GENDER EQUALITY IN RELIGIOUS EDUCATION:
A COMPARATIVE STUDY OF CATHOLIC, EVANGELICAL
AND SECULAR PRIVATE SCHOOLS IN GUATEMALA

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DARIN M. MATHER

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DEDICATION

To Sue,

whose example as a woman and whose commitment to justice for all children have

inspired this work.

I love you.

ABSTRACT

This study assesses the effects that private religious and secular schools have on gender equality in education. Using data collected from more than twenty school site visits, various methods are used to determine if Catholic, evangelical and secular schools have divergent outcomes in key areas including gender attitudes, academic aspirations and self-image. The mechanisms by which faith may affect religious schools' outcomes are a key focus of this study. Results show that there are key differences between school types. Catholic schools score significantly higher in gender egalitarian measures but significantly lower in some self-esteem and academic confidence measures. Evangelical school students, and especially evangelical school girls, have higher academic aspirations than students from other schools. Finally, this study demonstrates that religious beliefs and values are key predictors, especially for outcomes in gender ideology and self-esteem.

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CHAPTER 1: INTRODUCTION

For the last twenty years, girls' education has been prominently featured in international development rhetoric. Numerous international meetings, including the 1990 World Conference on Education for All and the 2000 Dakar World Education Forum, helped bring this issue to the world's attention. At the United Nations Millennium Summit, world leaders endorsed the goal of eliminating gender disparities in primary and secondary education as a top priority for the first decades of the new century (UN Millennium Project 2005a). Education is strongly emphasized in international development because it has been shown to have a positive impact on the lives of women. In her report on education and gender equality to the International Conference on Education, Joan DeJaeghere (2004) summarizes research findings that document a number of ways in which education has been beneficial for women and girls. These include greater personal empowerment (Moulton 1997), improved health and reduced HIV infection (UNICEF 2004), wider participation in social, political and economic spheres (Mensch, Bruce, and Greene 1998), and personal economic gains (Psacharopoulos and Patrinos 2002).

Though much progress has been made on gender equity in education over the last 20 years, much more work needs to be done. The Millennium Development Task Force Report on education and gender equality concluded that "the world is still far from achieving gender parity in enrollment and completion rates, particularly at the secondary school level" (UN Millennium Project 2005b, 4). The report points to estimates indicating that worldwide, 57 percent of all out-of-school children are girls. (In some areas that number is as high as 66 percent.) In light of these disparities, the Task Force

Report calls for more research on this key aspect of international development work. Mary Ann Maslak, a leading authority on gender and education, echoes the call for more scholarly attention to this important issue. She argues that despite the fact that there is indisputable evidence that girls have less access to schooling and, in general, receive an education of inferior quality, educational researchers "have not yet critically, systematically, and methodically examined the phenomenon of the undereducation of adolescent girls and adult women" (Maslak 2008, xiii). Her book calls for more studies that examine the situations and conditions that affect girls' educational quality and access. On her research agenda are two areas of special concern: the roles of non-governmental organizations in educational development, and creating new methods for understanding the female research participant (Maslak 2008, xiv).

This study will specifically address these two issues. First, it will focus on the role that private religious schools play in girls' educational development. This project will seek to determine whether private Catholic and evangelical schools in Guatemala have differing academic outcomes for girls and whether these schools differ from their private secular counterparts. Though private religious schools constitute a significant subset of the educational field worldwide, their contributions have often been overlooked in the development literature, and as a result, little is known about their effectiveness in contexts apart from the Western world. Less still is known about their outcomes for girls. This study seeks to build on the work that has been done on parochial schools in the United States and other Western countries by extending it to religious schools in a developing country in Latin America.

In addition to determining whether there are differences between private secular, Catholic and evangelical schools, this research will employ new measures to uncover factors that might contribute to these differences. Standard educational measures including class size, teacher training, and per pupil expenditure will be considered in conjunction with another set of factors that have been largely overlooked in studies of religious schools—the religious beliefs and values of students and staff. Scholars are currently divided on the role that religion plays in promoting gender equity, with evidence suggesting that it both inhibits and enhances women's positions in the developing world. Religious beliefs (presuppositions and assumptions about reality) and values (prescriptive judgments about what is worthy and unworthy) have each been an important part of the ongoing debate about this issue. This study aims to contribute to this debate by focusing on the role that these factors have in promoting gender equity in schools.

This introductory section will begin with a brief overview of the role of religious schools in educational development. It will be followed by a review of the literature on religion and gender development and its implications for education. The section will conclude with a statement of this study's research objectives, along with a brief summary of the substantive chapters that constitute this dissertation.

Religious Schools

Private schools, and private religious schools in particular, are significant actors in the field of educational development. Historically, some of the oldest international development agencies were missionary societies, which operated schools and other social

service organizations in colonial outposts. The schools that were run by these religious groups greatly impacted the African, Asian, Middle Eastern and Latin American environments in which they were formed (Chabbott 1999). In large areas of Africa, for instance, missionary schools virtually monopolized the educational system from the late 1800s into the early 1900s (Lettinga 2000). Even though after World War II, secular organizations grew rapidly and became prominent in the field, faith-based educational development organizations remain highly active in developing countries. For example, an evangelical database of missions and development agencies lists 108 different religious organizations working on educational initiatives throughout the world (Urbana 2008). Two of these organizations, World Vision and Compassion International, spend more than $400 million a year on children's education and development (World Vision 2008; Compassion International 2008). The Catholic Church now has more than 250,000 schools around the world, which serve almost 42 million students—a number that has risen steadily over the last 30 years (Thavis 2007). Despite the fact that these schools (as well as schools from various other religious traditions) are so numerous and often highly influential in developing countries, they have been almost completely overlooked by educational development scholars. One indicator of this neglect is the fact that UNESCO and the World Bank fail to even include measures of religious affiliation in the data that they collect about world education.

Studies in the United States, Europe and Australia have demonstrated that religious schools deserve special attention for their academic outcomes, especially among disadvantaged students. Groundbreaking research by Coleman, Hoffer, and Kilgore (1982) and an important follow-up study by Bryk, Lee, and Holland (1993) concluded

that Catholic schools produced higher cognitive achievement than public schools regardless of the students' family backgrounds. Andrew Greeley's (1982) study found that minority students along with students who came from poor families and families with limited education fared better in Catholics schools than in public institutions. Subsequent research by Foster and Irvine (1996) confirmed that Catholic schools have better outcomes than public schools for African Americans, and a study by Karyn St. George (2004) found that Catholic (single-sex) schools have a positive effect on girls' academic and social development. Though most of the research on religious education has been conducted in developed countries, results suggest that these schools may also produce high outcomes for disadvantaged students in developing contexts. For this reason, these schools warrant more attention from the educational development community, particularly in reference to one disadvantaged group—girls.

Two other important points should be made about the literature cited in the preceding paragraph. First, many of the studies of Catholic schools have used only public schools as a comparison group. Coleman, Hoffer, and Kilgore (1982) are an exception. They acknowledge that in the United States there is a wide variety of private schools, but for the sake of analysis, they simply lump this diverse array of religious and non-religious schools into the category of "other private." This gives them three comparison groups: public, Catholic and other private. These comparative approaches leave open questions about the religious effect on schooling. Is there something distinctive about Catholic education, or would schools from other religious traditions distinguish themselves if they were disaggregated from the rest of the private schools? This study will address this

question by directly comparing Catholic and evangelical schools to their private secular counterparts.

Second, for the most part these studies do not consider religious factors when seeking to explain differences in academic outcomes. Factors such as school resources, staffing, curriculum and governance receive the bulk of the analytical attention. Only Andrew Greeley (1982) provides a short chapter on "Religion and the Catholic School." In this chapter, Greeley determines that religious devotion and church affiliation are not significantly correlated with academic performance. While Greeley's consideration of religious devotion and affiliation seem to justify the neglect of religious factors in educational research, these variables are not necessarily the most salient. Other religious factors, such as beliefs and values often have a greater effect (Thompson, Thomas, and Head 2012) and thus should receive more attention in research on religious schools.

Religion and Gender Equity

The section above summarized the research showing a possible link between religious schools and academic outcomes. The following section will survey the literature on the effects that religion has on gender development. Martha Nussbaum's (2000) book *Women and Human Development* describes two extreme positions that are prevalent in discussions about religion and gender equality. At one extreme are secular humanist feminists who contend that religion has a negative social role that should be resisted or disregarded. At the other end of the spectrum are traditionalist feminists who look to religious paradigms for guidance in determining women's roles in society. The emergence of evangelical Protestantism in Latin America provides evidence for both

positions in this debate. Leslie Gill's study of Pentecostals in Peru confirms what many

have concluded about Latin American Pentecostals and evangelicals. She finds that

"[b]elief in the innate inferiority of women is so firmly entrenched in Pentecostal

ideology that many believers view the subordination of women as part of the natural

order. In addition, they feel that subordination is sanctioned by God, as evidenced by the

teaching of the Bible" (Gill 1990, 716). Conversely, a number of researchers, including

Marie Friedmann Marquardt (2005), Cecilia Mariz and Dores Machado (1997), and

Elizabeth Brusco (1993), have found that evangelicalism is often supportive of women's

autonomy. Brusco's research, for example, suggests that "Colombian evangelicalism

reforms gender roles in a way that enhances female status. It promotes female interests

not only in simple, practical ways but also through its potential as an antidote to

machismo, the emphatic masculinity so widespread in Latin America" (1993, 144).

      In the literature on gender equity, two specific aspects of religion—beliefs and

values—have been connected to gender attitudes. People's beliefs are their

presuppositions and assumptions about reality. They are a description of reality as people

understand it to be. Values, on the other hand, are prescriptive references to what is good

or important. They make reference to what ought to be. Both of these aspects, beliefs

about what is true (i.e., the Bible is inspired by God) and values for what is important

(i.e., honesty), are often deeply rooted in people's religious commitments (Smith 2003).

These beliefs and values have important implications for gender relations.

      Steigenga and Smilde's (1999) study on gender equality in Guatemala and Costa

Rica found little difference overall between Protestants, Catholics and the nonaffiliated in

their attitudes toward women's rights in society. However, their analysis did find a

significant link between certain religious beliefs and a respondent's attitudes toward gender equality. "Two measures of theological conservatism (responses concerning biblical literalism and Christ's death for our sins) had positive and significant effects on agreement with the statement that women should enjoy all the political rights and responsibilities that men do. One measure of millennialism (that Christ will return soon) had a negative and significant effect on agreement" (Steigenga and Smilde 1999, 180). If religious beliefs can affect people's attitudes toward gender equality, they might also have an impact on the way that girls are treated by school administrators and teachers. They could additionally affect girls' attitudes toward the educational process or their levels of academic confidence and achievement.

Research Context

The field research for this project was conducted in private Catholic, evangelical and secular schools in urban and rural settings in Sacatepequez, Guatemala. Sacatepequez, which is one of 22 different departments (or states) in Guatemala, is located just west of the capital city. It has almost 250,000 inhabitants living in more than 16 different municipalities (GeoHive 2013).

Guatemala is a key site for studying girls' education because the country has one of the largest gender gaps in educational quality and attainment in Latin America. It is also an appropriate setting for this research because a high percentage of its schools are private and many of these private schools are religious. The paragraphs that follow provide a brief description of the Guatemalan context, highlighting areas that are most pertinent to this study. I will begin with a short overview of Guatemalan history and

culture. Next I will provide more detailed information about gender, religion and education in the country.

With a population of over 14 million, Guatemala is the most populous country in Central America (CIA Factbook 2013). Although it is widely known for the beauty of its volcanic landscapes and the richness of its indigenous cultures, Guatemala also faces numerous perennial developmental challenges including high rates of poverty, infant and maternal mortality, malnutrition and illiteracy (Valladaras 2010).

Guatemala sits in the heart of a vast Mayan civilization that flourished during the first millennium AD. Remnants of this proud culture are still widely apparent in the *tipica* dress of the indigenous people, the 22 Mayan languages still spoken on a daily basis and the ruins scattered throughout the country.

Spanish culture was introduced during three centuries of colonial rule starting in the early 1500s with Guatemala serving as the capital for the Spanish colonial administration of Central America (Woodward 2008). Guatemala gained its independence in 1821 and was ruled by a series of dictators until the mid-twentieth century. In 1944, dictator General Jorge Ubico was overthrown after thirteen years of rule. This led to a period called the Ten Years of Spring in which Guatemala experienced democratic reforms allowing free speech and open political activity (Woodward 2008). In 1951, Jacobo Árbenz Guzmán, who was a leader of the coup against Ubico, was democratically elected as president of Guatemala. He began a series of land reforms and other initiatives that angered the powerful United Fruit Company. Concerned about these reforms and other leftist activities, United Fruit convinced the US government to engineer a successful coup against Árbenz, which resulted in his replacement by a

military junta lead by Colonel Carlos Castillo (Schlesinger and Kinzer 1999). This led to conflicts between the new government and various leftist rebel groups made up mainly of Mayan indigenous groups. These conflicts gradually escalated into a civil war lasting from the 1960s to 1996. In addition to fighting between the government and the rebels, the civil war was characterized by genocidal activities on behalf of the government that resulted in numerous atrocities that left more than 200,000 people killed or missing (REMHI 1999). Since a peace accord was signed in 1996, Guatemala has been relatively stable with democratically elected presidents overseeing a constitutional democracy.

Although Guatemala is a populous country with many resources, it continues to have a relatively weak economy, with GDP per capita at roughly half the Latin American average (CIA Factbook 2013). More than half the population lives below the national poverty line and 73% live in poverty in indigenous regions. Thirteen percent of the total population and 28% of the indigenous population lives in extreme poverty (CIA Factbook 2013). Income equality is high with 20% of the population accounting for more than 51% of the country's total consumption (CIA Factbook 2013). After the 1996 peace accords, Guatemala undertook a series of reforms to try to improve the economy. These measures had a strong initial effect, but growth has been slow to non-existent since 2009 (World Bank 2013). Today, out of 187 ranked countries, Guatemala is 133 on the Human Development Index and last among all Central American countries (World Bank 2013).

Guatemala is perhaps best known for its rich ethnic diversity. Guatemala is home to 22 different language groups (Fooksman 2013). In addition to their dialects, indigenous people groups can be easily identified by the distinctive colors that each group weaves into their clothing. Much of the division in Guatemalan society falls along

ethnic lines with language, culture and dress serving as the distinguishing feature rather than race. Westernized Guatemalans, called *ladinos*, tend to have more political, economic, educational and social privilege than non-Western indigenous. As indigenous villages become less isolated and Westernization continues in Guatemala, more and more indigenous youth are adopting Western culture in favor of their own, resulting in a sharp decline in Mayan culture (Barry 1992).

Guatemala became largely Christianized during the colonial era, and Catholicism dominated the religious and cultural landscape for centuries. This began to change in the twentieth century when Pentecostalism started to sweep across the globe, attracting converts, especially among the poor (Cox 1995; Martin 1990). Although Pentecostalism made inroads throughout Latin America, it grew with particular speed in Guatemala, especially after the devastating earthquake in 1976 that killed 20,000 and left over a million homeless. Pentecostalism, which often addresses the needs of the destitute by offering hope through faith in God, support and resources through strong social networks, and a vision for a moral order that is appealing to those in chaotic circumstances (Martin 2002; Mariz 1994), grew by 14% in the months following the quake (Chozick 2002). This growth continued through the following decades, extending into the middle and upper classes of Guatemalan society. Today Pentecostals, who are often called evangelicals, constitute nearly 40% of the total population. (See Garrard-Burnett 1998, O'Neill 2010, and Sherman 1997 for in-depth studies on the rise of evangelicalism and its impact on Guatemalan society.) While there are numerous tensions and a good deal of competition between Catholics and evangelicals in Guatemala, most in Guatemala are

religiously tolerant and religious violence is not commonplace (U.S. Department of State 2007).

Guatemala has traditionally been a profoundly conservative and patriarchal society (Barry 1992), and as a result, women's educational, workplace and political participation has typically lagged behind other countries in the region (Barry 1992; Catanzarite 1992). Lately, Guatemala has been making slow progress toward the Millennium Development Goal of promoting gender equity and empowerment of women. Although women's literacy rates have improved over the past decades, the ratio of literate women to men is still only 0.91 (Valladares 2010)—one of the worst rates in Central America (WID 2003). Illiteracy is particularly high among indigenous women (WID 2003). Women's workplace participation, which in Guatemala mainly consists of domestic and market activities, is another concern. Here again, Guatemala ranks among the lowest in Central America (WID 2003). Women also lag politically, occupying only 13% of the seats in Guatemala's congress, and once again, indigenous women are widely excluded from any leadership roles (Women's Democracy Network 2012).

Guatemala is also a very young country. The median age is 20.7 years with more than a third of the population in the 0–14-year-old cohort (CIA Factbook 2013). Because so many Guatemalans are children, education should be a high priority. However, only about 2.8% of the country's GDP is spent on education, ranking it 149th in the world (CIA Factbook 2013). Although education is compulsory and public education is tuition free, truancy laws are unenforced and public schools are woefully underfunded. Fees for books, uniforms and other school items make even public schools unaffordable for some students. Overworked and underpaid teachers often do not show up for work and when

they do, they are overwhelmed by very large class sizes. To accommodate large student populations, many schools run up to three sessions a day with students attending either a morning, afternoon or night session.

Although the majority of Guatemalan children attend primary school, many do so sporadically. After primary school, school participation drops off dramatically. In 2002, UNESCO (2011) estimated that Guatemala had a primary school net enrollment rate (NER) of 0.88 (0.91 for males and 0.85 for females). The secondary level NER was 0.31 (0.33 for males and 0.29 for females), and the tertiary level NER was 0.09 (0.11 for males and 0.08 for females). Schools' failure to move students to higher levels of academic achievement and the persistent gender gaps at all levels dramatically illustrate just a few of the problems with the Guatemalan educational system.

In this context, many turn to private schools to provide a higher quality education for their children. In Guatemala, nearly 15% of elementary schools, 54% of middle schools and 87% of high schools are private. These private schools educate 10% of the elementary, 45% of the middle school, and 77% of the high school students in the country (MINEDUC 2007). Many of these private schools have religious affiliations. In the region where this study was conducted, more than 1 in 4 of the private schools is Catholic or evangelical (MINEDUC 2008). Although some of these private schools are exclusive, most serve middle to lower class students. In my sample, 13 of the 21 schools reported that 50% or more of their students were poor or very poor. Only 3 schools reported that less than 20% of their students were poor or very poor. In fact, some of the private schools in this study specifically targeted students who could not afford to go to the public schools.

This context of failing schools and pervasive gender inequality serves as an important backdrop for this study on gender equality in education. Because Guatemalan parents often turn to religious schools as an alternative to public schools and because these schools serve such a high proportion of Guatemalan students, especially at the secondary level, it is crucial that we learn more about their contributions to education and to the culture as a whole.

Research Objectives

The forgoing literature review has highlighted the need for further research on religious schools and their influence on girls in developing countries. It has also shown that religious beliefs and values, which are largely overlooked in educational research, could have a significant effect on outcomes. This study seeks to address these shortcomings by undertaking a comparative analysis of private Catholic, evangelical and secular schools in Guatemala. Three separate aspects of gender equality are addressed in three substantive chapters.

The first chapter outlines a study of gender attitudes in Catholic, evangelical and secular schools. Although not a traditional measure of educational success, gender attitudes are important in academic contexts because more egalitarian attitudes have been associated with higher self-esteem and self-confidence and with higher levels of academic achievement (Ossana, Helms, and Leonard 1992; Grieve, Rosenthal, and Cavallo 1988; McDaniel 2010). Using Latent Class Analysis, a method that has not been previously used to study gender attitudes, I uncover three distinctly patterned perspectives on the roles of women in domestic and public spheres—*non-egalitarian,*

publically egalitarian and *generally egalitarian*. The non-egalitarian profile affirms women's subordination in all aspects of life. Those in the publically egalitarian profile support traditional roles for women in the home but are more affirming of women in public roles. Finally, those in the generally egalitarian profile tend to promote gender equality in all aspects of life. These profiles are then used to compare the gender attitudes of students in religious and non-religious schools with proportional *t*-tests and more extensive multivariate hierarchical linear models. Results reveal that students in religious schools do not exhibit significantly less egalitarian attitudes than do students in secular schools. In fact, Catholic school students are the most egalitarian in the sample. This chapter also demonstrates that religious beliefs, particularly beliefs about the authority of the Bible and the church, are key indicators of gender ideology.

