feeling ($\beta = 0.07$) and of Religious Belief ($\beta = 0.04$), the more positive is the rate of change of Seminary Participation. Also, the higher the class average for Seminary Feeling ($\gamma = 0.06$) the less negative is the slope of change of Seminary Participation.

The fact that a small marginally significant decrease in Seminary participation is observed over the period of the study may yet be another indication of the generally expected decline in religious activity over time. It is worth noting, however, that those students responding in the upper quartile for Seminary Feeling in the first survey demonstrate a slight increase in Seminary Participation over the course of the study. Figure 10.2 shows the moderating effect of Seminary Feeling on change in Seminary Participation over time. The slopes at the 25th, 50th and 75th percentiles of Seminary Feeling are illustrated showing the general decrease in Seminary Participation except for those scoring at the higher levels of Seminary Feeling. A similar effect can be observed with the mediating effect of the Public Religious Practice variable.
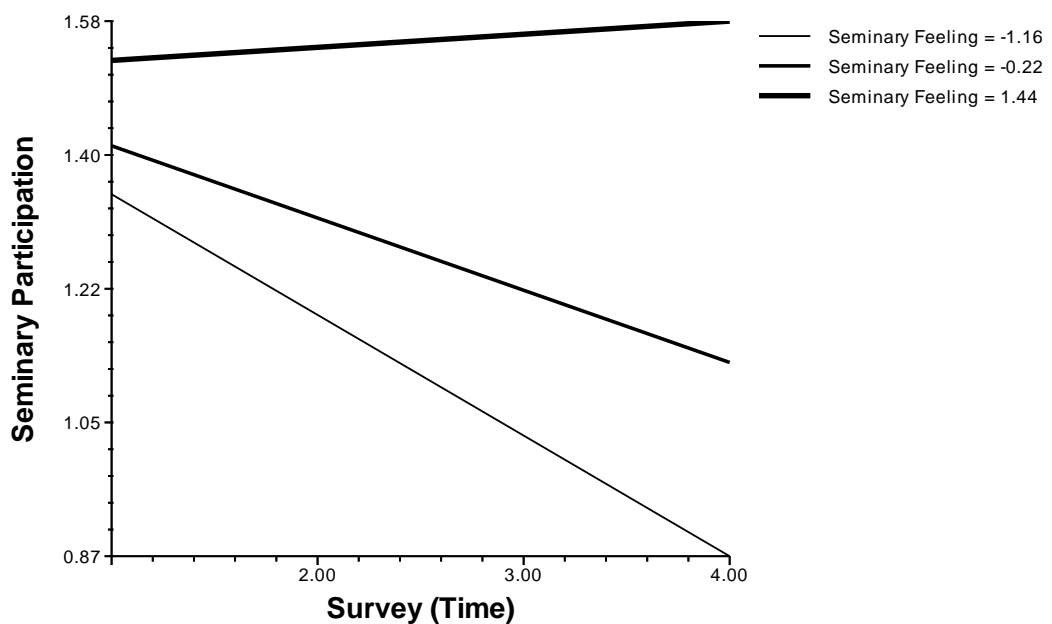
Figure 10.2 Graph showing the influence of Seminary Feeling (25th, 50th and 75th percentiles) on the change of Seminary Participation over time.

Whereas higher levels of Religious Belief, although making the slope of change of Seminary Participation less negative, does not appear to bring about an increase over time. Figure 10.3 records the graph of the moderating effects of Religious Belief over time on the variable of Seminary Participation. The slope at the average of the

upper and lower quartile of Religious Belief is illustrated. A similar pattern can be observed with the effect of the Feelings About School variable.

The connections between Seminary Feeling, a reflection of students' feelings about the spiritual and life benefits of Seminary, and Seminary Participation appear self evident. Positive feelings in the quality dimension can understandably lead to an increase in participation levels. The class level effect of this same variable is also understandable as a class of students with positive feelings tends to encourage the further participation of the individual. Similar relationships are also meaningful between Seminary Participation and the Public Religious Practice and Religious Belief variables, as in both cases these variables tend to moderate the effects of change over time.
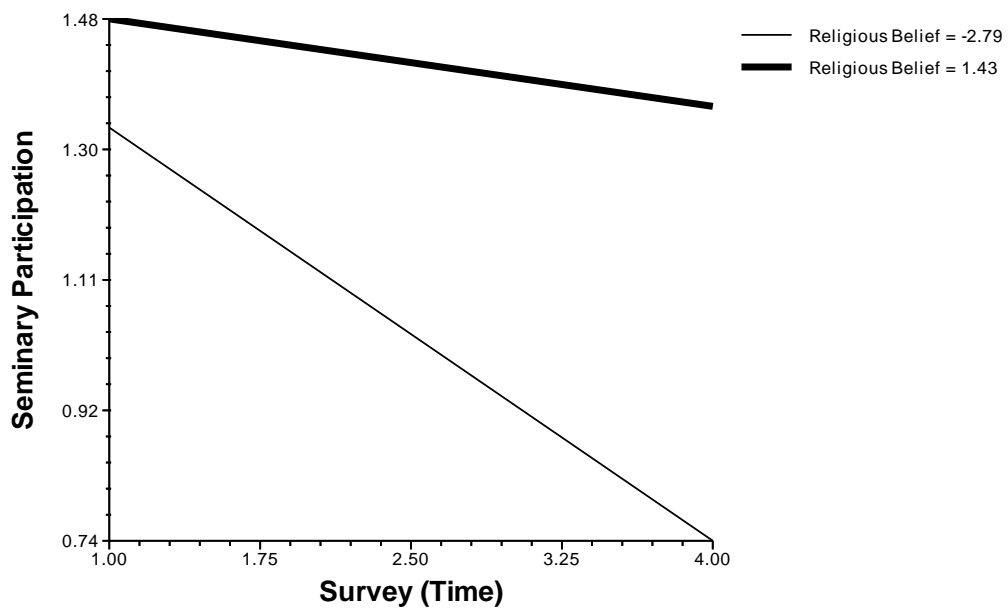
Figure 10.3 Graph showing the influence of Religious Belief (average of lower and upper quartile) on the change of Seminary Participation over time.

It is informative that an educational dimension is shown to influence change in Seminary Participation. A student's initial Feelings About School appear to relate positively to the rate of change of participation in the Seminary classroom. This, again, is a meaningful finding which no doubt reflects the educational mode and environment of the Seminary program and students' reactions to it.

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Change in Seminary Feeling

Table 10.4 shows the results of the HLM model run for change in Seminary Feeling including significant (p<0.10) between student and class level variables.

Table 10.4 Seminary Feeling as outcome variable in a 3-level HLM model

Level 1 (Within Student) Variable	Coefficient	Significance (p value)	Effect on Slope
Intercept	$\pi_0 =$ *1.73*	*0.00*	
Survey (Time)	$\pi_1 = -0.12$	0.15	No Significant Slope
Level 2 (Between Student) Survey 1 Variables		π_1 Random Coeff. Reliability Est. = 0.32	
Private Religious Practice	$\beta_{11} =$ 0.12	0.00	Positive
Seminary Participation	$\beta_{12} =$ 0.13	0.00	Positive
Religious Discontent	$\beta_{13} = -0.13$	0.00	Negative
Religious Belief	$\beta_{14} =$ 0.10	0.00	Positive
Awareness of god	$\beta_{15} =$ 0.11	0.00	Positive
Level 3 (Between Class) Survey 1 Class Variables		β_{10} Random Coeff. Reliability Est. = 0.05	
Feelings About School	$\gamma_{101} =$ 0.30	0.01	Positive
Insecurity with God	$\gamma_{101} =$ 0.18	0.06	Positive

Note: *Family Religious Practice* (Level 2 predictor) deleted from results due to sign reversal possibly due to suppressor effect.

Occasions = 4, Classes = 45, Students = 214, Units = 483
See Appendix E for HLM Output

Although no significant change is observed for Seminary Feeling in Table 10.4, a general decline in Seminary Feeling ($\pi_1 = -0.12$, p<0.10) is observed in a reduced model when only Level 1 data is included in the analysis (see Table 10.9). It is seen, however, that the higher the levels of Private Religious Practice ($\beta = 0.12$), of Seminary Participation ($\beta = 0.13$), of Religious Belief ($\beta = 0.10$), and of Awareness of God ($\beta = 0.11$) and the lower the levels of Religious Discontent ($\beta = -0.13$) the more positive is the rate of change of Seminary Feeling. Also, the higher the class average for Feelings About School ($\gamma = 0.30$) and Insecurity with God ($\gamma = 0.18$), the more positive is the slope of change of Seminary Feeling.

Figure 10.4 records the graph of the moderating effects of Awareness of God on change over time in Seminary Feeling as an example of the change in slope that occurs for various levels of significant moderating variables. Change over time of Seminary Feeling is illustrated at the 25th, 50th and 75th percentiles of the Awareness of God variable scores. The Seminary Feeling variable appears to have the largest negative rate of change of the religious and spiritual variables analysed, although comparisons of this nature are difficult to make. However, students indicating high scores on Awareness of God, and to a lesser extent Seminary Participation, Religious Belief and Private Religious Practice demonstrate positive growth in Seminary Feeling over the period of the study. Students measuring low for Religious Discontent also demonstrate positive growth in Seminary Feeling. The class effects of Feelings About School and Insecurity with God do not influence the outcome variable sufficiently to give rise to a positive slope, although a positive relationship with the slope of Seminary Feeling is seen to be in operation.

It appears that a large part of growth in students feeling the enjoyment, spiritual and life benefits of Seminary, as reflected in the Seminary Feeling variable, is related to the religious belief, the private religious life and the spirituality of the individual student as these elements are represented by all of the significant between student level variables.
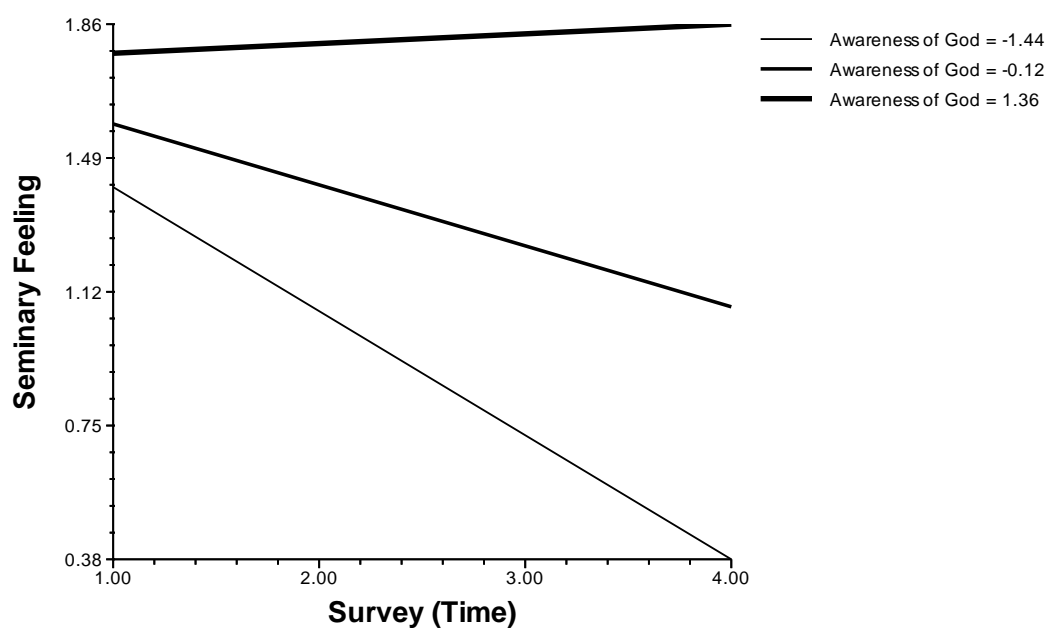
Figure 10.4 Graph showing the influence of Awareness of God (25th, 50th and 75th percentile) on the change of Seminary Participation over time.

The positive class effect of average Feelings About School on the slope of Seminary Feeling appears to be a reflection of the academic nature of the Seminary program as classes with a higher average of Feelings about School contain students who show less decline in Seminary Feeling over the period of the study. It is more difficult to understand, however, how the class average of Insecurity with God influences the slope of change in Seminary Feeling in a positive way, unless the discussion around issues associated with Insecurity with God within the class group leads to a more stimulating climate in the classroom and those students who are interested in these issues feel that they benefit from such an environment.

Change in Spiritual Experience

Table 10.5 shows the results of the HLM model run for change in Spiritual Experience including significant ($p < 0.10$) between student and class level variables.

Table 10.5 Spiritual Experience as outcome variable in a 3-level HLM model

Level 1 (Within Student) Variable	Coefficient	Significance (p value)	Effect on Slope
Intercept	$\pi_0 =$ *1.43*	*0.00*	
Survey (Time)	$\pi_1 =$ 0.04	0.76	No Significant Slope
Level 2 (Between Student) Survey 1 Variables		π_1 Random Coeff. Reliability Est. = 0.45	
Public Religious Practice	$\beta_{11} =$ 0.07	0.05	Positive
Religious Interest	$\beta_{12} =$ 0.15	0.00	Positive
Religious Belief	$\beta_{13} =$ 0.09	0.00	Positive
Collaborative RPS	$\beta_{14} =$ 0.06	0.02	Positive
Awareness of God	$\beta_{15} =$ 0.08	0.02	Positive
Level 3 (Between Class) Survey 1 Class Variables		β_{10} Random Coeff. Reliability Est. = 0.36	
Awareness of God	$\gamma_{101} =$ 0.11	0.08	Positive

Note: *Conscience Social Attitude* (Level 3 predictor) deleted from results due to sign reversal possibly due to suppressor effect.

Occasions = 4, Classes = 45, Students = 214, Units = 483
See Appendix E for HLM Output

Almost no change at all in Spiritual Experience ($\pi_1 = 0.04$, p>0.10) is observed in the sample as a whole over the two years of the study. It is seen, however, that the higher the levels of Public Religious Practice ($\beta = 0.07$), of Religious Interest ($\beta = 0.15$), of Religious Belief ($\beta = 0.09$), of Collaborative Religious Problem Solving ($\beta = 0.06$) and of Awareness of God ($\beta = 0.08$), the more positive is the rate of change of Seminary Feeling. Also, the higher the class average for Awareness of God ($\gamma = 0.11$) the more positive is the slope of change of Seminary Feeling.
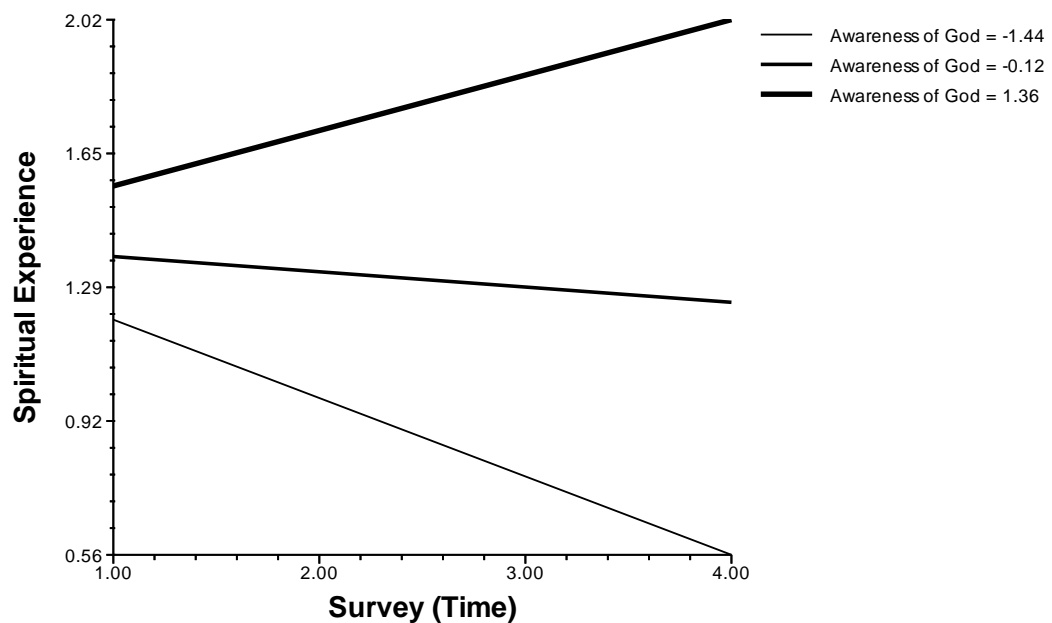
Figure 10.5 Graph showing the influence of Awareness of God (25th, 50th and 75th percentiles) on the change of Spiritual Experience over time.

Figure 10.5 presents the graph of the moderating effects of the variable Awareness of God on the change over time in Spiritual Experience. Although, Figure 10.5 shows that there is almost no change in the Spiritual Experience variable in the general sample over the period of the study, there is an increase in Spiritual Experience for students scoring high for all of the significant between student and class level variables shown to have a significant influence on the slope. Accordingly, students scoring low for all significant predictor variables show a decline for the Spiritual Experience variable.

Collectively, the predictor variables that fit this model appear to represent elements of religious practice, attitude and belief along with elements of spirituality,

demonstrating a possible connection between these aspects of religious life and change in reported spiritual experiences. The average level of Awareness of God within a class also appears to influence the Spiritual Experience of individual students. It is noteworthy that no background, moral or social variables appear to influence change in Spiritual Experience directly at the student or the class level.

Change in Religious Interest

Table 10.6 shows the results of the HLM model run for change in Religious Interest including significant ($p<0.10$) between student and class level variables.

Table 10.6 Religious Interest as outcome variable in a 3-level HLM model

Level 1 (Within Student) Variable	Coefficient	Significance (p value)	Effect on Slope
Intercept	$\pi_0 = 2.64$	*0.00*	
Survey (Time)	$\pi_1 = 0.22$	0.02	Positive Slope
Level 2 (Between Student) Survey 1 Variables		π_1 Random Coeff. Reliability Est. = 0.53	
Private Religious Practice	$\beta_{11} = 0.19$	0.00	Positive
Spiritual Experience	$\beta_{12} = 0.14$	0.00	Positive
Religious Discontent	$\beta_{13} = -0.13$	0.00	Negative
Awareness of God	$\beta_{14} = 0.10$	0.00	Positive
Disappointment with God	$\beta_{15} = -0.04$	0.09	Negative
Level 3 (Between Class) Survey 1 Class Variables		β_{10} Random Coeff. Reliability Est. = 0.21	
No significant effects			

Note: *Religious Discontent* (Level 3 predictor) deleted from results due to sign reversal possibly due to suppressor effect.

Occasions = 4, Classes = 45, Students = 214, Units = 483
See Appendix E for HLM Output

A general increase in Religious Interest ($\pi_1 = 0.22$, $p<0.10$) is observed in the sample as a whole over the two years of the study. It is also observed that the higher the levels of Private Religious Practice ($\beta = 0.19$), of Spiritual Experience ($\beta = 0.14$) and of Awareness of God ($\beta = 0.10$) and the lower the levels of Religious Discontent ($\beta = -0.13$), and of Disappointment with God ($\beta = -0.04$) the more positive is the rate of change of Religious Interest. No significant class level variables are found except for Religious Interest which is deleted from the model due to a suspected suppressor effect.

Figure 10.6 shows the difference in growth of the outcome variable for the scores at the 25th, 50th and 75th percentiles for Spiritual Experience. Although there is evidence of a general increase in Religious Interest over the two year period of the study, students scoring in the bottom quartile for Private Religious Practice, Spiritual Experience or Awareness of God show no change or even a slight decrease in Religious Interest over the study period. To a lesser degree students scoring in the upper quartile for Religious Discontent also show a slight decrease in Religious Interest.
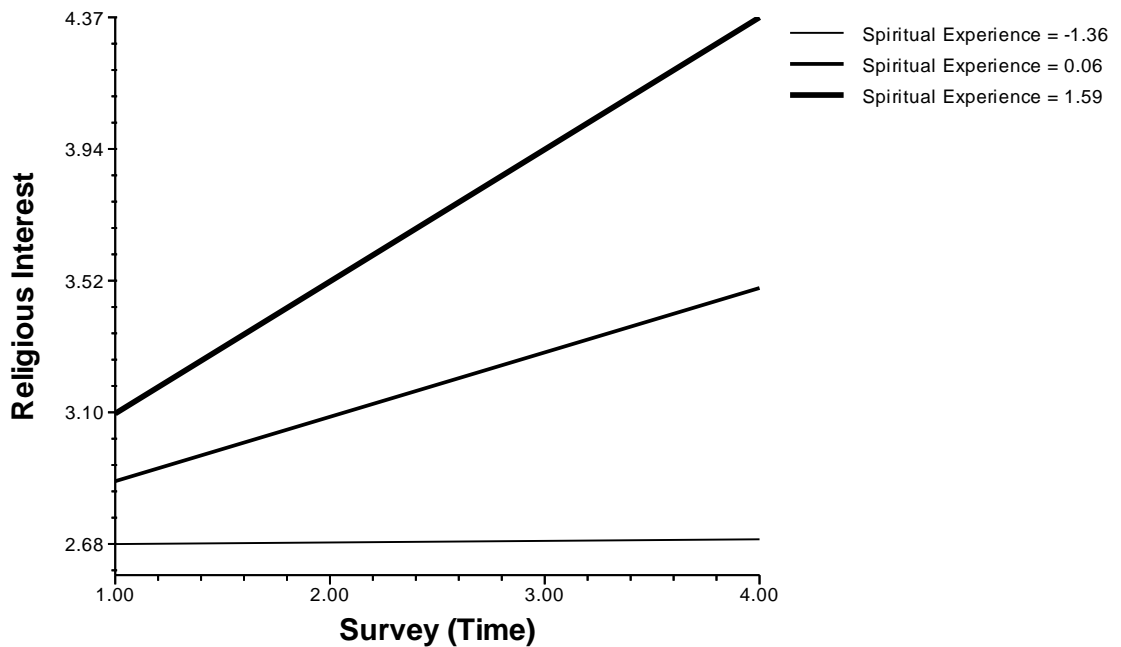
Figure 10.6 Graph showing the influence of Spiritual Experience (25th, 50th and 75th percentile) on the change of Religious Interest over time.

Change in Collaborative Religious Problem Solving

Table 10.7 shows the results of the HLM model run for change in Collaborative Religious Problem Solving including significant (p<0.10) between student and class level variables.

Table 10.7 Collaborative RPS as outcome variable in a 3-level HLM model

Level 1 (Within Student) Variable	Coefficient	Significance (p value)	Effect on Slope
Intercept	$\pi_0 = 0.05$	*0.85*	
Survey (Time)	$\pi_1 = 0.07$	0.50	No Significant Slope

Level 2 (Between Student) Survey 1 Variables		π_1 Random Coeff. Reliability Est. $= 0.37$	
Marks at School	$\beta_{11} = 0.13$	0.02	Positive
Public Religious Practice	$\beta_{12} = 0.09$	0.01	Positive
Spiritual Experience	$\beta_{13} = 0.07$	0.02	Positive
Religious Discontent	$\beta_{14} = -0.11$	0.00	Negative
Self–Directing RPS	$\beta_{15} = -0.11$	0.00	Negative
Awareness of God	$\beta_{16} = 0.19$	0.00	Positive

Level 3 (Between Class) Survey 1 Class Variables		β_{10} Random Coeff. Reliability Est. $= 0.13$	
No significant effects			

Occasions = 4, Classes = 45, Students = 214, Units = 483
See Appendix E for HLM Output

No significant change in Collaborative Religious Problem Solving ($\pi_1 = 0.07$, p>0.10) is observed in the sample as a whole over the two years of the study. It is observed that the higher the levels of self reported marks at school ($\beta = 0.13$), of Public Religious Practice ($\beta = 0.09$), of Spiritual Experience ($\beta = 0.07$), and of Awareness of God ($\beta = 0.19$) and the lower the levels of Religious Discontent ($\beta = -0.11$), and of Self-Directing Religious Problem Solving ($\beta = -0.11$), the more positive is the rate of change of Collaborative Religious Problem Solving. No significant class level variables are observed to influence the rate of change of Collaborative Religious Problem Solving directly.
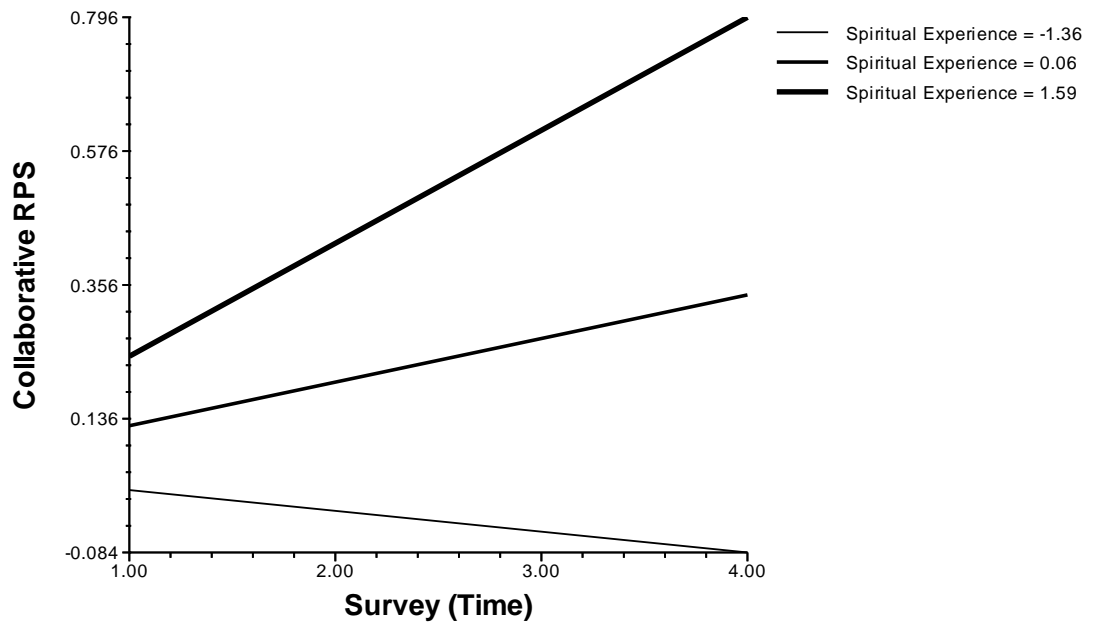
Figure 10.7 Graph showing the influence of Spiritual Experience (25th, 50th and 75th percentile) on the change of Collaborative RPS over time.

Figure 10.7 shows the slope of Collaborative Religious Problem Solving for scores at the 25th, 50th and 75th percentiles for the Spiritual Experience variable. Once again it is observed that certain characteristics can have a dramatic effect on the direction of change of certain variables as demonstrated in this case with the influence of Spiritual Experience on the rate of change of Collaborative Religious Problem Solving. All effects of significant explanatory variables change the slope of Collaborative Religious Problem Solving in similar ways as for Spiritual Experience.

Change in Awareness of God

Table 10.8 shows the results of the HLM model run for change in Awareness of God including significant ($p<0.10$) between student and class level variables.

Table 10.8 Awareness of God as outcome variable in a 3-level HLM model

Level 1 (Within Student) Variable	Coefficient	Significance (p value)	Effect on Slope
Intercept	$\pi_0 =$ *0.78*	*0.00*	
Survey (Time)	$\pi_1 =$ 0.24	0.04	Positive

Level 2 (Between Student) Survey 1 Variables		π_1 Random Coeff. Reliability Est. = 0.39	
Public Religious Practice	$\beta_{11} =$ 0.09	0.03	Positive
Spiritual Experience	$\beta_{12} =$ 0.13	0.00	Positive
Religious Belief	$\beta_{13} =$ 0.09	0.01	Positive
Collaborative RPS	$\beta_{14} =$ 0.12	0.00	Positive

Level 3 (Between Class) Survey 1 Class Variables		β_{10} Random Coeff. Reliability Est. = 0.33	
No Significant Effects			

Occasions = 4, Classes = 45, Students = 214, Units = 483
See Appendix E for HLM Output

A relatively large increase in Awareness of God ($\pi_1 =$ 0.24, $p<0.10$) is observed in the sample as a whole over the two years of the study. It is also observed that the higher the levels of Public Religious Practice ($\beta =$ 0.09), of Spiritual Experience ($\beta =$ 0.13), of Religious Belief ($\beta =$ 0.09), and of Collaborative Religious Problem Solving ($\beta =$ 0.12) the more positive is the rate of change of Awareness of God. No class level variables are found to influence significantly the rate of change of Awareness of God directly.

The growth in Awareness of God of the general sample appears to be the largest for any religious or spiritual variable in the study, although it is technically impossible to compare accurately the various scales. However, students scoring in the lower end of the scale for all significant explanatory variables except for Public Religious Practice decrease slightly in Awareness of God over the two years of the study.
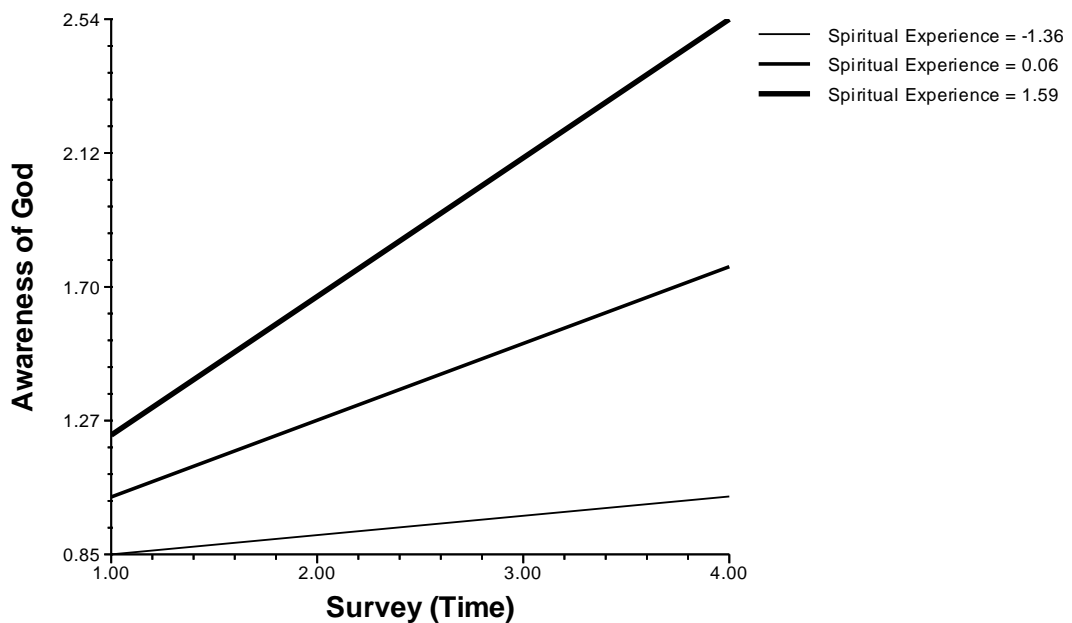
Figure 10.8 Graph showing the influence of Spiritual Experience (25th, 50th and 75th percentiles) on the change of Awareness of God over time.

Figure 10.8 shows the slopes of Awareness of God for scores at the 25th, 50th and 75th percentiles for Spiritual Experience as an example of the mediating effects of the explanatory variables. It can be observed from this graph that although there is a strong positive slope for students scoring high on the Spiritual Experience scale, students initially scoring low for Spiritual Experience show very little increase in Awareness of God over the two years of the study. In fact the slope can be seen to be negative for very low Spiritual Experience scores.

Responding to the Questions

In order to keep a potentially in depth and lengthy discussion within the scope of this study, the discussion of significant findings of the HLM analysis reported above is presented in terms of the research questions relevant to this chapter. It should be remembered that although many relationships are shown to be statistically significant and worth noting here, the relationships are nonetheless small and caution is required when interpreting and when responding to the research questions.

Table 10.9 Level 1 (within student) HLM Output showing Intercept and Slope of Religious and Spiritual Variables.

Associated Latent Variable	Variable (Y) (483 cases)	Intercept $*\pi_0$	Slope $*\pi_1$	p value	Direction of Change
Public Religious Life	Public Religious Practice	1.94	−0.03	0.44	Not Sig.
Seminary Participation	Seminary Participation	1.53	−0.08	0.06	Decrease
Seminary Quality	Seminary Feeling	1.73	−0.12	0.05	Decrease
Private Religious Life	Private Religious Practice	1.30	−0.03	0.39	Not Sig.
	Religious Interest	2.64	0.16	0.00	Increase
Spirituality	Awareness of God	0.78	0.26	0.00	Increase
	Spiritual Experiences	1.43	0.00	0.96	Not Sig.
Religious Problem Solving	Collaborative R.P.S.	0.05	0.06	0.39	Not Sig.
Other Variables	Religious Belief	3.14	0.09	0.10	Increase
	Religious Discontent	−0.40	−0.08	0.04	Decrease
	Disappointed with God	−2.16	−0.05	0.35	Not Sig.
	Insecure with God	−1.10	0.01	0.85	Not Sig.
	Deferring R.P.S.	−1.01	−0.15	0.01	Decrease
	Self Directing R.P.S.	−0.23	0.08	0.12	Not Sig.

Results obtained using HLM for Windows (version 6.01h); Lvl 1 n = 483, Lvl 2 n = 214 with slope residuals fixed (default) using all data over four surveys with Level 2 & 3 data included in MDM.
* where $Y = \pi_0 + \pi_1 (SURVEY) + e$

A summary of the average intercept and slope of religious and spiritual variables for the sample (n=483) is provided in Table 10.9 which enables a direct response to Research Question 3. The variables in this table are grouped and ordered to reflect the latent variable constructs used in the PLS Path analysis discussed in Chapter 9 for the sake of consistency. Other variables not examined in Chapter 9 are included in an Other Variables category. Although all variables are of interest, this discussion focuses primarily on variables included as part of the latent variables in Chapter 9.

The decline in both the participation levels and the feelings towards the impact of Seminary are clear from the summary in Table 10.9, at least when the sample as a whole is considered. This decline is in the context of an accompanying small but not significant decline in religious practice at both the public and private levels. This finding appears to indicate that both Seminary participation and attitude towards Seminary generally decline over time. Several possibilities exist to explain this decline, not the least of which may be related to the generally held view that

religiosity in teenagers declines with age (see Engebretson, 2003). There is little doubt that teenagers also become subject to greater pressures and distractions through schooling, employment and relationships as they grow older which may cause a decline in participation and attitude towards the demanding program of Seminary. In this context it is perhaps surprising that there is not a more significant decline in public and private religious practice found, although admittedly private religious practice is seen to decline significantly when a reduced model with a larger number of included cases is used in a similar HLM analysis. The comments of Sloane and Potvin (1983) may offer some understanding to this finding as they observed that the general decline in religiosity among young people was not as pronounced among more conservative religions. Perhaps this is true of some religiously active Latter-day Saint Seminary students.

Of special interest is the fact that while the students are shown to decline in Seminary participation and feeling they in fact increase in Religious Interest, a variable that measures interest in living according to the Latter-day Saint religious tradition and expectations, as well as Religious Beliefs, a variable that measures belief in church doctrine. Religious Discontent is seen to decrease over the same period indicating that students generally feel less dissatisfaction with Latter-day Saint expectations as time passes. These variables seem to reflect a belief and attitude level to religious life which appears to increase positively even while participation in Seminary and attitude towards Seminary classes decrease.

The most statistically significant positive change of the entire set of variables included in this study is in Awareness of God, a measure of the degree to which students feel God's influence in their lives. This variable is at the heart of student spirituality as defined in this study and as such this is an important observation. While students decline in Seminary participation and attitude, has no significant change in religious practice and develop positively in religious belief and attitude, generally their awareness of God increases. Spiritual Experience, the variable which partners Awareness of God in the Spirituality latent variable (see Chapter 9), has almost no change over the two-year period. Also, there is no significant change in the variables associated with the quality of the relationship with God, only the strength of that relationship as measured by the Awareness of God variable.

The findings of this analysis appear to demonstrate that change in religious participation does not necessarily reflect an immediate corresponding change in religious belief, religious attitude or spirituality as measured by a relationship with God. It is impossible to come to any conclusion regarding ongoing development of such dimensions from these findings, but it appears that decline in religious practice does not lead to immediate decline in these other dimensions of religious and spiritual life among Seminary students.

Question 4: ***Which initial factors influence the change over time of religious and spiritual dimensions?***

Overall findings, as those just discussed can be viewed more specifically when the context of other between-student variables is introduced to the model and the influences of such variables are tested for a significant influence on growth over time of the religious and spiritual variables. The HLM findings at Level-2 presented above demonstrate that certain variables not only influence the direction of growth or decline of dimensions measured over time, but also the magnitude of change, whether growth or decline, can be shown to depend on student initial scores for particular variables.

The Influence of Background Variables on Religious and Spiritual Development
At the student level, Level-2, it is interesting to note how few background or social-moral variables there are that influence change over time of religious or spiritual variables. The only background or social variables to influence change in religiously related variables are related to education.

The future educational aspirations of students and the hours spent doing homework have negative relationships with change over time of Public Religious Practice, perhaps suggesting that the more educationally ambitious students are, the more negative is the rate of change in the amount of public religious practice they are engaged in. Also, students' feelings about school relate positively with Seminary Participation, perhaps in response to the strong educational basis of the Seminary class program and classes. Educational achievement also plays a part in the change over time of the spiritual variable Collaborative Religious Problem Solving,

indicating a connection between initial academic performance and development of a cooperative mode of interacting with God.

The fact that educationally related variables are the only variables, from the list of antecedent, background, social or moral variables, to be shown to influence development of religious or spiritual variables at the student level in this study possibly highlights an important relationship between academic life and religious development. The findings appear to indicate that academic ambition hinders the development of public religiosity, positive feelings about school increase the development of Seminary participation and academic achievement positively influences development of a cooperative approach towards God.

The Influence of Religious Variables on Religious and Spiritual Development
Of the many religious variables to be shown to influence development in religious or spiritual variables, religious practice, either public or private, has the most far-reaching influence. Development in each of the variables focused on in this analysis is influenced by either Public Religious Practice or Private Religious Practice. These results indicate that the reported level of initial private religious practice tends to influence change in variables related to religious attitude and belief, such as Religious Interest and Seminary Feeling, while the reported level of Public Religious Practice tend to influence variables related to participation and spirituality such as Seminary Participation and Spiritual Experience.

It is surprising, particularly in light of the current tendency of many academic researchers and religious commentators to disassociate religious involvement from spiritual development (for example, see Tacey, 2003), that Public Religious Practice is shown to influence the more spiritually related variables. At least in the Latter-day Saint tradition of public religious life and the very relational approach to spirituality adopted in this study, public modes of religious practice appear to play an important part in the development of spirituality. This may be a reflection of the sometimes quite demanding forms of public religious practices that are encouraged in the Latter-day Saint religion. For example, along with simply attending meetings or activities, members are encouraged to participate by speaking publicly or participating in classes. This level of participation may not only demand a level of commitment but

may also assist in generating the positive influence on spirituality observed in this analysis.

Student belief in basic church doctrines also appears to have a broad influence over the development of many key religious and spiritual dimensions. For example, Religious Belief positively influences the rate of change of both Seminary Participation and Seminary Feeling. Religious Belief also positively influences change in the spiritually related variables of Spiritual Experience and Awareness of God.

It makes sense that students who believe more strongly in key teachings are more inclined not only to participate at increasing levels in the demanding program of Seminary but also to have a better attitude concerning that participation. A relationship between development in spirituality and belief in an associated religious system also appears to be feasible, if not self-evident.

The Influence of Spiritual Variables on Religious and Spiritual Development
A predominant spiritual variable influencing development of key variables in this study is the Awareness of God variable. Awareness of God positively influences development in Seminary Feeling, Spiritual Experiences, Religious Interest and Collaborative Religious Problem Solving, all of which are of an attitudinal or spiritual nature. The level of Spiritual Experience reported by students also influences development of the religious or spiritual variables in this study. As with Awareness of God these variables tend to be of an attitudinal or spiritual nature.

It seems that initial levels of Awareness of God and Spiritual Experience variables relate to the development or attitudinal aspects of religion and spirituality especially. These relationships appear to make sense, although the absence of any direct influence of these spiritual variables on the development of religious practice variables is an interesting finding that may require further investigation.

Question 5: ***Are there any class effects on the change in religious or spiritual dimensions?***

The exploration of class effects on the change over time of religious and spiritual variables appears to be subject to some interference from suppressor effects. However, some class level influences appear to be meaningful and add to the understanding of the model. There does not appear to be any overall order to the effects to be reported on an across-variable basis. Although several class level relationships are difficult to understand or discuss with clear meaning, feasible explanations for some class level effects can be advanced.

The relationship between average class levels of Awareness of God and rate of change of Spiritual Experience (see Table 10.5) appears to be easy to understand, as it is feasible that students meeting daily in a class of spiritually aware students are more inclined to develop spiritually, a part of which may entail having more spiritual experiences. Likewise, the fact that the average class level of positive feelings about school positively influences the rate of change of the Seminary Feeling variable for students (see Table 10.4) also lends itself to this explanation. A class environment of students with positive feelings towards school is likely to produce positive attitudes concerning the academically religious environment of the Seminary program. The class average of Seminary Feeling influences the rate of change in Seminary Participation in a positive way. Like the previous two examples, this relationship appears to reflect reality as students from classes which collectively feel positive about the outcomes of Seminary are encouraged to develop in that participation more positively (or less negatively given the overall negative slope of this variable) than students from other classes.

Question 6: ***How does the Seminary program influence change in religious and spiritual dimensions?***

There are at least two types of Seminary influences that can be observed from the current HLM analysis. First, the direct significant influences of Seminary Participation and Seminary Feeling on change over time of key variables can be observed. Second, any class level influences are essentially influences brought about through the Seminary experience as it is the Seminary class environment that is being reported in class aggregated Level-3 variables. Therefore, any direct Level-2

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influence of Seminary variables or any Level-3 class aggregate variable influences may be considered part of the influence of the Seminary experience on change in religious or spiritual dimensions of Seminary students.

Direct between-student influences of initial Seminary Participation or Seminary Feeling on change in religious or spiritual variables are quite limited. Apart from influencing change in Public Religious Practice, both Seminary Participation and Seminary Feeling only influence change in the two Seminary variables; Seminary Feeling and Seminary Participation respectively. It is possible however, that the effects of both Seminary variables with change in Public Religious Practice is still important as Public Religious Practice is found to be an important influence on the development of spirituality in this analysis. If there is student level Seminary influence on the change of any other variables, it appears that other variables overshadow any such influence in these models.

Findings concerning the influence of the Seminary program through the class level environment are difficult to summarise in general terms. However, considering individual significant class effects may provide some useful understanding. The class level influence on change over time of three particular variables appears to be most useful in providing understanding of the impact of the class environment of the Seminary program.

The influence of class average Seminary Feeling on decline in Seminary Participation over time is such that students from classes with greater levels of Seminary Feeling decline in Seminary Participation to a lesser degree over the two-year period. In a similar way, students from classes with greater levels of positive feelings about school show much less decline in Seminary Participation and even positive growth for those classes with high average scores than those with a lower class average. However, these variables are both only concerned with the Seminary program itself.

The impact of the Seminary class environment on the change over time of the Spiritual Experience variable is perhaps the most meaningful of the class level effects. Students from classes showing higher average Awareness of God tend to have a more positive rate of change of Spiritual Experience than others. In fact,

students belonging to classes scoring high for Awareness of God may actually show increased Spiritual Experience over time while others tend to stay constant or decline.

This relationship has implications for one of the major goals of the Seminary program, and indeed many religious instruction programs, which is the spiritual development of students. One implication is that it seems likely from these findings that an environment of spiritually aware students can help facilitate positive development of spiritual experiences in students.

Conclusion

This chapter discusses the potentially complex issue of change over time of key religious and spiritual variables. Variance in these key variables over the two year, four-wave, study period is found to be sufficient enough that meaningful change over time patterns can be observed using HLM analysis. Further, student level and class level variables influencing the rate of change over time of key variables are identified and the implications of these influences discussed, albeit briefly.

Responses to the relevant research questions highlight some interesting findings which are further discussed in the concluding chapter, Chapter 11. These findings include the fact that although Seminary participation and feeling decline and religious practice shows no significant change, interest in religious lifestyle, religious belief and an awareness of God's influence in life actually appears to increase among Seminary students over time. The impact of religious practice, both public and private, as well as religious belief and awareness of God on change in many key variables is also worth noting. Finally, class level impact is observed in some instances which carries implications for the nature of the Seminary environment and its impact on the religious and spiritual development of students.

The next chapter, Chapter 11, provides a summary and discussion of important points taken from the analyses contained in the chapters presenting the results of this study. Implications of these findings are discussed along with recommendations relevant to the Seminary program as well as future research in the field.

CHAPTER 11:

THE SEMINARY PROGRAM AND THE STUDY OF RELIGIOUS YOUTH

Introduction

This chapter provides a review of the findings previously reported in more detail in earlier chapters. Some implications of the findings of this investigation for the Seminary program specifically, and for understanding youth religious life generally, are presented. Recommendations for further research topics arising as a result of this investigation are also advanced.

Investigation Goals Revisited

This study sets out to investigate religious, spiritual, social and moral dimensions in the lives of Latter-day Saint Seminary students; a group demonstrating high levels of involvement in religious education and religious practice. Relationships between these characteristics are of particular interest as is the development over time of religious and spiritual dimensions. It is understood that the broad variety of factors included in the study means that depth of investigation for any one dimension is necessarily limited. However, the fact that the investigation seeks to consider such a wide variety of variables and their interrelationships is considered a unique contribution to inquiry and practice.

The primary population of interest consists of students participating in the early-morning Seminary program of the Church of Jesus Christ of Latter-day Saints. This highly religious group of students has been the subject of very little research of this nature, especially outside of the United States. Therefore, this study is seen as offering a significant contribution in seeking to understand better the relationships between, and development of, key elements of these students' lives. It is also considered that many of the findings from this study are likely to be useful in

contributing to an understanding of the lives of religious youth and how that religiosity influences their outlook on society.

Research questions are posed in order to guide this investigation. These questions can be grouped into two major areas; relationships between religious and social dimensions and the change in religious dimensions over time. These questions are listed below.

Relationships between key dimensions.

Question 1:   What influence does religiosity and spirituality have on the moral and social outlook of religious youth?

Question 2:   What effects does the Latter-day Saint Seminary program have on the religious, spiritual, moral and social lives of its participants?

Change over time in religious and spiritual dimensions.

Question 3:   How do religious and spiritual dimensions change over the course of the study?

Question 4:   Which initial factors influence the change over time of religious and spiritual dimensions?

Question 5:   Are there any class effects on the change in religious or spiritual dimensions?

Question 6:   How does the Seminary program influence change in religious and spiritual dimensions?

The Research and Reporting the Findings

In order to provide a foundation for discussion based on the findings of this study and respond to the research questions appropriately, relevant academic literature is initially reviewed in this thesis. Once again the breadth and number of the concepts included in this investigation mean that any review cannot be exhaustive or in great detail, but sufficient information is covered in order to inform the reader on current and relevant issues necessary for setting the context of this investigation. The topics covered in the review include:

(a) current thought on youth religiosity and spirituality;

(b) factors important to the religiosity and spirituality of youth;

(c) some relevant approaches to measuring religiosity and spirituality;

(d) the research regarding attitudes and its connection to action;

(e) the theory of planned behaviour that is viewed as a useful model for considering attitudes in this study;

(f) various approaches to understanding moral development, including the cognitive developmental approach and the movement to Neo-Kohlbergian as well as other paradigms for measuring moral thinking;

(g) research regarding the relationships between religion and attitudes, as well as religion and moral thinking; and

(h) research involving Latter-day Saint youth specifically in order to acquaint the reader with the cultural influences and peculiarities of this specific group.

The conceptual framework of this study is discussed in Chapter 5 following the review of relevant research contained in Chapters 2 to 4. In the process of presenting the structure and framework of the current study, specific theoretical approaches, constructs and corresponding survey instruments need to be identified for inclusion in the investigation and these are considered in Chapter 6.

The resulting major portion of data gathering involves four waves of surveys over a two-year period using a sample of convenience of Seminary students in South Australia and Victoria. The resulting data are analyzed and scales are constructed predominantly using Rasch analysis techniques. Descriptive statistics are used to describe the antecedent characteristics of the sample, while statistical techniques such as PLS path analysis (Sellin, 1989) for analyzing relationships among key factors and multilevel analysis using Hierarchical Linear Modelling (Raudenbush, Bryk & Congdon, 2005) for analyzing change over time by considering the multiple levels of the data are employed. Results are reported accordingly.

As well as responding to the research questions directly a chapter describing the sample based on the data from antecedent variables is presented in Chapter 7 together with a chapter examining the characteristics of discontinuing students. The

analysis on student dropout in the study after the initial survey provides particularly useful information and is thought to have wider implications worthy of consideration in the context of the overall findings.

A Review of Major Findings

Observations Concerning Student Dropout

In order to understand better the dynamics and make-up of the sample, and hence the research population for this study, an analysis is reported of an investigation into whether certain characteristics tended to lead students to discontinue participation in the study after the first survey. Only classes that returned student questionnaires for each wave were considered in this analysis, indicating that if a student was not represented in a survey it was generally because they were not in attendance at Seminary. Because of this class-based administration of the questionnaires it is plausible to assume that a high proportion of students who responded to the first survey but not to subsequent surveys had discontinued because they dropped out of the Seminary program.

In summary, the results of comparison of means for categorical data and analysis using the Pearson correlation coefficient for Rasch scaled measures, appear to indicate that students were more likely to drop out of the Seminary program if they:

  (a) had not been born into the Latter-day Saint Church;
  (b) had come from a home without a father present;
  (c) had lower levels of religious practice in the family;
  (d) had lower levels of private religious activity;
  (e) had a tendency to solve life's problems without God's help;
  (f) had lower school grades and educational aspirations (see Chapter8).

For those who were converts to the church, it was found that the class environment may have had an impact as to whether they remained within the program or not. Converts who belonged to Seminary classes with higher average levels of self-directing religious problem solving and lower average levels of insecurity in

relationships with God were much less inclined to drop out of the program than other converts.

Some implications of these findings are discussed below.

Relationships Among Key Factors

It is important for the success of this investigation that relationships can be shown to exist between the representative religious, spiritual and social factors used. The path model reported in Chapter 8 and illustrated in Figure 8.2 appears to be a meaningful model or reflection of actual relationships between some key background, religious, spiritual, social and moral factors. Furthermore, several relationships shown in the model may have important implications for the Latter-day Saint Seminary program, as well as a broader understanding of religious and spiritual lifestyles in the context of the wider community.

A review of some important findings is presented below in the context of the key research questions. These are purposefully kept brief as further detail is available in the relevant chapters of this volume. Table 9.4 and Figure 9.2 show the details of the findings regarding the relationships referred to below.

Question 1: *What influence does religiosity and spirituality have on the moral and social outlook of religious youth?*

There is evidence from the findings of this investigation that the public participation aspects of religious life, including those in the home, lead to more private forms of religion, such as personal prayer or study of scriptures. These private forms of religion are tend to foster spirituality, as measured by a personal and cooperative relationship with God. Although it seems intuitive that these relationships are cyclical in nature, with spirituality in turn encouraging public religious practice, the order of influence outlined in this analysis is still meaningful when used to provide an understanding of these relationships.

The findings of this study also appear to cast some light on the relationship between religious life and moral thinking. The level of independent moral thinking, that is,

morality guided by principles rather than individuals, appears to be influenced more by the spirituality of the individuals than by their religious practice, whether public or private. The evidence here suggests that the influence of religion on moral development, at least in terms of what influences moral judgment, operates through the dimension of spirituality.

Conversely, the evidence suggests that the development of positive social attitudes, such as conscience and service to others, is not influenced directly by spirituality but is influenced more by the level of private religious practice of the individual. In the specific case of the target population of Seminary students, the students' perceptions of the impact of Seminary also appear to influence these positive social attitudes.

Question 2: *What effects does the Latter-day Saint Seminary program have on the religious, spiritual, moral and social lives of its participants?*

This study provides evidence to suggest that the Seminary program influences private religious life, spirituality, social attitudes and independent moral thinking positively. In this relationship, it seems clear that the students' feelings regarding the Seminary program are the major influence, rather than mere participation on its own. In other words, the influence of the Seminary program is dependent on the enjoyment or impact of the experience as perceived by the students. It is likely that Seminary participation contributes toward positive feelings regarding the quality of the program which in turn contributes to higher levels of private religious practice, higher levels of spirituality, higher levels of independent moral thinking and higher levels of desirable social attitudes such as conscience and service to others. Like the relationships between religious practice and spirituality, it is likely that the relationships between Seminary participation, feelings, religious practice and spirituality are cyclical. However, the findings of this study appear to identify a meaningful structure of influence involving the Seminary program, religious practice, spirituality, moral thinking and social attitudes.