The second chapter focuses on the academic aspirations of students from Catholic, evangelical and secular schools. As I have noted above, educational attainment is vital for women's personal empowerment, their health, their political and economic participation and their personal economic gains (DeJaeghere 2004). Since children's academic aspirations are closely linked to their future attainment, it is important to assess the degree to which different schools inspire children to pursue advanced education. In this chapter each school type is compared to determine if there are differences in their students' aspirations and to assess the degree to which there are differentials between the boys and girls in these schools. Analysis in this chapter reveals that evangelical school students, particularly girls in evangelical schools, are twice as likely as other students to aspire to attend university. Although religious school type is influential, specific religious beliefs and values have no significant effect on academic aspirations.

The final substantive chapter addresses the issue of self-esteem. This also is an important outcome for schools because higher self-esteem is correlated with academic achievement, occupational success, positive relationships with others, healthy coping skills, and a general sense of well-being (Bagley 1989). Using various measures of self-esteem and academic confidence, this chapter again compares outcomes for different types of schools. Results show that students in Catholic schools have significantly less confidence in their math skills than students in other schools have. They are also significantly less likely to feel liked by those around them. In these outcomes, student religiosity and beliefs about the Bible and the work of the Holy Spirit were significantly linked to higher levels of self-esteem. Bivariate models reveal that there are a few small gender differences in self-esteem and self-confidence although these are not significant in the full models. Girls in the higher grades, however, are less likely to think that others like them than are girls in the lower grades.

Taken as a whole, this study demonstrates that there are key differences between religious school types. It also shows the importance of religious beliefs and values on school outcomes. The chapters that follow thus serve to make a case that more research needs to be done on religious schools to understand their contributions to global education initiatives and to better understand the positive and negative effects that these schools have on the millions of students who attend them. Furthermore, this study demonstrates that religious beliefs and values are key indicators that should be increasingly incorporated in studies of education and other aspects of society.

While the main focus of this study is on comparing different types of religious schools and evaluating the impact of religious variables, this study makes a number of

other important contributions. The chapter on gender ideology employs a new method, Latent Class Analysis, to uncover new profiles for describing gender attitudes. The method and the resulting profiles could both be used in future studies to further learning about gender ideology.

The chapter on academic aspirations breaks new ground in that it is the first study of academic aspirations that has been done apart from the Western context and results are surprising. Analysis reveals that students in private schools in Guatemala expect to attend university at astonishingly high rates. Three quarters of the students in the sample expect to obtain a tertiary degree. This finding presents a number of practical and public policy issues that need to be considered.

Finally, the chapter on self-esteem develops more comprehensive models of self-esteem than have been previously considered in the literature. These models show results that take into consideration the effects of school type, gender, family background, and religion while introducing interactions between different types of esteem. These models provide a fuller perspective on the factors that can affect self-esteem.

The following chapter describes the data and methods that were used to produce the results described above. This chapter starts with a description of the primary survey instrument used in the study, including information on the pilot study that was conducted in advance of the main fieldwork. Much of the chapter will include a description of the sampling method along with information about the schools that were included in the sample. The chapter concludes with an analytical methods section which provides a detailed description of Latent Class Analysis and Hierarchical Linear Modeling, the two statistical methods that are used most extensively in this study.

CHAPTER 2: DATA AND METHODS

Pilot Study

The research for this dissertation began with a pilot study that was conducted during the summer of 2008. I visited seven different private Guatemalan schools (four secular and three evangelical) to assess the contributions that each makes to gender equity in their schools. During the visits, I conducted in-depth interviews with at least one teacher and one administrator in the school. I also engaged in participant observation in two classrooms per school and administered brief surveys to 99 different students in the sixth-grade classes.

The interviews were used to gather basic information about the schools, the staff, the surrounding communities, and the schools' policies and initiatives for girls' education. During the classroom observations, I watched the interactions between boys and girls and the ways in which the teacher responded to children of each gender. The student surveys measured students' basic math and literacy skills and examined their perceptions of gender roles in Guatemalan society.

During the summer I was also able to make contact with the Ministry of Education office in Sacatepequez, the region where I planned to do my study. Here I obtained a list of all the schools in the area. This list, which included contact information for 123 private secular, evangelical and Catholic schools, was used to construct the school sample for my dissertation research. I was also told that with permission from the Director of Education, I could obtain electronic grade records for all the schools in the region.[1]

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[1] When I originally designed my dissertation research, I planned to incorporate these grade records into my analysis. Unfortunately, despite repeated efforts, I was never given access to this information. This greatly altered the direction of my research. Instead of combining data from the Ministry of Education with information from my own surveys and field observations, I was forced to limit my analysis to my own data.

My initial time in Guatemala confirmed that this was a viable project and the experience helped me fine-tune my data collection and analysis strategies. I learned a great deal about the types of data that I could obtain from school visits and what could realistically be inferred from this data. This pilot study also helped me make decisions about the types of methods that I would use for my dissertation research. I determined that I would not have sufficient time to conduct meaningful classroom observation and that my language skills were not adequate for in-depth interviews. Because the surveys turned out to be easy to administer and because they provided a great deal of useful data, I decided to make them the focus of my main research.

Research Design

Data Collection Methods

During the following year, I developed the design for my main dissertation research. For my fieldwork, I chose to revisit Guatemala. More specifically, I conducted my research on Sacatepequez, one of 22 different departments (or states) in Guatemala. Sacatepequez, which is located just west of the capital city, has almost 250,000 inhabitants living in more than 16 different municipalities (GeoHive 2013). My research was conducted in rural and urban schools throughout the department.

Guatemala is a key site for studying girls' education because the country has one of the largest gender gaps in educational quality and attainment in Latin America. Because of demands from domestic and agricultural work, girls in Guatemala have much lower enrollment and retention rates than boys, and as a result, women there are 50% more likely to be illiterate than men (Stromquist, Klees, and Miske 2000). The World

Bank (2008) estimates that there currently is a 7.8% gap in primary completion rates between boys and girls in Guatemala, and the country's 0.93 gender parity index puts them in the bottom 18% of countries reporting statistics (UNESCO 2007).

Guatemala is also an important site for this research because a high percentage of its schools are private. Nearly 15% of elementary schools, 54% of middle schools and 87% of high schools in Guatemala are private. These private schools educate 10% of the elementary, 45% of middle school, and 77% of the high school students in the country (MINEDUC 2007). Many of these private schools have religious affiliations. In the region where this study was conducted, more than 1 in 4 of the private schools are Catholic or evangelical (MINEDUC 2008).

For my research, I constructed a school sample using information gathered from the list of schools that was provided by the Ministry of Education office in the Department of Sacatepequez. I tried to choose one Catholic, one evangelical and one secular school[2] from each region of the Department, taking care to select evenly from urban and rural areas. Given my time constraints, I had originally hoped to conduct surveys in 24 different schools (8 from each type). In the end I was able to visit only 21 schools—7 Catholic, 9 evangelical and 5 secular. Two Catholic schools denied access, but in most instances I was able to find a replacement school close by. I was also denied access to a couple of secular schools and these proved harder to replace. One school that I had thought was secular turned out to be evangelical. Thus, I ended up with one more evangelical school than I had originally planned. Table 2.1 provides basic information

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[2] The secular institutions were included as a reference group.

Table 2.1
Survey Tallies

	School Information			Survey Tallies								
Name	Type	Location	# Enrolled	5th	6th	7th	8th	9th	Student Total	Administrator	Teacher	Grand Total
Belen	Catholic	Urban		21	26	28	24	25	124	0	3	127
Hermano Pedro	Catholic	Rural	113	25	34	34	29	37	159	1	4	164
Imaculada	Catholic	Rural	285	16	21	20	20	14	91	1	4	96
Monsenor	Catholic	Rural		14	8	12	14	17	65	1	4	70
Santa Familia	Catholic	Urban	674	37	40	35	32	34	178	1	3	182
Santo Tomas	Catholic	Rural	60	7	6	11	17	10	51	1	4	56
Vincent	Catholic	Urban	114	9	10	12	8	13	52	1	4	57
Totals				129	145	152	144	150	720	6	26	752
Alpha y Omega	Evangelical	Rural	300	9	5	13	13	19	59	1	3	63
Buenas Nuevas	Evangelical	Rural	141	11	2	3	5	0	21	1	4	26
Centro Americano	Evangelical	Urban	144	6	6	15	17	18	62	1	5	68
CETEDI	Evangelical	Rural	179	6	8	5	12	15	46	1	3	50
Emanuel	Evangelical	Rural	187	15	19	20	16	14	84	1	2	87
Getsemani	Evangelical	Urban	692	23	17	28	32	26	126	1	5	132
Israel	Evangelical	Rural	101	3	4	7	6	5	25	1	3	29
Orion	Evangelical	Urban	297	20	25	16	16	29	106	1	4	111
Saber y Gracias	Evangelical	Urban	330	21	20	25	33	31	130	1	5	136
Totals				114	106	132	150	157	659	9	34	702
CPA	Secular	Urban	129	7	7	12	11	6	43	1	4	48
Dante	Secular	Rural	47	6	7	4	2	3	22	1	1	24
Mixto Integral	Secular	Rural	268	23	25	0	27	11	86	1	3	90
Mundo Verde	Secular	Urban	121	8	13	16	6	6	49	1	5	55
Santa Lucia	Secular	Urban	206	17	6	15	36	20	94	1	5	100
Totals				61	58	47	82	46	294	5	18	317
Grand Totals				304	309	331	376	353	1673	20	78	1771

about the schools in my sample. It also includes tallies for the surveys that I was able to gather.

Public schools were not included in the sample for two reasons. First, the main thrust of this study is to understand the effect that religion and religious schools have on educational outcomes. Since the key comparison is religious versus secular and not private versus public, the school types included are sufficient, and adding public schools to the sample would introduce unnecessary complications. Second, although the private schools in this sample are not elite by any means,[3] there are substantial differences between private and public schools in Guatemala. Private schools generally have much smaller class sizes, more committed teachers, and more resources (on a per student basis) than their public school counterparts. Since private schools are generally more similar to each other in these and other areas, restricting the sample to private institutions makes it easier to focus comparisons on religious factors.

Given this study's comparative analysis of different school types, one area of special concern is the possibility that outcomes may be influenced by school selection biases. While it is very difficult to control for such biases without interviewing parents and students about their school selection processes, steps have been taken to address this concern. Most importantly, controls for parental educational levels are included along with measures of parental academic expectations[4] and involvement in their children's schoolwork. Though these controls in no way eliminate the potential effect of selection

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[3] In fact, some of the private schools in this study enrolled students who could not afford to go to the public schools, which often have fees for uniforms, books and other expenses. Thirteen of the 21 schools in the sample reported that 50% or more of their students were poor or very poor. Only 3 schools reported that less than 20% of their students were poor or very poor.

[4] This measure was not included in final models because it had no significant effect on the outcomes addressed in this study.

bias, they do provide some indication of whether such bias is an important factor for the assessed outcomes.

Visits to each site began with a brief conversation with the school administrator to review the purpose of the research and to establish a plan for visiting the classrooms in the school. Though I tried to make as many qualitative observations as possible during my time at the schools, most of the research was survey driven. I gave a written survey (described in Appendix A) to the administrator to be completed throughout the course of the day. This survey contained a few personal questions for the administrator and a list of questions about school demographics and operations. This survey also asked the administrator to answer a series of values and beliefs questions as one way to gauge the value and belief structure of the school as a whole.

In addition, I tried to visit the fifth- through ninth-grade classes of each school. During each class visit, I gave the teacher and the students a written survey (described in appendices B and C). The teacher survey included questions about their education, experience and classroom processes. It also asked about their attitudes toward the students. Finally, the teachers were asked to complete the same beliefs and values assessment that was given to the school administrator as another measure of the values and belief structures that are present in the school environment.

The student survey, which is described in Appendix C, had three parts. The first part gathered demographic information including gender, ethnic, family and religious information. The second part contained questions about their attitudes toward school, along with an assessment of their perceived academic skills and their projected educational and occupational attainment. The final part included assessments of students'

basic beliefs and values. The surveys were translated into Spanish. They were also pre-

tested with small groups of Guatemalan students. Follow-up interviews were used to

ensure that the questions were culturally appropriate and made sense to the students.

Information gathered from the methods described above was used to construct a

database of variables for analysis. This database contained the following information:

1. *School data* including religious affiliation (if any), number of students, hours of operation, per pupil expenditure, average teacher pay, and community demographic information.
2. *Classroom data* including class size, number of boys and girls, number of indigenous and ladino children; teacher information (gender, age, training, experience), the use of textbooks and workbooks, and teaching methods.
3. *Staff data* including education and experience, religious beliefs and values, and gender ideology.
4. *Student data* including grade, age, gender, race, parents' education, parents' occupation, home language, grades in math, science and language arts, confidence levels in math, science and language arts, career aspirations, and various values and beliefs.

All of this information was gathered to provide a comprehensive view of each

school including school structure, student demographics and staff training and

experience. It also provided an overview of the beliefs and values of staff and students.

Student beliefs and values were included as dependent and independent variables in this

study. Staff beliefs and values are important because, as authority figures within the

schools, administrators and teachers are key socializers who influence students in many

ways. Although many of the measures listed above are not included in final models, most

were considered in the initial analysis.

Analytical Methods

Using the survey data described above, I compare the outcomes of Catholic,

evangelical and secular private schools in three different aspects of gender equality—

students' gender attitudes, academic aspirations and self-esteem. Multilevel models are used to assess outcomes at the school and individual student levels. Though the effects of various independent variables are carefully considered, special attention is given to the religious orientation of the schools and the beliefs and values held by students. By including important controls at each level of analysis, these models highlight any effect that religious schools, and the beliefs and values of the students who attend all types of private schools, have on gender equality.

Data analysis employs three statistical methods. In Chapter 3, I use Latent Class Analysis (LCA) to uncover patterns of gender attitudes among all students in the sample. Because this method of analysis is exclusively used in Chapter 3 and because it is closely tied to the research question in the chapter, I provide an extensive description of LCA there. The other statistical methods, t-tests and Hierarchical Linear Models (HLM), are applied throughout the dissertation. These methods are addressed immediately below.

Proportional Tests

In the following chapters, I begin each analytical section by providing tables that directly compare each school type's outcomes for the dependent variable of interest. These tables also contain other comparisons that are pertinent to the analysis. Because the dependent variables are dichotomous, two sample proportional tests are used to determine if there are significant differences between the comparison groups. More specifically, the hypothesis that the proportion for each school type is different from the proportion for the other school types is tested (H_1: $\pi_1 \neq \pi_2$). With a large N, it is assumed that the sampling distribution of the difference between the sample proportions is normally distributed. The

following formula is used to compute the *Z* statistic for the difference between proportions test:

$$Z = \frac{P_1 - P_2}{S_{P_1 - P_2}}$$

The standard error in the denominator is calculated in this way:

$$S_{P_1 - P_2} = \sqrt{\frac{P_1(1 - P_1)}{N_1} + \frac{P_2(1 - P_2)}{N_2}}$$

Given the hypothesis that the two proportions are not equal, a two-tailed test is used to determine significance (Leon-Guerrero and Frankfort-Nachmias 2012).

Hierarchical Linear Models

After my initial analysis using proportional tests, I develop multivariate models to assess correlations between religious schools and the dependent variables when controls for other school and individual factors are added. Because the students in this data set are clustered in 21 schools, responses for students from the same school are likely correlated. For this reason hierarchical linear models (HLM) are more appropriate than traditional ordinary least square methods.

HLM, or multilevel, methods minimize distortion in estimates that could be caused by intraschool correlations by partitioning error variances into between-school and within-school components (Raudenbush and Bryk 2002). In this way, between-school effects, such as school type, and within-school effects, such as students' gender, grade, family background and religious beliefs, can be evaluated simultaneously (Woltman et al. 2012).

In each of the models used in this dissertation, two-level hierarchical models[5] are employed, with level 1 representing student level factors such as gender, family demographics and religious beliefs, and level 2 representing school level factors such as religious affiliation. Hausman tests were conducted to determine whether a random effects model, which can be used to estimate the effects of between cluster covariates, provides a better model fit than a fixed effects model, which does not estimate between cluster effects (Rabe-Hesketh and Skrondal 2008). In each case the random effects model was preferred. The equation for these models takes the form:

$$Y_{ij} = \beta_{0j} + \beta_1 x_{1ij} + \ldots + \beta_p x_{pij} + \zeta_j + \varepsilon_{ij}$$

where:

Y_{ij} = the dependent variable measured for the ith student nested within the jth school type

β_{0j} = the intercept for the jth school type

$x_{1ij}\ldots x_{pij}$ = the student level covariates

$\beta_1\ldots\beta_p$ = the regression coefficients associated with the student level covariates

ζ_j = the school level residual

ε_{ij} = the student level residual

This combined model incorporates student level ($x_{1ij}\ldots x_{pij}$) and school level (β_{0j}) predictors, cross-level terms ($\beta_1 x_{1ij} \ldots \beta_p x_{pij}$) along with error terms at the school (ζ_j) and student (ε_{ij}) levels (Woltman et al. 2012). Such models are ideal for this study because they will clearly demonstrate the effects of different school types on gender equity

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[5] Analysis was also done using a third level for the classroom, but this added little to the substantive results, so the third level was dropped in favor of a simpler two-level model.

outcomes while simultaneously considering individual student factors. Proportional tests and HLM models will be used in each of the three substantive chapters that follow.

Conclusion

The methods described in this section are all designed to provide insight into potential gender disparities between Catholic, evangelical and secular schools that operate in a developing world context. These methods are also intended to help determine whether religious beliefs and values affect outcomes.

The research site was specifically chosen because of its relevance to this study. Guatemala has one of the largest gender gaps in educational quality and attainment in Latin America. It also has a high percentage of schools that are private and religious. Within this context, a sample was specifically chosen to allow for comparisons between two types of religious institutions (Catholic and evangelical) with an added comparison between religious and secular schools. Survey information from a large sample of over 1600 students from 21 different schools provides the data necessary to make effective comparisons. The survey instruments provide key measures to allow for a clear evaluation of the effect that school type and specific religious beliefs and values have on students' gender attitudes, academic aspirations and self-esteem. The analytical methods employed (latent class analysis, proportional *t*-tests and hierarchical linear modeling) are the most appropriate for the data and purpose of this study.

Although great care was taken to create the best research design for the aims of this research, there are limitations to this approach. These limitations, which include a specific focus on Guatemalan schools, a lack of comparisons to public schools, a lack of

access to data from the Guatemalan Ministry of Education, and a lack of qualitative data, will be discussed in detail in the conclusions below. Despite these limitations, the chapters that follow will demonstrate that the chosen methods effectively provide clear answers to the main research questions. Although more needs to be done to extend the results, this study provides a compelling glimpse into an educational context that has been rarely explored in the past.

CHAPTER 3: GENDER ATTITUDES
IN GUATEMALAN RELIGIOUS SCHOOLS

Introduction

Attitudes about gender roles have a significant impact on the private and public

lives of both women and men. They affect family systems, labor force involvement and

political participation. Although a variety of different factors influence the formation of

gender attitudes, two key socializing institutions are often associated with opposite

effects. Schools are widely cited as promoting gender egalitarianism by regularly

exposing students to egalitarian perspectives (Davis 2007). Religious institutions, on the

other hand, are commonly linked to traditionalist ideologies in the literature (Nussbaum

2000). These competing visions of egalitarianism and traditionalism are juxtaposed in

interesting ways in religious schools. Will students who attend religious schools become

more egalitarian through educational exposure or more traditional through religious

exposure? This question, which has not previously been explored in the literature, is the

focus of the following study. I will seek to determine if students from private Catholic,

evangelical and secular schools in Guatemala differ in their gender ideologies. Results

will provide new insights into the relationship between religion and gender attitude

formation.