Change in Religious and Spiritual Dimensions

The analysis of change over time in certain religious and spiritual variables is an important aspect of this study and potentially represents a significant contribution to the understanding of religious development of LDS Seminary students, and young

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adolescents generally. The longitudinal nature of the data, consisting of four survey waves over two years, makes it possible to test for significant change in characteristic variables using linear modelling. The use of hierarchical linear modelling (HLM) analysis (Bryk & Raudenbush, 1992) means that this change over time can be observed in terms of the intercepts and the slopes as well as testing for the influence of between student and class level characteristics on the intercepts and the slopes. A review of key findings is presented below in the context of the relevant research questions. Details regarding these findings reviewed below are found in Chapter 10 of this volume.

Question 3:   How do religious and spiritual dimensions change over the course of the study?

Evidence from the HLM analysis used in this study suggests that LDS Seminary students in general decline in Seminary participation and feelings towards the Seminary program over time. There is little evidence to suggest that there is any significant change in religious practices of either a public or private nature generally. Most interesting is the fact that accompanying the decline in Seminary related activity and the general consistency of religious practice over time is evidence to suggest that LDS Seminary students who remain in the program show some increase in interest towards their religious lifestyle, some increase in belief in church doctrine, and some decrease in discontent with religious expectations as time passes. Therefore, while practices of a religious nature appear to decline or remain constant generally, the more attitudinal and belief centred dimensions of religious life actually show evidence of increase for LDS Seminary students.

The analysis of change over time also yields evidence to suggest that Seminary students are increasingly aware of God in their lives as time passes. In fact, the growth in the characteristic involving awareness of God may possibly be the largest of any of the variables analysed. However, growth in this primarily spiritual characteristic is not accompanied by growth in reported levels of having had spiritual experiences, for which there is no evidence of change over the two-year period of the study.

Question 4:   Which initial factors influence the change over time of religious and spiritual dimensions?

Although there may not be evidence that a variable changes significantly over time when considering the whole sample, there may be change in that variable for certain subgroups possessing certain characteristics. An analysis of such influencing characteristics in this study, as recorded in the first survey, yields evidence that certain characteristics do influence the growth or decline of some key religious or spiritual variables, sometimes to the point that the direction of the slope of change is reversed.

Of all the antecedent or background variables, only those to do with education appear to have an influence on rate of change of religious variables. For example, the findings suggest that students anticipating higher educational levels for themselves and those reporting spending more time doing homework show a greater degree of decline in public religious practice than their fellow students. Also, students reporting more positive feelings about school show less decline than their fellow students in Seminary participation levels.

 Participation in religion, either private or public, appears to have some influence on the growth of almost every variable considered in this analysis. Evidence from this study suggests that higher levels of public religious practice tend to influence positively the rate of change in participation related aspects of religious life, such as Seminary participation, and spirituality related aspects, such as having spiritual experiences. Private religious practice tends to influence the rate of change in attitudinal and belief aspects of religious life, such as the degree of interest in a religious lifestyle or belief in church doctrines.

The level of initial religious belief tends to influence change in a wide variety of religious and spiritual attitudes and experiences. For example, there is evidence to suggest that higher levels of religious belief among Seminary students encourages less decline in Seminary participation and feelings about the Seminary program, as well as increase in the development of an awareness of God and the level of spiritual experiences reported.

A student's initial level of awareness of God in their lives and the initial level of reported spiritual experiences both appear to influence change in a variety of religious and spiritual variables. These characteristics seem to be influential mainly on change in religious attitudinal or spirituality related aspects. For example, awareness of God is shown to influence positively the change in feelings about Seminary, reported spiritual experiences, religious interest and the cooperation with God in solving life's problems. Interestingly, the influence of awareness of God on change in feelings about the Seminary program suggests that a general decline is changed to positive growth in feelings towards Seminary for students scoring high on the Awareness of God variable.

Question 5:   Are there any class effects on the change in religious or spiritual dimensions?

The influence of the Seminary class environment, as represented by average variable scores of class members, on change in religious and spiritual dimensions is reported as part of the multilevel analyses described in Chapter 10. Two class level effects on the rate of growth in the model are worth reviewing here. The average class level of awareness of God has a positive influence on the rate of change of reported spiritual experiences. In other words, students from classes with higher average levels of awareness of God have a greater tendency to develop positively with respect to having spiritual experiences in their lives than do other classes with lower average levels of awareness of God.

The average class level of feelings towards school appears to influence the feelings of individual students with regards to the Seminary program. The findings suggest that students coming from classes with generally more positive feelings about school show less decline in feelings towards the Seminary program over time.

Question 6:   How does the Seminary program influence change in religious and spiritual dimensions?

Although the Seminary program appears to have an important influence on religious and social life when a single point in time is considered, the direct role of participation in, and feelings about the Seminary program in influencing change in religious and spirituality variables over time appears to be relatively limited. Apart

from influencing more positive change over time in each other, these two factors are shown to influence only change in public religious practice levels of Seminary students. This influence is not minor however, as public religious practice has a relatively large role to play in influencing future growth in other religious and spiritually related variables. The findings suggest that whatever developmental influence Seminary has on religious or spiritual dimensions measured in this study it is mostly through other religious or spiritual variables, such as Public Religious Practice that change occurs. It seems that mere participation or even positive feeling about Seminary do not give rise to development in and of themselves. It appears likely that participation in Seminary influences the levels of certain religious and spiritual dimensions (as reported in Chapter 9) which in turn influence change or development in related dimensions.

The influence of the Seminary classroom environment appears to carry greater implications for change in religious dimensions than Seminary participation and feelings levels do. Two key class level findings appear to indicate that a Seminary class that has higher initial average levels of awareness of God among the students contributes to higher levels of student spiritual experiences than classes with lower initial levels of awareness of God. Likewise, a Seminary class with higher initial average levels of positive feelings towards school contributes to greater growth in positive feelings for the Seminary program within individual students.

Implications for Understanding Youth Religiosity and Spirituality

In discussing the implications of the findings of this study for youth religiosity and spirituality generally, it is important to remember the specific and unique nature of the sample being studied. The students attending the Latter-day Saint Seminary in Australia have uncommon levels of religiosity and participate in unusual levels of religious and scriptural education (almost every weekday morning throughout the school year). As such, caution is needed when drawing conclusions and suggesting implications for the broader religious community. However, with this caution in mind it is my belief that many of the findings from this study can be generalized to be of benefit to broader focus groups. This study can shed light on potential

relationships between religion, spirituality, moral thinking and social attitudes in the lives of religious youth generally.

The Importance of the Family in the Religious and Social Lives of Youth

This study appears to reaffirm the findings of related research and academic writing regarding the influence of family life on religiosity in children (e.g. Albrecht, 1989) finding that factors relating to the family play a very important part in the religious, spiritual, as well as the social development of youth.

The nature of the child's relationship with parents is found to be much more influential than the socio-economic status of the home as well as the amount of religious practice in the home. The findings of Litchfield, Thomas and Li (1997) and Bao and his colleagues (1999) that an emotionally supportive and accepting relationship between parents and child tends to lead to an increase in the child's private religiosity appears to be partially supported by this study. However, a perceived caring parental relationship is shown to lead to increased private religiosity, such as private religious practice, mostly through increased public religiosity, such as public religious practice and Seminary involvement. This finding appears to concur with Engebretson's (2003) observation that parental influence is mainly in the realm of public religious activities and has less to do with the private religious lives of their children. The direct moral and social impact of the parental relationship is also found in this study and may be worth noting for future research with a different focus to the present study.

Although the influence of family religious practice is shown to be not as far reaching as that of parental relationships, religion in the home can still be considered an important factor in youth religiosity according to the findings of this study. Family religious practice not only encourages an increase in caring relationships of parents, as perceived by young people, but has some impact on public religious practice and a small impact on the private religious practice of youth. An interesting observation regarding the role of family religious practice in this study is that its influence on the spirituality of youth is mostly through private religious practice. This suggests that although religion in the home leads to more religious practice among teenagers,

family religious practice does not appear to influence spirituality in teenagers unless that family practice translates to the private religious practices of young people.

The Influence of Age and the Decline in Religiosity through the Teenage Years

One of the surprising findings of this study is the lack of influence that the age of students appears to have on other variables. Although the analysis of change over time shows that religious and spiritual variables do change over time when viewed longitudinally, the analysis of relationships between variables appears to indicate that there is little influence due to the age of youth between 14 and 18 years. It is possible that the dropout of less religious youth (see Chapter 8) causes a condensing of higher religiosity among the remaining older youth in the sample (Seminary program) therefore countering the natural decrease in religiosity with age reported to exist in the teenage years (e.g. Engebretson, 2003). As discussed in Chapter 8 however, the response rate to each survey by year level (see Table 7.5) does not appear to support this explanation.

The comments of Scobie (1975, p. 54) also need to be considered. He suggested that youth who experienced some kind of conversion during their teenage years might not experience the decline in religious interest and involvement that tended to occur normally once the youth moved beyond the concrete operational stage (age 13 to 14 years) of religious thinking but might in fact show an increase in religious interest. The change over time analyses in Chapter 10 tend to support this claim, as those who have high scores in such attributes as awareness of God and spiritual experiences show an increase, rather than a decrease in many religious and spiritual variables.

It is highly probable that the lack of the influence of age on other factors in the model used in this study may be due to a combination of the possibilities discussed. Perhaps the narrow age band, some degree of influence of the more spiritual students remaining in the program in older years and some youth having a conversion experience all help to counter the effect of a general decline in religiosity which may be expected.

Religion and Spirituality

The relationship between spirituality and religion remains a point of much discussion in academic and other writing. Definitions of spirituality vary and opinion ranges from dismissing organized religion as irrelevant to modern spirituality to claiming that organized religion is an integral part of spiritual life (e.g. Schneider, 2000; Smith & Denton, 2005; Smith, Faris & Denton, 2004; Tacey, 2003). The debate itself is beyond the scope of this discussion, however, the findings of this study show that religious practice can influence spirituality, at least when the dimension of an individual's relationship with God is seen as a valid indicator of spirituality.

The path diagram reported in Chapter 8 shows proposed relationships between key variables including background, family, religious and spiritual factors. Only two factors are shown to influence the Spirituality variable directly. Private Religious Life appears to have the largest direct influence on Spirituality of all of the variables, followed by Seminary Quality. This finding appears to indicate that, apart from the direct influence of the Seminary experience, private aspects of religion act as a mediator for all other potential influences on spirituality measured in this study. In other words, the major factor influencing spirituality lies in the private religious life of the individual, which includes practices such as prayer as well as an interest in pursuing a religious lifestyle. The fact that family religious practice, public religious practice, and even age and gender do not influence spirituality directly without the influence of Private Religious Life in the model demonstrates the key role of the private religious practices and lifestyle in influencing the spirituality of youth.

The relationship between feelings about Seminary and spirituality is also of interest when considering the wider questions of youth religious and spiritual development. This demonstrates the possibility of religious education, when perceived as meaningful by the student, being a contributor to the spirituality of youth that is independent of any other variable, including the key factors of private religious life just discussed.

The Relationship between Religion and Moral Thinking

The relationships between the religious and spiritual life and the moral and social life are of particular interest in this study. Some findings may be seen to support the cognitive developmental view of moral development (see Lee, 1980) that religion is not directly related to moral judgment. Religious practice is shown to have no direct influence on principle centered moral thinking based on the influence of justice or societal considerations in this study. However, the discussion in Chapter 8 regarding the findings of the path model in this study highlights the fact that the religious connection with morality appears to be through the dimension of spirituality. Therefore, although religion, as represented by religious practice in this model, does not appear to influence principle driven moral thinking directly, spirituality, as represented by relationship with God, spiritual experiences and cooperation with God does appear to have an influence. The spiritual connection with moral thinking is one that may have implications for future research work in this field.

The Relationship between Religion and Social Attitudes

While spirituality is shown to be associated with independent moral thinking, religious practice appears to be associated more with social attitudes. Of the religious and spiritual variables, only Private Religious Life and Seminary Quality are shown to be related to Social Attitudes, as represented by conscience and service to others. As discussed earlier, the influence of the Seminary program on social outcomes is supported by this finding. The importance of the private and personal dimension of religion is also emphasized by this finding. Regarding the influence of religion on social attitudes, it appears that as important as family based religious activity and public religious practices are, the private religious life is where the most influence comes from, in so far as religion impacting on social attitudes and intentions is concerned.

This finding leads to reflection on Allport's theory concerning intrinsic and extrinsic orientation towards religion (Allport and Ross, 1967). It is arguable that intrinsic orientation may be reflected by higher levels of private religious activity which is shown to relate to positive social attitudes in this study. It was the concern with the apparently high levels of prejudice in outwardly (publicly) religious people that

caused Allport to seek an explanation in the Intrinsic-Extrinsic Religious Orientation model in the first place. It is interesting to consider whether the findings of this study are associated with Allport's findings that those people demonstrating extrinsic orientation to religion show more of the social attitude of prejudice than those who are intrinsically oriented to religion. This may explain why those who indicate higher levels of private religious practice in this study have higher levels of the desirable social attitudes and why public religious practice does not appear to influence social attitudes independently of private religious practice.

Implications and Recommendations for the Seminary Program Arising from this Study

This study focuses on students from the Seminary program of the Church of Jesus Christ of Latter-day Saints. Accordingly, it is appropriate that comments regarding the implications of this study include discussion specifically relevant to students, teachers and administrators of the Seminary program. The discussion below briefly identifies some findings that appear to have implications for the Seminary program and those involved in its running. Although the practical responses to these findings may be limited, the knowledge of certain relationships between key religious and spiritual aspects operating in the lives of students is of value. This study confirms such relationships or, in some cases, brings to light some interesting dynamics relevant to the operation of the Seminary program and the development of its students. Recommendations are offered at the end of each section, but it is recognized that the scope of these findings are limited and many of the practicalities involved in this complex field are often difficult to identify, and even more so to implement.

The Influence of the Seminary Program

Chapter 8 of this report presents a path model (see Figure 8.2) that is designed to assist with an understanding the relationships between variables examined in this study. One of the findings resulting from the path model is that the Seminary program operates in the model independently of other variables such as family, public religious practice and private religious life. In fact, the direct influence of the

Seminary program is observed on the variables of Spirituality, Collaborative Religious Problem Solving, Independent Moral Thinking, and Social Attitudes. The breadth of the effects of the Seminary program on the model suggests that the program does influence the religious, spiritual and social lives of its students in positive ways. The caution for those associated with the program is that the influence appears to come by means of the variables representing students' feelings about meaning and the impact of the Seminary program rather than simply the degree of participation in the program.

Clearly, the perceptions of students regarding their experiences in the program are important for the impact that the program has on the religiosity, spirituality and social thinking of its participants. This appears to concur with the comments of Hoge and Petrillo (1978b, p. 370) who are quoted in Chapter 2 as saying,

> …whether the high school student liked or disliked his past religious training is more determinative of his attitudes and behavior than the amount of the training.

Recommendations

(1) In order to increase the impact of Seminary in the lives of students, the teaching and class experience needs to be such that students not only enjoy the experience but feel a spiritual influence and see benefits in their lives as these factors are reflected in the Seminary Quality variable. Ensuring the quality of the lessons and activities is likely to be an important part of maintaining student positive feelings towards Seminary and hence, increasing the impact of the program on other areas of life. Quality, in terms of what the Seminary Quality variable represents, has to do with the Seminary experience having a recognised impact on the spirituality of students' lives, assisting them to feel closer to God, helping them to see the benefits of Seminary in their lives and making the experience enjoyable. It seems likely that the Seminary program has a greater impact on the spiritual and social lives of youth when the Seminary experience has these elements. Clearly, attendance or mere participation in the classes is not enough to ensure that the Seminary program has the desired impact on students.

The Characteristics of Discontinuing Students

The chapter discussing student dropout appears to have implications relevant to whether students continue in the Seminary program or not. Of particular importance is the fact that the analysis identifies certain characteristics that appear to contribute to students discontinuing participation in the Seminary program (see Chapter 8). Most of the characteristics found to contribute towards student dropout appear to lie beyond the influence of those involved in administering or teaching the Seminary program. For example, students parented by a single mother and students coming from families with low levels of family religious practice seem more likely to drop out of the program than others. These two factors are centered in the home and are largely beyond the influence of Seminary teachers and administrators.

However, students who are converts to the LDS church, who are shown to be far more likely than others to discontinue involvement in the Seminary classes, appear to be much less likely to drop out if they participate in classes with an environment of fellow students feeling secure in their relationship with God and being less inclined to solve life's problems without God. This finding suggests that converts are quite sensitive to the influence of the Seminary class environment when it comes to the choice of whether to continue participation or not.

Students who practise their religion in its private forms, such as personal prayer and study, are less likely to drop out of Seminary, according to the findings of this study. This implies that students with lower levels of private religious practice are more likely than others to discontinue Seminary participation. Private forms of religious practice appear to be quite important to many factors included in this study, including students continuing to attend Seminary classes.

Recommendations

(2) It appears that the private religious practice of students is an important part of their religious life. Accordingly, teachers may be able to reduce or discourage Seminary dropout by encouraging and facilitating the private religious lives of their students. Such encouragement might involve the implementation of programs to emphasise and even facilitate private religious practices such as private prayer and the study of scripture.

(3) Teachers and leaders in the Seminary program may be able to assist converts to continue participating in the Seminary program if they can encourage an atmosphere in the class where students' relationships with God are cooperative and secure. Teachers encouraging the sharing of positive comments and experiences in class may influence the perceived environment and by so doing influence the student, or more specifically the convert, to continue in the Seminary program.

Factors Influencing Seminary Participation

The characteristic shown to relate most to the level of Seminary participation is public religious practice. It appears that youth who are engaged in public religious life are also inclined to participate to a greater degree in the Seminary classroom. The encouragement and facilitation of a public religious lifestyle therefore seems important to student participation in Seminary classes.

Educational performance also appears to contribute to the extent to which a student participates in the Seminary classroom. Because Seminary is an educational program, the connection between educational achievement and Seminary participation is to be expected. This finding also implies, however, that students with lower levels of educational achievement have lower levels of participation in Seminary classes. In order to increase overall participation in the Seminary program, teachers may consider catering for less academic students through appropriate teaching and learning activities.

Recommendations

(4) Because public religious practice appears to be important to Seminary participation levels, it is recommended that parents, Seminary teachers and leaders encourage and facilitate students being engaged in public religious life as much as possible. As well as the direct influence parents and leaders can have in encouraging the public religious participation of youth, this study shows that parents can also have an influence on the public religious practices of young people through family religious practices and the nature of their relationship with their children.

(5) It is clear that not all students are equal in academic ability. The nature of the Seminary classroom is such that high levels of reading ability and comprehension are required. Texts studied in class usually contain the old English language, such as the King James Version of the Bible. In order to encourage the participation of less academically capable Seminary students in the classroom, teachers may consider adjusting teaching styles and activities so that less able students are not disadvantaged in a religious and spiritual learning environment. More simple texts can be kept on hand for academically challenged youth to use and the level of ability assumed within classes can be lowered making the environment less academic in nature. Perhaps in this way overall classroom participation can be increased.

Factors Influencing the Decline in Seminary Participation and Feelings

This study indicates that, as time passes, student Seminary participation and feelings toward Seminary generally decline. This may reflect a natural part of youth development with demands on time and attention increasing over time and what appears to be a natural inclination to be less religious with age (see Engebretson, 2003). However, certain factors appear to reduce this decline in Seminary participation and feelings towards the program (see Chapter 10). In the case of the variable Seminary Feeling, which may have the steepest decline of all religious variables, the decrease can become an increase over time for students with high levels of spirituality (awareness of God) and religious practice, belief and positive attitude. The decline in Seminary participation and feelings may be part of teenage development, but those with higher levels of spirituality and religiosity appear to reverse the trend and may actually increase in Seminary participation and feelings. This may be related to the findings of Scobie (1975) who reported that young adolescents who underwent some kind of conversion actually showed an increase in religiosity rather than a decline.

The implications of this finding may appear simple, although in practice it is probably far from it. It seems likely that if students can develop high levels of spirituality, and to a lesser extent religious lifestyle, the participation in, and perceived quality of, the Seminary experience may develop positively over time rather than decline.

Recommendation

(6) The continued emphasis and fostering of spirituality and private dimensions of religious practice in students is obviously one of the goals of the Seminary program and as such recommendations concerning the development of students in this way are already a major focus of program administrators and teachers. The contribution of this study on this point is the finding that among all of its inherent benefits, spiritual and religious development appears to encourage increasing levels of participation and enthusiasm towards the Seminary program itself, which in turn can contribute to greater levels of spirituality and religiosity. The recommendations of facilitating private religious practice and focusing on the spiritual, not just religious, development of young people seem to have a place when seeking to address the decline in Seminary participation and attitudes throughout the four years of the Seminary experience.

The Impact of the Class Environment

Although the measured effects are small, it appears from the findings of this study that the classroom environment, as the sum total of characteristics of the students in it, is important for the development of certain characteristics of individual students (see Chapter 10). An example of this is the role of the classroom environment in discouraging the dropout of students who are converts. Another key finding of this nature however, also has implications for the Seminary program. The analyses of change over time of certain variables in this study indicate that students coming from classes with higher average levels of awareness of God report greater increase in levels of spiritual experience over time. The implications for the program appear to be that the spiritual environment among students in the classroom can have an impact on the spiritual development of individual students and that effort ought to be made to develop beneficial collective classroom characteristics.

Recommendation

(7) In general terms this study finds that certain student environments can be beneficial to the spirituality of students as well as detrimental. Being aware of this fact and continuing to improve the classroom environment appears to be a

sound recommendation for teachers arising from this finding. More specifically, the environmental characteristics that appear to have the most positive influence on student outcomes relate to spirituality, such as students' relationship with God. Teachers providing a classroom focus on spiritual dimensions, such as relationship with God, rather than only factual or religious content may help to facilitate the desired classroom environment.

Implications for Future Research

The broad and investigative nature of this study means that there are many areas arising from the findings that require further, perhaps more detailed, investigation before definitive conclusions can be reached. There are also many findings that have added to the body of knowledge from which future research can be launched.

Recommendations for possible future projects include the following proposals for future research.

(1) There is a need to investigate further the relationship between spirituality and moral thinking. Perhaps other techniques used to measure moral thinking can be investigated in relation to spirituality in order to investigate the nature of this relationship, if it can be substantiated. Keeping in mind the problems identified in this study concerning the use of the Defining Issues Test (Rest, 1986) among conservative religious samples, the use of a stage-based model for measuring moral development may provide greater insight into the possible influence of spirituality on moral thinking.

(2) There is a need to study the connection between private aspects of religiosity and social attitudes. The link between Allport's (Allport & Ross, 1967) theory of religious orientation and the findings concerning the relationship between private religious life and social attitudes from this study need to be investigated further. The number of social attitudes measured in this study is very limited. Perhaps further research may investigate the influence of religious lifestyle on a more varied array of social attitudes, both positive and negative in nature.

(3) There is a need to conduct further study of a longitudinal nature regarding change in religious and spiritual dimensions of the lives of teenagers. This study identifies certain factors that appear to influence changes in religiosity and spirituality. More detailed investigation of what these factors are and how they influence changes in religiosity and spirituality over time is required in order to substantiate or refute the findings of this study. One deficiency of this study is the inability to investigate cyclical relationships which may exist between religious and spiritual dimensions. Perhaps future research can be established to investigate these relationships further, since multilevel and multivariate analytical techniques have recently become available that permit this type of analysis.

Conclusion

This chapter reviews and summarises key findings from this study. Implications for the advances in understanding of youth religiosity and spirituality are also discussed. Implications and recommendations for those involved with teaching in or administering the Seminary program are also presented in this chapter. Finally, possible considerations for fields of future research resulting from this study are proposed.

The findings of this study provide for acceptably considered responses to the research questions and hence to the goals of the study proposed at the outset. Furthermore the findings of this study, although broad in nature, appear to be useful for furthering an understanding of the development of the religious, spiritual and social lives of young people generally as well as a greater understanding of the nature of change in student religiosity, spirituality, moral thinking and social attitudes arising from the Seminary program. One of the strengths of this study lies in the use of four waves for surveying the practices, views and attitudes of the youth involved in the study and the investigation of change over time of specific religious and spiritual dimensions. While this study is contains some evaluative elements it also highlights some ideas and relationships for the theory of the development of the religious life and spirituality of young people who are involved in religious educational programs. These theoretical dimensions of the lives of adolescent youth have been largely ignored in educational research and clearly warrant further

investigation, not only to improve the effectiveness of the specific programs investigated in this study, but also in the development of appropriate programs, whether religious or not, for the education and development of young people.

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APPENDIX A

Pilot Study Survey Instrument

SOCIAL EXPERIENCE QUESTIONNAIRE
Latter-Day Saint Seminary Students

> This is an opportunity to demonstrate how you feel about various social situations and issues that may affect your life. **This is not a test** so there are no right or wrong answers. We want to know YOUR FEELINGS. Please do not talk about your answers with anyone else while answering the questionnaire. Please try to respond to as many items as you can before the end of class.
>
> **Your answers will be kept private and will only be used when combined with hundreds of other responses.**
>
> **Please** <u>write your name</u> **on the envelope provided and** <u>enclose your completed form</u> **before returning it to your teacher.**
>
> *Thank you for your help.*

1.   This section is about YOU, PERSONALLY.

Please respond to each question by ticking the appropriate box or writing the answer in the space provided.

Office Use Only

1. Are you: ☐ MALE   ☐ FEMALE   ?   `1.`

2. How old are you? _____ years old.   `2.`

3. What year are you in school?   Year _____.   `3.`

4. Including this year, how many years have you attended seminary? _____ years.   `4.`

5. How many brothers and sisters do you have? _____ total.   `5.`

6. Do you have a paid job during the year? ☐ YES ☐ NO   `6.`

   6.1. If YES, how many hours per week do you work? _____ hours.   `6.1`

7. Who do you live with?   ☐ Mother and Father   `7.`
                                              ☐ Mother only
                                              ☐ Father only
                                              ☐ Other: _____

8. What is your Father's and/or Mother's occupation?   Father:_____   `8.1`
(If your father / mother is no longer alive, please state your guardian's
occupation. If you do not have a guardian, please state the occupation of
your father / mother while living.)   `8.2`
     Mother:_____

9. Are you a convert to the LDS Church?   ☐ YES ☐ NO   `9.1`

   9.1.   If YES, how old were you when you joined? _____ years old.   `9.2`

2. This section is about YOUR SCHOOL EXPERIENCE.

Please respond to each question by ticking the appropriate box or writing the answer in the space provided.

1. How do you feel about school?
   - ☐ I dislike school very much
   - ☐ I dislike school
   - ☐ I have mixed feelings
   - ☐ I like school somewhat
   - ☐ I like school very much

2. What marks do you generally receive in school?
   - ☐ Very Poor
   - ☐ Poor
   - ☐ Average
   - ☐ Good
   - ☐ Very Good

3. How important is it to you to do well in school?
   - ☐ Not Important
   - ☐ Somewhat Important
   - ☐ Important
   - ☐ Extremely Important

4. Which activities are you involved in?
   (You may select more than one.)
   - ☐ Not involved in any
   - ☐ Sports
   - ☐ Music / Band / Dance
   - ☐ School plays / Drama
   - ☐ Other: _____

   4.1. How many hours per week do you participate in all these activities? _____ hours.

5. About how many hours do you spend on homework outside of class each day? _____ hours.

6. How many hours during the average day do you spend watching television? _____ hours.

7. What are your educational expectations?
   - ☐ I don't expect to finish year 12
   - ☐ I expect to finish year 12
   - ☐ I expect to complete a TAFE or similar course
   - ☐ I expect to obtain a university degree
   - ☐ I expect to obtain an Advanced Degree
     (Masters, PhD, Doctor, Lawyer, etc.)

8. How many of your friends that you do things with are LDS?
   - ☐ None
   - ☐ A few
   - ☐ Most
   - ☐ All

3. This section is about what influences your opinion on SOCIAL ISSUES.

The following issues are often discussed in today's society. This section aims to see 'who' and/or 'what' influences your opinion about these social issues.

Instructions

Four each issue you need to do <u>four</u> things:

1. **Give your opinion on the issue.**

2. **Write <u>why</u> you hold that opinion.**

3. **<u>Rate the amount of influence</u> of each of the six statements on your opinion.**
   Simply write your rating (0, 1, 2, 3, 4,….,10) in the space provided for each statement.

Your rating will be according to the following scale:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

4. **If there is another influence that is not listed among the six statements, add it to the list and rate it on the same scale.**

1) Should people who break the law (such as stealing, speeding, etc.) be punished?

(please <u>circle</u> one) **YES** **NO** **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

a)   The idea that everyone should try to make society a better place has _____ on my opinion.

b)   The idea that all people must be treated fairly has _____ on my opinion.

c)   My family's beliefs and expectations about certain laws have _____ on my opinion.

d)   My friends', the media and/or teachers' beliefs about certain laws have _____ on my opinion.

e)   The idea that it satisfies my own interests has _____ on my opinion.

f)   God's view about certain laws has _____ on my opinion.

g)   (Other)_____ has _____ on my opinion.

2) Should people of different race and colour live in harmony with each other?

(please <u>circle</u> one) **YES** **NO** **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

a)   My friends', the media and/or teachers' beliefs about racial harmony have _____ on my opinion.

b)   Satisfying my own interests about racial harmony has _____ on my opinion.

c)   The idea that society as a whole will benefit from racial harmony has _____ on my opinion.

d)   The idea that all people are born equal and should be respected has _____ on my opinion.

e)   God's view about racial harmony has _____ on my opinion.

f)   My family's beliefs on how different races should live have _____ on my opinion.

g)   (Other)_____ has _____ on my opinion.

3) Should all people respect the natural environment in which we live?

(please circle one)　　　**YES**　　　　**NO**　　　　**Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

  a) My family's beliefs and expectations about the environment have　_____ on my opinion.

  b) My friends', the media and/or teachers' beliefs about the environment have　_____ on my opinion.

  c) Satisfying my own environmental interests has　_____ on my opinion.

  d) God's view about the environment has　_____ on my opinion.

  e) The idea that respect for the environment benefits society has　_____ on my opinion.

  f) The belief that all living things should be given some chance for survival has _____ on my opinion.

  g) (Other)_____ has　_____ on my opinion.

4) Should 'freedom of speech' (being able to say publicly what you believe) be allowed?

(please circle one)　　　**YES**　　　　**NO**　　　　**Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

  a) The belief that freedom of speech may satisfy my own interests has　_____ on my opinion.

  b) The idea that freedom of speech makes society a better place to live in has　_____ on my opinion.

  c) God's view about the freedom of speech has　_____ on my opinion.

  d) The idea that every person has an equal right to freedom of speech has　_____ on my opinion.

  e) My family's beliefs and expectations about freedom of speech have　_____ on my opinion.

  f) My friends', the media and/or teachers' beliefs about freedom of speech have _____ on my opinion.

  g) (Other)_____ has　_____ on my opinion.

5) Should equal opportunities be given to people regardless of their race and gender?

(please <u>circle</u> one)   **YES**   **NO**   **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

a) My friends', the media and/or teachers' beliefs on race and gender issues have _____ on my opinion.

b) God's view about race and gender issues has _____ on my opinion.

c) The idea that all people are born equal and should be respected has _____ on my opinion.

d) My family's beliefs and expectations on race and gender issues have _____ on my opinion.

e) The idea that society will benefit from addressing race and gender issues has _____ on my opinion.

f) Satisfying my own interests on race and gender issues has _____ on my opinion.

g) (Other)_____ has _____ on my opinion.

6) Should scientific research which harms people or natural environment be allowed?

(please <u>circle</u> one)   **YES**   **NO**   **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

a) God's view about such scientific research has _____ on my opinion.

b) The idea that all living things are worthy of respect has _____ on my opinion.

c) My family's beliefs and expectations about scientific research have _____ on my opinion.

d) My friends', the media and/or teachers' beliefs about scientific research have _____ on my opinion.

e) The belief that scientific research may satisfy my own needs has _____ on my opinion.

f) The idea that scientific research should seek to make society a better place has_____ on my opinion.

g) (Other)_____ has _____ on my opinion.

4. This section is about YOUR PARENTS' INFLUENCE.

Please respond to each statement by ticking the most appropriate box. Your parents will not be shown your responses.

The following statements list various attitudes and behaviours of parents. Indicate how you think each statement describes your mother and/or father by placing a tick inside the corresponding box for each. (If you only live with one parent, just answer for that parent.)

	My MOTHER				My FATHER				Office Use Only
	Very Unlike	Kind of Unlike	Kind of Like	Very Like	Very Unlike	Kind of Unlike	Kind of Like	Very Like	
(EXAMPLE) Has a sense of humour			4					4	
1. Speaks to me with a warm and friendly voice									1.
2. Does not help me as much as I need									2.
3. Lets me do those things I like doing									3.
4. Seems emotionally cold to me									4.
5. Appears to understand my problems and worries									5.
6. Is affectionate to me									6.
7. Likes me to make my own decisions									7.
8. Does not want me to grow up									8.
9. Tries to control everything I do									9.
10. Invades my privacy									10.
11. Enjoys talking things over with me									11.
12. Frequently smiles at me									12.
13. Tends to baby me									13.
14. Does not seem to understand what I need or want									14.
15. Lets me decide things for myself									15.
16. Makes me feel I'm not wanted									16.
17. Can make me feel better when I am upset									17.
18. Does not talk to me very much									18.
19. Tries to make me dependent on her/him									19.
20. Feels I cannot look after myself unless she/he is around									20.
21. Gives me as much freedom as I want									21.
22. Lets me go out as often as I want									22.
23. Is overprotective of me									23.
24. Does not praise me									24.
25. Lets me dress in any way I please									25.

5. This section is about your FEELINGS and ACTIONS.

Following are some statements designed to help you evaluate your feelings and actions. Please respond to each statement by ticking inside the most appropriate box. Do not mark the shaded boxes.

	Strongly Disagree	Disagree	Agree	Strongly Agree		Only
1. If I saw someone trying to steal a car, I would alert someone.						1.
2. I am loyal to others even when they're not around.						2.
3. I try to see how my strengths can be used to serve others.						3.
4. I am concerned about the influence that white settlement has had on Aboriginal culture.						4.
5. I welcome new people into my circle of friends.						5.
6. I would be willing to donate money to a needy cause if someone asked me.						6.
7. If I found a wallet with money but no identification, I would take it to the police.						7.
8. There aren't many occasions when I'm unsure about how to behave.						8.
9. I watch for opportunities to help others.						9.
10. It concerns me that there is such a large gap between the rich and the poor in this country.						10.
11. I try to behave in ways which will not embarrass others.						11.
12. I would want to feel that my job was benefiting others.						12.
13. It concerns me that there are people forced to live on the streets in this country.						13.
14. If I visited people from a different culture, I would be careful in case my normal behaviour offended them.						14.
15. I would feel sorry if I had missed an opportunity to help someone.						15.
16. I try not to be aggressive in an argument.						16.
17. I would be willing to regularly donate money to sponsor a needy child.						17.
18. I would feel bad if I had been involved in bullying another person.						18.
19. I like meeting new people.						19.
20. I recognise that I have gifts that can be used to serve others.						20.
21. I would rather do my own work poorly than cheat and do well.						21.
22. If people disagree with me I feel comfortable.						22.
23. I have a responsibility to help other people.						23.
24. I think it's just as wrong to steal from a company as an individual.						24.
25. If someone argues with me I try not to feel threatened.						25.
26. I would be willing to donate money to a needy cause.						26.
27. It concerns me that so many people are unable to find employment in this country.						27.
28. I feel confident to express my opinions.						28.
29. Each individual can do something to overcome injustice in the world.						29.
30. I would admire someone who didn't cheat on an exam when they had the opportunity to do so.						30.
31. I wouldn't deliberately undermine someone's reputation.						31.
32. I feel comfortable when I'm introduced to new people.						32.

RELIGIOUS EXPERIENCE QUESTIONNAIRE
Latter-Day Saint Seminary Students

This is an opportunity to demonstrate how you feel about God and Religion. **This is not a test** so there are no right or wrong answers. We want to know YOUR FEELINGS. Please do not talk about your answers with anyone else while filling out the questionnaire.

Your answers will be kept private and will only be used when combined with hundreds of other responses.

Thank you for your help.

EXAMPLES:

For most of this questionnaire you will be asked to respond to statements in the following way. Note that the ticks are placed next to each statement according to how much the person agreed or disagreed with the statement.

This person does not really like classical music, loves her/his football team and does not like watching Playschool.

Please indicate with a tick <u>inside</u> the appropriate box how strongly you agree or disagree with each of the following statements.	Strongly Disagree	Tend to Disagree	Tend to Agree	Strongly Agree
1. I enjoy classical music		✓		
2. I follow the best football team				✓
3. Playschool is my favourite TV show	✓			

1. This section is about your RELIGIOUS BELIEFS and EXPERIENCES.

Please indicate with a tick <u>inside</u> the appropriate box how strongly you agree or disagree with the following statements.

	Strongly Disagree	Tend to Disagree	Tend to Agree	Strongly Agree	Office Use Only
1. God lives and is real					1.
2. Jesus Christ is the divine Son of God					2.
3. Satan actually exists					3.
4. There is a life after death					4.
5. God really does answer prayers					5.
6. Joseph Smith actually saw God the Father and Jesus Christ					6.
7. The Book of Mormon is the word of God					7.
8. The Bible is the word of God					8.
9. The president of the LDS Church is a prophet of God					9.
10. The Lord guides the Church today through revelation to Church leaders					10.
11. Even in this life God punishes individuals for their sins					11.
12. Even in this life God blesses individuals for their righteousness					12.
13. I plan to serve a mission for the LDS Church					13.
14. I plan to marry in the temple					14.
15. I plan to be active in the Church					15.
16. During the past year, I really have tried to live the standards of the Church					16.
17. I have a strong testimony of the truthfulness of the gospel					17.
18. I feel guilty when I go against any of the teachings of the Church					18.
19. There have been times in my life when I felt the Holy Ghost					19.
20. I know what it feels like to repent and be forgiven					20.
21. I have been guided by the Spirit with some of my problems and decisions					21.
22. I very seldom think about religion					22.
23. My relationship with God is an important part of my life					23.
24. In my life there are more important things than religion					24.
25. It's hard for me to accept some of the teachings of the Church					25.
26. The Church puts too many restrictions on me					26.
27. There have been times when I have rebelled against a teaching of the Church					27.
28. I sometimes feel like an outsider in the Church					28.
29. I seem to fit in very well with people in my ward					29.
30. I am well liked by members of my ward/branch					30.
31. I just can't measure up to Church standards					31.
32. I am a good example of living the gospel to my friends					32.

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2. This section is about your RELIGIOUS PRACTICES.

Please indicate with a tick <u>inside</u> the appropriate box how often you participate in the following:	Never	Rarely	Sometimes	Often	Very Often	Office Use Only
1. I participate in Church social activities						1.
2. I attend Priesthood or Young Women's meetings on Sunday						2.
3. I attend Sacrament meeting						3.
4. I attend Sunday School class						4.
5. I fast on Fast Sunday						5.
6. I pay tithing on the money I earn						6.
7. I bear my testimony in Church						7.
8. I read the Scriptures by myself						8.
9. I pray privately						9.
10. I read Church magazines and books						10.
11. I attend Seminary						11.

3. This section is about your SEMINARY EXPERIENCE.

Please indicate with a tick <u>inside</u> the appropriate box how strongly you agree or disagree with the following statements about your seminary experience.	Strongly Disagree	Tend to Disagree	Tend to Agree	Strongly Agree	Office Use Only
1. I always pay attention to the seminary lesson					1.
2. I participate in seminary class activities					2.
3. I try to learn all of the Scripture Mastery scriptures					3.
4. I do my scripture reading for each lesson					4.
5. I enjoy seminary					5.
6. Seminary is a valuable part of my education					6.
7. I try to apply the lessons I learn in seminary to my life					7.
8. I attend seminary only because I am forced to by others					8.
9. I have learnt a lot about my relationship with God in seminary					9.
10. I have learnt a lot about my relationships with other people in seminary					10.
11. My teacher loves me					11.
12. My teacher prepares well for lessons					12.
13. I generally feel the Holy Spirit during seminary classes					13.

4. This section is about God's role in SOLVING YOUR PROBLEMS.

	Never	Rarely	Sometimes	Often	Very Often	Office Use Only
People see God's role in solving problems in their life differently. Here we are interested in how you feel God works in your life when you have to solve problems. Please indicate with a tick <u>inside</u> the appropriate box how often you try to solve problems in the following ways.						
1. When it comes to deciding how to solve a problem, God and I work together as partners						1.
2. When a troublesome issue arises, I leave it up to God to decide what it means for me						2.
3. When I have a problem, I talk to God about it and together we decide what it means						3.
4. I act to solve my problems without God's help						4.
5. I do not think about different solutions to my problems because God provides them for me						5.
6. When I have difficulty, I decide what it means by myself without help from God						6.
7. When considering a difficult situation, God and I work together to think of possible solutions						7.
8. I don't spend much time thinking about troubles I've had; God makes sense of them for me						8.
9. Together, God and I put my plans into action						9.
10. Rather than trying to come up with the right solution to a problem myself, I let God decide how to deal with it						10.
11. When thinking about a difficulty, I try to come up with possible solutions without God's help						11.
12. When I feel nervous or anxious about a problem, I work together with God to find a way to relieve my worries						12.
13. After I've gone through a rough time, I try to make sense of it without relying on God						13.
14. When faced with trouble, I deal with my feelings without God's help						14.
15. When a situation makes me anxious, I wait for God to take those feelings away						15.
16. After solving a problem, I work with God to make sense of it						16.
17. When deciding on a solution, I make a choice independent of God's input						17.
18. In carrying out solutions to my problems, I wait for God to take control and know somehow He'll work it out						18.

5.This section is about FAMILY RELIGIOUS PRACTICES.

Please indicate how often your family participates in the following activities by ticking <u>inside</u> the appropriate box along side the statement.

	Never	Rarely	Sometimes	Often	Very Often	Office Use Only
1. My family holds Family Home Evening						1.
2. My family reads the scriptures together						2.
3. My family has family prayer						3.
4. My family attends Sunday church services						4.
5. My family discusses religious topics						5.

6. This section is about your RELATIONSHIP WITH GOD.

Please indicate with a tick in the appropriate box how true each of the following statements is for YOU. Be sure to answer according to what you <u>really</u> experience rather than what you feel <u>should</u> be.

Give the first answer that comes to mind. Don't spend too much time thinking about each item.

	Not At All True	Slightly True	Substantially True	Very True	Office Use Only
1. I have a sense of how God is working in my life.					1.
2. There are times when I feel disappointed with God.					2.
2 (a) When this happens, I still want our relationship to continue.					2.1.
3. God's presence feels very real to me.					3.
4. I am afraid that God will give up on me.					4.
5. I seem to have a unique ability to influence God through my prayers.					5.
6. Listening to God is an essential part of my life.					6.
7. There are times when I feel frustrated at God.					7.
7 (a) When I feel this way, I still desire to put effort into our relationship.					7.1.
8. I am aware of God prompting me to do things.					8.
9. My emotional connection with God is unstable.					9.
10. My experiences of God's responses to me impact me greatly.					10.
11. There are times when I feel irritated at God.					11.
11 (a) When I feel this way I am able to come to some sense of resolution in our relationship.					11.1.
12. God recognises that I am more spiritual than most.					12.
13. I am aware of God's presence in my interactions with other people.					13.
14. There are times when I feel God is punishing me.					14.
15. I am aware of God responding to me in a variety of ways.					15.
16. There are times when I feel angry at God.					16.
16 (a) When this happens, I still have the sense that God will always be with me.					16.1.
17. I am aware of God attending to me in times of need.					17.
18. God understands that my needs are more important than most people's.					18.

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Continued from previous page.	Not At All True	Slightly True	Substantially True	Very True	Office Use Only
19. I am aware of God telling me to do something.					19.
20. I worry that I will be left out of God's plans.					20.
21. My experience of God's presence impacts me greatly.					21.
22. I have a sense of direction in which God is guiding me.					22.
23. My relationship with God is an extraordinary one that most people would not understand.					23.
24. There are times when I feel betrayed by God.					24.
24 (a) When I feel this way, I put effort into restoring our relationship.					24.1.
25. I am aware of God communicating to me in a variety of ways.					25.
26. Manipulating God seems to be the best way to get what I want.					26.
27. I am aware of God's presence in times of need.					27.
28. From day to day, I sense God being with me.					28.
29. There are times when I feel frustrated by God for not responding to my prayers.					29.
29 (a) When I feel this way, I am able to talk it through with God.					29.1.
30. I have a sense of God communicating guidance to me.					30.
31. When I sin, I tend to withdraw from God.					31.
32. I experience an awareness of God speaking to me personally.					32.
33. I find my prayers to God are more effective than other people's.					33.
34. I feel I have to please God or he might reject me.					34.
35. I have a strong impression of God's presence.					35.
36. There are times when I feel that God is angry at me.					36.
37. I am aware of God being very near to me.					37.
38. When I sin, I am afraid of what God will do to me.					38.
39. When I consult God about decisions in my life, I am aware of His direction and help.					39.
40. I seem to be more gifted than most people in discerning God's will.					40.
41. When I feel God is not protecting me, I tend to feel worthless.					41.
42. There are times when I feel like God has let me down.					42.
42 (a) When this happens, my trust in God is not completely broken.					42.1.

☺ **This is the end of the questionnaire.   Thank you for your time.**

✉ **Please seal this questionnaire in the envelope provided, write your nickname on the envelope and return it to your teacher.**

APPENDIX B

Major Study Survey Instrument, Scale Item Lists and Scale Item Fit Statistics

SOCIAL EXPERIENCE QUESTIONNAIRE
Latter-Day Saint Seminary Students

> This is an opportunity to demonstrate how you feel about various social situations and issues that may affect your life. **This is not a test** so there are no right or wrong answers. We want to know YOUR FEELINGS. Please do not talk about your answers with anyone else while answering the questionnaire. Please try to respond to as many items as you can before the end of class.
>
> **Your answers will be kept private and will only be used when combined with hundreds of other responses.**
>
> **Please <u>write your name</u> on the envelope provided and <u>enclose your completed form</u>** before returning it to your teacher.
>
> *Thank you for your help.*

1.   This section is about YOU, PERSONALLY.

Please respond to each question by ticking the appropriate box or writing the answer in the space provided.

Office Use Only

1. Are you: ☐ MALE ☐ FEMALE ? [1.]

2. What is your date of birth? ____/____/_____ [2.]

3. What year are you in school? Year _____. [3.]

4. Including this year, how many years have you attended seminary? _____ years. [4.]

5. How many brothers and sisters do you have? _____ total. [5.]

6. Who do you live with? [6.]
   ☐ Mother and Father
   ☐ Mother only
   ☐ Father only
   ☐ Other: _____

7. What is your Father's and/or Mother's occupation? Father:_____ [7.1]
   (If your father / mother is no longer alive, please state your guardian's occupation. If you do not have a guardian, please state the occupation of your father / mother while living.) Mother:_____ [7.2]

8. Are you a convert to the LDS Church? ☐ YES ☐ NO [8.]

   8.1. If YES, how old were you when you joined? _____ years old. [8.2]

9. Do you have a paid job during the year? ☐ YES ☐ NO [9.]

   9.1. If YES, how many hours per week do you work? _____ hours. [9.1]

2.   This section is about YOUR SCHOOL EXPERIENCE.

Please respond to each question by ticking the appropriate box or writing the answer in the space provided.

1. How do you feel about school?
    - ☐ I dislike school very much
    - ☐ I dislike school
    - ☐ I have mixed feelings
    - ☐ I like school somewhat
    - ☐ I like school very much

    1.

2. What marks do you generally receive in school?
    - ☐ Very Poor
    - ☐ Poor
    - ☐ Average
    - ☐ Good
    - ☐ Very Good

    2.

3. How important is it to you to do well in school?
    - ☐ Not Important
    - ☐ Somewhat Important
    - ☐ Important
    - ☐ Extremely Important

    3.

4. What are your educational expectations?
    - ☐ I don't expect to finish year 12
    - ☐ I expect to finish year 12
    - ☐ I expect to complete a TAFE or similar course
    - ☐ I expect to obtain a university degree
    - ☐ I expect to obtain an Advanced Degree
      (Masters, PhD, Doctor, Lawyer, etc.)

    4.

5. How many hours per week do you spend participating
    in the following activities?   hours
    (If you are not involved in an activity,   • Sports   ____
    indicate 0 hours)

    ____   • Music / Band / Dance

    • School plays / Drama   ____

    • Other: _____   ____

    5a

    5b

    5c

    5d

6. About how many hours do you spend on homework outside of class each day?_____ hours.

    6.

7. How many hours during the average day do you spend watching television?   _____ hours.

    7.

8. How many of your friends that you do things with are LDS?
    - ☐ None
    - ☐ Some
    - ☐ Most
    - ☐ All

    8.

4. This section is about what influences your opinion on SOCIAL ISSUES.

The following issues are often discussed in today's society. This section aims to see 'who' and/or 'what' influences your opinion about these social issues.

Instructions

For each issue you need to do <u>four</u> things:

    5. Give your opinion on the issue.

    6. Write <u>why</u> you hold that opinion.

    7. <u>Rate the amount of influence</u> of each of the five statements on your opinion.
    Simply write your rating (0, 1, 2, 3, 4, 5, 6) in the space provided for each statement.

Your rating will be according to the following scale:

0	1	2	3	4	5	6
No Influence	Almost No Influence	Little Influence	Moderate Influence	Quite a Strong Influence	A Very Strong Influence	A Powerful Influence

    8. If there is another influence that is not listed among the five statements, add it to the list and rate it on the same scale.

1) Should people who break the law (such as stealing, speeding, etc.) be punished?

(please <u>circle</u> one)   **YES**   **NO**   **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6
No Influence	**Almost No Influence**	**Little Influence**	**Moderate Influence**	**Quite a Strong Influence**	**A Very Strong Influence**	**A Powerful Influence**

h)   The idea that everyone should try to make society a better place has _____ on my opinion.

i)   The idea that all people must be treated fairly has _____ on my opinion.

j)   My family's beliefs and expectations about certain laws have _____ on my opinion.

k)   My friends', the media and/or teachers' beliefs about certain laws have _____ on my opinion.

l)   The idea that it satisfies my own interests has _____ on my opinion.

m)   (Other)_____ has _____ on my opinion.

2) Should people of different race and colour live in harmony with each other?

(please <u>circle</u> one)   **YES**   **NO**   **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6
No Influence	**Almost No Influence**	**Little Influence**	**Moderate Influence**	**Quite a Strong Influence**	**A Very Strong Influence**	**A Powerful Influence**

h)   My friends', the media and/or teachers' beliefs about racial harmony have _____ on my opinion.

i)   Satisfying my own interests about racial harmony has _____ on my opinion.

j)   The idea that society as a whole will benefit from racial harmony has _____ on my opinion.

k)   The idea that all people are born equal and should be respected has _____ on my opinion.

l)   My family's beliefs on how different races should live have _____ on my opinion.

m)   (Other)_____ has _____ on my opinion.

3) Should all people respect the natural environment in which we live?

(please <u>circle</u> one)   **YES**   **NO**   **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6
No Influence	Almost No Influence	Little Influence	Moderate Influence	Quite a Strong Influence	A Very Strong Influence	A Powerful Influence

h) My family's beliefs and expectations about the environment have _____ on my opinion.

i) My friends', the media and/or teachers' beliefs about the environment have _____ on my opinion.

j) Satisfying my own environmental interests has _____ on my opinion.

k) The idea that respect for the environment benefits society has _____ on my opinion.

l) The belief that all living things should be given some chance for survival has _____ on my opinion.

m) (Other)_____ has _____ on my opinion.

4) Should 'freedom of speech' (being able to say publicly what you believe) be allowed?

(please <u>circle</u> one)   **YES**   **NO**   **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6
No Influence	Almost No Influence	Little Influence	Moderate Influence	Quite a Strong Influence	A Very Strong Influence	A Powerful Influence

h) The belief that freedom of speech may satisfy my own interests has _____ on my opinion.

i) The idea that freedom of speech makes society a better place to live in has _____ on my opinion.

j) The idea that every person has an equal right to freedom of speech has _____ on my opinion.

k) My family's beliefs and expectations about freedom of speech have _____ on my opinion.

l) My friends', the media and/or teachers' beliefs about freedom of speech have _____ on my opinion.

m) (Other)_____ has _____ on my opinion.