Literature Review

The Importance of Gender Attitudes

Gender attitudes, which some researchers refer to as gender ideologies, are

internalized prescriptive cultural beliefs about gender roles and values (Gibbons, Hamby,

and Dennis 1997; Levant 2007). A large body of research has demonstrated that gender

attitudes are important because they are associated with a number of key outcomes inside
and outside the home. First, they affect peoples' domestic lives. Gender egalitarianism is
correlated, in both women and men, with delayed entry into marriage and marital
childbearing, while having no measurable effect on non-marital cohabitation or births to
single parents (Cunningham et al. 2005). Once families are formed, egalitarian attitudes
in husbands or wives or both are positively related to a more equitable distribution of
household labor (Blair and Lichter 1991; Greenstein 1996; Kamo 1998). While this effect
is consistent across cultures, the micro-level influence of gender attitudes on domestic
labor distribution may be partially mediated by macro-level factors such as economic
development, female labor-force participation and welfare regimes in less egalitarian
societies (Fuwa 2004).

The impact of gender attitudes also extends outside the home to employment,
politics and education. First, it affects labor force participation and earnings. Women who
understand the female role as being mainly centered in the domestic realm are less likely
to participate in paid employment (Thornton, Alwin, and Camburn 1983), while women
with more egalitarian attitudes work more hours and have higher hourly earnings than
those who do not (Corrigall and Konrad 2007).

Next, gender attitudes have a strong influence on female political participation.
Ideas about women's role in society can enhance or constrain their political opportunities
(Paxton and Kunovich 2003). In fact, gender ideology is often cited as the most common
reason for low female political participation (IPU 1997).

Finally, and most germane to this study, gender attitudes have an effect on
education. Girls with more egalitarian attitudes have higher self-esteem (Ossana, Helms,

and Leonard 1992) and more self-confidence in their math and science abilities (Grieve, Rosenthal, and Cavallo 1988). Gender attitudes also affect girls' educational attainment. This is because girls' perceptions about the future and the roles that they may one day fulfill often lead them to have either higher or lower educational aspirations. McDaniel (2010) found that girls with more egalitarian attitudes had higher expectations for completing a tertiary degree. Other studies show a link between egalitarianism and the attainment of higher levels of education in girls (Tallichet and Willits 1986; Cunningham et al. 2005).

Because gender attitudes are correlated with so many important outcomes and because, as we will see below, schools have a significant effect on gender attitude formation, it is important to determine whether religious schools have different outcomes for gender formation than non-religious schools. Before we turn to this analysis, however, we must examine the ways in which gender attitudes are formed.

The Formation of Gender Attitudes

Bolzendahl and Myers (2004) suggest that most theoretical explanations for gender attitudes are a function of either interest-based or exposure-based issues. Interest-based theories contend that those whose defined interests benefit directly from a gender egalitarian ideology are more likely to hold feminist attitudes. On the other hand, exposure-based theories argue that change in gender attitudes results from exposure to ideas and situations that bolster feminist ideas.

From an interest-based perspective, it is no surprise that gender is a key predictor for egalitarian attitudes. Although research indicates that both women and men benefit from gender equality (Barnett and Rivers 2004), women are more likely to hold to

egalitarian ideologies because they are more likely to perceive tangible benefits for themselves in the form of economic gain, prestige, self-actualization, and more (Davis 2007; Davis and Greenstein 2009).

While interest-based factors are clearly important, exposure-based predictors, which emphasize gender socialization, receive the most attention in this study. Four key socializing influences are considered in the analysis below: home, education, national culture and religion.

Children's attitudes are strongly shaped by their home environments. Parents' gender ideologies are transferred to their children through daily interactions, through modeling and through the structuring of the home environment (Sutfin et al. 2008). Two key factors have particular influence. First, because there is a strong relationship between education and gender egalitarian perspectives (see Bolzendahl and Meyers [2004] for a review), parents' education levels can affect the gender attitudes of their children. Though some studies give particular attention to the mother's education because of her role as the primary female model for children (Powell and Steelman 1982; Tallichet and Willits 1986), research has shown that both the father's and the mother's education influences children's gender attitudes (Thornton, Alwin, and Camburn 1983; Fan and Marini 2000). Maternal employment is another key factor. Working mothers often serve as egalitarian role models through their labor force participation. They are often exposed to more egalitarian perspectives in the workplace, and their increased responsibilities at work often foster a more egalitarian division of labor in the household. Each of these factors can influence children's gender attitudes (see Fan and Marini [2000] and Davis [2007] for extensive reviews).

Education is a second strong socialization agent for gender equality. Those who are more educated tend to have more egalitarian gender attitudes (Tallichet and Willits 1986; Cunningham et al. 2005). This is because schooling tends to counter ideas about traditional male and female roles (Funk and Willits 1987; Fan and Marini 2000) while supporting ideas of individual autonomy and merit-based achievement (Cunningham et al. 2005). Trend and panel studies consistently confirm that higher levels of education are correlated with increased gender egalitarianism (see Davis [2007] for a review).

Third, children are socialized by their national culture. Different societies have different attitudes and expectations about appropriate gender roles. These varying gender ideologies affect the household division of labor, the institutional opportunities for women, and the female workforce and political participation rates within a given country (McDaniel 2010). While many in Guatemala, where this study was conducted, uphold egalitarian roles for women, machismo is still a relevant social force affecting broad swaths of the population, including those with high socioeconomic status and education levels (Gibbons, Wilson, and Rufener 2006).

Religion, a final important influence on gender attitudes, plays a key role in this study of religious schools. Many scholars contend that religion is adverse to gender equality and thus should be resisted or disregarded. Others view religion as a potential source for improving women's life situations (see Nussbaum [2000] for a review). This tension is particularly evident in Latin America, where scholars have uncovered evidence supporting both positions in this debate. Some scholars, such as Leslie Gill, conclude that the Pentecostal religion that is growing rapidly in the region is detrimental to women because many Pentecostals "view the subordination of women as part of the natural order

[and] they feel that subordination is sanctioned by God, as evidenced by the teaching of

the Bible" (Gill 1990, 716). On the other hand, a number of researchers, including Marie

Friedmann Marquardt (2005), Cecilia Mariz and Dores Machado (1997), and Elizabeth

Brusco (1993), have found that evangelicalism[6] is often supportive of women's

autonomy. This is because its emphasis on family life serves as an antidote to machismo

while providing women with practical improvements in the form of respect and support

from their husbands.

Quantitative studies of religion and gender in the United States have generally

concluded that the religiously affiliated have less egalitarian attitudes than the non-

affiliated and that Conservative Protestants are the least egalitarian (see Fan and Marini

[2000] for a review). However, Fan and Marini's (2000) own nationally representative

longitudinal study found no difference in gender role attitudes that could be attributed to

religious affiliation. They speculate that their more recent findings could be attributable

to changing religious teachings or the dwindling effects of those teachings.

The literature on gender equity and religion also indicates that specific religious

beliefs affect gender attitudes. Steigenga and Smilde's (1999) study on gender equality in

Guatemala and Costa Rica found little difference overall between Protestants, Catholics

and the nonaffiliated in their attitudes toward women's rights in society. However, their

analysis did find a significant link between certain religious beliefs and a respondent's

attitudes toward gender equality. "Two measures of theological conservatism (responses

concerning biblical literalism and Christ's death for our sins) had positive and significant

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[6] While in some contexts the distinction between Pentecostals and evangelicals is important, the two
groups are often indistinguishable in many Latin American societies like Guatemala. In fact,
Guatemalans often call Pentecostals "evangélicos." In this study the terms Pentecostal, evangelical
and Conservative Protestant will be used interchangeably.

effects on agreement with the statement that women should enjoy all the political rights and responsibilities that men do. One measure of millennialism (that Christ will return soon) had a negative and significant effect on agreement" (Steigenga and Smilde 1999, 180). These findings in Latin America run counter to results of studies in the United States in which biblical literalism is consistently correlated with more traditional gender ideologies, especially in regard to women's roles in the home and in religious institutions (Peek, Lowe, and Williams 1991; Hoffman and Bartkowski 2008; Bartkowski and Hempel 2009).

This literature demonstrates the complex nature of gender attitude formation, suggesting that many different factors play a role in its development. Based on the theoretical frameworks presented in this review, I predict a number of different outcomes in the analysis below.

The first and most central research question for this study is whether students from schools with different religious affiliations have different gender attitudes. While schools in general should promote more gender equity, the beliefs and practices espoused by some religious schools may mediate that effect. The findings in the literature on religion and gender attitudes would suggest that students from secular schools will have more egalitarian attitudes than will students from religious schools.

In addition to the influence of religious schools, past research would predict that girls will be more gender egalitarian than boys because they are more likely to benefit directly from gender equality. Additionally, most studies affirm that more exposure to education makes students more egalitarian. More time in religious school may also further expose students to non-egalitarian teachings, but because the vast majority of

research finds a positive relationship between education and egalitarianism, in this study I predict that students in the upper grades should be more egalitarian than those in the lower grades. Furthermore, students whose parents have higher education levels should have gender attitudes that are more egalitarian, while children of homemakers should be less egalitarian because their households are less likely to have an equitable division of labor in the home and because their mothers are less likely to be exposed to gender egalitarian ideologies.

Finally, specific religious beliefs are tested for gender attitude formation. Making predictions here is more difficult because the literature offers somewhat contradictory findings. Since this study is conducted in a Latin American context, the findings of Steigenga and Smilde (1999) will serve as a guide. Thus students who strongly adhere to biblical literalism should tend to be more gender egalitarian, while those who hold to strong millennial points of view should be less so. Additionally, those students who strongly affirm the church's authority in moral and social issues are predicted to be less gender egalitarian because churches often support more traditional views on women's roles.

Before these predictions about gender attitude formation can be tested, however, there is one last thing to consider—how should gender attitudes be measured? This is the focus of the last section of the literature review.

The Measurement of Gender Attitudes

In the field of gender studies, there has been much debate about whether gender is a unidimensional or multidimensional concept. Though initially conceived unidimensionally as a masculine-feminine continuum, later scholarship concluded that it

is best understood multidimensionally, including various perspectives on sex roles, identity, personality and ideology (see Spence [1993]; Spence and Buckner [2000]; and Levant et al. [2007] for examples of different constructions).

Research on gender attitudes has also engaged in debates about the dimensionality of gender equality. Here, too, unidimensional ideas—emphasizing a linear continuum from traditional to egalitarian—have given way to multidimensional conceptualizations (Milo, Badger, and Coggins 1983). Though a number of different factors have been proposed, two factor models distinguishing between public and private gender attitudes have been shown to fit the data best (Milo, Badger, and Coggins 1983; King et al. 1997; McDaniel 2008). The public dimension addresses gender attitudes related to politics, education and the workplace. The private dimension emphasizes domestic attitudes such as who the breadwinner should be, the division of labor in the home, parent-child relationships and family decision making, along with interpersonal relationships outside the home (King et al. 1997; McDaniel 2008).

While the private and public dimensions of gender attitudes have been recognized for some time, little, if any, research has sought to distinguish between respondents' attitudes in each of these dimensions. They are often considered separately, using scales that focus on either the public (Price 2008) or the private (Kaufman 2000) dimensions, or scales that lump the two together (Inglehart and Norris 2003; McDaniel 2008.). However, no study that I am aware of considers the distinctive influence of both dimensions. Is it possible for people to hold more egalitarian public gender attitudes while retaining traditional gender attitudes in the private sphere? Could it also happen the other way around? This public/private distinction has not been adequately addressed in

the literature.

In the pages that follow, I will demonstrate that this is an important empirical distinction that warrants more attention. I begin by using Latent Class Analysis to examine patterns in public and private gender attitudes among Guatemalan private school students. Once these patterns are established, I will use simple t-tests along with more sophisticated Hierarchical Linear Models to determine which factors are most closely correlated with gender attitudes in these different domains. The factors that will be considered in this analysis are those that have been linked to gender attitude formation in previous research.

Methods

Using survey data from 21 different private schools in Guatemala, I compare the gender attitudes of students in Catholic, evangelical and secular private schools. This analysis has two parts. First, Latent Class Analysis (LCA) is used to uncover patterns of gender attitudes among all students in the sample. Next, I use proportional tests and Hierarchical Linear Models (HLM) to determine which gender attitude formation predictors are associated with the resulting gender attitude outcomes for students in each type of private school.

Latent Class Analysis (LCA)

As the literature review indicated above, most research on gender attitudes is conducted using scales derived from a list of survey responses assessing public and private gender attitudes. While this approach is helpful, it does not uncover the patterns in

survey responses that could reveal underlying dimensions in these attitudes. Other studies

use factor analysis to uncover different patterns of gender attitudes, but the analysis

usually stops there. These factors are rarely mobilized to determine which gender attitude

formation predictors and demographic features are associated with the established

dimensions.

I take a different approach by using LCA to find compositional patterns in gender

attitude responses. LCA, which has been used elsewhere to provide fuller, more nuanced

descriptions than traditional scalar methods (Edgell, Mather, and Tranby 2013), is a

statistical method that seeks to determine whether a set of unobserved classes can account

for associations among indicator variables (Clogg and Goodman 1984; McCutcheon

1987; Silverstein and Bengston 1997). It divides the cases into different latent classes that

are conditionally independent, meaning that the variables of interest are uncorrelated with

other variables within any given class. The resulting classes are not observed directly

from the data; rather, they are identified based on patterns of relationships found among

the survey indicators—in this case variations in gender attitudes.

LCA is somewhat analogous to factor analysis, which has been used before to

ascertain different dimensions of gender attitudes. Both methods seek to infer unobserved

constructs from observed data; however, there are two important differences between the

two. First, LCA is most concerned with case patterns, while factor analysis focuses on

patterns in the variables. Second, unlike factor analysis, LCA assigns cases to specific

latent class groups. This allows for further analysis of predictors and outcomes for the

members assigned to these groups—something that is more difficult to do with factor

analysis.

Two types of parameters are estimated in LCA analysis. The *latent class probabilities* identify the prevalence of each latent class. While this parameter can be thought of as the percentage of cases in each latent class, a more accurate analogy would be a mixture or density model, such that each respondent contributes some information to each latent class. The *conditional item probabilities* are specific to a given class and are the probabilities of observing that specific characteristic in each latent class (McCutcheon 1987; Nylund, Asparouhov, and Muthén 2007; Vermunt 2010). Maximum likelihood estimation in Latent Gold 5.0 was used to maximize the log-likelihood function specified by Vermunt and Magidson (2004).

The fit of a specific number of latent classes to the data is determined using several statistics (Vermunt and Magidson 2005). The log-likelihood (LL) chi-square statistic assesses goodness of fit by estimating the proportion of classification errors. Next, the Bayesian Information Criteria (BIC) is used to differentiate between proposed models containing a varying number of latent classes. Finally, the Akaike Information Criterion (AIC) is used to find the most parsimonious model. In general, lower values for LL, BIC and AIC parameters suggest a better fit. One last criterion that can be used to determine the best number of latent classes is the *p*-value for each model under the assumption that the LL statistic follows a chi-square distribution. Generally for models with *p*-values greater than .05, the one with the fewest parameters is the best.

Proportional Tests and HLM to Assess Predictors of Gender Attitudes

After patterns of gender attitudes have been determined using LCA, the next step is to ascertain which factors are associated with each of the established profiles. I begin

this analysis with simple proportional tests to compare outcomes for Catholic, evangelical and secular schools. Because Catholic schools are not exclusive to Catholic students and evangelical schools are not exclusive to evangelical students, I have included analysis that shows the specific impact of each of these schools on students from varying religious traditions.

Next I develop multivariate models to assess correlations between religious schools and gender attitudes when controls for students' gender, grade, family background and religious beliefs are added. Because the students in these surveys are clustered in 21 schools, responses for students from the same school are likely correlated. For this reason multilevel models are more appropriate than traditional ordinary least square methods. Multilevel methods minimize distortion in estimates that could be caused by intraschool correlations by partitioning error variances into between-school and within-school components (Raudenbush and Bryk 2002). In this way between-school effects, such as school type, and within-school effects, such as students' gender, grade, family background and religious beliefs, can be assessed simultaneously. Separate logit models are created to assess correlations of the independent variables with each of the gender attitude profiles that are uncovered through LCA. Hausman tests determined that random-effects models are most appropriate for analyzing differences between these school clusters. Tests were also conducted to ensure that independent variables are not highly correlated, and results for each model have been checked to ensure that outliers do not have an undue impact on coefficients.

Results

Patterns of Gender Attitudes

In this study, five different variables, which are listed in Table 3.1, are used to measure students' gender attitudes. The first variable, suggesting that the man should be the head of the household, assesses gender attitudes in the private domain. The last two fit in the public domain, with questions relating to women's roles in the workplace and in politics. The second variable, suggesting that men are better leaders than women, could apply to the private domain but is most relevant to the public sphere. Dummy variables, reoriented from their original wording to assess gender egalitarianism, were created to ease interpretation. Those who strongly agreed or strongly disagreed, depending on the question, were coded as 1.

Table 3.1: Descriptive Summary of Variables Measuring Gender Attitudes

Variable	Mean	%*
The man should be the head of the family.	2.61	13.16%
(4=strongly agree; 1=strongly disagree)		strongly disagree
The majority of men are better leaders than women.	2.20	20.78%
(4=strongly agree; 1=strongly disagree)		strongly disagree
Women can do the same jobs as men.	3.12	39.50%
(4=strongly agree; 1=strongly disagree)		strongly agree
Someday I would like to see a woman as president of our country.	3.57	61.10%
(4=strongly agree; 1=strongly disagree)		strongly agree

*Either strongly agree or disagree were chosen to represent gender egalitarianism.

The model fit statistics for the LCA are presented in Table 3.2. Based on the indicators described above, the model that best fits the data while maintaining parsimony is the three latent class model. This is an important finding. Had the results indicated that just one latent class is the best fit for the data, it would suggest that traditional scalar (unidimensional) methods are most appropriate. However, the three class finding

Table 3.2: Latent Class Model Fit

Number of Classes	# of Parms.	df	L2	BIC	AIC	Bootstrapped P-Value
1	4	11	479.690	398.084	457.690	0.000
2	9	6	56.730	12.217	44.729	0.000
3	**14**	**1**	**6.530**	**-0.886**	**4.532**	**0.072**
4	19	-4	0.820	30.494	8.819	0.214
5	24	-9	0.039	66.810	18.040	0.448

Table 3.3: Latent Class Analysis Profiles

	Non-Egalitarian	Publicly Egalitarian	Generally Egalitarian
Cluster size	0.130	0.540	0.319
Indicators:			
The Man Is Not the Head of Family			
0	0.892	0.767	0.112
1	0.108	0.233	0.888
Men Are Not Better Leaders Than Women			
0	0.858	0.558	0.032
1	0.142	0.442	0.968
Women Can Do the Same Jobs as Men			
0	0.623	0.296	0.205
1	0.377	0.704	0.795
Would Like to See a Female President			
0	0.766	0.005	0.085
1	0.234	0.995	0.915

demonstrates that variations in the data are best represented by multiple dimensions.
These dimensions are detailed in Table 3.3.

The column headers at the top of Table 3.3 describe the three latent classes that were derived from the LCA. I have named these classes *non-egalitarian, publicly egalitarian* and *generally egalitarian.* These labels describe the distinct differences that I

observe in the three classes. Listed below the headers is the cluster size. This shows that roughly half the students surveyed fit the publicly egalitarian profile. Less than one third are generally egalitarian. The smallest class is the non-egalitarian class.

The last portion of the table provides information about the observed indicator variables and the ways they are patterned in the latent classes. Each of the gender attitude variables from Table 3.1 is listed along with the probabilities of observing that specific characteristic in each latent class (1 indicates strongly agreeing with the statement). In the "Non-Egalitarian" column, there is a probability of 0.108 that a respondent in this class would strongly agree that "the man is not the head of the family" and a probability of 0.892 that respondents in this class would not strongly agree. This output reveals the following patterns of responses for each latent class.

The first thing to note is that two of the latent classes are diametric opposites. On the one hand, non-egalitarians, the smallest of the classes, hold more traditional gender attitudes across the board. They are quite likely to affirm that men should be the head of the family and that men are better leaders than women. They are also likely to disagree that women can do the same jobs as men and that they would like to see a woman as president. On the other end of the spectrum, a larger group of students fit the profile I call generally egalitarian. They are very likely to affirm egalitarian gender roles in each of the survey items. These opposing gender viewpoints fit well with the prevailing literature that regularly contrasts traditionalist attitudes with those that are more egalitarian.