5) Should equal opportunities be given to people regardless of their race and gender?

(please circle one)   **YES**   **NO**   **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6
No Influence	Almost No Influence	Little Influence	Moderate Influence	Quite a Strong Influence	A Very Strong Influence	A Powerful Influence

h) My friends', the media and/or teachers' beliefs on race and gender issues have _____ on my opinion.

i) The idea that all people are born equal and should be respected has _____ on my opinion.

j) My family's beliefs and expectations on race and gender issues have _____ on my opinion.

k) The idea that society will benefit from addressing race and gender issues has _____ on my opinion.

l) Satisfying my own interests on race and gender issues has _____ on my opinion.

m) (Other)_____ has _____ on my opinion.

6) Should scientific research which harms people or natural environment be allowed?

(please circle one)   **YES**   **NO**   **Can't Decide**

Why? _____

Rate the amount of <u>influence</u> of each statement below on your opinion by writing the corresponding number in the space:

0	1	2	3	4	5	6
No Influence	Almost No Influence	Little Influence	Moderate Influence	Quite a Strong Influence	A Very Strong Influence	A Powerful Influence

h) The idea that all living things are worthy of respect has _____ on my opinion.

i) My family's beliefs and expectations about scientific research have _____ on my opinion.

j) My friends', the media and/or teachers' beliefs about scientific research have _____ on my opinion.

k) The belief that scientific research may satisfy my own needs has _____ on my opinion.

l) The idea that scientific research should seek to make society a better place has_____ on my opinion.

m) (Other)_____ has _____ on my opinion.

4.   This section is about YOUR PARENTS' INFLUENCE.

Please respond to each statement by ticking the most appropriate box. Your parents will not be shown your responses.

The following statements list various attitudes and behaviours of parents. Indicate how you think each statement describes your mother and/or father by placing a tick __inside__ the corresponding box for each. (If you only live with one parent, just answer for that parent.)

	My MOTHER				My FATHER				Office Use Only	
	Very Unlike	Kind of Unlike	Kind of Like	Very Like	Very Unlike	Kind of Unlike	Kind of Like	Very Like		
(EXAMPLE) Has a sense of humour			✓					✓		
1. Speaks to me with a warm and friendly voice									1.	
2. Does not help me as much as I need									2.	
3. Lets me do those things I like doing									3.	
4. Seems emotionally cold to me									4.	
5. Appears to understand my problems and worries									5.	
6. Is affectionate to me									6.	
7. Likes me to make my own decisions									7.	
8. Does not want me to grow up									8.	
9. Tries to control everything I do									9.	
10. Invades my privacy									10.	
11. Enjoys talking things over with me									11.	
12. Frequently smiles at me									12.	
13. Tends to baby me									13.	
14. Does not seem to understand what I need or want									14.	
15. Lets me decide things for myself									15.	
16. Makes me feel I'm not wanted									16.	
17. Can make me feel better when I am upset									17.	
18. Does not talk to me very much									18.	
19. Tries to make me dependent on her/him									19.	
20. Feels I cannot look after myself unless she/he is around									20.	
21. Gives me as much freedom as I want									21.	
22. Lets me go out as often as I want									22.	
23. Is overprotective of me									23.	
24. Does not praise me									24.	

5.   This section is about your FEELINGS and ACTIONS.

Following are some statements designed to help you evaluate your feelings and actions. Please respond to each statement by ticking inside the most appropriate box. Do not mark the shaded boxes.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Only
1. If I saw someone trying to steal a car, I would alert someone.					1.
2. I am loyal to others even when they're not around.					2.
3. I try to see how my strengths can be used to serve others.					3.
4. I am concerned about the influence that white settlement has had on Aboriginal culture.					4.
5. I welcome new people into my circle of friends.					5.
6. I would be willing to donate money to a needy cause if someone asked me.					6.
7. If I found a wallet with money but no identification, I would take it to the police.					7.
8. There aren't many occasions when I'm unsure about how to behave.					8.
9. I watch for opportunities to help others.					9.
10. It concerns me that there is such a large gap between the rich and the poor in this country.					10.
11. I try to behave in ways which will not embarrass others.					11.
12. It concerns me that there are people forced to live on the streets in this country.					12.
13. If I visited people from a different culture, I would be careful in case my normal behaviour offended them.					13.
14. I would feel sorry if I had missed an opportunity to help someone.					14.
15. I try not to be aggressive in an argument.					15.
16. I would be willing to regularly donate money to sponsor a needy child.					16.
17. I would feel bad if I had been involved in bullying another person.					17.
18. I like meeting new people.					18.
19. I recognise that I have gifts that can be used to serve others.					19.
20. I would rather do my own work poorly than cheat and do well.					20.
21. If people disagree with me I feel comfortable.					21.
22. I have a responsibility to help other people.					22.
23. I think it's just as wrong to steal from a company as an individual.					23.
24. If someone argues with me I try not to feel threatened.					24.
25. I would be willing to donate money to a needy cause.					25.
26. It concerns me that so many people are unable to find employment in this country.					26.
27. I feel confident to express my opinions.					27.
28. Each individual can do something to overcome injustice in the world.					28.
29. I would admire someone who didn't cheat on an exam when they had the opportunity to do so.					29.
30. I wouldn't deliberately undermine someone's reputation.					30.
31. I feel comfortable when I'm introduced to new people.					31.

RELIGIOUS EXPERIENCE QUESTIONNAIRE

Latter-Day Saint Seminary Students

This is an opportunity to demonstrate how you feel about God and Religion. **This is not a test** so there are no right or wrong answers. We want to know YOUR FEELINGS. Please do not talk about your answers with anyone else while filling out the questionnaire.

Your answers will be kept private and will only be used when combined with hundreds of other responses.

Thank you for your help.

EXAMPLES:

For most of this questionnaire you will be asked to respond to statements in the following way. Note that the ticks are placed next to each statement according to how much the person agreed or disagreed with the statement.

This person does not really like classical music, loves her/his football team and does not like watching Playschool.

Please indicate with a tick <u>inside</u> the appropriate box how strongly you agree or disagree with each of the following statements.	Strongly Disagree	Tend to Disagree	Tend to Agree	Strongly Agree
1. I enjoy classical music		✓		
2. I follow the best football team				✓
3. Playschool is my favourite TV show	✓			

1. This section is about your RELATIONSHIP WITH GOD.

Please indicate with a tick in the appropriate box how true each of the following statements are for YOU. Be sure to answer according to what you <u>really</u> experience rather than what you feel <u>should</u> be.

Give the first answer that comes to mind. Don't spend too much time thinking about each item.

	Not At All True	Slightly True	Substantially True	Very True	Office Use Only
1. God's presence feels very real to me.					1.
2. There are times when I feel disappointed with God.					2.
3. I am afraid that God will give up on me.					3.
4. I seem to have a unique ability to influence God through my prayers.					4.
5. Listening to God is an essential part of my life.					5.
6. There are times when I feel frustrated at God.					6.
7. I am aware of God prompting me to do things.					7.
8. My emotional connection with God is unstable.					8.
9. There are times when I feel irritated at God.					9.
10. God recognises that I am more spiritual than most.					10.
11. I am aware of God's presence in my interactions with other people.					11.
12. There are times when I feel God is punishing me.					12.
13. I am aware of God responding to me in a variety of ways.					13.
14. There are times when I feel angry at God.					14.
15. I am aware of God attending to me in times of need.					15.
16. God understands that my needs are more important than most people's.					16.
17. I worry that I will be left out of God's plans.					17.
18. I have a sense of direction in which God is guiding me.					18.
19. My relationship with God is an extraordinary one that most people would not understand.					19.
20. There are times when I feel betrayed by God.					20.
21. I am aware of God's presence in times of need.					21.
22. From day to day, I sense God being with me.					22.
23. There are times when I feel frustrated by God for not responding to my prayers.					23.
24. When I sin, I tend to withdraw from God.					24.
25. I find my prayers to God are more effective than other people's.					25.
26. I feel I have to please God or he might reject me.					26.
27. I have a strong impression of God's presence.					27.
28. There are times when I feel that God is angry at me.					28.
29. When I sin, I am afraid of what God will do to me.					29.
30. When I consult God about decisions in my life, I am aware of His direction and help.					30.
31. I seem to be more gifted than most people in discerning God's will.					31.
32. When I feel God is not protecting me, I tend to feel worthless.					32.
33. There are times when I feel like God has let me down.					33.

2. This section is about your RELIGIOUS PRACTICES.

Please indicate with a tick <u>inside</u> the appropriate box how often you participate in the following:

	Never	Rarely	Sometimes	Often	Very Often	Office Use Only
1. I participate in Church social activities						1.
2. I attend Sacrament meeting						2.
3. I attend Sunday School class						3.
4. I fast on Fast Sunday						4.
5. I pay tithing on the money I earn						5.
6. I bear my testimony in Church						6.
7. I read the Scriptures by myself						7.
8. I pray privately						8.
9. I read Church magazines and books						9.

3. This section is about your SEMINARY EXPERIENCE.

Please indicate with a tick <u>inside</u> the appropriate box how often you do the following:

	Never	Rarely	Sometimes	Often	Very Often	Office Use Only
1. I attend seminary						1.
2. I pay attention to my teacher during seminary class						2.
3. I enjoy seminary						3.
4. I participate in activities and games in seminary class						4.
5. I attend seminary only because I feel forced to by others						5.
6. I learn the scripture mastery scriptures						6.
7. I feel the Holy Spirit during seminary class						7.
8. I feel closer to God throughout the day after attending seminary						8.
9. I try to apply the lessons I learn in seminary to my life						9.
10. I feel stressed about having to attend seminary						10.
11. I contribute to class discussions						11.
12. I see seminary as a benefit to my life generally						12.

4. This section is about FAMILY RELIGIOUS PRACTICES.

Please indicate how often your family participates in the following activities by ticking inside the appropriate box along side the statement.

	Never	Rarely	Sometimes	Often	Very Often	Office Use Only
1. My family holds Family Home Evening						1.
2. My family reads the scriptures together						2.
3. My family has family prayer						3.
4. My family keeps the Sabbath Day holy						4.
5. My family discusses religious topics						5.
6. My parents teach me gospel principles						6.
7. My parents take an active interest in what I learn in church classes						7.

5. This section is about God's role in SOLVING YOUR PROBLEMS.

People see God's role in solving problems in their life differently. Here we are interested in how you feel God works in your life when you have to solve problems. Please indicate with a tick inside the appropriate box how often you try to solve problems in the following ways.

	Never	Rarely	Sometimes	Often	Very Often	Office Use Only
1. When it comes to deciding how to solve a problem, God and I work together as partners						1.
2. When a troublesome issue arises, I leave it up to God to decide what it means for me						2.
3. When I have a problem, I talk to God about it and together we decide what it means						3.
4. I act to solve my problems without God's help						4.
5. I do not think about different solutions to my problems because God provides them for me						5.
6. When I have difficulty, I decide what it means by myself without help from God						6.
7. When considering a difficult situation, God and I work together to think of possible solutions						7.
8. I don't worry too much about learning from difficult situations, since God will make me grow in the right direction						8.
9. Together, God and I put my plans into action						9.
10. Rather than trying to come up with the right solution to a problem myself, I let God decide how to deal with it						10.
11. When thinking about a difficulty, I try to come up with possible solutions without God's help						11.
12. When I feel nervous or anxious about a problem, I work together with God to find a way to relieve my worries						12.

Continued from previous page	Never	Rarely	Sometimes	Often	Very Often	
13. After I've gone through a rough time, I try to make sense of it without relying on God						13.
14. When faced with trouble, I deal with my feelings without God's help						14.
15. When a situation makes me anxious, I wait for God to take those feelings away						15.
16. After solving a problem, I work with God to make sense of it						16.
17. When I feel nervous or anxious I calm myself without relying on God						17.
18. In carrying out solutions to my problems, I wait for God to take control and know somehow He'll work it out						18.

6. This section is about your RELIGIOUS BELIEFS and EXPERIENCES.

Please indicate with a tick <u>inside</u> the appropriate box how strongly you agree or disagree with the following statements.	Strongly Disagree	Tend to Disagree	Tend to Agree	Strongly Agree	Office Use Only
1. There is a life after death					1.
2. God really does answer prayers					2.
3. I plan to serve a mission for the LDS Church					3.
4. I plan to marry in the temple					4.
5. I sometimes feel like an outsider in the Church					5.
6. God lives and is real					6.
7. I plan to be active in the Church my whole life					7.
8. During the past year, I really have tried to live the standards of the Church					8.
9. I have a testimony of the truthfulness of the gospel					9.
10. Satan actually exists					10.
11. There have been times in my life when I felt the Holy Ghost					11.
12. Joseph Smith actually saw God the Father and Jesus Christ					12.
13. I know what it feels like to repent and be forgiven					13.
14. Jesus Christ is the divine Son of God					14.
15. I have been guided by the Spirit with some of my problems and decisions					15.
16. The Bible is the word of God					16.
17. I know what it feels like to have a spiritual 'change of heart'					17.
18. My relationship with God is an important part of my life					18.
19. In my life there are more important things than religion					19.

Continued from previous page	Strongly Disagree	Tend to Disagree	Tend to Agree	Strongly Agree	
20. It's hard for me to accept some of the teachings of the Church					20.
21. The Book of Mormon is the word of God					21.
22. The Church puts too many restrictions on me					22.
23. The president of the LDS Church is a prophet of God					23.
24. There have been times when I have rebelled against a teaching of the Church					24.
25. The Lord guides the Church today through revelation to Church leaders					25.
26. I just can't measure up to Church standards					26.
27. I am a good example of living the gospel to my friends					27.

☺ *This is the end of the questionnaire. Thank you for your time.*

✉ *Please seal this questionnaire in the envelope provided, write your code name on the envelope and return it to your teacher.*

Lists of Scales and Items Included in Major Study

Parental Style

Scale Used: The Parental Bonding Instrument
Subscales: Care, Overprotection
No. of Items: 24 (Likert scale for each parent)
Source: Parker, Tupling & Brown (1979).

Mother's / Father's Care

1. Speaks to me with a warm and friendly voice
2. Does not help me as much as I need (REVERSE)
3. Seems emotionally cold to me (REVERSE)
4. Appears to understand my problems and worries
5. Is affectionate to me
6. Enjoys talking things over with me
7. Frequently smiles at me
8. Does not seem to understand what I need or want (REVERSE)
9. Makes me feel I'm not wanted (REVERSE)
10. Can make me feel better when I am upset
11. Does not talk to me very much (REVERSE)
12. Does not praise me (REVERSE)

Mother's / Father's Overprotection

1. Lets me do those things I like doing (REVERSE)
2. Likes me to make my own decisions (REVERSE)
3. Does not want me to grow up
4. Tries to control everything I do
5. Invades my privacy
6. Tends to baby me
7. Lets me decide things for myself (REVERSE)
8. Tries to make me dependent on her/him
9. Feels I cannot look after myself unless she/he is around
10. Gives me as much freedom as I want (REVERSE)
11. Lets me go out as often as I want (REVERSE)
12. Is overprotective of me

Categories: Very Unlike – Kind of Unlike – Kind of Like – Very Like

Social Attitudes

Scale Used: ACER Attitudes and Values Questionnaire
Subscales: Conscience, Social Growth, Service to Others.
No. of Items: 100 (if possible, reduced to 50)
Source: Australian Council for Educational Research, (1999).

Conscience

1. If I saw someone trying to steal a car, I would alert someone.
2. I am concerned about the influence that white settlement has had on Aboriginal culture.
3. If I found a wallet with money but no identification, I would take it to the police.
4. It concerns me that there is such a large gap between the rich and the poor in this country.
5. It concerns me that there are people forced to live on the streets in this country.
6. I would feel bad if I had been involved in bullying another person.
7. I would rather do my own work poorly than cheat and do well.
8. I think it's just as wrong to steal from a company as an individual.
9. It concerns me that so many people are unable to find employment in this country.
10. I would admire someone who didn't cheat on an exam when they had the opportunity to do so.

Social Growth

1. I am loyal to others even when they're not around.
2. I welcome new people into my circle of friends.
3. There aren't many occasions when I'm unsure about how to behave.
4. I try to behave in ways which will not embarrass others.
5. If I visited people from a different culture, I would be careful in case my normal behaviour offended them.
6. I try not to be aggressive in an argument.
7. I like meeting new people.
8. If people disagree with me I feel comfortable.
9. If someone argues with me I try not to feel threatened.
10. I feel confident to express my opinions.
11. I wouldn't deliberately undermine someone's reputation.
12. I feel comfortable when I'm introduced to new people.

Service to Others

1.	I try to see how my strengths can be used to serve others.
2.	I would be willing to donate money to a needy cause if someone asked me.
3.	I watch for opportunities to help others.
4.	I would feel sorry if I had missed an opportunity to help someone.
5.	I would be willing to regularly donate money to sponsor a needy child.
6.	I recognise that I have gifts that can be used to serve others.
7.	I have a responsibility to help other people.
8.	I would be willing to donate money to a needy cause.
9.	Each individual can do something to overcome injustice in the world.

Categories: Strongly Disagree – Disagree – Agree – Strongly Agree

Moral Thinking

Scales Used: Revised Moral Authority Scale
Subcales: Society, Justice/Fairness, Family, Others, Self-Interest
No. of Items: 30 (6 scenarios)
Source: White (1996a)

Society

The idea that everyone should try to make society a better place has _____ on my opinion.

Justice/Fairness

The idea that all people must be treated fairly has _____ on my opinion.

Family

My family's beliefs and expectations about certain laws have _____ on my opinion.

Others

My friends', the media and/or teachers' beliefs about certain laws have _____ on my opinion.

Self-Interest

The idea that it satisfies my own interests has _____ on my opinion.

Categories: No Influence to A Powerful Influence (11 Categories)

Religious Practices

Scales Used: Religion and Family Survey – Section 4

Subscales: Private Religious Practice, Public Religious Practice
No. of Items: 9 (Likert Scale)
Source: Top & Chadwick (1998).

RP_Prv: Private Religious Practice

1. I fast on Fast Sunday
2. I pay tithing on the money I earn
3. I read the Scriptures by myself
4. I pray privately
5. I read Church magazines and books

RP_Pub: Public Religious Practice

1. I participate in Church social activities
2. I attend Sacrament meeting
3. I attend Sunday School class
4. I bear my testimony in Church

Categories: Never – Rarely – Sometimes – Often – Very Often

Seminary Experience

Subscales: Seminary Participation, Seminary Feeling

No. of Items: 12 items

Source: Developed in during pilot study

Sem_Prt: Seminary Participation

1. I attend seminary
2. I pay attention to my teacher during seminary class
3. I participate in activities and games in seminary class
4. I attend seminary only because I feel forced to by others
5. I learn the scripture mastery scriptures
6. I try to apply the lessons I learn in seminary to my life
7. I contribute to class discussions

Sem_Exp: Seminary Feeling

1.	I enjoy seminary
2.	I feel the Holy Spirit during seminary class
3.	I feel closer to God throughout the day after attending seminary
4.	I feel stressed about having to attend seminary
5.	I see seminary as a benefit to my life generally

Categories: Never – Rarely – Sometimes – Often – Very Often

Religious Beliefs and Experiences

Scales Used: Religion and Family Survey – Section 4

Subscales: Religious Beliefs, Spiritual Experiences, Religious Interest, Religious Discontent

No. of Items: 27 (Likert Scale)

Source: Top & Chadwick (1998).

RB_Blf: Religious Belief

1.	Satan actually exists
2.	Joseph Smith actually saw God the Father and Jesus Christ
3.	There is a life after death
4.	The Bible is the word of God
5.	God lives and is real
6.	Jesus Christ is the divine Son of God
7.	The Lord guides the Church today through revelation to Church leaders
8.	The president of the LDS Church is a prophet of God
9.	The Book of Mormon is the word of God

RB_Spex: Spiritual Experiences

1.	God really does answer prayers
2.	I have a testimony of the truthfulness of the gospel
3.	I have been guided by the Spirit with some of my problems and decisions
4.	There have been times in my life when I felt the Holy Ghost
5.	I know what it feels like to have a spiritual 'change of heart'
6.	I know what it feels like to repent and be forgiven

RB_Int: Religious Interest

1. I plan to marry in the temple
2. My relationship with God is an important part of my life
3. I have a testimony of the truthfulness of the gospel
4. I plan to be active in the Church my whole life
5. During the past year, I really have tried to live the standards of the Church
6. I am a good example of living the gospel to my friends

RB_Disc: Religious Discontent

1. The Church puts too many restrictions on me
2. In my life there are more important things than religion
3. I sometimes feel like an outsider in the Church
4. I just can't measure up to Church standards
5. It's hard for me to accept some of the teachings of the Church
6. There have been times when I have rebelled against a teaching of the Church

Categories: Strongly Disagree – Tend to Disagree – Tend to Agree – Strongly Agree

Religious Problem Solving

Scale Used: The Religious Problem Solving Scale

Subscales: Collaborative, Self Directing, Deferring

No. of Items: 18 (Likert Scale)

Source: Pargament, et al. (1988).

RPS_Coll: Collaborating

1. When it comes to deciding how to solve a problem, God and I work together as partners
2. After solving a problem, I work with God to make sense of it
3. When I have a problem, I talk to God about it and together we decide what it means
4. Together, God and I put my plans into action
5. When considering a difficult situation, God and I work together to think of possible solutions
6. When I feel nervous or anxious about a problem, I work together with God to find a way to relieve my worries

RPS_Slf: Self Directing

1.	When thinking about a difficulty, I try to come up with possible solutions without God's help
2.	I act to solve my problems without God's help
3.	When I have difficulty, I decide what it means by myself without help from God
4.	After I've gone through a rough time, I try to make sense of it without relying on God
5.	When faced with trouble, I deal with my feelings without God's help
6.	When I feel nervous or anxious I calm myself without relying on God

RPS_Def: Deferring

1.	When a troublesome issue arises, I leave it up to God to decide what it means for me
2.	Rather than trying to come up with the right solution to a problem myself, I let God decide how to deal with it
3.	I do not think about different solutions to my problems because God provides them for me
4.	I don't worry too much about learning from difficult situations, since God will make me grow in the right direction
5.	In carrying out solutions to my problems, I wait for God to take control and know somehow He'll work it out
6.	When a situation makes me anxious, I wait for God to take those feelings away

Categories: Never – Rarely – Sometimes – Often – Very Often

Family Religiosity

Items Used: Based on Religion and Family Survey – Section 4
No. of Items: 7 (Likert scale)
Source: Top & Chadwick (1998).

FamPrac: Family Religious Practice

1.	My family reads the scriptures together
2.	My parents teach me gospel principles
3.	My parents take an active interest in what I learn in church classes
4.	My family has family prayer
5.	My family keeps the Sabbath Day holy
6.	My family discusses religious topics
7.	My family holds Family Home Evening

Categories: Never – Rarely – Sometimes – Often – Very Often

Spirituality

Scale Used: Spiritual Assessment Inventory

Subscales: Awareness, Disappointment, Instability

No. of Items: 27 (Likert Scale)

Source: Hall & Edwards (1996).

RG_Aware: Awareness of God

1. I am aware of God prompting me to do things.
2. God's presence feels very real to me.
3. Listening to God is an essential part of my life.
4. I am aware of God's presence in my interactions with other people.
5. I am aware of God responding to me in a variety of ways.
6. I am aware of God attending to me in times of need.
7. I am aware of God's presence in times of need.
8. I have a sense of direction in which God is guiding me.
9. From day to day, I sense God being with me.
10. I have a strong impression of God's presence.
11. When I consult God about decisions in my life, I am aware of His direction and help.

RG_Diss: Disappointment with God

1. There are times when I feel disappointed with God.
2. There are times when I feel frustrated at God.
3. There are times when I feel angry at God.
4. There are times when I feel irritated at God.
5. There are times when I feel betrayed by God.
6. There are times when I feel like God has let me down.
7. There are times when I feel frustrated by God for not responding to my prayers.

RG_Ins: Insecurity with God

1. I am afraid that God will give up on me.
2. There are times when I feel God is punishing me.
3. My emotional connection with God is unstable.
4. I worry that I will be left out of God's plans.
5. I feel I have to please God or he might reject me.
6. When I feel God is not protecting me, I tend to feel worthless.
7. When I sin, I tend to withdraw from God.
8. There are times when I feel that God is angry at me.
9. When I sin, I am afraid of what God will do to me.

Categories: Not At All True – Slightly True – Substantially True – Very True

Table B.1 Item level scale loading, difficulty and fit statistics

Scale	Items	Princ. Comp. Factor Ldg.	Item Location/ difficulty	Std Error	Infit Mean Square	Outfit Mean Square	Notes
Justice - Moral Authority Scale n=525	MA1B	0.69	-0.19	0.06	1.10	1.19	
	MA2D	0.80	-0.53	0.06	0.88	0.79	
	MA3E	0.74	0.13	0.05	1.09	1.08	
	MA4C	0.74	0.46	0.05	1.07	1.08	
	MA5B	0.82	-0.11	0.06	0.91	0.86	
	MA6A	0.74	0.25	0.05	0.98	0.98	
Family – Moral Authority Scale n=556	MA1C	0.65	-0.48	0.05	1.26	1.30	
	MA2E	0.73	-0.25	0.05	1.19	1.20	
	MA3A	0.81	0.25	0.05	0.91	0.90	
	MA4D	0.85	0.16	0.05	0.78	0.77	
	MA5C	0.86	-0.15	0.05	0.78	0.76	
	MA6B	0.74	0.46	0.05	1.10	1.13	
Society – Moral Authority Scale n=592	MA1A	0.66	0.10	0.05	1.11	1.15	
	MA2C	0.75	-0.26	0.05	1.00	1.02	
	MA3D	0.78	-0.09	0.05	0.88	0.88	
	MA4B	0.71	0.31	0.05	1.08	1.06	
	MA5D	0.82	-0.06	0.05	0.89	0.86	
Others – Moral Authority Scale n=512	MA2A	0.78	-0.03	0.06	1.23	1.22	
	MA3B	0.82	0.03	0.06	1.00	1.00	
	MA4E	0.87	-0.08	0.06	0.89	0.87	
	MA5A	0.87	-0.15	0.06	0.86	0.83	
	MA6C	0.80	0.23	0.06	1.03	1.09	
Self – Moral Authority Scale n=566	MA1E	0.64	0.02	0.05	1.23	1.26	
	MA2B	0.78	-0.30	0.05	0.90	0.88	
	MA3C	0.81	-0.08	0.05	0.89	0.90	
	MA4A	0.76	-0.03	0.05	1.03	1.02	
	MA5D	0.63	-0.22	0.05	0.82	0.80	
	MA6D	0.65	0.62	0.05	1.19	1.21	

Table B.1 (Cont): Item level scale loading, difficulty and fit statistics.

Scale	Items	Princ. Comp. Factor Ldg.	Item Location/ difficulty	Std Error	Infit Mean Square	Outfit Mean Square	Notes
Mother's Care – Parental Bonding n=528	P2M (Reversed Coding)	0.56	0.29	0.06	1.24	1.30	Reversed Items Affecting Unidimension-ality
	P4M (Reversed Coding)	0.66	-0.60	0.07	1.07	0.93	
	P5M	0.67	0.38	0.06	0.84	0.94	
	P11M	0.59	0.20	0.06	1.01	1.03	
	P12M	0.63	0.05	0.06	0.90	0.97	
	P14M (Reversed Coding)	0.68	0.41	0.06	0.91	0.95	
	P16M (Reversed Coding)	0.68	-0.83	0.07	1.07	0.83	
	P17M	0.68	0.28	0.06	0.86	0.85	
	P18M (Reversed Coding)	0.71	-0.30	0.06	1.00	0.98	
	P24M (Reversed Coding)	0.62	0.11	0.06	1.10	1.09	
Mother's Overprotection – Parental Bonding n=565	P3M (Reversed Coding)	0.66	0.40	0.06	0.92	0.90	Reversed Items Affecting Unidimension-ality
	P7M (Reversed Coding)	0.67	0.27	0.06	0.98	0.99	
	P9M	0.74	0.06	0.06	0.88	0.84	
	P10M	0.64	0.37	0.06	1.18	1.22	
	P20M	0.65	0.78	0.07	1.22	1.16	
	P21M (Reversed Coding)	0.70	-0.84	0.06	0.79	0.80	
	P22M (Reversed Coding)	0.63	-0.82	0.06	0.99	1.01	
	P23M	0.56	-0.22	0.06	1.24	1.26	
Father's Care – Parental Bonding n=523	P2F (Reversed Coding)	0.69	0.08	0.06	1.19	1.28	Reversed Items Affecting Unidimension-ality
	P4F (Reversed Coding)	0.57	-0.54	0.06	1.14	1.08	
	P5F	0.63	0.54	0.06	0.86	1.00	
	P6F	0.69	-0.04	0.06	0.82	0.83	
	P11F	0.71	0.34	0.06	0.99	1.01	
	P12F	0.63	0.12	0.06	0.93	0.96	
	P14F (Reversed Coding)	0.69	0.24	0.06	1.04	1.08	
	P16F (Reversed Coding)	0.62	-0.95	0.07	1.10	1.05	
	P17F	0.65	0.42	0.06	0.82	0.81	
	P18F (Reversed Coding)	0.73	-0.13	0.06	0.94	0.96	
	P24F (Reversed Coding)	0.71	-0.06	0.06	1.20	1.17	

Table B.1 (cont): Item level scale loading, difficulty and fit statistics.

Scale	Items	Princ. Comp. Factor Ldg.	Item Location/ difficulty	Std Error	Infit Mean Square	Outfit Mean Square	Notes
Father's Overprotection – Parental Bonding n=532	P3f (Reversed Coding)	0.70	0.21	0.06	0.84	0.84	Reversed Items Affecting Unidimension-ality
	P7F (Reversed Coding)	0.64	0.16	0.06	1.03	1.04	
	P9F	0.71	0.01	0.06	0.91	0.88	
	P10F	0.65	0.57	0.06	1.10	1.07	
	P20F	0.58	0.73	0.06	1.32	1.27	
	P21F (Reversed Coding)	0.70	-0.83	0.06	0.78	0.81	
	P22F (Reversed Coding)	0.66	-0.80	0.06	0.92	0.98	
	P23F	0.49	-0.04	0.06	1.27	1.33	
Conscience – Attitudes & Values n=570	AV1	0.51	-0.38	0.07	1.13	1.15	Personal vs Social Conscience Affecting Unidimension-lity
	AV4	0.58	0.98	0.06	0.94	0.97	
	AV7	0.66	0.08	0.07	1.03	1.00	
	AV10	0.55	0.51	0.06	1.00	1.05	
	AV12	0.65	0.05	0.06	0.83	0.84	
	AV17	0.59	-0.17	0.07	1.04	1.08	
	AV20	0.56	-0.22	0.07	1.13	1.11	
	AV23	0.62	-0.52	0.07	0.99	0.99	
	AV26	0.61	0.23	0.06	0.86	0.86	
	AV29	0.68	-0.55	0.07	0.88	0.85	
Social Growth – Attitudes & Values n=572	AV8	0.33	0.18	0.06	1.09	1.15	Problems With Unidimension-ality
	AV11	0.38	-0.03	0.06	0.95	0.97	
	AV13	0.49	-0.33	0.06	1.09	1.10	
	AV15	0.34	0.51	0.06	1.04	1.10	
	AV18	0.64	-0.74	0.07	0.97	0.93	
	AV21	0.40	0.78	0.06	0.97	1.02	
	AV24	0.43	-0.05	0.06	0.83	0.82	
	AV27	0.55	-0.28	0.06	0.90	0.93	
	AV30	0.43	0.00	0.06	1.07	1.10	
	AV31	0.66	-0.04	0.06	0.93	0.94	

Table B.1 (cont): Item level scale loading, difficulty and fit statistics.

Scale	Items	Princ. Comp. Factor Ldg.	Item Location/ difficulty	Std Error	Infit Mean Square	Outfit Mean Square	Notes
Service – Attitudes & Values n=567	AV3	0.64	-0.10	0.09	0.93	0.94	
	AV6	0.75	-0.14	0.09	0.95	0.91	
	AV9	0.72	0.57	0.08	0.82	0.83	
	AV14	0.67	0.39	0.08	1.07	1.11	
	AV16	0.64	0.27	0.08	1.14	1.13	
	AV19	0.61	-0.43	0.09	1.26	1.22	
	AV22	0.72	-0.23	0.09	0.86	0.82	
	AV25	0.73	-0.10	0.09	0.82	0.78	
	AV28	0.55	-0.22	0.09	1.14	1.17	
Private Religious Practice n=958	RP2	0.71	-0.31	0.04	1.13	1.06	
	RP3	0.71	-0.32	0.04	0.95	0.93	
	RP6	0.66	0.39	0.03	1.03	1.04	
	RP8	0.70	0.06	0.03	1.06	1.04	
	RP9	0.77	-0.18	0.03	0.81	0.80	
Public Religious Practice n=1042	RP1	0.45	2.64	0.04	0.97	1.35	
	RP4	0.73	-0.18	0.05	0.94	1.11	
	RP5	0.82	-0.83	0.06	0.92	0.79	
	RP7	0.77	-1.63	0.08	1.03	1.06	
Seminary Participation n=1026	SE4	0.72	0.41	0.04	1.14	1.12	
	SE6	0.77	-0.96	0.05	0.89	0.84	
	SE7	0.77	0.00	0.04	0.91	0.92	
	SE12	0.69	0.56	0.04	1.10	1.09	
Seminary Feelings n=1012	SE5	0.83	1.09	0.05	0.96	0.97	
	SE9	0.87	0.18	0.05	0.93	0.91	
	SE10	0.88	-0.67	0.05	0.91	0.86	
	SE11	0.82	-0.61	0.05	1.18	1.14	

Table B.1 (cont): Item level scale loading, difficulty and fit statistics.

Scale	Items	Princ. Comp. Factor Ldg.	Item Location/ difficulty	Std Error	Infit Mean Square	Outfit Mean Square	Notes
Religious Belief	RB8	0.79	-0.05	0.11	0.90	0.89	
n=437	RB10	0.74	-0.41	0.12	1.11	1.15	
	RB11	0.72	0.89	0.10	1.22	1.24	
	RB12	0.83	-0.37	0.12	0.82	0.77	
	RB22	0.85	-0.03	0.11	0.76	0.69	
	RB25	0.74	-0.45	0.12	1.01	0.92	
	RB27	0.80	0.42	0.10	0.98	0.97	
Religious	RB2	0.78	0.17	0.04	0.78	0.81	
Discontent	RB9	0.69	0.31	0.05	1.02	1.04	
n=1030	RB16	0.63	0.17	0.04	1.15	1.16	
	RB20	0.77	0.03	0.04	0.84	0.85	
	RB26	0.61	-0.68	0.04	1.16	1.11	
Spiritual	RB1	0.69	-0.97	0.07	1.10	1.17	
Experience	RB6	0.81	-0.37	0.07	0.90	0.87	
n=907	RB15	0.80	0.05	0.07	0.83	0.84	
	RB17	0.77	-0.56	0.07	0.93	0.92	
	RB21	0.67	1.31	0.06	1.17	1.19	
	RB24	0.70	0.50	0.06	1.13	1.12	
Religious Interest	RB3	0.76	-1.12	0.08	1.13	0.94	
n=915	RB5	0.82	-0.47	0.07	0.89	0.79	
	RB6	0.81	0.03	0.07	0.90	0.81	
	RB7	0.83	-0.75	0.08	0.85	0.68	
	RB13	0.75	0.51	0.06	0.98	0.97	
	RB19	0.71	1.81	0.06	0.96	0.95	

Table B.1 (cont): Item level scale loading, difficulty and fit statistics.

Scale	Items	Princ. Comp. Factor Ldg.	Item Location/ difficulty	Std Error	Infit Mean Square	Outfit Mean Square	Notes
Self Directing – Religious Problem Solving n=1009	RPS4	0.71	-0.46	0.05	1.16	1.18	
	RPS5	0.76	0.00	0.04	1.08	1.09	
	RPS9	0.81	0.04	0.04	0.83	0.85	
	RPS12	0.81	0.10	0.04	0.89	0.90	
	RPS16	0.82	0.15	0.05	0.89	0.88	
	RPS18	0.75	0.16	0.05	1.12	1.14	
Deferring – Religious Problem Solving n=1006	RPS1	0.73	-0.24	0.05	1.04	1.07	
	RPS6	0.81	0.36	0.05	0.88	0.87	
	RPS7	0.75	0.17	0.05	1.08	1.08	
	RPS15	0.79	-0.04	0.05	0.88	0.88	
	RPS17	0.75	-0.24	0.05	1.05	1.05	
Collaborative – Religious Problem Solving n=1033	RPS2	0.87	-0.31	0.05	0.84	0.86	
	RPS3	0.85	0.34	0.05	0.96	0.95	
	RPS8	0.85	0.29	0.05	1.01	1.00	
	RPS11	0.86	0.12	0.05	0.98	0.97	
	RPS14	0.90	-0.44	0.05	1.14	1.14	
Family Religious Practice n=1012	FRP1	0.74	1.07	0.04	1.03	0.99	
	FRP2	0.82	-0.49	0.04	0.77	0.69	
	FRP3	0.72	0.12	0.04	1.05	1.20	
	FRP4	0.79	-0.34	0.04	1.02	0.88	
	FRP5	0.71	-0.52	0.04	1.05	1.14	
	FRP6	0.80	-0.01	0.04	0.79	0.80	
	FRP7	0.76	0.18	0.04	1.15	1.08	

Table B.1 (cont): Item level scale loading, difficulty and fit statistics.

Scale	Items	Princ. Comp. Factor Ldg.	Item Location/ difficulty	Std Error	Infit Mean Square	Outfit Mean Square	Notes
Awareness of God n=985	RG1	0.75	-0.28	0.06	1.20	1.27	
	RG2	0.81	-0.85	0.06	0.88	0.89	
	RG5	0.77	-0.38	0.06	1.13	1.14	
	RG7	0.73	0.61	0.05	1.20	1.22	
	RG10	0.79	0.21	0.05	0.98	0.99	
	RG14	0.80	-0.34	0.06	1.04	0.98	
	RG16	0.81	0.17	0.05	0.92	0.90	
	RG21	0.85	0.25	0.05	0.77	0.77	
	RG24	0.84	0.35	0.05	0.87	0.86	
	RG27	0.80	0.26	0.05	0.99	1.00	
Disappointment with God n=822	RG3	0.78	-0.47	0.05	1.01	1.04	
	RG6	0.83	-0.36	0.06	0.81	0.80	
	RG11	0.86	0.07	0.06	0.79	0.73	
	RG15	0.81	0.22	0.06	0.88	0.87	
	RG17	0.80	0.86	0.07	1.12	0.86	
	RG20	0.79	0.28	0.06	1.10	1.01	
	RG22	0.72	-0.60	0.05	1.19	1.30	
Insecure with God n=1034	RG4	0.69	0.42	0.05	1.08	0.99	
	RG8	0.64	-0.20	0.04	1.01	1.03	
	RG9	0.55	-0.06	0.04	1.09	1.21	
	RG13	0.72	0.62	0.05	1.02	0.87	
	RG18	0.73	0.30	0.05	0.90	0.87	
	RG19	0.62	-0.03	0.04	1.08	1.07	
	RG23	0.46	-0.81	0.04	1.21	1.34	
	RG25	0.77	-0.01	0.04	0.80	0.76	
	RG26	0.74	-0.23	0.04	0.83	0.81	

APPENDIX C

Bernoulli HLM Output for Dropout Variable

Extracts from HLM 6 Output File relevant to Findings in Chapter 8 Concerning Student Dropout.

```
 The maximum number of level-1 units = 164
 The maximum number of level-2 units = 34
 The maximum number of micro iterations = 14
 Method of estimation: restricted PQL
 Maximum number of macro iterations = 100

 Distribution at Level-1: Bernoulli

 The outcome variable is   DRP_S2

 The model specified for the fixed effects was:
 -----------------------------------------------------

   Level-1                  Level-2
   Coefficients             Predictors
 ---------------------     --------------
#       INTRCPT1, B0       INTRCPT2, G00
 %  CONVERT slope, B1      INTRCPT2, G10
$                          RPSCOL_1, G11
$                          RGINSC_1, G12
 % RP_PRV_R slope, B2      INTRCPT2, G20

'#' - The residual parameter variance for this level-1 coefficient has been set
      to zero.
'%' - This level-1 predictor has been centered around its grand mean.
'$' - This level-2 predictor has been centered around its grand mean.

 The model specified for the covariance components was:
 ----------------------------------------------------------
         Tau dimensions
               CONVERT slope
             RP_PRV_R slope


 Summary of the model specified (in equation format)
 -----------------------------------------------------

Level-1 Model

     Prob(Y=1|B) = P

     log[P/(1-P)] = B0 + B1*(CONVERT) + B2*(RP_PRV_R)

Level-2 Model
     B0 = G00
     B1 = G10 + G11*(RPSCOL_1) + G12*(RGINSC_1) + U1
     B2 = G20 + U2

Level-1 variance = 1/[P(1-P)]
```

```
-------------------------------------------------------
 Random level-1 coefficient   Reliability estimate
-------------------------------------------------------
  CONVERT, B1                        0.101
 RP_PRV_R, B2                        0.121
-------------------------------------------------------
```

Note: The reliability estimates reported above are based on only 30 of 34
units that had sufficient data for computation. Fixed effects and variance
components are based on all the data.

The outcome variable is   DRP_S2

Final estimation of fixed effects
(Unit-specific model with **robust** standard errors)

Fixed Effect	Coefficient	Standard Error	T-ratio	Approx. d.f.	P-value
For INTRCPT1, B0					
INTRCPT2, G00	-1.476789	0.238130	-6.202	159	0.000
For CONVERT slope, B1					
INTRCPT2, G10	2.391658	0.944440	2.532	31	0.017
RPSCOL_1, G11	8.090826	2.266462	3.570	31	0.001
RGINSC_1, G12	2.977847	1.321846	2.253	31	0.031
For RP_PRV_R slope, B2					
INTRCPT2, G20	-0.376314	0.187230	-2.010	33	0.052

Fixed Effect	Coefficient	Odds Ratio	Confidence Interval
For INTRCPT1, B0			
INTRCPT2, G00	-1.476789	0.228370	(0.143,0.365)
For CONVERT slope, B1			
INTRCPT2, G10	2.391658	10.931602	(1.597,74.850)
RPSCOL_1, G11	8.090826	3264.382583	(32.267,330251.158)
RGINSC_1, G12	2.977847	19.645470	(1.330,290.164)
For RP_PRV_R slope, B2			
INTRCPT2, G20	-0.376314	0.686387	(0.469,1.004)

Final estimation of variance components:

Random Effect	Standard Deviation	Variance Component	df	Chi-square	P-value
CONVERT, U1	2.20256	4.85126	27	24.73499	>.500
RP_PRV_R slope, U2	0.43900	0.19272	29	24.18554	>.500

APPENDIX D

Scale Correlation Tables

Table D.1 Pearson correlation coefficients of background variables (n>400)

	SEX	AGE	SCH_YR	SEM_YR	SIBLINGS	JOB_HRS	F_OCC	M_OCC	CONVERT	FEEL_SCH	MARK_SCH	DO_WELL	ED_EXP	HW_HRS	TV_HRS	PMCARE_R	PMOPRO_R	PFCARE_R
AGE	-0.02																	
SCH_YR	0.00	0.86																
SEM_YR	-0.01	0.84	0.92															
SIBLINGS	-0.05	-0.13	-0.11	-0.08														
JOB_HRS	0.02	0.32	0.30	0.24	0.01													
F_OCC	0.08	-0.08	-0.04	-0.06	-0.01	-0.04												
M_OCC	0.03	-0.01	0.00	0.01	0.20	-0.04	0.18											
CONVERT	-0.04	-0.04	-0.05	-0.16	-0.13	-0.02	0.06	-0.03										
FEEL_SCH	0.11	0.03	0.06	0.07	-0.05	0.04	0.00	-0.01	-0.13									
MARK_SCH	0.13	-0.05	-0.01	0.00	-0.03	-0.01	-0.14	-0.04	-0.05	0.35								
DO_WELL	0.08	-0.07	-0.03	-0.03	-0.08	-0.02	0.01	-0.03	0.01	0.30	0.30							
ED_EXP	0.08	0.05	0.07	0.08	-0.06	0.00	-0.19	-0.07	-0.09	0.27	0.36	0.31						
HW_HRS	0.22	0.18	0.22	0.23	-0.07	-0.03	0.09	0.00	-0.04	0.19	0.20	0.24	0.15					
TV_HRS	-0.08	-0.13	-0.14	-0.14	-0.08	-0.12	0.06	0.02	0.00	-0.11	-0.15	-0.12	-0.23	-0.11				
PMCARE_R	0.13	0.00	0.02	0.01	-0.02	-0.06	0.02	0.02	-0.04	0.18	0.20	0.13	0.16	0.22	-0.07			
PMOPRO_R	0.05	-0.12	-0.11	-0.08	-0.03	0.02	0.01	0.06	-0.01	-0.15	-0.20	0.03	-0.14	-0.11	0.10	-0.45		
PFCARE_R	0.06	-0.08	-0.05	-0.04	-0.03	-0.03	0.05	0.09	-0.09	0.23	0.15	0.13	0.14	0.17	-0.06	0.62	-0.32	
PFOPRO_R	0.05	-0.09	-0.08	-0.06	0.01	0.00	-0.02	0.01	0.01	-0.20	-0.19	0.01	-0.15	-0.08	0.10	-0.31	0.74	-0.46

Table D.2 Pearson correlation coefficients of religious, spiritual and social variables (n>510)

	AVCONS_R	AVSOC_R	AVSER_R	RP_PRV_R	RP_PUB_R	SEMPRT_R	SEMEXP_R	RBSPEX_R	RBDIS_R	RBINT_R	RBELF_R	RPSCOL_R	RPSSLF_R	RPSDEF_R	FAMPRC_R	RGAWR_R	RGDISS_R	RGINSC_R	MA_JUST
AVSOC_R	0.56																		
AVSER_R	0.68	0.65																	
RP_PRV_R	0.43	0.29	0.37																
RP_PUB_R	0.30	0.33	0.36	0.51															
SEMPRT_R	0.37	0.37	0.42	0.44	0.51														
SEMEXP_R	0.42	0.34	0.49	0.52	0.49	0.72													
RBSPEX_R	0.39	0.37	0.49	0.50	0.48	0.49	0.62												
RBDIS_R	-0.33	-0.28	-0.29	-0.47	-0.36	-0.34	-0.45	-0.46											
RBINT_R	0.47	0.39	0.52	0.61	0.53	0.49	0.62	0.75	-0.60										
RBELF_R	0.36	0.27	0.36	0.40	0.36	0.36	0.49	0.59	-0.45	0.63									
RPSCOL_R	0.35	0.36	0.47	0.53	0.43	0.47	0.61	0.65	-0.46	0.64	0.45								
RPSSLF_R	-0.17	-0.06	-0.14	-0.34	-0.20	-0.21	-0.31	-0.38	0.40	-0.37	-0.28	-0.46							
RPSDEF_R	0.09	0.00	0.13	0.17	0.09	0.08	0.21	0.25	-0.03	0.22	0.15	0.41	-0.09						
FAMPRC_R	0.22	0.26	0.27	0.37	0.40	0.26	0.26	0.30	-0.30	0.38	0.25	0.30	-0.11	0.03					
RGAWR_R	0.38	0.42	0.48	0.51	0.47	0.49	0.63	0.73	-0.50	0.71	0.53	0.73	-0.37	0.26	0.33				
RGDISS_R	-0.13	-0.14	-0.05	-0.20	-0.18	-0.18	-0.24	-0.22	0.43	-0.27	-0.26	-0.18	0.24	0.14	-0.14	-0.24			
RGINSC_R	-0.09	-0.14	-0.06	-0.21	-0.16	-0.10	-0.11	-0.15	0.40	-0.26	-0.18	-0.16	0.27	0.17	-0.12	-0.18	0.57		
MA_JUST	0.46	0.37	0.49	0.23	0.23	0.27	0.30	0.30	-0.21	0.32	0.30	0.29	-0.09	0.04	0.21	0.29	-0.07	-0.05	
MA_SOC	0.38	0.32	0.47	0.21	0.22	0.25	0.29	0.27	-0.14	0.28	0.25	0.27	-0.08	0.03	0.18	0.26	-0.05	-0.04	0.75

Table D.3 Pearson correlation coefficients of background variables with religious, spiritual and social variables (n>400)

	SEX	AGE	SCH_YR	SEM_YR	SIBLINGS	JOB_HRS	F_OCC	M_OCC	CONVERT	FEEL_SCH	MARK_SCH	DO_WELL	ED_EXP	HW_HRS	TV_HRS	PMCARE_R	PMOPRO_R	PFCARE_R	PFOPRO_R
AVCONS_R	0.28	-0.02	-0.02	-0.04	-0.06	0.06	0.01	0.08	0.00	0.17	0.17	0.18	0.11	0.19	-0.14	0.35	-0.12	0.32	-0.16
AVSOC_R	0.15	0.04	0.03	0.00	-0.02	0.13	0.02	0.03	0.03	0.25	0.14	0.19	0.07	0.13	-0.13	0.27	-0.06	0.31	-0.12
AVSER_R	0.21	0.05	0.05	0.04	0.01	0.10	0.05	0.03	0.05	0.24	0.13	0.19	0.08	0.22	-0.19	0.28	-0.13	0.30	-0.13
RP_PRV_R	0.16	-0.02	0.01	0.01	0.09	0.04	0.01	0.00	-0.11	0.15	0.26	0.16	0.23	0.22	-0.16	0.30	-0.13	0.25	-0.18
RP_PUB_R	0.04	-0.08	-0.09	-0.08	0.14	0.02	0.09	0.08	-0.12	0.19	0.11	0.12	0.11	0.11	-0.10	0.27	-0.03	0.24	-0.09
SEMPRT_R	0.07	-0.09	-0.04	-0.05	0.03	0.01	0.04	-0.03	-0.04	0.24	0.22	0.22	0.07	0.17	-0.09	0.27	-0.14	0.24	-0.14
SEMEXP_R	0.10	-0.06	-0.04	-0.05	0.01	0.01	0.07	-0.01	0.01	0.20	0.15	0.23	0.05	0.23	-0.11	0.29	-0.15	0.25	-0.17
RBSPEX_R	0.11	-0.01	-0.02	-0.04	0.09	0.04	0.10	0.03	0.03	0.15	0.12	0.12	0.06	0.18	-0.12	0.31	-0.16	0.23	-0.19
RBDIS_R	-0.03	0.04	0.04	0.05	-0.07	-0.02	-0.06	-0.15	0.09	-0.17	-0.19	-0.13	-0.15	-0.10	0.14	-0.35	0.20	-0.30	0.27
RBINT_R	0.13	-0.06	-0.07	-0.08	0.13	0.02	0.06	0.03	-0.04	0.21	0.25	0.17	0.14	0.19	-0.19	0.36	-0.20	0.32	-0.24
RBELF_R	0.09	-0.02	-0.03	-0.02	0.05	-0.02	-0.01	0.03	-0.05	0.14	0.14	0.12	0.06	0.13	-0.14	0.32	-0.16	0.25	-0.17
RPSCOL_R	0.02	-0.04	-0.04	-0.04	0.02	0.04	-0.01	-0.02	0.04	0.16	0.20	0.17	0.13	0.16	-0.09	0.27	-0.11	0.24	-0.18
RPSSLF_R	-0.14	-0.01	-0.02	-0.01	-0.04	0.00	-0.06	-0.03	0.02	0.01	-0.07	-0.07	-0.07	-0.06	0.06	-0.20	0.07	-0.11	0.10
RPSDEF_R	-0.12	-0.10	-0.09	-0.10	-0.01	0.01	0.01	-0.02	0.11	-0.08	-0.05	0.04	-0.05	-0.02	0.01	-0.03	0.05	0.02	0.03
FAMPRC_R	-0.05	-0.12	-0.10	-0.04	0.24	-0.09	-0.10	0.14	-0.23	0.19	0.17	0.17	0.13	0.09	-0.08	0.31	-0.03	0.35	-0.10
RGAWR_R	0.04	-0.01	-0.02	-0.02	0.01	0.07	0.04	0.01	0.01	0.14	0.16	0.16	0.09	0.18	-0.09	0.34	-0.16	0.33	-0.23
RGDISS_R	-0.07	-0.06	-0.07	-0.06	0.00	0.01	-0.04	-0.09	0.11	-0.12	-0.12	0.01	-0.06	-0.06	0.06	-0.29	0.21	-0.24	0.27
RGINSC_R	-0.07	-0.04	-0.04	-0.03	0.05	0.03	-0.03	-0.06	0.09	-0.15	-0.18	0.04	-0.13	-0.05	0.00	-0.29	0.23	-0.25	0.24
MA_JUST	0.30	-0.09	-0.06	-0.05	-0.02	-0.03	0.05	-0.01	-0.01	0.21	0.14	0.22	0.13	0.21	-0.11	0.26	-0.05	0.22	-0.11
MA_SOC	0.23	0.00	0.00	0.01	-0.01	0.00	0.03	-0.01	0.02	0.22	0.17	0.25	0.19	0.19	-0.18	0.22	-0.12	0.21	-0.15
MA_OTH	0.08	-0.15	-0.16	-0.17	-0.02	-0.05	0.09	0.03	0.09	0.12	0.02	0.21	0.02	0.09	0.06	0.04	0.00	0.14	-0.05
MA_FAM	0.16	-0.17	-0.16	-0.13	0.05	-0.04	0.02	0.09	0.00	0.19	0.15	0.21	0.09	0.13	-0.01	0.24	-0.08	0.30	-0.11
MA_SELF	0.17	-0.07	-0.09	-0.06	-0.02	0.01	0.04	-0.03	0.06	0.17	0.10	0.17	0.13	0.14	-0.08	0.09	-0.02	0.09	-0.01

APPENDIX E

Three-Level HLM Output for Change Over Time Analyses.