The publically egalitarian profile adds something new to the mix however. While it is probably not surprising that the largest group of respondents lies somewhere between the extremes of the non-egalitarian and generally egalitarian profiles, it is interesting to

note that the members of this class tend to follow a very specific pattern. In the public domain, members of this class are just as affirming of egalitarian attitudes as those in the generally egalitarian profile. In the private domain, however, they tend to be much more traditional. This profile is distinctive in the literature in that it specifically identifies a set of gender attitudes that are simultaneously publicly progressive and privately traditional. As we will see in the analyses that follow, a publicly egalitarian profile opens new conceptual space for comparisons of gender attitudes and the factors that predict them.

Effect of Religious Schools

Having established the gender attitude profiles, I will turn next to the predictions outlined at the end of the literature review above. The first and most central question for this study is whether students from secular schools have more egalitarian attitudes than students from religious schools. I begin examining this question with simple t-tests. Table 3.4 below displays the results of the one sample proportional tests.

The top line of the table provides the sample proportions for each of the gender attitude profiles. These show that the non-egalitarian profile is smallest with approximately 13% of the sample population. Publically egalitarian is the largest with slightly over half the sample population, followed by generally egalitarian in the middle with a little less than one third of respondents. These proportions serve as reference points for the rest of the results in the table. Each section of the table begins with findings for each type of school followed by results for students from the corresponding religious tradition. Because students from various religious traditions attend each type of school, I

have also included output for students from each religious tradition who attend each type of school.

**Table 3.4: Crosstab Comparison of
Gender Attitudes between Religious Schools**

	N	Non-Egalitarian	Publically Egalitarian	Generally Egalitarian
Sample Mean	1678	13.05%	54.05%	31.94%
Catholic School	724	12.71%	46.41%***	40.47%***
Catholic Student	986	10.15%**	52.28%	36.95%***
Catholic Student in Catholic School	613	11.58%	47.31%***	40.78%***
Catholic Student in Evangelical School	211	9.95%	57.35%	30.81%
Catholic Student in Secular School	161	4.97%**	64.60%**	30.43%
Evangelical School	658	15.50%*	57.90%*	24.77%***
Evangelical Student	525	16.19%*	59.05%*	23.24%***
Evangelical Student in Evangelical School	365	18.08%**	58.90%*	21.37%***
Evangelical Student in Catholic School	77	14.29%	48.05%	36.36%
Evangelical Student in Secular School	83	9.64%	69.88%**	19.28%**
Secular School	296	8.45%**	64.19%***	27.03%*
Other Student	165	19.39%**	50.30%	29.70%
Other Student in Secular School	51	15.69%	54.90%	29.41%
Other Student in Catholic School	32	28.12%**	28.12%**	43.75%
Other Student in Evangelical School	82	18.29%	56.10%	24.39%

Significantly different from sample mean at *$p<0.05$; **$p<0.01$; ***$p<0.001$ (two-tail test)

The results in Table 3.4 only partially affirm my prediction that secular schools will be more egalitarian than Catholic and evangelical schools. According to these results, secular schools are indeed more egalitarian than evangelical schools, but the most egalitarian are clearly Catholic schools. Students in Catholic schools are significantly below the sample mean percent for publically egalitarian, but they are nearly nine percentage points above the mean percent for generally egalitarian. These findings are

strongly supported by comparisons between different religious subgroups who attend

Catholic schools. Catholic students in Catholic schools are among the lowest of all

subgroups in adherence to public egalitarianism, and they are among the highest in

general egalitarianism. Evangelicals who attend Catholic schools are 10% less likely to

be publically egalitarian and 13% more likely to be generally egalitarian than evangelical

students in general. The same holds true for students who are not affiliated with the

Catholic or evangelical churches. These students score 22 percentage points lower for

public egalitarianism and 13 percentage points higher for general egalitarianism if they

attend Catholic schools. Interestingly though, students in Catholic schools do not tend to

be less non-egalitarian than the wider sample. In fact, "other" students (those not

affiliated with the Catholic or evangelical church) who attend Catholic schools are more

non-egalitarian by a significant margin.[7] Based on these findings, we can generally say

that students in Catholic schools are the most generally egalitarian of all private student

groups in this region of Guatemala, and as a result they tend to be less publically

egalitarian than others. The percentage of students in Catholic schools who are non-

egalitarian tends to closely mirror wider student adherence to this gender profile.

In contrast, students in evangelical schools are significantly more likely to be non-

egalitarian or publically egalitarian and significantly less likely to be generally egalitarian

than the sample mean. Evangelicals who go to evangelical schools are among the highest

in their support for non-egalitarianism.[8] They are significantly higher than the sample

proportion in public egalitarianism and they are among the lowest in general

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[7] It is difficult to speculate about why this result is so high without learning more about the students who make up this "other" group.

[8] "Other" students are higher, but again these comparisons are difficult because the survey provides no information about these students' religious affiliations.

egalitarianism—10 percentage points below the sample mean. Catholic students who attend evangelical schools also tend to be more publically egalitarian and less generally egalitarian than other Catholic students. The same holds for students attending evangelical schools who are not affiliated with Catholic or evangelical churches. These subgroup findings strongly support the broad picture for students attending evangelical schools. They are significantly more likely to be non-egalitarian and significantly less likely to be generally egalitarian than the wider student population. The majority of evangelical students support public egalitarianism.

Students who attend secular schools tend to occupy a middle ground between Catholic and evangelical students. They are among the least likely to adhere to non-egalitarianism, but they are much less likely to be generally egalitarian than Catholic school students. Secular school students are by far the most likely to hold to public egalitarianism. This pattern clearly holds when comparisons are made between Catholics and evangelicals who attend secular schools and the wider populations of Catholic and evangelical students.

Religious and Nonreligious Effects on Gender Attitudes

The last step in this analysis is to create broader models to assess which religious and nonreligious factors significantly affect gender attitudes. The findings from the *t*-tests above are expanded to determine whether the patterns of difference between school types uncovered in the preceding section will hold when religious and nonreligious controls are added. In the hierarchical linear models that follow, I incorporate various independent variables to measure the effect of factors that have previously been shown to influence

gender attitudes. These variables are listed in Table 3.5, which provides descriptive statistics for the full sample along with separate findings for Catholic, evangelical and secular schools.

Aside from the school variables, I have included controls for the religious tradition of the students. Because they were regularly significant in Table 3.4, I have also included interactions for Catholic students in Catholic schools and evangelical students in evangelical schools. Additionally, the models include a female dummy and a grade level variable to assess whether females and older students are associated with different gender profiles. Homemaker and mother's education variables have been included to determine if less traditional and better educated mothers may impact a student's gender profile. Finally, three theological variables, which have previously been associated with varying levels of egalitarianism, have been added to test the effect of specific religious beliefs.[9]

Table 3.6 below provides the results of multivariate HLM models for each of the three different profiles of gender attitudes. Because the dependent variables are dummies assessing whether students' gender attitudes fit a certain profile, logit models are used. The coefficients are displayed as odds ratios to ease interpretation. Any result that is greater than one indicates increased odds, whereas results less than one represent decreased odds.

The first step in the analysis is to examine correlations between school type and gender profile. Model 1 provides a direct comparison of Catholic, evangelical and secular schools. (Secular is omitted as the reference category to illustrate the effect of religious

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[9] A variable measuring commitment to the idea that Christ died for our sins was a significant indicator in Steigenga and Smilde's (1999) research. I have not included that variable in this analysis because there is very little variation in student responses (80.44% of all students in the sample strongly agreed with this statement) and because it was highly correlated with biblical literalism (90.47% of students who strongly supported biblical literalism strongly agreed that Christ died for our sins).

Table 3.5: Descriptive Statistics of Independent Variables in Gender Attitude Models

Independent Variable	Description of Variable	Sample Mean or %	Cath. Schl. Mean or %	Evan. Schl. Mean or %	Secular Schl. Mean or %
Catholic school	Student goes to Catholic school.	43.10%	100.00%	0.00%	0.00%
Evangelical school	Student goes to evangelical school.	39.30%	0.00%	100.00%	0.00%
Catholic student	Student identifies self as Catholic.	58.90%	85.04%	32.12%	54.58%
Evangelical student	Student identifies self as evangelical.	31.36%	10.66%	55.56%	28.14%
Cath. student in Cath. school	Student is Catholic going to a Catholic school.	36.68%			
Evan. student in evan. school	Student is evangelical going to an evangelical school.	21.80%			
Female student	Student is female.	50.33%	54.13%	46.18%	50.34%
Student grade level	Student's grade in school (Range 5-9)	7.09 (1.41)	7.06 (1.40)	7.19 (1.43)	6.97 (1.40)
Mother's education	Mother's education 0=did not complete primary school; 1=completed primary school; 2=completed middle school; 3= completed secondary school; 4=attended university	2.03 (1.42)	1.96 (1.37)	1.96 (1.48)	2.42 (1.32)
Mother is a homemaker	Student's mother is a homemaker.	38.05%	37.01%	38.99%	38.49%
Biblical literalism	Student strongly agrees that the Bible is inspired by God and must be accepted literally word for word.	67.36%	63.86%	70.80%	68.24%
Christ returns soon	Student strongly agrees that Christians should not be concerned about this world because Christ will return soon to establish his kingdom.	42.75%	36.00%	48.56%	46.28%
Church decides morals	Student strongly agrees that the church should play a key role in deciding what is right or wrong in our societies.	35.79%	38.62%	34.49%	31.76%

Standard deviation in parenthesis

schools.) These findings closely mirror those in Table 3.4. However, when the controls are added in Model 2, we find a few variations in the results. First, while students in evangelical schools are significantly more likely to be non-egalitarian in the base model, this significance disappears in Model 2, indicating that school type is not the most important predictor. The publically egalitarian models show that, even when controls are added, students in Catholic schools remain significantly less publically egalitarian than secular school students. There is no statistically significant difference between evangelical and secular school students in this profile. Finally, the results show that,

when controls are added, Catholic school students are twice as likely to be generally egalitarian than secular school students, while there is no significant difference between evangelical and secular school students. Overall we see that students in Catholic schools tend to be less publically egalitarian and more generally egalitarian than secular school students, while there is no significant difference between students in evangelical and secular schools across the board. These findings negate the prediction that secular schools are more egalitarian than religious schools. In fact, all in all, students in Catholic schools appear to be the most egalitarian. Nothing in the data can explain this difference although Catholic schools do tend to emphasize social justice issues and they are less likely than evangelicals to emphasize "male headship" in the home.

Next I will focus on student characteristics, specifically examining the effect of gender and grade. The full models show that female students are significantly less likely to be non-egalitarian, whereas they are significantly more likely to be generally egalitarian than the male students. This finding is not surprising and it confirms the theory that females' self-interest will make them more egalitarian than males.

The student grade variable follows the same pattern. Students in higher grades (both males and females) are significantly less likely to be non-egalitarian and significantly more likely to be generally egalitarian. This affirms the well-established findings in the literature that those with more education tend to be more egalitarian. However, because these data are cross-sectional, it is not possible to determine if findings are directly attributable to a cumulative effect of exposure to schooling or to a specific type of schooling. This would be an important topic to consider in future studies.

TABLE 3.6: Gender Egalitarian Predictors
Hierarchical Linear Models

	Non-Egalitarian				Publicly Egalitarian				Generally Egalitarian			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE
Catholic school	1.58	(0.37)	2.13	(0.97)	0.48 ***	(0.08)	0.38 **	(0.12)	1.83 **	(0.32)	2.07 *	(0.71)
Evangelical school	1.99 **	(0.47)	1.23	(0.44)	0.77	(0.12)	0.92	(0.19)	0.88	(0.16)	0.95	(0.22)
Catholic student			0.35 **	(0.12)			1.44	(0.32)			1.15	(0.28)
Evangelical student			0.44	(0.20)			2.26 **	(0.68)			0.60	(0.19)
Cath. student in Cath. School			0.76	(0.39)			1.37	(0.48)			0.83	(0.31)
Evan. student in Evan. School			2.40	(1.25)			0.57	(0.19)			1.14	(0.42)
Female student			0.31 ***	(0.06)			1.08	(0.13)			1.63 ***	(0.21)
Student grade level			0.86 *	(0.06)			0.92	(0.04)			1.19 ***	(0.05)
Mother's education			1.07	(0.07)			1.03	(0.04)			0.93	(0.04)
Mother is a homemaker			1.03	(0.20)			0.96	(0.12)			1.04	(0.14)
Biblical literalism			0.60 *	(0.12)			1.30 *	(0.17)			0.95	(0.13)
Christ returns soon			0.95	(0.19)			1.21	(0.15)			0.79	(0.11)
Church decides morals			0.73	(0.15)			1.57 ***	(0.20)			0.69 **	(0.10)
N	1678		1315		1678		1315		1678		1315	
Wald chi-square	8.90		76.11		26.89		64.39		29.43		87.64	

*p>.05; **p>.10; ***p>.01

Surprisingly, the full models register no effect from mother's education or the mother's being a homemaker. This unexpected result does not align with well-established links between mother's education and work status and children's gender attitudes. Here cultural differences may come into play. For some in Latin America, being a homemaker is somewhat of a status symbol, reflecting that the mother does not need to work to support the family. Also, much of women's employment in Guatemala is highly gendered, with many women working as cleaners, vendors, clerks and teachers. The environments that these women work in may not socialize them in the same ways as Western contexts.

Finally, we examine the influence of specific student religious beliefs. First, findings indicate that those students who strongly agree that the Bible is inspired by God and must be accepted literally word for word are significantly less likely to be non-egalitarian and significantly more likely to be publicly egalitarian. This result partially affirms predictions that biblical literalists will be more egalitarian and it affirms Steigenga and Smilde's (1999) findings that literalists will support female economic and political rights. Next, the results show that the "Christ returns soon" variable, which measures millennialist beliefs, is not a significant indicator for any of the gender profiles, negating the findings of Steigenga and Smilde. Finally, those students who strongly affirm that the church should play a key role in deciding what is right or wrong in society are significantly less likely to be generally egalitarian and significantly more likely to be publically egalitarian. This partially supports the prediction that students who strongly endorse church authority will be less egalitarian.

The broad picture painted by the findings for these religious variables is that students who strongly hold to the authority of the Bible and the church do not have a greater propensity to non-egalitarian attitudes as many might suppose. These students tend to support egalitarian roles for women in the public sphere, while embracing traditional roles for women in the home.

Discussion

Contributions

The results of this study contribute to our understanding of gender attitudes in a number of important ways. First, it introduces a new method for studying gender attitudes. Most existing research relies heavily on unidimensional scales that do not effectively measure nuances in respondents' gender attitudes. Other studies use factor analysis to uncover various dimensions of gender attitudes, but these are not deployed in analyses that predict which social factors are associated with each specific dimension. Latent class analysis allows researchers to uncover the various dimensions of gender attitudes, producing profiles that can be incorporated into analytical models as dependent or independent variables. This method has great potential for helping to improve our understanding of gender attitudes and should be employed in future research.

Using the latent class analytical approach, this study produced a new descriptive category for gender attitudes. Traditional scalar models emphasize that people's gender attitudes are non-egalitarian, completely egalitarian, or somewhere in between, but they do not specify the nature of the attitudes that lie "in between." This study's results reveal an additional distinct middle category that is widely affirmed by Guatemalan school children. Public egalitarians, who make up the majority of respondents in this study, tend

to support women's equality in the economic and political spheres while maintaining traditional attitudes in the home. This new category incorporates two separate dimensions of gender attitudes that have previously been discussed in the literature—the public and the private—and pulls them together in a way that has not yet been identified. The fact that this publicly egalitarian profile describes more than half of the respondents in the sample clearly points to its conceptual importance. More needs to be done to understand this gender ideology profile, including the ways that these attitudes are formed and their social and psychological impact. Ongoing research should also determine if this profile transcends the Guatemalan context. Do people hold these same patterns of gender attitudes in the West or in other developing nations? What other profiles may emerge?

In addition to demonstrating a new way to analyze and conceptualize gender attitudes, this study breaks new ground by considering the effect of religious schools. While a number of studies have demonstrated a strong link between education and gender egalitarianism, little, if any, attention has been given to the effect that religious schools have on gender attitude formation. Wider studies on religion and gender would suggest that secular schools would be more gender egalitarian than religious schools. The results in this study reveal a different picture. In fact Catholic schools in Guatemala tend to be the most egalitarian, and evangelical schools are not significantly distinguishable from secular schools in gender attitudes when relevant controls are added. These findings draw attention to the need for more studies on religious schools with special emphasis on the factors that contribute to Catholic schools' more egalitarian outcomes.

This study also provides more insight into the link between religion and gender egalitarianism. First, the contrast between Catholic and evangelical schools in Guatemala

again demonstrates that different religious perspectives are correlated with differing gender outcomes. The Catholic findings also support the claim, by some, that religion can have a positive effect on gender attitudes. One important result in this study is the strong association between evangelicals (and traditional evangelical beliefs) with public egalitarianism. This would explain some of the contradictory findings about Latin evangelicals' gender attitudes. Researchers like Steigenga and Smilde (1999) who focus on women's social rights and participation find no difference or perhaps even a positive association between evangelicalism and gender egalitarianism, whereas those such as Gill (1990) who include the domestic and religious spheres in their analysis point to the non-egalitarian nature of evangelicalism. This again points to the importance of using latent class profiles for gender ideology research because these profiles provide more nuanced measures to help us more clearly understand distinct differences in gender attitudes.

Finally, this study retests a number of well-established theories about gender attitude formation. First, it reaffirms previous findings that females hold more egalitarian perspectives than males. It also supports the well-established theory that those with more education tend to be more egalitarian. Surprisingly, this study finds no correlation between students' gender attitudes and their mothers' education levels or work-force participation. While the link between female education and work-force participation is documented around the world, the transmission of gender attitudes from mother to daughter has mainly been studied in Western contexts. Perhaps this process works differently in Latin contexts. This also is an area that warrants further research.

Overall, this study points to promising new directions in research. It shows the importance of using new methods to develop more multidimensional profiles of gender

attitudes. It highlights the significant role that religious schools have in gender attitude

formation, and it provides a more nuanced picture of religion's effect on gender attitudes.

Each of these important topics deserves more scholarly attention in the time to come.

CHAPTER 4: ACADEMIC ASPIRATIONS
IN GUATEMALAN RELIGIOUS SCHOOLS

Introduction

Girls' education is a key contributor to well-being in the developing world. A post-primary education for girls has been linked to various individual and societal benefits. Individually, girls with higher levels of education have a greater sense of personal empowerment (Moulton 1997). They are more economically prosperous (Psacharopoulos and Patrinos 2002); their overall health is improved (UNICEF 2004); their fertility rates decrease (Forste 1994); and they experience the advantages of wider social, political and economic participation (Mensch, Bruce, and Greene 1998). These benefits also extend beyond the individual to society as a whole in the form of enhanced economic development, improved educational outcomes for the next generation, and healthier families (DeJaeghere 2004; Klasen 2002).

Because educating girls at higher levels has such a significant effect, it is important to examine the factors that contribute to girls' academic attainment. One key component is students' academic aspirations. Since the seminal findings of the Wisconsin studies (Sewell, Haller, and Portes 1969; Sewell, Haller, and Ohlendorf 1970), a large longitudinal project that examined the underpinnings of success, researchers have established a clear link between students' educational aspirations and their eventual attainment (see Bozick et al. [2010] for a review). This connection between aspirations and attainment conforms to common sense. We would naturally expect that those who hope to pursue higher levels of education are more likely to do so than those who have lower academic expectations for themselves.

With the clear link between academic aspirations and achievement in mind, the Wisconsin researchers and many who followed set out to determine which factors contribute most to students' desires to pursue higher levels of education. In addition to the key influence of students' family backgrounds and their peer relationships, numerous studies have shown that schools play a significant role in the development of academic expectations (see Berzin [2010] for a thorough review).