Change Over Time of Private Religious Practice:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
  The maximum number of level-1 units = 483
  The maximum number of level-2 units = 214
  The maximum number of level-3 units = 45
  The maximum number of iterations = 100
  Method of estimation: full maximum likelihood

  The outcome variable is RP_PRV_R

  The model specified for the fixed effects was:
 -------------------------------------------------


  Level-1                Level-2            Level-3
  Coefficients           Predictors         Predictors
 --------------------   --------------    ----------------
        INTRCPT1, P0      INTRCPT2, B00     INTRCPT3, G000
  SURVEY_# slope, P1      INTRCPT2, B10     INTRCPT3, G100
                                            %TV_HRS_1, G101
                                            %AVSER__1, G102
                                            %RPSDEF_1, G103
                        #%RP_PUB_R, B11     INTRCPT3, G110
                        #% RBDIS_R, B12     INTRCPT3, G120
                        #% RBINT_R, B13     INTRCPT3, G130


 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean


 Summary of the model specified (in equation format)
 -------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(RP_PUB_R) + B12*(RBDIS_R) + B13*(RBINT_R) + R1


Level-3 Model

     B00 = G000 + U00
     B10 = G100 + G101(TV_HRS_1) + G102(AVSER__1) + G103(RPSDEF_1) + U10
     B11 = G110
     B12 = G120
     B13 = G130

For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 1800 *******
```

```
    Final estimation of fixed effects:
    -----------------------------------------------------------------------------
                                       Standard             Approx.
       Fixed Effect       Coefficient  Error      T-ratio   d.f.    P-value
    -----------------------------------------------------------------------------
    For       INTRCPT1, P0
       For INTRCPT2, B00
          INTRCPT3, G000    1.295747   0.136031    9.525      44     0.000
    For SURVEY_# slope, P1
       For INTRCPT2, B10
          INTRCPT3, G100   -0.034630   0.042624   -0.812      41     0.421
          TV_HRS_1, G101   -0.093236   0.032708   -2.851      41     0.007
          AVSER__1, G102   -0.120152   0.042138   -2.851      41     0.007
          RPSDEF_1, G103    0.117472   0.034898    3.366      41     0.002
       For RP_PUB_R, B11
          INTRCPT3, G110    0.083705   0.021341    3.922     210     0.000
       For  RBDIS_R, B12
          INTRCPT3, G120   -0.082659   0.020171   -4.098     210     0.000
       For  RBINT_R, B13
          INTRCPT3, G130    0.055411   0.014982    3.698     210     0.000
    -----------------------------------------------------------------------------

    The outcome variable is RP_PRV_R


    Final estimation of level-1 and level-2 variance components:
    -----------------------------------------------------------------------------
    Random Effect          Standard    Variance    df   Chi-square  P-value
                           Deviation   Component
    -----------------------------------------------------------------------------
    INTRCPT1,        R0     0.94866     0.89995    116   256.62342    0.000
    SURVEY_# slope,  R1     0.19071     0.03637    113   185.31169    0.000
     level-1,        E      0.71553     0.51199
    -----------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


    Final estimation of level-3 variance components:
    -----------------------------------------------------------------------------
    Random Effect          Standard    Variance    df   Chi-square  P-value
                           Deviation   Component
    -----------------------------------------------------------------------------
    INTRCPT1/INTRCPT2, U00   0.58945     0.34745    40    77.59314    0.001
    SURVEY_#/INTRCPT2, U10   0.12351     0.01526    37    44.01778    0.199
    -----------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.

Statistics for current covariance components model
 --------------------------------------------------
Deviance                      = 1353.419733
Number of estimated parameters = 15
```

Change Over Time of Public Religious Practice:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
   The maximum number of level-1 units = 483
   The maximum number of level-2 units = 214
   The maximum number of level-3 units = 45
   The maximum number of iterations = 100
   Method of estimation: full maximum likelihood

   The outcome variable is RP_PUB_R

   The model specified for the fixed effects was:
 ------------------------------------------------

   Level-1                Level-2            Level-3
   Coefficients           Predictors         Predictors
 --------------------   --------------     ----------------
        INTRCPT1, P0        INTRCPT2, B00    INTRCPT3, G000
   SURVEY_# slope, P1       INTRCPT2, B10    INTRCPT3, G100
                        #%  ED_EXP, B11      INTRCPT3, G110
                        #%  HW_HRS, B12      INTRCPT3, G120
                        #% AVSER_R, B13      INTRCPT3, G130
                        #%RP_PRV_R, B14      INTRCPT3, G140
                        #%SEMPRT_R, B15      INTRCPT3, G150
                        #%RBSPEX_R, B16      INTRCPT3, G160

 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean

 Summary of the model specified (in equation format)
 ---------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(ED_EXP) + B12*(HW_HRS) + B13*(AVSER_R) + B14*(RP_PRV_R)
             + B15*(SEMPRT_R) + B16*(RBSPEX_R) + R1

Level-3 Model

     B00 = G000 + U00
     B10 = G100 + U10
     B11 = G110
     B12 = G120
     B13 = G130
     B14 = G140
     B15 = G150
     B16 = G160
 For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 28 *******
```

```
Final estimation of fixed effects:
  ----------------------------------------------------------------------------
                                       Standard              Approx.
      Fixed Effect        Coefficient  Error      T-ratio    d.f.      P-value
  ----------------------------------------------------------------------------
 For        INTRCPT1, P0
    For INTRCPT2, B00
       INTRCPT3, G000      1.942800    0.152522    12.738      44       0.000
 For SURVEY_# slope, P1
    For INTRCPT2, B10
       INTRCPT3, G100     -0.055627    0.057383    -0.969      44       0.338
      For    ED_EXP, B11
       INTRCPT3, G110     -0.059252    0.023495    -2.522     207       0.013
      For    HW_HRS, B12
       INTRCPT3, G120     -0.074114    0.026464    -2.801     207       0.006
      For   AVSER_R, B13
       INTRCPT3, G130      0.066776    0.022639     2.950     207       0.004
      For RP_PRV_R, B14
       INTRCPT3, G140      0.066789    0.023313     2.865     207       0.005
      For SEMPRT_R, B15
       INTRCPT3, G150      0.046097    0.021530     2.141     207       0.033
      For RBSPEX_R, B16
       INTRCPT3, G160      0.030578    0.015083     2.027     207       0.044
  ----------------------------------------------------------------------------


The outcome variable is RP_PUB_R

Final estimation of level-1 and level-2 variance components:
  ----------------------------------------------------------------------------
 Random Effect          Standard     Variance     df    Chi-square   P-value
                        Deviation    Component
  ----------------------------------------------------------------------------
 INTRCPT1,       R0      1.21283      1.47096     116    307.00781     0.000
 SURVEY_# slope, R1      0.36489      0.13314     110    253.46581     0.000
  level-1,       E       0.67215      0.45179
  ----------------------------------------------------------------------------
Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


Final estimation of level-3 variance components:
  ----------------------------------------------------------------------------
 Random Effect          Standard     Variance     df    Chi-square   P-value
                        Deviation    Component
  ----------------------------------------------------------------------------
 INTRCPT1/INTRCPT2, U00   0.65742      0.43220     40     70.36181     0.002
 SURVEY_#/INTRCPT2, U10   0.22027      0.04852     40     59.91539     0.022
  ----------------------------------------------------------------------------
Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


 Statistics for current covariance components model
 --------------------------------------------------
Deviance                       = 1363.486113
Number of estimated parameters = 15
```

Change Over Time of Seminary Participation:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
  The maximum number of level-1 units = 483
  The maximum number of level-2 units = 214
  The maximum number of level-3 units = 45
  The maximum number of iterations = 100
  Method of estimation: full maximum likelihood

  The outcome variable is SEMPRT_R

  The model specified for the fixed effects was:
 ------------------------------------------------------

   Level-1                 Level-2            Level-3
   Coefficients            Predictors         Predictors
 --------------------    --------------    ----------------
        INTRCPT1, P0       INTRCPT2, B00      INTRCPT3, G000
  SURVEY_# slope, P1       INTRCPT2, B10      INTRCPT3, G100
                                             %SEMEXP_1, G101
                         #%FEEL_SCH, B11      INTRCPT3, G110
                         #%RP_PUB_R, B12      INTRCPT3, G120
                         #%SEMEXP_R, B13      INTRCPT3, G130
                         #% RBELF_R, B14      INTRCPT3, G140

 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean


  Summary of the model specified (in equation format)
 ------------------------------------------------------

Level-1 Model

      Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

      P0 = B00 + R0
      P1 = B10 + B11*(FEEL_SCH) + B12*(RP_PUB_R) + B13*(SEMEXP_R) +
B14*(RBELF_R) + R1


Level-3 Model

      B00 = G000 + U00
      B10 = G100 + G101(SEMEXP_1) + U10
      B11 = G110
      B12 = G120
      B13 = G130
      B14 = G140
 For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 38 *******
```

```
Final estimation of fixed effects:
--------------------------------------------------------------------------------
                                         Standard           Approx.
    Fixed Effect         Coefficient     Error      T-ratio  d.f.    P-value
--------------------------------------------------------------------------------
For       INTRCPT1, P0
   For INTRCPT2, B00
      INTRCPT3, G000       1.526781      0.131773    11.586    44     0.000
For SURVEY_# slope, P1
   For INTRCPT2, B10
      INTRCPT3, G100      -0.094622      0.053816    -1.758    43     0.085
      SEMEXP_1, G101       0.061110      0.027436     2.227    43     0.031
   For FEEL_SCH, B11
      INTRCPT3, G110       0.083919      0.031707     2.647   209     0.009
   For RP_PUB_R, B12
      INTRCPT3, G120       0.059701      0.020057     2.977   209     0.004
   For SEMEXP_R, B13
      INTRCPT3, G130       0.062533      0.015003     4.168   209     0.000
   For  RBELF_R, B14
      INTRCPT3, G140       0.036876      0.015593     2.365   209     0.019
--------------------------------------------------------------------------------


The outcome variable is SEMPRT_R

Final estimation of level-1 and level-2 variance components:
--------------------------------------------------------------------------------
Random Effect          Standard      Variance     df    Chi-square  P-value
                       Deviation     Component
--------------------------------------------------------------------------------
INTRCPT1,       R0     0.83033       0.68944      116   227.25436    0.000
SURVEY_# slope, R1     0.26542       0.07045      112   202.12569    0.000
 level-1,       E      0.84919       0.72112
--------------------------------------------------------------------------------


Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.



Final estimation of level-3 variance components:
--------------------------------------------------------------------------------
Random Effect          Standard      Variance     df    Chi-square  P-value
                       Deviation     Component
--------------------------------------------------------------------------------
INTRCPT1/INTRCPT2, U00    0.50654       0.25658    40     62.22515    0.014
SURVEY_#/INTRCPT2, U10    0.18460       0.03408    39     52.72506    0.070
--------------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


 Statistics for current covariance components model
 --------------------------------------------------
Deviance                    = 1381.281196
Number of estimated parameters = 14
```

Change Over Time of Seminary Feeling:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
   The maximum number of level-1 units = 483
   The maximum number of level-2 units = 214
   The maximum number of level-3 units = 45
   The maximum number of iterations = 100
   Method of estimation: full maximum likelihood

   The outcome variable is SEMEXP_R

   The model specified for the fixed effects was:
  -------------------------------------------------------
   Level-1                 Level-2              Level-3
   Coefficients            Predictors          Predictors
  --------------------    --------------    ----------------
        INTRCPT1, P0       INTRCPT2, B00     INTRCPT3, G000
  SURVEY_# slope, P1       INTRCPT2, B10     INTRCPT3, G100
                                             %FEEL_S_1, G101
                                             %RGINSC_1, G102
                          #%RP_PRV_R, B11     INTRCPT3, G110
                          #%SEMPRT_R, B12     INTRCPT3, G120
                          #% RBDIS_R, B13     INTRCPT3, G130
                          #% RBELF_R, B14     INTRCPT3, G140
                          #%FAMPRC_R, B15     INTRCPT3, G150
                          #% RGAWR_R, B16     INTRCPT3, G160

 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean

 Summary of the model specified (in equation format)
 -----------------------------------------------------
Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(RP_PRV_R) + B12*(SEMPRT_R) + B13*(RBDIS_R) +
B14*(RBELF_R)
             + B15*(FAMPRC_R) + B16*(RGAWR_R) + R1

Level-3 Model

     B00 = G000 + U00
     B10 = G100 + G101(FEEL_S_1) + G102(RGINSC_1) + U10
     B11 = G110
     B12 = G120
     B13 = G130
     B14 = G140
     B15 = G150
     B16 = G160
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 6399 *******
```

```
Final estimation of fixed effects:
     --------------------------------------------------------------------------------
                                           Standard             Approx.
        Fixed Effect         Coefficient   Error      T-ratio   d.f.     P-value
     --------------------------------------------------------------------------------
     For         INTRCPT1, P0
        For INTRCPT2, B00
           INTRCPT3, G000      1.732130    0.185189    9.353     44       0.000
     For SURVEY_# slope, P1
        For INTRCPT2, B10
           INTRCPT3, G100     -0.122876    0.082916   -1.482     42       0.146
           FEEL_S_1, G101      0.300349    0.115983    2.590     42       0.013
           RGINSC_1, G102      0.184324    0.096874    1.903     42       0.064
        For RP_PRV_R, B11
           INTRCPT3, G110      0.120618    0.039949    3.019     207      0.003
        For SEMPRT_R, B12
           INTRCPT3, G120      0.131384    0.036717    3.578     207      0.001
        For   RBDIS_R, B13
           INTRCPT3, G130     -0.128358    0.036049   -3.561     207      0.001
        For   RBELF_R, B14
           INTRCPT3, G140      0.101123    0.030028    3.368     207      0.001
        For FAMPRC_R, B15
           INTRCPT3, G150     -0.097033    0.032494   -2.986     207      0.004
        For   RGAWR_R, B16
           INTRCPT3, G160      0.109643    0.024543    4.467     207      0.000
     --------------------------------------------------------------------------------


The outcome variable is SEMEXP_R

Final estimation of level-1 and level-2 variance components:
     --------------------------------------------------------------------------------
     Random Effect         Standard      Variance     df     Chi-square   P-value
                           Deviation     Component
     --------------------------------------------------------------------------------
     INTRCPT1,       R0     1.36596       1.86584      116    212.41107    0.000
     SURVEY_# slope, R1     0.62491       0.39052      110    246.71649    0.000
      level-1,       E      1.27908       1.63605
     --------------------------------------------------------------------------------
Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.

Final estimation of level-3 variance components:
     --------------------------------------------------------------------------------
     Random Effect         Standard      Variance     df     Chi-square   P-value
                           Deviation     Component
     --------------------------------------------------------------------------------
     INTRCPT1/INTRCPT2, U00  0.52609      0.27677      40     55.75094     0.050
     SURVEY_#/INTRCPT2, U10  0.11932      0.01424      38     43.43846     0.250
     --------------------------------------------------------------------------------
Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.

 Statistics for current covariance components model
 ---------------------------------------------------
Deviance                     = 1814.608937
Number of estimated parameters = 17
```

Change Over Time of Spiritual Experience:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
The maximum number of level-1 units = 483
The maximum number of level-2 units = 214
The maximum number of level-3 units = 45
The maximum number of iterations = 100
Method of estimation: full maximum likelihood

The outcome variable is RBSPEX_R

The model specified for the fixed effects was:
 -----------------------------------------------------
  Level-1                Level-2            Level-3
  Coefficients           Predictors         Predictors
 -------------------- --------------- ----------------
        INTRCPT1, P0     INTRCPT2, B00    INTRCPT3, G000
 SURVEY_# slope, P1      INTRCPT2, B10    INTRCPT3, G100
                                          %AVCONS_1, G101
                                          %RGAWR__1, G102
                      #%RP_PUB_R, B11    INTRCPT3, G110
                      #% RBINT_R, B12    INTRCPT3, G120
                      #% RBELF_R, B13    INTRCPT3, G130
                      #%RPSCOL_R, B14    INTRCPT3, G140
                      #% RGAWR_R, B15    INTRCPT3, G150


 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean

 Summary of the model specified (in equation format)
 -----------------------------------------------------
```

Level-1 Model

$$Y = P0 + P1*(SURVEY\_\#) + E$$

Level-2 Model

$$P0 = B00 + R0$$
$$P1 = B10 + B11*(RP\_PUB\_R) + B12*(RBINT\_R) + B13*(RBELF\_R) +$$
$$B14*(RPSCOL\_R)$$
$$+ B15*(RGAWR\_R) + R1$$

Level-3 Model

```
     B00 = G000 + U00
     B10 = G100 + G101(AVCONS_1) + G102(RGAWR__1) + U10
     B11 = G110
     B12 = G120
     B13 = G130
     B14 = G140
     B15 = G150
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 3720 *******
```

```
Final estimation of fixed effects:
  ----------------------------------------------------------------------
                                    Standard            Approx.
     Fixed Effect       Coefficient  Error     T-ratio   d.f.   P-value
  ----------------------------------------------------------------------
 For        INTRCPT1, P0
    For INTRCPT2, B00
       INTRCPT3, G000     1.434549   0.202387    7.088     44    0.000
 For SURVEY_# slope, P1
    For INTRCPT2, B10
       INTRCPT3, G100    -0.035804   0.114283   -0.313     42    0.755
       AVCONS_1, G101    -0.312858   0.116000   -2.697     42    0.010
       RGAWR__1, G102     0.106832   0.059452    1.797     42    0.079
    For RP_PUB_R, B11
       INTRCPT3, G110     0.066030   0.033292    1.983    208    0.048
    For  RBINT_R, B12
       INTRCPT3, G120     0.149287   0.034357    4.345    208    0.000
    For  RBELF_R, B13
       INTRCPT3, G130     0.093645   0.029765    3.146    208    0.002
    For RPSCOL_R, B14
       INTRCPT3, G140     0.062074   0.025860    2.400    208    0.017
    For  RGAWR_R, B15
       INTRCPT3, G150     0.078058   0.033090    2.359    208    0.019
  ----------------------------------------------------------------------


The outcome variable is RBSPEX_R

Final estimation of level-1 and level-2 variance components:
  ----------------------------------------------------------------------
 Random Effect          Standard    Variance    df    Chi-square  P-value
                        Deviation   Component
  ----------------------------------------------------------------------
 INTRCPT1,       R0      1.62101     2.62768    116   258.53465    0.000
 SURVEY_# slope, R1      0.78409     0.61479    111   273.02437    0.000
  level-1,       E       1.19220     1.42135
  ----------------------------------------------------------------------
Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


Final estimation of level-3 variance components:
  ----------------------------------------------------------------------
 Random Effect          Standard    Variance    df    Chi-square  P-value
                        Deviation   Component
  ----------------------------------------------------------------------
 INTRCPT1/INTRCPT2, U00   0.66555     0.44296    40    56.34039    0.045
 SURVEY_#/INTRCPT2, U10   0.44928     0.20185    38    68.38180    0.002
  ----------------------------------------------------------------------
Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


 Statistics for current covariance components model
 --------------------------------------------------
Deviance                     = 1780.499202
Number of estimated parameters = 16
```

304

Change Over Time of Religious Interest:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
   The maximum number of level-1 units = 483
   The maximum number of level-2 units = 214
   The maximum number of level-3 units = 45
   The maximum number of iterations = 100
   Method of estimation: full maximum likelihood

   The outcome variable is  RBINT_R

   The model specified for the fixed effects was:
  ------------------------------------------------------

   Level-1                Level-2              Level-3
   Coefficients           Predictors           Predictors
  --------------------   ---------------      ----------------
        INTRCPT1, P0        INTRCPT2, B00      INTRCPT3, G000
  SURVEY_# slope, P1        INTRCPT2, B10      INTRCPT3, G100
                                               %RBDIS__1, G101
                        #%RP_PRV_R, B11       INTRCPT3, G110
                        #%RBSPEX_R, B12       INTRCPT3, G120
                        #% RBDIS_R, B13       INTRCPT3, G130
                        #% RGAWR_R, B14       INTRCPT3, G140
                        #%RGDISS_R, B15       INTRCPT3, G150


  '#' - The residual parameter variance for the parameter has been set to zero
  '%' - This variable has been centered around its grand mean



 Summary of the model specified (in equation format)
 ------------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(RP_PRV_R) + B12*(RBSPEX_R) + B13*(RBDIS_R) +
B14*(RGAWR_R)
             + B15*(RGDISS_R) + R1

Level-3 Model

     B00 = G000 + U00
     B10 = G100 + G101(RBDIS__1) + U10
     B11 = G110
     B12 = G120
     B13 = G130
     B14 = G140
     B15 = G150
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 2459 *******
```

```
Final estimation of fixed effects:
--------------------------------------------------------------------------
                                       Standard           Approx.
    Fixed Effect        Coefficient    Error     T-ratio  d.f.    P-value
--------------------------------------------------------------------------
For       INTRCPT1, P0
   For INTRCPT2, B00
      INTRCPT3, G000     2.640067      0.193396   13.651    44     0.000
For SURVEY_# slope, P1
   For INTRCPT2, B10
      INTRCPT3, G100     0.223775      0.093531    2.393    43     0.021
      RBDIS__1, G101     0.205738      0.086259    2.385    43     0.022
   For RP_PRV_R, B11
      INTRCPT3, G110     0.192117      0.033536    5.729   208     0.000
   For RBSPEX_R, B12
      INTRCPT3, G120     0.141084      0.027124    5.202   208     0.000
   For  RBDIS_R, B13
      INTRCPT3, G130    -0.130232      0.037725   -3.452   208     0.001
   For  RGAWR_R, B14
      INTRCPT3, G140     0.097108      0.026657    3.643   208     0.001
   For RGDISS_R, B15
      INTRCPT3, G150    -0.039090      0.023168   -1.687   208     0.093
--------------------------------------------------------------------------


The outcome variable is  RBINT_R


Final estimation of level-1 and level-2 variance components:
--------------------------------------------------------------------------
Random Effect           Standard     Variance     df   Chi-square  P-value
                        Deviation    Component
--------------------------------------------------------------------------
INTRCPT1,      R0        1.61786      2.61748     116   310.30793    0.000
SURVEY_# slope, R1       0.79437      0.63103     111   354.72913    0.000
 level-1,      E         0.99954      0.99909
--------------------------------------------------------------------------
Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


Final estimation of level-3 variance components:
--------------------------------------------------------------------------
Random Effect           Standard     Variance     df   Chi-square  P-value
                        Deviation    Component
--------------------------------------------------------------------------
INTRCPT1/INTRCPT2, U00   0.69616      0.48464      40    67.99270    0.004
SURVEY_#/INTRCPT2, U10   0.28412      0.08073      39    56.04369    0.038
--------------------------------------------------------------------------
Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


 Statistics for current covariance components model
 --------------------------------------------------
Deviance                      = 1697.199487
Number of estimated parameters = 15
```

Change Over Time of Collaborative Religious Problem Solving:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
   The maximum number of level-1 units = 483
   The maximum number of level-2 units = 214
   The maximum number of level-3 units = 45
   The maximum number of iterations = 100
   Method of estimation: full maximum likelihood

   The outcome variable is RPSCOL_R

   The model specified for the fixed effects was:
 ------------------------------------------------------
  Level-1                  Level-2           Level-3
  Coefficients             Predictors        Predictors
 --------------------   --------------    ----------------
        INTRCPT1, P0       INTRCPT2, B00    INTRCPT3, G000
  SURVEY_# slope, P1       INTRCPT2, B10    INTRCPT3, G100
                         #%MARK_SCH, B11    INTRCPT3, G110
                         #%RP_PUB_R, B12    INTRCPT3, G120
                         #%RBSPEX_R, B13    INTRCPT3, G130
                         #% RBDIS_R, B14    INTRCPT3, G140
                         #%RPSSLF_R, B15    INTRCPT3, G150
                         #% RGAWR_R, B16    INTRCPT3, G160

 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean


 Summary of the model specified (in equation format)
 ------------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(MARK_SCH) + B12*(RP_PUB_R) + B13*(RBSPEX_R) +
B14*(RBDIS_R)
            + B15*(RPSSLF_R) + B16*(RGAWR_R) + R1

Level-3 Model

     B00 = G000 + U00
     B10 = G100 + U10
     B11 = G110
     B12 = G120
     B13 = G130
     B14 = G140
     B15 = G150
     B16 = G160
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 976 *******
```

```
Final estimation of fixed effects:
 -------------------------------------------------------------------------------
                                       Standard              Approx.
      Fixed Effect       Coefficient   Error       T-ratio   d.f.    P-value
 -------------------------------------------------------------------------------
 For        INTRCPT1, P0
    For INTRCPT2, B00
       INTRCPT3, G000     0.045845     0.247662     0.185     44     0.854
 For SURVEY_# slope, P1
    For INTRCPT2, B10
       INTRCPT3, G100     0.068974     0.100778     0.684     44     0.497
    For MARK_SCH, B11
       INTRCPT3, G110     0.134949     0.057603     2.343     207    0.020
    For RP_PUB_R, B12
       INTRCPT3, G120     0.093672     0.034482     2.717     207    0.008
    For RBSPEX_R, B13
       INTRCPT3, G130     0.070479     0.029868     2.360     207    0.019
    For  RBDIS_R, B14
       INTRCPT3, G140    -0.107417     0.035175    -3.054     207    0.003
    For RPSSLF_R, B15
       INTRCPT3, G150    -0.106157     0.030947    -3.430     207    0.001
    For  RGAWR_R, B16
       INTRCPT3, G160     0.192535     0.028235     6.819     207    0.000
 -------------------------------------------------------------------------------
 The outcome variable is RPSCOL_R

 Final estimation of level-1 and level-2 variance components:
 -------------------------------------------------------------------------------
 Random Effect            Standard     Variance    df    Chi-square   P-value
                          Deviation    Component
 -------------------------------------------------------------------------------
 INTRCPT1,     R0         1.86991      3.49655     116   242.39864    0.000
 SURVEY_# slope, R1       0.81204      0.65941     110   259.83616    0.000
  level-1,     E          1.49106      2.22325
 -------------------------------------------------------------------------------
 Note: The chi-square statistics reported above are based on only 157 of 214
 units that had sufficient data for computation.  Fixed effects and variance
 components are based on all the data.