The key role that schools play in forming academic aspirations, particularly for girls, will be the main focus of this chapter. I analyze the association between different types of religious schools in Guatemala and different levels of expectations in their female students. I make direct comparisons between Catholic, evangelical and secular schools to examine the following: 1) differences in aspirations for all students in each school type; 2) differences in aspirations for girls in each school type; and 3) the differentials between girls and boys in each type of school. Full regression models are also developed to determine if significant associations remain in the presence of relevant controls.

Though limited to the context of Guatemalan private schools, results from this study make an important contribution to the literature. Much has been written about educational aspirations, but little has been done to examine gender differences in expectations. (Marini and Greenberger [1978] and Hanson [1994] are two notable exceptions.) Only one study undertakes a cross-national comparison of gender differentials in educational aspirations. This research by McDaniel (2010) focuses exclusively on countries in the Organization for Economic Cooperation and Development (OECD), leaving out countries in the developing world. Because 85% of school-age

children worldwide live in developing countries (UNICEF, WHO, and UNFPA 2003), this gap is a significant oversight. The findings in this study, which do not conform to patterns in the West, further highlight the importance of more research on academic aspirations in the developing world, especially for girls.

This study uses a common approach to measuring academic aspirations (McDaniel 2010). It employs, as a dependent variable, a question that asks if students expect to obtain a tertiary degree. First, direct comparisons between school types are made using this measure. Later, full multilevel logistic regression models are employed to assess outcomes using relevant controls. With this design in mind, the literature review that follows will first summarize the existing literature on tertiary education in the developing world. I will then provide an overview of the importance of academic aspirations for achievement. Finally, I review the predictors that are commonly associated with increased aspirations.

Literature Review

Tertiary Attendance and Aspiration Rates

Global tertiary Gross Enrollment Ratios (GER)[10] are climbing rapidly. Just in the last decade, worldwide rates have jumped from 18.1% in 1999 to 27.1% in 2009 (Klein 2011). While these rates are increasing across the different regions of the world, there are wide discrepancies between countries. At the high end of the spectrum, the United States and countries in Scandinavia have rates at or above 70%, while at the low end, many countries in Sub-Saharan Africa have rates less than 2% (Klein 2011; NationMaster

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[10] The Gross Enrollment Ratio is calculated by dividing the number of students enrolled in a country by the number of students (Soubbotina 2004). The tertiary GER usually used the number of people in the five-year age group following secondary school for its calculations.

2013). The Latin American average GER is 37%, a rate that is above the world average but well below OECD rates (Klein 2011). In Guatemala, however, the GER is much lower than that—8.5% (NationMaster 2013).

Those who study girls' education have given much attention to gender differentials in tertiary education. The Gender Parity Index (GPI), which is a ratio of the number of enrolled females to the number of enrolled males, is a common measure of gender equality in higher education (Koronkiewicz 2013). Female participation in higher education has been steadily rising, and it recently passed an important global milestone. In 1999 the world GPI was 0.98. Ten years later it was 1.08, signifying that globally the female GER is now higher than the male GER (Klein 2011). Currently, female enrollments at the tertiary level have exceeded parity in over 35% of countries (Ortega 2009), but again these rates vary from region to region. With an average GPI of 1.25, Latin American and Caribbean countries fare quite well, scoring slightly ahead of Europe and Central Asia's 1.22 GPI. Again, Sub-Saharan countries constitute the low end of the spectrum with an average GPI of 0.64 (Klein 2011).

In Guatemala, however, gender parity continues to be an important issue. A recent study by Stith, Gorman and Choudhury (2003) found that girls in rural regions were significantly less likely than boys to continue their education beyond the primary grades into secondary school. At the tertiary level, the GPI in Guatemala is only 0.72 (NationMaster 2013).

While GER and GPI have been the focus of much scholarly work, very little has been done to explore the topic of academic aspirations in the world community. Anne McDaniel (2010) was the first to address this topic in the developed world. Her study of

OECD countries showed that, on average, 47% of 15 year olds in OECD countries expect to complete tertiary schooling—that number is closer to 60% in the United States (McDaniel 2010). She also found that, except for Japan and Korea, girls' tertiary expectations exceed boys' expectations in all 29 OECD countries (McDaniel 2010). But, as McDaniel herself indicates, no research has been done on academic aspirations in the developing world. Given the established link between aspirations and attendance, this is an important oversight. Are students in the developing world aspiring to attend higher educational institutions? How do their rates compare with those in the developed world? Are schools and parents encouraging children to pursue higher education? Are there differences between religious schools in student tertiary aspirations? Are there gender differentials in aspirations among the student population as a whole and among religious student populations in particular? What implications might aspirations have on tertiary attendance in the developing world? These are unanswered questions in the literature that this chapter seeks to address by looking specifically at the Guatemalan context.

Theories of Academic Aspirations

In the study of academic aspirations, researchers focus on three broad theoretical frameworks: status attainment, blocked opportunities and social support. Often these are viewed as competing theories, but recent research (Kao and Tienda 1998; Mau and Bikos 2000; Berzin 2010) has examined them concurrently in an attempt to assess their complementary contributions to our understanding of student aspirations.

Status attainment has been the primary theoretical framework for explaining differences in educational aspirations. Beginning with a study by Blau and Duncan

(1967), a number of studies have linked academic achievement and aspirations with family socioeconomic status (Barr and Dreeben 1983; Featherman and Hauser 1978; Sewell, Haller, and Portes 1969). This theory maintains that family factors such as parental education, status, and educational expectations strongly affect children's aspirations (Berzin 2010), and in this way social status is transmitted intergenerationally.

Although little has been done to investigate educational aspirations in the developing world, studies on academic achievement tend to support status attainment theory in these contexts. Research studies conducted in Latin America by Post (1990), Forste, Heaton, and Haas (2004), and Psacharapolous and Velez (1993), together with a study conducted in Thailand and Malawi by Lockheed, Fuller, and Nyirongo (1989) affirm the relationship between household socio-economic status and children's educational attainment although correlations are not as strong as in the West.

Blocked opportunities theories, which focus mainly on educational institutions, take a negative approach to academic aspirations, arguing that students can be prohibited from aspiring to higher education based on messages that they get from schools and sometimes their parents and peers. A number of studies have shown that student difficulties in elementary and secondary schools can lead to discouragement, which makes students less interested in pursuing higher education (Mau 1995; Ogbu 1991; Wilson and Wilson 1992).

Blocking in schools can also be gendered. Schools can hinder girls' aspirations through the following: curricula that track girls away from higher education, pedagogies that limit girls' expectations, a lack of female teachers to serve as role models, and the

absence of educational and career guidance systems that encourage girls to aspire to higher education (see DeJaeghere 2010 for a review).

While not generally considered in blocking theories, gender ideology also plays a role in suppressing girls' educational expectations. A number of studies have shown that girls with less gender egalitarian viewpoints tend to have lower academic aspirations (Davis and Pearce 2007; Eccles 1994; McDaniel 2010). This is often attributed to the perception that girls with more traditional gender attitudes have fewer opportunities and incentives to pursue higher education (McDaniel 2010).

The third theoretical framework points to social support as a key contributor to increased academic aspirations. According to this theory, encouragement and support from family, friends, teachers and others can positively affect students' academic expectations (Berzin 2010). While peers do have an influence on an adolescent's educational and life goals, the expectations and support of parents have the strongest influence on aspirations (Berzin 2010; Hill et al. 2004; Kandel and Lesser 1969). A supportive school environment is also correlated with higher levels of academic attainment (Marjoribanks 2004). Additionally, teacher support, school satisfaction and school behavior expectations are linked with higher academic aspirations[11] (Berzin 2010).

Neo-institutionalists argue that global norms about schooling have contributed to the expansion of higher education, especially in the developing world where, in many instances, higher education rates are greater than they were in European countries just a few decades ago (Schofer and Meyer 2005). According to neo-institutionalists, this rapid

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[11] Teacher support and school engagement lose their significance when family support variables are added to Berzin's models.

growth is driven by prevailing world models of education, which have dramatically expanded mass schooling at the primary and secondary levels. Schools that follow these models tend to extol the values of increased tertiary education as well (Chabotte 2002; Meyer, Ramirez, and Nuhoḡlu Soysal 1992; Schofer and Meyer 2005). These prevailing world models have also had a significant effect on girls' education. The international "Education for All" movement, which had a primary aim to expand girls' access to primary and secondary education, has had a corresponding unprecedented and unforeseen impact on women's higher education enrollment (Bradley and Ramirez 1996; Ortega 2008). Though neo-institutional perspectives are typically not included in social support theories of educational attainment, the global norms about seeking higher education that are regularly propagated at the primary and tertiary levels clearly apply within the social support framework.

In this study of private religious schools in Guatemala, the religious context is also an important consideration. While little, if any, research has been done on the connection between religion and academic aspirations, there is reason to believe that religious institutions could have a blocking or supporting effect. Schools that endorse more traditional gender ideologies may block girls from aspiring to attain tertiary level schooling. On the other hand, religion is often a key source of support (see Edgell, Mather, and Tranby [2013] for a review). It is conceivable that religious groups could provide a supportive environment that encourages girls to aspire for higher levels of education. For this reason, religious school types are included in the models for this study to determine what, if any, effect they have on their students' academic aspirations.

Methods

Using survey data from 21 different private schools in Guatemala, I compare the academic aspirations of students in Catholic, evangelical and secular private schools. This analysis has two parts. I begin with a direct comparison of the three different school types using crosstabs to contrast the proportions of students in each who intend to finish college. In these crosstabs, I include comparisons of all students: girl students separately, boy students separately, and a differential between boys and girls for academic aspirations in each type of school.

Next, I develop multivariate models to assess correlations between religious schools and academic aspirations when control variables are added. Drawing from the theoretical frameworks reviewed above, controls from this study have been specifically chosen to measure the effect of status attainment, blocked opportunities and social support on students' academic attainment. Additional controls have been introduced to test the influence of religion.

Once again, because the students in these surveys are clustered in schools, multilevel models are employed instead of traditional ordinary least squared methods. This is done to minimize the distortion of estimates that could be caused by intraschool correlations. Hausman tests are again used to determine if random-effects models are most appropriate for analyzing differences between these school clusters. Tests have also been conducted to ensure that independent variables are not highly correlated. Finally, results for each model have been checked to ensure that outliers do not have an undue impact on coefficients.

Results

School Type Comparisons of Academic Aspirations

The first analytical step in this paper is a direct comparison of academic

aspirations between different school types. This analysis is conducted using a survey

variable which asks fifth through ninth graders, "When do you think that you will stop

going to school?" Students who answered "after university" are coded 1 and all others are

coded 0. Crosstab comparisons of the academic aspirations dummy variable are used to

determine if there are significant differences between Catholic, evangelical and secular

schools in the aspirations for all of their students, and for girl and boy students

specifically. I also compare the girl-boy differential for each school type. Results for this

analysis are provided in Table 4.1 below.

**Table 4.1: Crosstab Comparisons of
Academic Aspirations between Religious Schools**

	N	All Students	Girls	Boys	Girls – Boys
All Schools	1682	75.56%	78.08%	73.54%	4.54%*
Catholic Schools	725	75.03%	75.71%	74.70%	01.01%
Evangelical Schools	661	75.79%	81.79%*	71.31%	10.48%***
Secular Schools	296	76.35%	76.71%	76.39%	0.32%

Significantly different from all other school types at *$p<0.05$; **$p<0.01$; ***$p<0.001$ (two-tail test)

The first thing to note is the incredible result that 75.56% of all students across all

different types of private schools in Guatemala aspire to finish university. This number

exceeds expectation levels in the United States and across Europe. The only OECD

countries that surpass these Guatemalan students in academic expectations are Turkey

and Korea (McDaniel 2010), and these expectations are present despite the fact that

actual Guatemalan enrollment rates are only 8.5% (NationMaster 2013). The similarity of

the proportions for each type of school suggests that despite the fact that opportunities are limited, all of these schools are fostering high expectations among their students for academic attainment.

Gender comparisons reveal that, across the board, girls aspire to finish tertiary education at significantly higher rates than boys. While this trend mirrors that of most OECD nations (McDaniel 2010), it is somewhat surprising in a context like Guatemala where machismo has been an established feature of society and where opportunities for women have traditionally been limited (Stromquist, Klees, and Miske 2000).

Given the limited data available on academic aspirations in Guatemala, it is nearly impossible to pinpoint the causes for these high levels of aspirations for students, and especially for girls. However, these findings do lend further support to neo-institutional claims that schools around the world are picking up on prevailing world models of education which place a high value on tertiary education in general and which encourage girls to achieve at higher educational levels (Bradley and Ramirez 1996; Ortega 2008).

Finally, it is surprising to note that girls at evangelical schools expect to finish a university level education at higher rates than Catholic and secular school girls. The girl to boy differential is significantly higher at evangelical schools as well. This finding is unexpected given evangelicals' greater propensity to be non-egalitarian. (See the results section in Chapter 3.) Catholic schools, which are most likely to be completely egalitarian, have the lowest rates of tertiary aspirations among girls. This suggests that gender attitudes have little affect on academic expectations in this context, a proposition that will be more fully explored in the next section.

Multivariate Comparisons of Academic Aspirations

In this section, the bivariate findings above will be further tested to see if they stand when appropriate control variables are introduced. Table 4.2 below provides the descriptive statistics for each of the dependent variables that are included in these models. The first three dependent variables (female, evangelical and female evangelical) represent the key findings in the bivariate tables above—namely that girls have higher academic aspirations than boys and that evangelical girls in particular have the highest aspirations.

Table 4.2: Descriptive Statistics of Independent Variables in Academic Aspiration Models

Independent Variable	Description of Variable	Sample Mean or %	Evan. Schl. Mean or %
Female student	Student is female.	50.33%	46.18%
Evangelical school	Student goes to evangelical school.	39.30%	100.00%
Female at evangelical school	Student is female at evangelical school	18.20%	46.18%
Student grade level	Student's grade in school (Range 5-9)	7.09 (1.41)	7.19 (1.43)
Father's education	Father's education 0=did not complete primary school; 1=completed primary school; 2=completed middle school; 3= completed secondary school; 4=attended university	2.24 (1.43)	2.17 (1.48)
Mother's education	Mother's education 0=did not complete primary school; 1=completed primary school; 2=completed middle school; 3= completed secondary school; 4=attended university	2.03 (1.42)	1.96 (1.48)
Non-egalitarian	Student classified as non-egalitarian through latent class analysis.*	13.05%	15.50%
Parents help	Parents help student with homework	62.31%	58.40%
Teacher experience	Years of teaching experience for student's teacher.	2.38 (2.89)	3.26 (3.89)
Female teacher	The student's teacher is a female	62.40%	46.38%
Learning helps	Response to: "The things I am learning in school will help me in life." 4=strongly agree; 1= strongly disagree	3.84 (0.42)	3.83 (0.40)
Evangelical student	Student identifies self as evangelical.	31.36%	55.56%
Female evangelical student	Female student identifying as evangelical.	15.87%	26.15%

Standard deviation in parenthesis
 *Non-egalitarian students are more likely to believe that men should be the head of the family; men are better leaders than women; women can't do the same jobs as men; and they would not like to see a woman president.

A grade variable has also been included to determine if aspirations are higher or lower in the upper grade levels. Each of the remaining dependent variables has been chosen to test the influence of key theoretical factors.

The first set of controls includes measures for father's and mother's education. These variables will be used to assess the status attainment theory that family status, which is often measured through parents' education levels, has a significant effect on students' aspirations.

The blocked opportunities theories focus on the ways in which academic aspirations can be discouraged. This discouragement can often come from schools and teachers, but it can also be imparted through the prevailing non-egalitarian gender ideology of the students' social context. These factors are represented in the multivariate model with variables including school type and non-egalitarian gender ideology.

Next, social support theories argue that support from family, teachers and others can positively influence students' academic aspirations. To assess this theory, four variables have been added. First, on the family side, a variable is included that assesses whether the students' parents help them with their homework. On the school side, variables measuring teachers' experience and gender are used. (The teacher gender variable is important because female teachers are often seen as instrumental in providing role modeling and support for girls' aspirations.) Finally, a "learning helps" variable, which assesses the degree to which a student views the things that they are learning as beneficial for their lives, has been added to the model. Although no link has previously been made in the literature, this attitude among students could influence aspirations

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE
Female student	0.99	(0.15)	0.99	(0.17)	0.97	(0.15)	0.88	(0.16)	0.98	(0.16)	0.75	(0.16)
Evangelical school	0.76	(0.25)	0.80	(0.23)	0.78	(0.25)	0.60	(0.21)	0.76	(0.26)	0.63	(0.21)
Female at evangelical schl.	1.80 *	(0.46)	2.04 *	(0.58)	1.78 *	(0.45)	2.14 **	(0.61)	1.82 *	(0.51)	2.40 *	(0.86)
Student grade level	1.32 ***	(0.06)	1.37 ***	(0.07)	1.31 ***	(0.06)	1.29 ***	(0.07)	1.32 ***	(0.06)	1.31 ***	(0.08)
Father's education			1.16 *	(0.07)							1.15 *	(0.08)
Mother's education			1.18 **	(0.08)							1.19 *	(0.09)
Non-egalitarian					0.73	(0.13)					0.65 *	(0.14)
Parents help							1.10	(0.16)			0.94	(0.16)
Teacher experience							1.06	(0.04)			1.04	(0.04)
Female teacher							1.16	(0.19)			1.20	(0.21)
Learning helps							1.45 *	(0.23)			1.52 *	(0.27)
Evangelical student									0.98	(0.20)	1.02	(0.27)
Female evangelical student									1.02	(0.29)	1.27	(0.47)
N	1659		1316		1655		1241		1651		999	
Wald chi-square	46.83		60.82		49.34		36.70		45.90		49.04	

*p>.05; **p>.10; ***p>.01

because those students who have learned the value of education from their parents and teachers may be more likely to seek to attain more of it.

Finally, an evangelical and a female evangelical variable have been placed into the models. In the bivariate analysis above, evangelical schools were shown to have significantly higher rates of girls' aspirations; therefore, these two measures have been added to determine if these differences can be attributed to the religious tradition of the students.[12]

Table 4.3 shows results from analyses using all of the above listed independent variables. These multivariate models were constructed using Hierarchical Linier Modeling. Because the dependent variable is a dummy assessing whether students aspire to complete a university education, logit models are used. The coefficients are displayed as odds ratios to ease interpretation. Any result that is greater than one indicates increased odds, whereas results less than one represent decreased odds.

Six different models are displayed in Table 4.3. The first is a base model that replicates the key findings in the bivariate analysis above. Here we see that girls at evangelical schools have significantly higher academic aspirations than others. This significance holds when controls are added. In fact, the odds ratios increase in the presence of other controls in successive models.

Model 1 also contains a grade variable, which is significant even when relevant controls are added. Though it is not possible to make a clear determination without longitudinal models, this finding could indicate that the longer students stay in school, the more influence the schools have on their higher educational aspirations. Of course the

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[12] Various variables for religious beliefs and practice were also tried, but these had no significant effect so they were not included in the final models.

findings could also result from dropouts that might occur among those with lower aspirations. More needs to be done to examine this significant correlation.

Models 2, 3, and 4 individually assess the influence of independent variables that serve as indicators for the status attainment, blocked opportunity and social support theoretical frameworks. In Model 2 both father's and mother's education have a significantly positive effect on students' academic aspirations. This significance holds even in Model 6, which includes all independent variables, giving strong support to status attainment theorists' contention that students from higher SES families aspire for higher levels of education as a means to maintain the status position of their parents.

In Model 3, the non-egalitarian variable is not significant, suggesting that students' aspirations might not be inhibited by gender ideologies that do not affirm the importance of women's roles in either the private or the public realm. However, this variable becomes significant in Model 6, demonstrating that the non-egalitarian attitudes are correlated with decreased aspirations if relevant controls are added to the analysis.

Model 4, which tests the social support theories, provides little evidence to uphold it. While it is conceivable that other variables measuring parental and school support could be correlated with increased aspirations, the three variables employed in this study—teacher experience, teacher gender and parental homework help—are not significant. It is important to note that the "learning helps" variable is significant, suggesting that students who believe in the value of education are more likely to pursue it at higher levels.

Finally, Model 5 adds an evangelical student and a female evangelical student variable to the analysis. These were included to see if there was something in particular

about evangelicalism that might explain the increased aspirations in evangelical schools. Results for these variables were insignificant, suggesting that there is something specific about evangelical schools and not evangelicalism in general that contributes to the heightened academic expectations of their female students.[13] One possible mechanism may be the Protestant Ethic, which is synonymous with reduced fatalistic attitudes and an increased sense of dignity, self-discipline and initiative (Mariz 1992; Sherman 1997). These traits, along with a desire to affirm God's calling and favor, could foster strong desires for achievement in students. Since schooling is a primary route for advancement, especially for girls, it may explain why female students in evangelical Protestant schools have higher aspirations than others.

Overall these findings support the status attainment model, which holds true even in a developing context like Guatemala. Students at higher grade levels have higher aspirations, as do those who believe that education provides some benefit for their lives. Two other significant findings include the result showing that female students in evangelical schools are twice as likely as other students to aspire to a college education and the indication that non-egalitarian gender attitudes are negatively associated with academic aspirations.

Discussion

The results of this study highlight a number of interesting findings that warrant further attention. First, as noted above, students in Guatemalan private schools aspire to finish university studies at astonishingly high rates—higher than those in most OECD

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[13] Specific religious beliefs such as biblical literalism and the belief that Christ is returning soon were tested, but none of these were significant so they were excluded from the final models.

countries. This result begs the question as to whether this is a phenomenon that is exclusively limited to private schools in Guatemala or if it is more widespread. Would these rates be as high in Guatemalan public schools? Would they be as high in other Latin American countries, or in developing nations throughout the world? As Anne McDaniel (2010) notes, very little research on educational aspirations has been conducted outside the United States and almost nothing has been done in the developing world. The surprisingly high levels of aspirations in this study suggest that much more needs to be done to understand trends in tertiary aspirations in developing countries and to consider their implications.

Furthermore, it is important to better understand why these students have such high aspiration rates. Answers put forth by previous studies in the West are at least partially supported by this research in a Latin American context. Scholarship dating back to the 1960s has established the importance of status attainment as a driver for academic aspirations and achievement in more developed countries. This study demonstrates that parents' educational status is also highly correlated with students' academic expectations, indicating that status transmission is also a concern in Guatemala and that education could be viewed as an important vehicle for status maintenance there as well.

While this study supports status maintenance theory, it cannot fully explain the extraordinarily high aspiration rates among children in these schools. Although the schools in this sample are private schools, they are by no means elite. On average, mothers of students in this sample have a middle school education and only 21% have any tertiary schooling. Father's average education is slightly above the middle school level, with 27% attaining some level of tertiary education. These education levels for

parents do not explain the 75% tertiary aspiration rates among students. The two other aspirational theories (blocking and social support theories) were also partially supported by the results above, but again, they cannot fully explain the size of the rates.

Unfortunately, the last remaining major theoretical framework for explaining academic aspirations—neo-institutionalism—could not be tested in this study. However, the fact that attainment, blocking and social support theories provide inadequate explanations for the high educational aspirations of these Guatemalan students indicates that it would be worthwhile to test neo-institutional theory in this context. Much of neo-institutional theory is formulated at the macro level, relying on quantitative studies. More micro- and meso-level neo-institutional studies would be beneficial to see if global educational scripts that include an emphasis on tertiary education have indeed entered the classrooms of schools such as those in this study's sample and if so, to determine what impact these scripts are having on the students.

Next, in addition to these theoretical issues, this study also has a number of practical implications. More than 75% of students in this study indicate that they expect to complete a university degree. At the same time, only 8.5% currently enroll in universities. This wide gap between expectations and reality raises a number of important issues. First it suggests that, at least in Guatemala, more needs to be done to provide students with opportunities to achieve their academic goals. The Guatemalan higher educational structure is not adequate to meet student demand for good quality, low cost opportunities to get an education. The gap between aspirations and reality also highlights the potential for student frustration. How will students respond if they are encouraged to aspire to something that is virtually unattainable due to limited supply and high costs?

What effects could arise from this dissatisfaction? Finally, the gap raises larger questions as to the advisability of fostering such high expectations in countries such as Guatemala. Does it make sense to encourage students to pursue something that is likely out of reach? While higher education may be important in Western economies, is it essential in developing economies that may not even be able to support large numbers of jobs for university graduates?

Another practical outcome is the finding that students who believe that their education is beneficial to their lives are more likely to want to stay in school longer. This may seem obvious, but it is not widely addressed in the literature on academic aspirations. It also suggests that schools need to give more attention to providing their students with a sense of the practical relevance of schooling for their lives.

Finally, this study set out to specifically compare different types of private schools to determine if there is a significant difference between them in academic aspirations, particularly for girls. The results indicated that when boys and girls are considered together, these private schools seem to do equally well; however, females in evangelical schools tend to have the highest aspirations of all the students. This finding that evangelical schools score highest in girls' aspirations is curious given the fact that evangelical schools have significantly lower levels of father and mother education, parental homework help, and female teachers than other types of schools. Evangelical schools also have significantly higher numbers of students who are non-egalitarian in their gender attitudes. All of these outcomes would generally suggest lower student aspirations, especially for girls. Evangelical schools do tend to have more experienced teachers than other schools, but this is not a significant variable in any of the models.

Other measures, such class size and teacher education, were tested but not included because they produced insignificant results. While data acquired for this current research provide no clear explanation for this phenomenon, it may be best explained by the Protestant Ethic (Weber [1930] 2002) which is alive and well in Guatemala (Sherman 1997). Because achievement and a calling in the world can best be achieved, for girls especially, through education, this may explain why evangelical schools do so much to encourage their girls to aspire to higher levels of education.

Though much more needs to be done to fully explore the implications of this study, the results do point to a number of significant findings that have implications for education and societal change around the world. The high rates of academic aspirations for boys, and especially for girls, point to the potential for growing demand for education in developing countries like Guatemala. They also suggest that private evangelical schools in some way contribute to this demand. The implications of these high aspiration rates are, as yet, unforeseeable, but given the gap between expectations and reality, they clearly merit further attention.

CHAPTER 5: SELF-ESTEEM IN GUATEMALAN RELIGIOUS SCHOOLS

Introduction

One important goal for schools is to enhance their students' well-being, including their self-esteem (Bagley 1989; Bagley et al. 1979). Positive self-esteem is correlated with academic achievement, occupational success, positive relationships with others, healthy coping skills, and a general sense of well-being. On the other hand, low self-esteem is associated with a variety of psychological, physiological, behavioral and social problems (Kutob et al. 2010). Some studies have shown that religious schools, particularly Catholic schools, have higher outcomes for self-esteem (Bryk, Lee, and Holland 1993; Coleman, Hoffer, and Kilgore 1982). These studies have a number of shortcomings in that they do not include important controls for factors such as socioeconomic status (SES), gender, and specific religious beliefs, and they do not consider other types of religious schools. However, they do highlight the importance of religious considerations, which have been shown to have a significant impact on self-esteem (Thompson, Thomas, and Head 2012).

Using data gathered from students in private Guatemalan schools, this research builds on previous studies done in Catholic institutions and extends their findings by including additional controls and by introducing comparisons with evangelical schools. Results provide more insight into the religious factors that are associated with self-esteem outcomes in schools by emphasizing the importance of specific beliefs such as biblical literalism and a strong sense that the Holy Spirit is active today. This study also develops more comprehensive statistical models than other studies by introducing measures for family background and including the effects of specific types of esteem on one another.

Literature Review

Definitions of Self-Esteem

Self-esteem is commonly defined as "the overall affective evaluation of one's own worth, value, or importance" (Blascovich and Tomaka 1991, 115). More broadly, it refers to the positive or negative feelings that one has about oneself including the extent to which one prizes, values or likes oneself (Gecas 1982).

Several aspects of self-esteem are emphasized in the literature. One of the most common is a straightforward subjective evaluation that "I like myself," or "I have a high self-esteem" (Robins, Hendin, and Trzesniewski 2001). A second aspect understands self-esteem to be "an internal, psychological system that gauges the degree to which an individual feels included versus excluded by other people" (Cacioppo et al. 2008, 200). Rooted in interactionist theories (Cooley 1902; Mead 1934), this perspective emphasizes that self-concept often reflects people's perceptions of the appraisals that others make of them (Gekas 1982). This involves a sense of inclusion—of being liked by others. A third aspect of esteem is a sense of confidence that one has the ability to meet the demands of a task or cope with one's social environment (*Psychology Dictionary* 2013; Ridgeway 1979). This sense of confidence can be applied to specific contexts such as a positive evaluation of school performance (Cheung and Yeung 2010; Wilhite 1990). Each of these three aspects of self-esteem is employed as a dependent variable in this study.

Importance of Self-Esteem

A raft of research has demonstrated the importance of self-esteem. Higher levels of self-esteem have been linked to increased achievement, coping relationships, well-being and health. On the other hand, low self-esteem is associated with a number of psychological and behavioral concerns ranging from anxiety to suicide (see Trzesniewski et al. [2006] and Kutob et al. [2010] for reviews). More specifically, academic self-esteem is correlated with increased academic achievement, along with decreased substance abuse and deviant behavior (see Cheung and Yeung [2010] for a review).

The development of self-esteem in children and youth is particularly important. Self-esteem is relatively pliable for children and early adolescents (Trzesniewski, Donnellan, and Robins 2003). Often self-esteem grows during early adolescence—possibly because of greater self-understanding, increased autonomy, and wider latitude to engage in activities that one enjoys (Demo 1992). Self-esteem then solidifies in the late teens and remains quite stable through adulthood until old age (Trzesniewski, Donnellan, and Robins 2003). The self-concept that forms during these years has long-term consequences. Low self-esteem in adolescence is associated with decreased mental and physical health, lower academic achievement, and increased incidences of financial problems and criminal conduct throughout adulthood (Trzesniewski et al. 2006). For this reason, it is critical for children and adolescents to develop a healthy sense of self-esteem. The following paragraphs will examine the factors that contribute to this development.

Development of Self-Esteem

In their influential research, Rosenberg and Pearlin (1978) identify four processes through which self-esteem is developed. First, through *social comparison,* individuals reference their own abilities, opinions, status, and other attributes to those held by others. This ranking process affects self-esteem. Second, through *reflected appraisals,* individuals make value judgments about themselves based on their personal evaluations of how others perceive them. Third, through *self-perception,* individuals develop an image of themselves by observing their own behaviors and evaluating their abilities and dispositions. Finally, *psychological centrality* affects self-esteem. Psychological centrality theories argue that the value individuals place on various self-rated traits affects global self-esteem. For instance, two children may self-assess that they are poor and that they have a lot of friends. The child who places high personal value on relationships is more likely to have higher global self-esteem, whereas the child who values status or material possessions is more likely to have lower global self-esteem. Each of these four processes serves as a filter through which individuals evaluate and organize objective experiences of their environment to develop a sense of self. This sense of self in turn affects how individuals relate to their environment.

Rosenberg and Pearlin (1978) note that these four specific processes can be further classified into two general processes. The first two processes—self-comparison and reflected appraisal—are more sociological. They involve different types of interpersonal rankings. The last two—self-perception and psychological centrality—are more psychological. They emphasize the importance of personal evaluations of social structural facts. Each of these processes is prevalent in the literature on self-esteem. Some

research emphasizes the importance of social location. Other studies stress factors that may affect one's personal value judgments. Most research draws on both types of factors. This study will do the same.

Schools and Self-Esteem

Schools are important sites for self-esteem formation (Bagley 1989). School teachers and administrators work with children and adolescents at a time when they are at vital stages for self-concept formation (Demo 1992; Trzesniewski, Donnellan, and Robins 2003). Within the school environment, students go through each of the four fundamental processes of self-esteem development. Students make social comparisons to their classmates and teachers. Their reflected appraisals are shaped by interactions with peers and authorities at school. School activities and interactions provide opportunities for students to develop their own self-perceptions about their abilities and dispositions. Finally, schools directly and indirectly teach values which influence the development of students' psychological centrality.

Because schools emphasize different values and create different environments in which students can make comparisons and evaluate their abilities, one would expect that they would each have different self-esteem outcomes. This has been shown to be the case, especially in religious schools. Coleman, Hoffer, and Kilgore (1982) and a decade later Bryk, Lee, and Holland (1993) showed that Catholic students had higher levels of academic achievement and self-esteem when compared to public school students from similar backgrounds. However, further studies have suggested that it is not Catholic schools per se that contribute to improved self-esteem, but rather student religiosity (Bagley and Mallick 1997; Smith, Weigert, and Thomas 1979). In the studies above,

comparisons are made between Catholic and public schools and between Catholic schools in different cultures, but no current studies compare different types of religious schools. Only Smith, Weigert, and Thomas (1979), whose study compares Catholic schools in different cultures, introduce specific religious beliefs into their analysis. This study expands on the work that has gone before by introducing evangelical schools into the equation. It also introduces a wider range of demographic and religious controls than has been used in previous studies.

In addition to the social comparisons that take place in schools and the values that are instilled through religious and other types of formal and informal teaching, schools can affect self-esteem through self-perception processes. As they work on school projects, students evaluate their academic abilities. This evaluation affects self-esteem. Studies have shown that, while the effect is mediated by the value that students put on academic performance, academic self-esteem has a powerful influence on global self-esteem (Rosenberg, Schooler, and Schoenbach 1989; Rosenberg et al. 1995)[14]. Since schools can greatly influence academic self-esteem, the effect of academic self-esteem on global self-esteem will also be an important consideration in this study.

Family and Self-Esteem

In addition to schools, family background plays a key role in students' self-esteem development. Family ties are critical to self-esteem for the duration of life (Coleman, Ivani-Chalian, and Robinson 1993). Parental engagement, closeness, communication and role modeling are key indicators in self-esteem development (Youngblade et al. 2007).

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[14] Interestingly, Rosenberg et al (1995) demonstrated that academic self-esteem has a more powerful influence on global self-esteem than the effect that global self-esteem has on school marks.

The socioeconomic status (SES) of a students' family is another important

consideration. Although SES is more highly correlated with self-esteem in adulthood—

likely because esteem is more influence by a sense of earned advantage rather than

inherited status (Twenge and Campbell 2002)—children's self-concepts are also affected

by SES through social comparisons and reflected appraisals (Thompson, Thomas, and

Head 2012; Twenge and Campbell 2002). While family is not a central concern for this

study, measures of parental engagement and SES (mother's and father's education) are

added to models as important controls.

Gender and Self-Esteem

In 1991, the American Association of University Women (AAUW) published a

highly influential study demonstrating that girls' self-esteem dropped precipitously in the

transition from childhood into adolescence. As girls moved from elementary school, they

became less confident in their math and science skills and expressed lower career

aspirations than boys. The AAUW study predicted that this lower sense of self-esteem

would have a detrimental effect in girls' futures (AAUW 1991). Subsequent, more

detailed studies have supported the fact that a gender gap in self-esteem persists, but they

have found that the magnitude of the AAUW's findings are largely overstated (see Kling

et al. [1999] for a meta-analysis). Additionally, in contrast to the AAUW's findings,

Kling et al. (1999) show that gender differences in self-esteem actually remain fairly

constant over time.

Gender differences in self-esteem for school children are easily attributable to the

key formation processes highlighted by Rosenberg and Pearlin (1978). Through social

comparison, girls compare their status and opportunities with those of boys. Girls have different reflected appraisals of approval and expectations from teachers, and they have numerous opportunities to compare their skills and dispositions to those of boys.

Rosenberg and Pearlin's fourth self-esteem development process, psychological centrality, is closely connected to gender ideology. This is because values are a key component of gender ideology. For example, a girl who excels in math and science may get messages from authority figures that "girls don't do that." This disconnect between perceived skills and internalized values about what girls should and should not do could negatively affect self-esteem. Research has clearly shown the importance of gender ideology for girls' self-esteem development. Girls with non-traditional attitudes toward gender roles are more likely to have higher self-esteem (Lennon et al. 1999), while less egalitarian gender attitudes negatively affect self-esteem (Brown 2003). This association works both ways. Girls with a higher sense of self-esteem are also more likely to hold to less traditional gender roles (Ridgeway and Jacobson 1979).

Religion and Self-Esteem

In the social science literature, there is an ongoing debate about the effect that religion has on self-esteem. Some studies have found no relationship between religion and self-esteem, although these focused exclusively on religious attendance and the self-rated importance of religion (Donahue and Benson 1995; Milot and Ludden 2009). Another study, using similar variables, found a positive relationship between religiosity and esteem (Bagley and Mallick 1997). Markstrom's (1999) research found no relationship between religiosity and general self-esteem; however, academic esteem was

associated with religious attendance, youth group involvement, and participation in Bible study groups. These mixed results are well documented in the work of Abbotts et al. (2004).

Although findings to date are somewhat inconclusive, there are many reasons to postulate that religious factors should affect self-esteem. Emphasizing the sociological aspects of Rosenberg and Pearlin's (1978) theory, Thompson, Thomas, and Head speculate that because they are often supportive environments, "church-based relationships may provide reflected appraisals and social comparisons that facilitate positive self-evaluations as well as opportunities for social interactions that promote positive self-awareness" (2012, 387). Smith, Weigert and Thomas argue that self-esteem differences amongst Catholic students from different cultures in their study may relate to the comparative status of the varying religious groups. Those Catholics in minority positions within their cultures likely had higher levels of self-esteem because "the continuing requirement to affirm status and existence vis-à-vis other meaning systems serves to place the religious dimension in a more salient position in self-evaluation" (1979, 58). Finally, for believers, reflected appraisals are additionally formed in light of the divine. Those who believe that they are truly loved and accepted by God despite their sins and shortcomings may have a higher self-esteem regardless of whether they believe that the people with whom they interact think well of them. David Myers argues that there is an "interplay between our God-concept and our self-concept" (2008, 328). He notes that from a religious perspective, "no longer is there any need to define one's self-worth by achievements, material well-being, or social approval. To find self-acceptance,…*[s]imply accept the fact that you are accepted!"* (327, italics in the

original).

Psychological processes are also a consideration. Smith, Weigert, and Thomas argue that churches prescribe values about who one should be and what one should do, providing a standard by which adherents can compare their own conformity. "An individual's evaluation of how well he or she stands with reference to this aspect of the ideal self is related to self-esteem" (1979, 52).

Other religious factors have also been linked to self-esteem. Religious tradition is one such factor. Several studies on religion and self-esteem have focused on Catholic schools. These have demonstrated that Catholic students have higher levels of self-esteem than their public school counterparts (Coleman, Hoffer, and Kilgore 1982; Bryk, Lee, and Holland 1993). Smith, Weigert and Thomas's (1979) comparative study of Catholic students from different cultures found variations in self-esteem that were mainly attributable to religiosity but also found differences in culture and gender ideology.

Other studies have noted associations between higher self-esteem and Protestantism, especially Pentecostalism. Pentecostal churches emphasize that members can relate directly to God. They provide a variety of leadership roles to ordinary lay members and they offer a strong sense of community and support. All of these factors contribute to improved self-esteem (Mariz 1992).

In addition, Pentecostal theology emphasizes the empowerment of the Holy Spirit in individual's lives. This gives people a sense that their lives can change, reducing fatalistic attitudes and increasing the sense of dignity, self-discipline and initiative (Mariz 1992; Sherman 1997). These traits typify the Protestant Ethic, which among other things, has been tied to an increased sense of self-esteem (Quinn and Crocker, 1999; Suh and

Jayoung, 2008).

As is the case in many studies of religion, beliefs about the Bible are also a key consideration for self-esteem. In fact, Thompson, Thomas, and Head argue that this "may be one of the most important aspects of religiosity affecting individuals' evaluations of themselves" (2012, 387). This is because the Bible authoritatively provides a sense of ontological security, a foundation for hope in difficult circumstances, and the conferment of status in the eyes of God (Thompson, Thomas, and Head 2012).

Though numerous studies have examined the effect of religion on self-esteem, none have directly compared Catholic and Protestant traditions and none have considered all of these factors together. This research aims to address these shortcomings.

Methods

This study will use the survey data from the 21 different Guatemalan private schools that are described in the "Data and Methods" chapter. Self-esteem comparisons will be made of students in Catholic, evangelical and secular private schools. Measures for the three different aspects of self-esteem mentioned in the literature review above will be considered.