 Final estimation of level-3 variance components:
 -------------------------------------------------------------------------------
 Random Effect            Standard     Variance    df    Chi-square   P-value
                          Deviation    Component
 -------------------------------------------------------------------------------
 INTRCPT1/INTRCPT2, U00   0.90822      0.82487     40    58.85628     0.027
 SURVEY_#/INTRCPT2, U10   0.23935      0.05729     40    41.70430     0.397
 -------------------------------------------------------------------------------
 Note: The chi-square statistics reported above are based on only 41 of 45
 units that had sufficient data for computation.  Fixed effects and variance
 components are based on all the data.

 Statistics for current covariance components model
 --------------------------------------------------
Deviance                    = 1949.484134
Number of estimated parameters = 15
```

Change Over Time of Awareness of God:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
   The maximum number of level-1 units = 483
   The maximum number of level-2 units = 214
   The maximum number of level-3 units = 45
   The maximum number of iterations = 100
   Method of estimation: full maximum likelihood

   The outcome variable is  RGAWR_R

   The model specified for the fixed effects was:
  ------------------------------------------------------

   Level-1                Level-2            Level-3
   Coefficients           Predictors         Predictors
  --------------------   ---------------    ---------------
         INTRCPT1, P0       INTRCPT2, B00     INTRCPT3, G000
   SURVEY_# slope, P1       INTRCPT2, B10     INTRCPT3, G100
                         #%RP_PUB_R, B11      INTRCPT3, G110
                         #%RBSPEX_R, B12      INTRCPT3, G120
                         #% RBELF_R, B13      INTRCPT3, G130
                         #%RPSCOL_R, B14      INTRCPT3, G140

  '#' - The residual parameter variance for the parameter has been set to zero
  '%' - This variable has been centered around its grand mean


  Summary of the model specified (in equation format)
  ------------------------------------------------------

Level-1 Model

      Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

      P0 = B00 + R0
      P1 = B10 + B11*(RP_PUB_R) + B12*(RBSPEX_R) + B13*(RBELF_R) +
B14*(RPSCOL_R) + R1


Level-3 Model

      B00 = G000 + U00
      B10 = G100 + U10
      B11 = G110
      B12 = G120
      B13 = G130
      B14 = G140
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 43 *******
```

```
Final estimation of fixed effects:
  ----------------------------------------------------------------------------
                                       Standard              Approx.
      Fixed Effect       Coefficient   Error      T-ratio    d.f.    P-value
  ----------------------------------------------------------------------------
 For        INTRCPT1, P0
    For INTRCPT2, B00
       INTRCPT3, G000     0.776612     0.225972    3.437       44     0.002
 For SURVEY_# slope, P1
    For INTRCPT2, B10
       INTRCPT3, G100     0.238475     0.113646    2.098       44     0.041
    For RP_PUB_R, B11
       INTRCPT3, G110     0.089204     0.041326    2.159      209     0.032
    For RBSPEX_R, B12
       INTRCPT3, G120     0.127263     0.037278    3.414      209     0.001
    For  RBELF_R, B13
       INTRCPT3, G130     0.094069     0.036191    2.599      209     0.010
    For RPSCOL_R, B14
       INTRCPT3, G140     0.115108     0.026691    4.313      209     0.000
  ----------------------------------------------------------------------------

  The outcome variable is  RGAWR_R


  Final estimation of level-1 and level-2 variance components:
  ----------------------------------------------------------------------------
  Random Effect             Standard     Variance    df   Chi-square  P-value
                            Deviation    Component
  ----------------------------------------------------------------------------
  INTRCPT1,       R0         1.61616      2.61198    116   227.79291   0.000
  SURVEY_# slope, R1         0.72582      0.52682    112   244.21565   0.000
   level-1,       E          1.26334      1.59604
  ----------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


  Final estimation of level-3 variance components:
  ----------------------------------------------------------------------------
  Random Effect             Standard     Variance    df   Chi-square  P-value
                            Deviation    Component
  ----------------------------------------------------------------------------
  INTRCPT1/INTRCPT2, U00     0.86270      0.74426    40     61.43904   0.016
  SURVEY_#/INTRCPT2, U10     0.42923      0.18423    40     60.76717   0.019
  ----------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


  Statistics for current covariance components model
  --------------------------------------------------
Deviance                     = 1898.912663
Number of estimated parameters = 13
```

Change Over Time of Religious Belief:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10


```
  The maximum number of level-1 units = 483
  The maximum number of level-2 units = 214
  The maximum number of level-3 units = 45
  The maximum number of iterations = 100
  Method of estimation: full maximum likelihood

  The outcome variable is  RBELF_R

  The model specified for the fixed effects was:
 ------------------------------------------------


  Level-1              Level-2          Level-3
  Coefficients         Predictors       Predictors
 --------------------  --------------   ----------------
       INTRCPT1, P0      INTRCPT2, B00    INTRCPT3, G000
 SURVEY_# slope, P1      INTRCPT2, B10    INTRCPT3, G100
                       #%RP_PRV_R, B11    INTRCPT3, G110
                       #% RBDIS_R, B12    INTRCPT3, G120
                       #% RBINT_R, B13    INTRCPT3, G130

 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean


 Summary of the model specified (in equation format)
 ------------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(RP_PRV_R) + B12*(RBDIS_R) + B13*(RBINT_R) + R1


Level-3 Model

     B00 = G000 + U00
     B10 = G100 + U10
     B11 = G110
     B12 = G120
     B13 = G130

For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 886 *******
```

```
Final estimation of fixed effects:
--------------------------------------------------------------------------------
                                      Standard              Approx.
      Fixed Effect      Coefficient   Error      T-ratio    d.f.     P-value
--------------------------------------------------------------------------------
For       INTRCPT1, P0
   For INTRCPT2, B00
      INTRCPT3, G000    3.137202     0.185345    16.926      44      0.000
For SURVEY_# slope, P1
   For INTRCPT2, B10
      INTRCPT3, G100    0.105796     0.096134     1.101      44      0.278
   For RP_PRV_R, B11
      INTRCPT3, G110    0.092681     0.039644     2.338     210      0.020
   For  RBDIS_R, B12
      INTRCPT3, G120   -0.094675     0.035951    -2.633     210      0.009
   For  RBINT_R, B13
      INTRCPT3, G130    0.137052     0.026823     5.109     210      0.000
--------------------------------------------------------------------------------

The outcome variable is  RBELF_R


Final estimation of level-1 and level-2 variance components:
--------------------------------------------------------------------------------
Random Effect               Standard    Variance    df    Chi-square   P-value
                            Deviation   Component
--------------------------------------------------------------------------------
INTRCPT1,        R0         1.34902     1.81986    116    241.81663    0.000
SURVEY_# slope, R1          0.49785     0.24786    113    222.55200    0.000
 level-1,        E          1.12429     1.26402
--------------------------------------------------------------------------------
```

Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation. Fixed effects and variance
components are based on all the data.

```
Final estimation of level-3 variance components:
--------------------------------------------------------------------------------
Random Effect               Standard    Variance    df    Chi-square   P-value
                            Deviation   Component
--------------------------------------------------------------------------------
INTRCPT1/INTRCPT2, U00      0.65146     0.42439     40    63.45666     0.011
SURVEY_#/INTRCPT2, U10      0.38910     0.15140     40    76.98546     0.001
--------------------------------------------------------------------------------
```

Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation. Fixed effects and variance
components are based on all the data.

```
 Statistics for current covariance components model
 --------------------------------------------------
Deviance                     = 1768.461013
Number of estimated parameters = 12
```

Change Over Time of Religious Discontent:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
  The maximum number of level-1 units = 483
  The maximum number of level-2 units = 214
  The maximum number of level-3 units = 45
  The maximum number of iterations = 100
  Method of estimation: full maximum likelihood

  The outcome variable is  RBDIS_R

  The model specified for the fixed effects was:
 ------------------------------------------------

   Level-1                Level-2             Level-3
   Coefficients           Predictors          Predictors
 --------------------   ---------------     ----------------
       INTRCPT1, P0        INTRCPT2, B00      INTRCPT3, G000
 SURVEY_# slope, P1        INTRCPT2, B10      INTRCPT3, G100
                                              %   AGE_1, G101
                                              %MARK_S_1, G102
                       #%AVCONS_R, B11       INTRCPT3, G110
                       #%RP_PRV_R, B12       INTRCPT3, G120
                       #%RPSCOL_R, B13       INTRCPT3, G130
                       #%RGDISS_R, B14       INTRCPT3, G140

 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean


 Summary of the model specified (in equation format)
 ---------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(AVCONS_R) + B12*(RP_PRV_R) + B13*(RPSCOL_R) +
B14*(RGDISS_R) + R1


Level-3 Model

     B00 = G000 + U00
     B10 = G100 + G101(AGE_1) + G102(MARK_S_1) + U10
     B11 = G110
     B12 = G120
     B13 = G130
     B14 = G140
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 35 *******
```

```
Final estimation of fixed effects:
     ------------------------------------------------------------------------------
                                    Standard              Approx.
         Fixed Effect    Coefficient   Error    T-ratio    d.f.     P-value
     ------------------------------------------------------------------------------
  For         INTRCPT1, P0
     For INTRCPT2, B00
        INTRCPT3, G000    -0.399616   0.115043   -3.474      44      0.001
  For SURVEY_# slope, P1
     For INTRCPT2, B10
        INTRCPT3, G100    -0.102724   0.040375   -2.544      42      0.015
            AGE_1, G101   -0.102014   0.050066   -2.038      42      0.048
        MARK_S_1, G102     0.149532   0.068468    2.184      42      0.034
     For AVCONS_R, B11
        INTRCPT3, G110    -0.040787   0.024966   -1.634     209      0.103
     For RP_PRV_R, B12
        INTRCPT3, G120    -0.062137   0.023460   -2.649     209      0.009
     For RPSCOL_R, B13
        INTRCPT3, G130    -0.040548   0.010420   -3.891     209      0.000
     For RGDISS_R, B14
        INTRCPT3, G140     0.056638   0.012555    4.511     209      0.000
     ------------------------------------------------------------------------------


  The outcome variable is  RBDIS_R

  Final estimation of level-1 and level-2 variance components:
     ------------------------------------------------------------------------------
     Random Effect          Standard     Variance    df    Chi-square   P-value
                            Deviation    Component
     ------------------------------------------------------------------------------
     INTRCPT1,      R0       1.09518      1.19941    116    239.77382    0.000
     SURVEY_# slope, R1      0.17133      0.02935    112    151.76605    0.007
      level-1,      E        0.77589      0.60201
     ------------------------------------------------------------------------------
  Note: The chi-square statistics reported above are based on only 157 of 214
  units that had sufficient data for computation.  Fixed effects and variance
  components are based on all the data.


  Final estimation of level-3 variance components:
     ------------------------------------------------------------------------------
     Random Effect          Standard     Variance    df    Chi-square   P-value
                            Deviation    Component
     ------------------------------------------------------------------------------
     INTRCPT1/INTRCPT2, U00   0.25011      0.06256    40    40.18024    0.463
     SURVEY_#/INTRCPT2, U10   0.09298      0.00865    38    39.74577    0.392
     ------------------------------------------------------------------------------
  Note: The chi-square statistics reported above are based on only 41 of 45
  units that had sufficient data for computation.  Fixed effects and variance
  components are based on all the data.


   Statistics for current covariance components model
   --------------------------------------------------
  Deviance                      = 1380.129286
  Number of estimated parameters = 15
```

314

Change Over Time of Disappointment with God:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
   The maximum number of level-1 units = 483
   The maximum number of level-2 units = 214
   The maximum number of level-3 units = 45
   The maximum number of iterations = 100
   Method of estimation: full maximum likelihood

   The outcome variable is RGDISS_R

   The model specified for the fixed effects was:
  --------------------------------------------------

    Level-1                Level-2            Level-3
    Coefficients           Predictors         Predictors
  --------------------   ---------------   ----------------
        INTRCPT1, P0       INTRCPT2, B00     INTRCPT3, G000
  SURVEY_# slope, P1       INTRCPT2, B10     INTRCPT3, G100
                                             %SEM_YR_1, G101
                                             %RP_PUB_1, G102
                         #% RBDIS_R, B11     INTRCPT3, G110
                         #%RGINSC_R, B12     INTRCPT3, G120

 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean


 Summary of the model specified (in equation format)
 ----------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(RBDIS_R) + B12*(RGINSC_R) + R1


Level-3 Model

     B00 = G000 + U00
     B10 = G100 + G101(SEM_YR_1) + G102(RP_PUB_1) + U10
     B11 = G110
     B12 = G120
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 735 *******
```

```
Final estimation of fixed effects:
-------------------------------------------------------------------------------
                                        Standard            Approx.
    Fixed Effect         Coefficient    Error     T-ratio   d.f.     P-value
-------------------------------------------------------------------------------
For        INTRCPT1, P0
   For INTRCPT2, B00
      INTRCPT3, G000    -2.160394      0.155552    -13.889    44      0.000
For SURVEY_# slope, P1
   For INTRCPT2, B10
      INTRCPT3, G100    -0.038279      0.067303     -0.569    42      0.572
       SEM_YR_1, G101   -0.202481      0.091745     -2.207    42      0.033
       RP_PUB_1, G102   -0.118840      0.070210     -1.693    42      0.098
   For  RBDIS_R, B11
      INTRCPT3, G110     0.088362      0.036841      2.398   211      0.017
   For RGINSC_R, B12
      INTRCPT3, G120     0.196546      0.038806      5.065   211      0.000
-------------------------------------------------------------------------------

The outcome variable is RGDISS_R



Final estimation of level-1 and level-2 variance components:
-------------------------------------------------------------------------------
Random Effect            Standard     Variance    df    Chi-square  P-value
                         Deviation    Component
-------------------------------------------------------------------------------
INTRCPT1,        R0      1.38754      1.92528     116   262.56997    0.000
SURVEY_# slope,  R1      0.42857      0.18367     114   218.16832    0.000
 level-1,        E       1.16396      1.35481
-------------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


Final estimation of level-3 variance components:
-------------------------------------------------------------------------------
Random Effect            Standard     Variance    df    Chi-square  P-value
                         Deviation    Component
-------------------------------------------------------------------------------
INTRCPT1/INTRCPT2, U00   0.15339      0.02353     40    38.75281    >.500
SURVEY_#/INTRCPT2, U10   0.02567      0.00066     38    31.83253    >.500
-------------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


 Statistics for current covariance components model
 --------------------------------------------------
Deviance                     = 1794.611022
Number of estimated parameters = 13
```

Change Over Time of Insecurity with God:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
The maximum number of level-1 units = 483
The maximum number of level-2 units = 214
The maximum number of level-3 units = 45
The maximum number of iterations = 100
Method of estimation: full maximum likelihood

The outcome variable is RGINSC_R

The model specified for the fixed effects was:
-------------------------------------------------

  Level-1              Level-2          Level-3
  Coefficients         Predictors       Predictors
-------------------   ---------------   ----------------
        INTRCPT1, P0     INTRCPT2, B00    INTRCPT3, G000
  SURVEY_# slope, P1     INTRCPT2, B10    INTRCPT3, G100
                                          %   AGE_1, G101
                                          %DO_WEL_1, G102
                                          %TV_HRS_1, G103
                       #%  ED_EXP, B11     INTRCPT3, G110
                       #%RGDISS_R, B12     INTRCPT3, G120

'#' - The residual parameter variance for the parameter has been set to zero
'%' - This variable has been centered around its grand mean


 Summary of the model specified (in equation format)
 ----------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(ED_EXP) + B12*(RGDISS_R) + R1


Level-3 Model

     B00 = G000 + U00
     B10 = G100 + G101(AGE_1) + G102(DO_WEL_1) + G103(TV_HRS_1) + U10
     B11 = G110
     B12 = G120
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 1154 *******
```

```
Final estimation of fixed effects:
--------------------------------------------------------------------------------
                                   Standard            Approx.
    Fixed Effect     Coefficient   Error      T-ratio  d.f.    P-value
--------------------------------------------------------------------------------
For        INTRCPT1, P0
   For INTRCPT2, B00
      INTRCPT3, G000   -1.104168   0.105183   -10.498    44    0.000
For SURVEY_# slope, P1
   For INTRCPT2, B10
      INTRCPT3, G100    0.012730   0.038302     0.332    41    0.741
          AGE_1, G101   -0.163733   0.055026    -2.976    41    0.005
       DO_WEL_1, G102    0.158765   0.084678     1.875    41    0.067
       TV_HRS_1, G103   -0.065384   0.030849    -2.120    41    0.040
   For    ED_EXP, B11
      INTRCPT3, G110    0.062354   0.022760     2.740   211    0.007
   For RGDISS_R, B12
      INTRCPT3, G120    0.066578   0.012538     5.310   211    0.000
--------------------------------------------------------------------------------

The outcome variable is RGINSC_R



Final estimation of level-1 and level-2 variance components:
--------------------------------------------------------------------------------
Random Effect          Standard    Variance    df    Chi-square  P-value
                       Deviation   Component
--------------------------------------------------------------------------------
INTRCPT1,      R0       1.12643     1.26884    116    310.08744    0.000
SURVEY_# slope, R1      0.26002     0.06761    114    212.99588    0.000
 level-1,      E        0.69500     0.48302
--------------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 157 of 214
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.



Final estimation of level-3 variance components:
--------------------------------------------------------------------------------
Random Effect          Standard    Variance    df    Chi-square  P-value
                       Deviation   Component
--------------------------------------------------------------------------------
INTRCPT1/INTRCPT2, U00   0.07991     0.00639    40    39.51855    >.500
SURVEY_#/INTRCPT2, U10   0.00951     0.00009    37    29.83826    >.500
--------------------------------------------------------------------------------

Note: The chi-square statistics reported above are based on only 41 of 45
units that had sufficient data for computation.  Fixed effects and variance
components are based on all the data.


 Statistics for current covariance components model
 --------------------------------------------------
Deviance                    = 1335.318609
Number of estimated parameters = 14
```

Change Over Time of Deferring Religious Problem Solving:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10

```
  The maximum number of level-1 units = 483
  The maximum number of level-2 units = 214
  The maximum number of level-3 units = 45
  The maximum number of iterations = 100
  Method of estimation: full maximum likelihood

  The outcome variable is RPSDEF_R

  The model specified for the fixed effects was:
 -----------------------------------------------------

   Level-1              Level-2           Level-3
   Coefficients         Predictors        Predictors
 --------------------  --------------    ---------------
         INTRCPT1, P0     INTRCPT2, B00    INTRCPT3, G000
  SURVEY_# slope, P1      INTRCPT2, B10    INTRCPT3, G100
                        #%RPSCOL_R, B11    INTRCPT3, G110
                        #%FAMPRC_R, B12    INTRCPT3, G120

 '#' - The residual parameter variance for the parameter has been set to zero
 '%' - This variable has been centered around its grand mean


 Summary of the model specified (in equation format)
 -----------------------------------------------------

Level-1 Model

     Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

     P0 = B00 + R0
     P1 = B10 + B11*(RPSCOL_R) + B12*(FAMPRC_R) + R1


Level-3 Model

     B00 = G000 + U00
     B10 = G100 + U10
     B11 = G110
     B12 = G120
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 51 *******
```

```
Final estimation of fixed effects:
----------------------------------------------------------------------------
                                       Standard              Approx.
     Fixed Effect       Coefficient    Error     T-ratio     d.f.    P-value
----------------------------------------------------------------------------
For        INTRCPT1, P0
  For INTRCPT2, B00
      INTRCPT3, G000    -1.012279     0.156971    -6.449       44     0.000
For SURVEY_# slope, P1
  For INTRCPT2, B10
      INTRCPT3, G100    -0.124997     0.064156    -1.948       44     0.057
    For RPSCOL_R, B11
      INTRCPT3, G110     0.062008     0.016099     3.852      211     0.000
    For FAMPRC_R, B12
      INTRCPT3, G120    -0.075332     0.029577    -2.547      211     0.012
----------------------------------------------------------------------------

The outcome variable is RPSDEF_R


Final estimation of level-1 and level-2 variance components:
----------------------------------------------------------------------------
Random Effect             Standard      Variance    df    Chi-square  P-value
                          Deviation     Component
----------------------------------------------------------------------------
INTRCPT1,       R0        1.24551       1.55129     116   218.52715   0.000
SURVEY_# slope, R1        0.44041       0.19396     114   220.41644   0.000
 level-1,       E         1.05227       1.10726
----------------------------------------------------------------------------
```

Note: The chi-square statistics reported above are based on only 157 of 214 units that had sufficient data for computation. Fixed effects and variance components are based on all the data.

```
Final estimation of level-3 variance components:
----------------------------------------------------------------------------
Random Effect             Standard      Variance    df    Chi-square  P-value
                          Deviation     Component
----------------------------------------------------------------------------
INTRCPT1/INTRCPT2, U00    0.44296       0.19621     40    50.00143    0.134
SURVEY_#/INTRCPT2, U10    0.01581       0.00025     40    40.41510    0.452
----------------------------------------------------------------------------
```

Note: The chi-square statistics reported above are based on only 41 of 45 units that had sufficient data for computation. Fixed effects and variance components are based on all the data.

```
 Statistics for current covariance components model
 -------------------------------------------------
Deviance                     = 1710.441873
Number of estimated parameters = 11
```

**Change Over Time of Self Directing Religious Problem Solving:
Extracts from HLM 6 Output File Relevant to Findings in Chapter 10**

```
   The maximum number of level-1 units = 483
   The maximum number of level-2 units = 214
   The maximum number of level-3 units = 45
   The maximum number of iterations = 100
   Method of estimation: full maximum likelihood

   The outcome variable is RPSSLF_R

   The model specified for the fixed effects was:
   ------------------------------------------------------

    Level-1               Level-2             Level-3
    Coefficients          Predictors          Predictors
   --------------------  ---------------    ----------------
          INTRCPT1, P0      INTRCPT2, B00      INTRCPT3, G000
   SURVEY_# slope, P1       INTRCPT2, B10      INTRCPT3, G100
                                               %AVCONS_1, G101
                         #%RPSCOL_R, B11       INTRCPT3, G110
                         #%RGDISS_R, B12       INTRCPT3, G120

   '#' - The residual parameter variance for the parameter has been set to zero
   '%' - This variable has been centered around its grand mean


   Summary of the model specified (in equation format)
   ------------------------------------------------------

Level-1 Model

       Y = P0 + P1*(SURVEY_#) + E

Level-2 Model

       P0 = B00 + R0
       P1 = B10 + B11*(RPSCOL_R) + B12*(RGDISS_R) + R1


Level-3 Model

       B00 = G000 + U00
       B10 = G100 + G101(AVCONS_1) + U10
       B11 = G110
       B12 = G120
For starting values, data from 426 level-1 and 157 level-2 records were used

Iterations stopped due to small change in likelihood function
******* ITERATION 52 *******
```

```
Final estimation of fixed effects:
--------------------------------------------------------------------------------
                                       Standard             Approx.
    Fixed Effect         Coefficient   Error      T-ratio   d.f.     P-value
--------------------------------------------------------------------------------
For        INTRCPT1, P0
   For INTRCPT2, B00
      INTRCPT3, G000     -0.228583     0.151246    -1.511      44     0.138
For SURVEY_# slope, P1
   For INTRCPT2, B10
      INTRCPT3, G100      0.068117     0.062246     1.094      43     0.280
      AVCONS_1, G101      0.256333     0.098871     2.593      43     0.013
   For RPSCOL_R, B11
      INTRCPT3, G110     -0.105557     0.014794    -7.135     211     0.000
   For RGDISS_R, B12
      INTRCPT3, G120      0.080852     0.018714     4.320     211     0.000
--------------------------------------------------------------------------------
```

The outcome variable is RPSSLF_R

```
Final estimation of level-1 and level-2 variance components:
--------------------------------------------------------------------------------
Random Effect              Standard     Variance    df    Chi-square   P-value
                           Deviation    Component
--------------------------------------------------------------------------------
INTRCPT1,        R0        1.42192      2.02187    116    256.79600    0.000
SURVEY_# slope,  R1        0.46928      0.22022    114    249.05239    0.000
 level-1,        E         1.00348      1.00698
--------------------------------------------------------------------------------
```

Note: The chi-square statistics reported above are based on only 157 of 214 units that had sufficient data for computation. Fixed effects and variance components are based on all the data.

```
Final estimation of level-3 variance components:
--------------------------------------------------------------------------------
Random Effect              Standard     Variance    df    Chi-square   P-value
                           Deviation    Component
--------------------------------------------------------------------------------
INTRCPT1/INTRCPT2, U00     0.31155      0.09706     40    36.42271     >.500
SURVEY_#/INTRCPT2, U10     0.05285      0.00279     39    32.33533     >.500
--------------------------------------------------------------------------------
```

Note: The chi-square statistics reported above are based on only 41 of 45 units that had sufficient data for computation. Fixed effects and variance components are based on all the data.

```
 Statistics for current covariance components model
 --------------------------------------------------
Deviance                    = 1664.554785
Number of estimated parameters = 12
```