The first measure is a subjective evaluation. It is simply derived from students' Likert-type responses to the statement "I like myself." Though using a single self-report item is less common than more complex self-esteem scales such as the Rosenberg Self-Esteem (RSE) Scale, Robbins, Hendin, and Trzesniewski (2001) have shown that a single item provides a reliable alternative to multiple item scales, especially in circumstances

such as this where the goal is to discover individuals' conscious experience of self-esteem.

A second measure that gauges the degree to which students feel accepted and included is employed to specifically measure students' reflected appraisals. Again, a single Likert-type statement, "people like me," is used.

Finally, a third set of measures is included to assess students' academic esteem, a commonly used, domain-specific measure that examines students' self-confidence in their ability to complete tasks and cope with life's challenges (Cheung and Yeung 2010). Here, three measures will be used to assess academic esteem—self-evaluations of reading, math and science skills.

The analysis will begin with a direct comparison of the three different school types contrasting student outcomes for each aspect of self-esteem. In these cross tabulations, I include comparisons of all students, girl students separately, boy students separately, and a differential between boys and girls for self-esteem in each type of school.

Next I develop multivariate models to assess correlations between the various types of self-esteem and a list of independent variables. Drawing from the theoretical frameworks reviewed above, independent variables for school type, gender and gender ideology, grade level, parent's education, parental support, and religious measures such as attendance, saliency, Pentecostal beliefs and biblical literalism are included to test the effect of these factors on esteem. Again hierarchical linear models (HLM) are used to minimize the distortion of estimates that could be caused by intraschool correlations.

Results

School Type Comparisons of Self-Esteem

Table 5.1 provides results for the self-evaluation and reflected appraisal variables.

The first section of the table displays the percentage of students who strongly agree to the

statement "I like myself." Results, which are provided for all students, girl students, and

boy students, are broken out by school type. Asterisks indicate that outcomes for one

school type are significantly different from all other school types. The last column notes

the differences between girls and boys in each school type. Crosses in this column

indicate significant differences between boys and girls, all of which are at the $p<0.001$

level.

Table 5.1: Crosstab Comparisons of Self-Esteem and Reflected Appraisals between Religious Schools

	N	**I like myself (% strongly agreeing)**			
	N	**All Students**	**Girls**	**Boys**	**Girls - Boys**
All Schools	1678	76.22%	76.59%	75.79%	0.80%
Catholic Schools	725	73.93%*	73.39%*	74.39%	-1.00%
Evangelical Schools	658	76.90%	78.74%	75.43%	3.31%
Secular Schools	295	80.34%*	80.69%	79.86%	0.83%
		People like me (% strongly agreeing)			
	N	**All Students**	**Girls**	**Boys**	**Girls - Boys**
All Schools	1680	34.58%	29.46%	39.66%	-10.20%[†]
Catholic Schools	725	30.76%**	24.03%***	37.80%	-13.77%[†]
Evangelical Schools	659	37.62%*	34.44%**	40.29%	-5.85%
Secular Schools	296	37.16%	33.56%	42.36%	-8.80%

Significantly different from all other school types at *$p<0.05$; **$p<0.01$; ***$p<0.001$ (one-tail test)
[†]Significant differences between boys and girls at $p<0.001$ (one-tail test)

While the overall results show that a high number of students—about 76%—

strongly agree that they like themselves, Catholic students, in general, and Catholic girls,

in particular, report lower levels of self-esteem than students at other schools. Secular

school students report higher levels of self-esteem than other schools. There are no significant differences between boys and girls on these self-evaluations.

The second section of Table 5.1 shows results for the reflected appraisal statement "People like me." Here the rates are much lower. On average, only 34% of students strongly agree that they think others like them. This represents a 42% differential between the self-evaluation and the reflected appraisal. Findings here also indicate that there is a wide gap between boys and girls in reflected appraisals across all schools. This gap between boys and girls is widest at Catholic schools. Again Catholic school students, in general, and Catholic school girls, in particular, report significantly lower reflected appraisals than the other schools. Evangelical school students, in general, and evangelical school girls, in particular, report significantly higher reflected appraisals.

Table 5.2 reports findings for three different indicators of students' academic esteem—confidence in reading, math and science. All three indicators are derived from a question asking students how good they are at these respective subjects. The tables indicate the percentage of students who marked "good" or "really good" for each subject.[15] There are too many significant findings in this table to discuss in detail, but the general trend is that Catholic school students report significantly lower levels of confidence across all subjects for boys and girls. (Boys' math scores are the one exception.) Interestingly, there are no significant differences between boys and girls in math and science, and girls generally have a much higher confidence score in reading than boys do.

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[15] An overall academic confidence scale was not used because the three variables lacked internal consistency (Cronbach's alpha = 0.49).

Table 5.2: Crosstab Comparisons of Academic Confidence between Religious Schools

	N	All Students	Girls	Boys	Girls - Boys
		% considers self really good or good in reading			
All Schools	1682	74.44%	80.84%	67.60%	13.24%[†]
Catholic Schools	725	70.48%**	77.26%*	62.20%**	15.07%[†]
Evangelical Schools	661	78.82%***	87.42%***	71.02%*	16.39%[†]
Secular Schools	296	74.32%	76.71%	71.53%	5.18%
		% considers self really good or good in math			
	N	All Students	Girls	Boys	Girls - Boys
All Schools	1682	62.60%	62.28%	62.99%	-0.71%
Catholic Schools	725	59.45%**	57.11%*	61.28%	-4.17%
Evangelical Schools	661	62.63%	63.58%	62.50%	1.08%
Secular Schools	296	70.27%	73.29%**	68.06%	5.23%
		% considers self really good or good in science			
	N	All Students	Girls	Boys	Girls - Boys
All Schools	1682	73.96%	75.09%	73.06%	2.03%
Catholic Schools	725	70.07%**	71.83%*	67.99%*	3.85%
Evangelical Schools	661	76.40%*	79.47%*	74.15%	5.32%
Secular Schools	296	78.04%*	74.66%	81.94%**	7.29%

Significantly different from all other school types at *$p<0.05$; **$p<0.01$; ***$p<0.001$ (two-tail test)
[†]Significant differences between boys and girls at $p<0.001$ (two-tail test)

Multivariate Analysis of Self-Esteem

School types are just one factor that could influence self-esteem in children. In this next section, I create multivariate models incorporating variables that have been shown in past research to affect self-esteem. These models provide a test for a number of different theories while serving as a check to see if the significant differences uncovered in Table 5.2 still stand in the presence of relevant controls.

Table 5.3 contains a list of the independent variables used in this analysis. These variables are displayed with descriptive statistics for the entire sample and for each

Table 5.3: Descriptive Statistics of Independent Variables in Self-Esteem Models

Independent Variable	Description of Variable	Sample Mean or %	Cath. Schl. Mean or %	Evan. Schl. Mean or %	Secular Schl. Mean or %
Catholic school	Student goes to Catholic school	43.10%	100.00%	0.00%	0.00%
Evangelical school	Student goes to evangelical school	39.30%	0.00%	100.00%	0.00%
Female student	Student is female	50.33%	54.13%	46.18%	50.34%
Student grade level	Student's grade in school (Range 5-9)	7.09 (1.41)	7.06 (1.40)	7.19 (1.43)	6.97 (1.40)
Not gender egalitarian	Student classified as non-egalitarian through latent class analysis.*	13.05%	12.71%	15.50%	8.45%
Father's education	0=did not complete primary school; 1=completed primary school; 2=completed middle school; 3= completed secondary school; 4=attended university	2.24 (1.43)	2.17 (1.39)	2.17 (1.48)	2.58 (1.39)
Mother's education	0=did not complete primary school; 1=completed primary school; 2=completed middle school; 3= completed secondary school; 4=attended university	2.03 (1.42)	1.96 (1.37)	1.96 (1.48)	2.42 (1.32)
Parents provide homework help	Parents help student with homework (% answering "yes")	64.10%	67.52%	60.03%	64.83%
Church attendance	Attends church 6=Once a week or more; 1=almost never	4.72 (1.72)	4.75 (1.67)	4.77 (1.70)	4.50 (1.85)
Serving God is important	Serving God is one of student's top four values**	81.62%	75.29%	89.54%	79.64%
Catholic student	Student self-identifies as Catholic	58.90%	85.04%	32.12%	54.58%
Holy Spirit is active today	Student strongly agrees that God still pours out his Spirit on believers today like he did in biblical times.	66.11%	61.79%	70.50%	66.89%
Biblical literalism	Student strongly agrees that the Bible is inspired by God and must be accepted literally word for word.	67.36%	63.86%	70.80%	68.24%

Standard deviation in parenthesis

*Non-egalitarian students are more likely to believe that men should be the head of the family; men are better leaders than women; women can't do the same jobs as men; and they would not like to see a woman president.

**Other values include thinking for myself, success, honest, hard work, enjoying life, family and friends, getting good grades, doing right, respecting other (10 total)

school type. To test for the effect of school type, Catholic and evangelical school dummies are included in the main model with secular schools withheld for comparison.

The next three variables are used to assess the gender differences in self-esteem. A female dummy variable is used along with a variable to assess non-gender-egalitarian attitudes. School grades serve as a basic control, but this variable is also used as an interaction term with the female dummy to assess whether older girls have higher or lower levels of self-esteem than younger girls.

To evaluate the influence of family background on self-esteem, a block of three more variables are included. Father's and mother's education provide a rough measure of SES and another variable asking whether parents provide homework help serves as an indicator of parental involvement.

The remaining variables are all religious measures. The first two, "church attendance" and "serving God is important," are included because attendance and religious saliency are commonly used measures in studies on self-esteem and faith. The next two focus on the student's religious tradition—one is for Catholic students and the other, which asks if students believe the Holy Spirit is active today, is used as a rough indicator of Pentecostal beliefs and practices. Finally, a measure for biblical literalism has been included in the models. Though they are not listed in Table 5.3, different measures of self-esteem will be included in the models to see how they affect each other.

Table 5.4 provides the results of multivariate HLM models for each of the five measures of self-esteem. Because the dependent variables are dummies assessing high levels of esteem in each of these five areas, logit models are used. The coefficients are

<p align="center">**Table 5.4: Multivariate Models of Self-Esteem**</p>

	I like myself		People like me		Reading confidence		Math confidence		Science confidence	
	OR	SE	OR	SE	OR	SE	OR	SE	OR	SE
Catholic school	0.80	(0.67)	0.67 *	(0.13)	0.89	(0.18)	0.62 *	(0.15)	0.86	(0.24)
Evangelical school	0.76	(0.98)	0.98	(0.19)	1.44	(0.31)	0.83	(0.20)	1.02	(0.29)
Female student	1.02	(1.98)	1.98	(1.34)	2.34	(1.71)	2.91	(1.94)	1.37	(1.03)
Student grade level	1.09	(1.09)	1.09	(0.07)	1.04	(0.07)	0.95	(0.06)	0.88	(0.07)
Female x grade level	1.01	(0.83)	0.83 *	(0.08)	1.00	(0.10)	0.86	(0.08)	0.97	(0.10)
Not gender egalitarian	0.89	(0.77)	0.77	(0.17)	0.83	(0.18)	1.04	(0.22)	0.75	(0.17)
Father's education	0.92	(1.01)	1.01	(0.06)	1.05	(0.07)	1.06	(0.06)	1.07	(0.07)
Mother's education	1.08	(1.16)	1.16 *	(0.07)	1.10	(0.07)	1.09	(0.06)	1.06	(0.07)
Parents provide homework help	1.39 *	(1.20)	1.20	(0.15)	0.90	(0.12)	0.95	(0.11)	1.37 *	(0.19)
Church attendance	0.99	(1.03)	1.03	(0.04)	1.08	(0.04)	1.02	(0.04)	1.02	(0.04)
Serving God is important	1.47 *	(0.95)	0.95	(0.17)	1.21	(0.22)	1.21	(0.20)	0.90	(0.17)
Catholic student	1.05	(1.21)	1.21	(0.19)	1.04	(0.18)	1.15	(0.18)	0.83	(0.14)
Holy Spirit is active today	1.53 *	(1.14)	1.14	(0.18)	1.12	(0.18)	1.35 *	(0.20)	1.14	(0.18)
Biblical literalist	1.85 ***	(1.45)	1.45 *	(0.23)	0.90	(0.15)	0.91	(0.14)	1.13	(0.19)
I like myself			2.81 ***	(0.53)	1.12	(0.19)	1.12	(0.18)	1.12	(0.19)
People like me	2.75 ***	(2.81)			1.70 **	(0.27)	1.34 *	(0.19)	1.86 ***	(0.30)
Reading confidence	1.07	(0.19)	1.58 **	(0.26)						
Math confidence	1.09	(1.58)	1.14	(0.16)						
Science confidence	1.11	(1.14)	1.79 ***	(0.30)						
N	1170		1170		1170		1170		1170	
Wald chi-square	86.69		117.94		65.92		45.37		50.37	

*p>.05; **p>.10; ***p>.01

displayed as odds ratios to ease interpretation. Any result that is greater than one indicates increased odds, whereas results less than one represent decreased odds.

Results in Table 5.4 indicate that even when controls are added, students in Catholic schools lag behind secular school students in their reflected appraisal that "people like me." They also score lower than secular school students in math confidence. Evangelical schools do not differ from secular schools in any of these self-esteem measures.

Interestingly, the full models do not reveal any significant gender differences in self-esteem across all measures, though older girls do have significantly lower reflected appraisals than younger girls. It is also surprising to see that gender ideology had no effect on self-esteem. Models using a completely gender-egalitarian variable (not listed here) also did not produce significant results.

Family factors had a significant effect in several areas. First, those whose mothers had higher levels of education were more likely to believe that other people liked them. Parental involvement through homework help had a positive effect on students' self-evaluation ("I like myself.") and on their confidence in science.

Next, the religion variables provided a number of interesting results. First, church attendance, which is commonly used in studies on religion and self-esteem, yielded no significant findings, indicating that this is not a useful measure of esteem. Another common religious variable, saliency, was significant however. The models estimate that students who believe that serving God is important were almost 50% more likely to agree that they like themselves. Catholic students are not significantly different from others, but those with Pentecostal tendencies were more likely to like themselves and to have higher

levels of math confidence. Finally, biblical literalists are estimated to be 85% more likely to like themselves and 45% more likely to believe that others like them.

The last block of variables assesses the extent to which the self-esteem variables affect each other. The first, self-evaluative variable, "I like myself," is highly correlated with the "people like me" variable. Those who believe that others like them are nearly three times more likely to like themselves. Interestingly, academic confidence is not related to self-evaluated esteem. The reflected appraisal variable, "people like me," is associated with all the other types of esteem. It is significantly correlated with self-evaluated esteem and with confidence in reading and science. Finally, all three academic confidence measures are positively correlated with a high reflected appraisal. Though it is clear that self-evaluations, reflected appraisals, and academic confidence are correlated with one another, without structural equation models, it is not possible to determine the direction of the relationship.

Discussion

The main thrust of this research was to build on existing studies of self-esteem in Catholic schools by introducing comparisons to evangelical schools and by adding a more comprehensive list of controls. The Guatemalan context for this study is also informative as little research on self-esteem in religious schools has been done outside of Western contexts. Smith, Weigert, and Thomas (1979) are one exception.

While early studies of Catholic schools in the United States suggest that Catholic students have higher levels of self-esteem than students in public schools (Coleman, Hoffer, and Kilgore 1982; Bryk, Lee, and Holland 1993), results from this study show

that Catholic schools actually score lower than evangelical and secular private school students in every measure of self-esteem and academic confidence. These results held true for measures of reflected appraisals and math confidence even when appropriate controls were added. These varying outcomes could result from different comparisons—Catholic schools vs. public schools as opposed to Catholic schools vs. other private schools. However, it also seems likely that these differences are attributable to student religiosity, supporting claims by Bagley and Mallick (1997) and Smith, Weigert, and Thomas (1979) that religiosity, not school type, is the key differentiating factor. This is partially supported in this study by results showing that the introduction of religious variables decreased the significance of the Catholic school variable in many instances. Also, as Smith, Weigert, and Thomas (1979) point out, in contrast to the United States, Catholics in Latin contexts like Guatemala often attribute less saliency to their faith than members of groups like evangelicals that have minority status. Thus if religiosity is the main factor, Catholic schools could potentially score higher in the United States and lower in Guatemala.

Gender comparisons show that in the Guatemalan context there are no significant differences in self-esteem, although older girls have lower reflected appraisals than younger girls, hinting that at least one aspect of girls' esteem may decline over time.[16] In contrast to other studies (Brown 2003; Lennon et al. 1999), gender ideology in the Guatemalan context has no effect on self-esteem. These differences between Western and Guatemalan contexts could be attributable to psychological centrality and the varying levels of value that girls place on gender equality in each of these different cultures.

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[16] This cannot be demonstrated conclusively without a longitudinal study.

While there has been ongoing debate in the literature about the influence that religion has on self-esteem, this study shows that for these Guatemalan students, religion is a highly significant factor. This is especially true for measures of religious saliency, of Pentecostal beliefs and of biblical literalism. These findings suggest that future studies on self-esteem should include more comprehensive religious variables than the attendance and saliency measures that are most commonly employed.

Finally, the results of this study make it clear that different types of self-esteem are highly correlated with one another. While this should not be surprising, it is important to note that these are each separate constructs, which have an influence on one another. This supports the findings of Rosenberg, Schooler, and Schoenbach (1989) and Rosenberg et al. (1995) that academic self-esteem has a powerful influence on a broader sense of self-esteem; however, because this study does not employ structural equation modeling, it is not possible to ascertain the direction of the effects.

In short, this study makes important contributions to a number of ongoing academic debates. First, it provides evidence supporting conflicting contentions that religious school type and the religiosity of students are key differentiating factors in self-esteem levels. While school type is a significant indicator in this study, much of the difference could be attributable to student religiosity. More needs to be done to flesh out the effects of school type and religiosity. Next, this research shows that religious factors, especially religious saliency, biblical literalism and Pentecostal debates are significant and should be considered in ongoing research on self-esteem. Finally, this study provides continued evidence that academic confidence is related to broader aspects of self-esteem, in this case, higher levels of reflected appraisals.

CHAPTER 6: CONCLUSION

In this study I set out to address two main issues. First, I sought to determine if private Catholic, evangelical and secular schools in Guatemala have differing outcomes for girls. Second, I explored the potential contribution of religious factors, such as beliefs and values, to any differences that emerged. The analysis, which focused on comparisons in three areas—gender ideology, academic aspirations and self-esteem—produced a number of significant outcomes. These results, which are summarized in the paragraphs below, contribute to the academic literature in many ways.

Gender Ideology

Schools are often cited as key institutions for shaping gender egalitarian ideologies in students. Conversely, religious institutions are regularly associated with traditionalist gender ideologies. These competing perspectives on gender ideology are potentially brought together in religious schools, raising previously unexplored questions as to these institutions' impact on the gender attitudes of their students. This study sought to answer these questions by comparing the gender ideologies of students in Catholic, evangelical and secular schools.

I began my analysis by using a new method for studying gender attitudes. Instead of using traditional scales, I employed Latent Class Analysis to determine if there were patterns in students' responses to survey questions on gender attitudes. Results revealed three distinctly patterned perspectives on the roles of women in domestic and public spheres—*non-egalitarian, publicly egalitarian* and *generally egalitarian*. The non-egalitarian profile affirms women's subordination in all aspects of life. Conversely, those

in the generally egalitarian profile tend to widely support gender equality. Finally, those in the publicly egalitarian profile endorse traditional roles for women in the home but are more affirming of women in public roles. These are distinct profiles that would not be uncovered using traditional scales. The publicly egalitarian profile is a completely new construct that has not previously been discussed in the literature.

In the next step, I used these profiles to compare the gender attitudes of students in religious and non-religious schools. Direct school comparisons show that evangelical school students are more likely to be non-egalitarian, secular school students are more likely to be publically egalitarian, and Catholic school students are more likely to be generally egalitarian. These differences between school types are, however, not significant in full models, except in the instance of Catholic schools. Full models show that Catholic school students are twice as likely to be generally egalitarian and significantly less likely to be publically egalitarian than students in other school types.

Further analysis revealed interesting correlations between specific religious beliefs and gender ideology. Two variables relating to the authority of Scripture and the authority of the church are most salient. Those who strongly agree that the Bible is inspired by God and must be accepted literally word for word are significantly less likely to be non-egalitarian but more likely to be publicly egalitarian. Those students who strongly agree that the church should play a key role in deciding what is right or wrong in our societies are less likely to be generally egalitarian but, like biblical literalists, are more likely to be publically egalitarian. These results suggest that biblical and ecclesiastical teachings such as "wives, submit to your husbands, as is fitting in the Lord" (Col. 3:18, New International Version) strongly affect believers' attitudes toward

women's roles in the private sphere, but they do not affect believers' openness toward allowing women to have equal footing in the public sphere.

Taken as a whole, these findings indicate several things. First, scholars should not assume that just because they are religious, Catholic and evangelical schools are less egalitarian than secular schools. In fact, Catholic school students are highly egalitarian. Second, these findings show that there are distinct patterns to students' gender attitudes, which would be overlooked using traditional scales as measurements. The profiles that emerge from Latent Class Analysis contribute to the ongoing debate about gender ideology and religion. Gender attitudes are complex and thus more nuanced measures for analysis are required to understand them. Latent class profiles, like the ones listed above, have the potential to provide even more insights into the relationship between gender ideology and religion. The publicly egalitarian profile in particular is a new construct that, among other things, helps explain why the researchers who focus on aspects of women's roles in the public sphere and the researchers who examine women's roles in the domestic and religious spheres may come to different conclusions. As a final note, this study's findings show that specific religious beliefs, especially those related to the authority of Scripture and the church, are strongly associated with public egalitarianism. This also is a key finding that should be further explored in ongoing research.

Academic Aspirations

Higher levels of education dramatically impact peoples' lives. This is especially true for girls, who have been shown to receive tremendous economic, political and health benefits from added schooling. Because academic attainment is strongly linked to

students' academic aspirations, it is important to consider the roles that schools play in encouraging students to aspire toward higher levels of education. Although much has been written about educational aspirations, very few studies have focused on gender differences in expectations, and no research has been done on aspirations in developing countries. By comparing the educational expectations for students in Guatemalan Catholic, evangelical and secular schools, this research contributes in many ways.

First, it demonstrates that students in Guatemalan private schools aspire to obtain a tertiary level education at surprisingly high rates. Seventy-five percent of students in this sample hope to complete a university degree—a rate that is higher than in many Western nations. This high aspiration rate suggests that more attention should be given to this issue to determine if these findings are an anomaly or if high aspirations are widespread across Latin America and the developing world.

Second, the results from this study provide insights into the factors that affect aspirations in developing nations. Similar to the Western world, findings show that parental educational status is a key predictor of these Guatemalan students' academic aspirations. This supports the theory that maintaining family status is a key motivator for students who hope to attend university. Gender ideology is another important predictor in this study. Non-egalitarian students have significantly lower academic expectations than other students.

Finally, and most germane to this study, is the finding that evangelical school students, and especially evangelical school girls, are more likely to have higher academic expectations. Although there is no way to demonstrate conclusively in this study, these differences may be related to the Protestant Ethic, which is quite prevalent in Guatemala.

Protestants, and especially Protestant girls, who emphasize individualism, self-discipline and initiative, may be more motivated to seek higher education levels as a means to better themselves and to live out their callings from God.

Self-Esteem

Another important goal for schools is to enhance their students' self-esteem and self-confidence. The self-concept that forms during the school years has long-term consequences affecting the health, academic achievement and finances of adults. Schools are key sites for self-esteem formation. In the school environment, students make social comparisons to their classmates and teachers, develop self-perceptions of their abilities and dispositions, and learn values that will determine how they evaluate their self-worth. Some studies in Western contexts have shown that Catholic school students have higher self-esteem than public school students, but other research suggests that it is student religiosity, not school type, that most contributes to self-esteem. This study set out to further adjudicate between the effect of school type and student religiosity. It also extends the work of previous scholarship on the self-esteem of students in three ways: it focuses on students in developing countries, it includes comparisons with evangelical schools, and it introduces a wider range of demographic and religious controls than has been used in previous studies.

The analysis of self-esteem outcomes in Guatemalan school children produced surprising results, showing that Catholic schools actually score lower than evangelical and secular private school student in every measure of self-esteem and academic confidence. This suggests that more work should be done to reconcile differences

between this study and those conducted in Western countries. Additionally, more needs to be done to determine which factors contribute to varying self-esteem outcomes in different types of schools. Previous research has shown that student religiosity is a key contributor to self-esteem, a theory that is partially support by the findings in this study. In fact, cultural differences, which may make religion more salient to Catholic students in the United States and Canada and less salient to Catholic students in Latin America, may account for the different outcomes for Catholic school students in these different contexts.

This study also highlights the importance of religious beliefs. More specifically, belief in biblical literalism and the active work of the Holy Spirit are two important predictors of improved self-esteem and self-confidence. This may be attributable to the Protestant Ethic and the accompanying sense of dignity, self-discipline and initiative that is linked to these two beliefs. It may also result from believers' sense of ontological security from feeling approved of and accepted by God.

Limitations

Although this dissertation contributes to the social scientific literature in many important ways, it also has limitations. Broadly speaking, its main limitation is its specific focus on Guatemalan school children. While this provides a unique perspective on an important subset of the world population, the findings are not widely generalizable. For instance, in the chapter on gender ideology, the profiles uncovered in the analysis may not be similar to those of Guatemalan adults or to children and adults from other parts of the world. Further studies in different localities or those that use global data sets

would provide a more refined and generalizable understanding of each of the issues addressed in this study.

Second, this research project focuses exclusively on the private sector. It thus leaves open the question of whether these findings are limited to private schools or if they would also apply to public schools. Additionally, it concentrates on schools from secular and Christian traditions. It neglects schools from other religious traditions that might have different results.

Next, the religious findings are limited by the ages of the respondent. While children often absorb the religious beliefs and attitudes of their parents and co-religionists early in life, elementary and junior high students are not likely to understand the full implications of their beliefs. For this reason, it would be important to also retest these findings with adult subjects.

Additionally, the cross-sectional nature of this study limits the scope of its findings. While there are clear associations in this analysis between the various dependent variables and the different types of religious and secular schools, it is not possible to determine the specific effect of these school types without contributions from additional longitudinal and qualitative studies.

Finally, this study was limited in its scope. While schools should have the goal of fostering gender attitudes, academic aspirations and self-esteem in their students, many other outcomes are also important to their mission. Because access to key data sources was denied for this study, I was not able to compare student drop-out and advancement rates, grades, standardized test scores and other important measures of school success. As

such, this study does not provide a complete picture of the work that these schools are doing.

Future Research

The paragraphs above have highlighted key contributions from this study. While each of the initiatives in this work has provided important insights, each has also raised new questions and pointed to new possibilities for future research. First of all, more needs to be done to extend this research by specifically addressing the limitations described in the previous section. While there is much to be learned from students who study in private religious schools in Guatemala, this work should also include samples from other geographic locations and from schools sponsored by other religious traditions. Such studies would provide key insights into differences and commonalities between various types of religious schools. Further, organizations like the World Bank and UNESCO should give more attention to religious schools by gathering data from them and including key religious measures in their data sets. This would allow researchers to do to more accurate comparisons with other types of schools and provide analysis that is more broadly generalizable.

Next, while a limited amount of research in Western contexts has compared public schools to private (especially Catholic) religious institutions, little, if anything, has been done to compare public and private religious schools in developing countries. Because so many schools in the developing world are religious, it is imperative that more be done to comparatively analyze the outcomes for these different types of schools.

This study was cross-sectional in nature, providing a snapshot at one point in time. Schools work with students for many years at a time and thus their influence is best evaluated cumulatively; therefore, longitudinal studies should be done to examine the effects that religious schools have on their students over time. Additionally, religious influence is often transmitted through means such as nuanced attitudes and values that are often difficult to accurately measure using quantitative instruments. Because of this, more qualitative work should be done to better understand the effects of religious education and the means by which specific values are passed on to students.

Also, as noted above, more needs to be done to analyze religious school outcomes using other educational measures including student drop-out, advancement and graduation rates, grades, standardized test scores, literacy rates, and other important measures of school success. Studies in these areas would provide key information to help evaluate the contributions of religious schools.

Aside from the general work that could be done to better understand religious education and its impact on gender equality, specific questions need to be addressed related to each of the areas of analysis in this dissertation. For starters, this study used Latent Class Analysis to provide more refined profiles of students' gender ideology. This method, which has never before been used in studies of gender attitudes, has great potential to add to our understanding of gender ideologies. LCA should be applied to wider samples to see if results are replicated in other contexts. Furthermore, many other measures of gender attitudes could be added to the analysis. This may uncover other profiles that would further refine our conceptions of gender attitudes. As noted above, the latent classes that are derived from this method can be used as dependent or independent

variables, opening up the possibility for various types of analysis. Each gender attitude profile also represents a distinct perspective that potentially has distinct implications for women's roles and social interactions. As such, these profiles warrant further scholarly attention on an individual basis. Next, it would be important to conduct longitudinal studies of gender attitudes to determine if there are patterns of ideological change in individuals and societies. For example, over time is it common to see people transition from non-egalitarian to publically egalitarian to generally egalitarian, or do ideologies shift in other ways? Finally, this form of analysis can also offer new insights outside the realms of religion and education. It can be used to better demonstrate how gender ideology is associated with economic outcomes, political positions and other important social issues.

The findings in the section on academic aspirations also raise a number of questions that should be investigated further. Why are the aspiration rates in this study so high, especially given the fact that only about 8.5% of eligible Guatemalan students currently enroll in universities? Is this merely an artifact of students wanting to provide a "right answer" on a survey at school? Are students naïve in their expectations? Is the gap between the expected and the actual mainly an issue resulting from Guatemala's limited supply of tertiary options? Would more students in Guatemala go to college if it were a viable option for them? How do these rates compare with rates in other developing contexts? What might account for differences across the developing world? In Guatemalan private schools, girls tend to have higher aspirations than boys. Is this true of other contexts?

Questions about the effect that schools have on aspirations also need to be considered. For instance, what are schools doing to engender such high aspirations? Although the schools in this study were by no means elite, they were private. Is there something about private schooling that increases aspirations? Would public schools have lower rates? These questions cannot be explored in this research, but they are important to consider as they have key practical and public policy implications; therefore, more quantitative and qualitative work needs to be done in this area.

Finally, the findings from the research on self-esteem suggest that more should be done to differentiate between school types and self-esteem. A broader study should include comparisons between public and private secular, Catholic, and evangelical schools. Other school types could also be included. These studies should take place in varied cultural contexts to allow comparisons across differing religious traditions. Key variables should be included in the models to control for differences in family background and religious saliency, traditions, practices and beliefs. Ongoing qualitative studies in schools and other contexts would also be helpful to provide further understanding of the social, psychological, ontological and cultural factors that influence various aspects of self-esteem. Finally, ongoing work should be done with structural equation models, to further unravel the interconnections of the various types of esteem. These models could be strengthened by adding religious variables, something that has not been attempted in previous structural equation research on self-esteem.

Conclusion

Millions of children around the world attend religious schools, yet the work of these schools in developing countries has been largely overlooked by the educational

development community. This dissertation has broken new ground by focusing on private religious schools in one particular developing context—Guatemala. It has also expanded the scope of comparison by including evangelical schools, a widely prevalent but overlooked group, in the sample. The studies described in each chapter of this dissertation have focused on differences in gender equity between Catholic, evangelical and secular schools, showing that there are key outcome differences between these school types and demonstrating that religious beliefs and values are strongly correlated with the results. While much was learned from this study, it has just scratched the surface. Much more needs to be done to evaluate the work that religious schools are doing around the world. Hopefully more scholars will continue these investigations to better understand the contributions that religious schools are making and to ensure that their students are being well served.

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Please answer the following questions by filling in the blank or marking an "X" next to the appropriate answer. If you do not want to answer any of these questions, feel free to skip it and go to the next one.

School name:

Administrator Information:

Age: _____   Gender: ___Female ___Male

Have you studied at the university level? ___Yes ___No

    If so, what is the highest level that you have completed? ___Bachelors ___Masters ___Doctoral

How many combined years have you spent in teaching and administration?

Beside the school you are currently working at, how many other schools have you worked with?

School information:

In what year was your school founded?

Is the school affiliated with a religious organization? ___Y ___N
    If so, is the organization ___Catholic ___Evangelical ___Other (specify)

How long is the school day? _____hours

How many male and female teachers are at the school? _____Female _____Male

How many support staff?

On average, how much are teachers paid per month?

How many teachers have taken university classes in education?

How many teachers have completed baccalaureate degrees?

How many teachers have taken graduate classes in education?

Do your teachers participate in training workshops? ___Y ___N How many workshops per year?____

How many children are enrolled at the school?

What is the per pupil expenditure at the school (per month)?

What is the tuition per month at the school?

Are scholarships available for students? _____Y ___N What percentage are on scholarship?

To what degree is each of these matters a problem in your school?

Student absenteeism	__Serious	__Moderate	__Minor	__Not at all
Parents' lack of interest in students' progress	__Serious	__Moderate	__Minor	__Not at all
Teacher absenteeism	__Serious	__Moderate	__Minor	__Not at all
Teachers' lack of commitment or motivation	__Serious	__Moderate	__Minor	__Not at all
Physical conflicts between students	__Serious	__Moderate	__Minor	__Not at all
Students lacking respect for the teachers	__Serious	__Moderate	__Minor	__Not at all
Students physically abused at home	__Serious	__Moderate	__Minor	__Not at all
Students neglected at home	__Serious	__Moderate	__Minor	__Not at all
Students are hungry during school	__Serious	__Moderate	__Minor	__Not at all

There are 10 different values listed below. Please mark an "X" by the 4 that you think are most important for the students in your school.

_____Thinking for themselves
_____Serving God
_____Being successful
_____Being honest
_____Working hard
_____Enjoying life
_____Caring for family and friends
_____Getting good grades
_____Doing the right thing
_____Respecting others

Please respond to the following statements about religion and the family. Mark an "X" to indicate whether you personally strongly agree, agree, disagree, or strongly disagree with each statement. If you do not know what you think about a statement, you may mark "I don't know." If you do not want to answer any of these questions, feel free to skip it and go to the next one.

The church should play a key role in deciding what is right or wrong in our societies.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Mary is the mother of the church.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

In order to be saved, I must believe that Jesus Christ died for our sins.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Christians should not be concerned about this world because Christ will return soon to establish his kingdom.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

The Pope is infallible in matters of faith and morals.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

The Bible is inspired by God and must be accepted literally word for word.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

God still pours out his Spirit on believers today like he did in biblical times.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

The man should be the head of the household.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

It is more important for a wife to help her husband in his job than to have one herself.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

A working mother can have as strong a relationship with her children as a mother who does not work.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Most men are better leaders than women.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Women are able to do the same jobs that men do.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

I would like to see a woman as president of our country someday.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Please answer the following questions by filling in the blank or marking an "X" next to the appropriate answer. If you do not want to answer any of these questions, feel free to skip it and go to the next one.

Teacher Information:

Age: _____ Yrs of Education:_____

Have you studied at the university level? ___Yes ___No

If so, what is the highest level that you have completed? ___Bachelors ___Masters

For how many years have you been a teacher?_____

Beside this school, how many other schools have you worked with? _____

How many years have you taught at this school?_____

How many teacher training seminars have you attended in the last year?_____

Classroom Information:

Mark and "X" by the subjects that you teach using textbooks:
___Math ___Reading ___Grammar ___Science ___Social Studies

What percentage of your teaching time is spent disciplining students and keeping order in your classroom? ___%

On average, how many hours of homework do your students have per week?_____

How many of the boys in your class do you think have the academic skills needed to attend university?_____

How many of the girls in your class do you think have the academic skills needed to attend university?_____

Please respond to the following statements about religion and the family. Mark an "X" to indicate whether you personally strongly agree, agree, disagree, or strongly disagree with each statement. If you do not know what you think about a statement, you may mark "I don't know." If you do not want to answer any of these questions, feel free to skip it and go to the next one.

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____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

Mary is the mother of the church.
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In order to be saved, I must believe that Jesus Christ died for our sins.
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____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

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____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

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____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

There are 10 different values listed below. Please mark an "X" by the 4 that you think are most important for the students in your school.

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_____Serving God   _____Caring for family and friends
_____Being successful   _____Getting good grades
_____Being honest   _____Doing the right thing
_____Working hard

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Please answer the following questions by filling in the blank or marking an "X" next to the answer. If you do not want to answer any of these questions, that is ok. Just skip it and go to the next one.

Are you a girl or a boy?   _____girl   _____boy   How old are you?_____

How are you at math?   How are you at science?
　　　_____Really good   _____Really good
　　　_____Good   _____Good
　　　_____OK   _____OK
　　　_____Bad   _____Bad
　　　_____Really bad   _____Really bad

How are you at reading?   How are you at art?
　　　_____Really good   _____Really good
　　　_____Good   _____Good
　　　_____OK   _____OK
　　　_____Bad   _____Bad
　　　_____Really bad   _____Really bad

How are you at writing?   How are you at physical education?
　　　_____Really good   _____Really good
　　　_____Good   _____Good
　　　_____OK   _____OK
　　　_____Bad   _____Bad
　　　_____Really bad   _____Really bad

What do you want to be when you grow up?_____

When do you think you will stop going to school?
　　　____After primary school
　　　____After basico
　　　____After diversificado
　　　____After university

Do you live with your father? ____Yes ____No   If you do, what does he do for work?_____

　　Did your father complete primary school?   ____Yes ____No

　　Did you father complete basico?   ____Yes ____No

　　Did your father complete diversificado?   ____Yes ____No

　　Did your father attend university?   ____Yes ____No

Do you live with your mother? ____Yes ____No   If you do, what does she do for work?_____

　　Did your mother complete primary school?   ____Yes ____No

　　Did you mother complete basico?   ____Yes ____No

　　Did your mother complete diversificado?   ____Yes ____No

　　Did your mother attend university?   ____Yes ____No

How many brothers and sisters do you have? _____

What language do you speak in your home?_____

Do your parents keep close track of how you are doing in school? ____Yes ____No

Do your parents expect you to get good grades in school? ____Yes ____No ____They don't care either way

What is your religious background? ____Catholic ____Evangelical ____None ____Other (What is it?)_____

About how often do you go to church?
____Once a week or more ____Several times a month ____Once a month ____Several times a year
____Once or twice a year ____Almost never

Please mark an "X" to indicate whether you personally strongly agree, agree, disagree, or strongly disagree with each of the following statements. If you do not know what you think about a statement, you may mark "I don't know." If you do not want to answer any of these questions, that is ok. Just skip it and go to the next one.

I like myself
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

I am able to do things as well as other people
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

People who accept their situation in life are happier than those who try to change things.
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

I like school
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

I am learning a lot in my school.
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

The things I am learning in school will help me in life.
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

I feel safe at my school.
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

I work hard in school.
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

People like me.
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

I can do anything if I work hard at it.
____Strongly Agree ____Agree ____Disagree ____Strongly Disagree ____I don't know

Please respond to the following statements about religion and the family. Mark an "X" to indicate whether you personally strongly agree, agree, disagree, or strongly disagree with each statement. If you do not know what you think about a statement, you may mark "I don't know." If you do not want to answer any of these questions, that is ok. Just skip it and go to the next one.

The church should play a key role in deciding what is right or wrong in our societies.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Mary is the mother of the church.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

In order to be saved, I must believe that Jesus Christ died for my sins.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Christians should not be concerned about this world because Christ will return soon to establish his kingdom.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

The Pope is infallible in matters of faith and morals.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

The Bible is inspired by God and must be accepted literally word for word.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

God still pours out his Spirit on believers today like he did in biblical times.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

The man should be the head of the household.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

It is more important for a wife to help her husband in his job than to have one herself.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

A working mother can have as strong a relationship with her children as a mother who does not work.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Most men are better leaders than women.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

Women are able to do the same jobs that men do.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

I would like to see a woman as president of our country someday.
____Strongly Agree   ____Agree   ____Disagree   ____Strongly Disagree   ____I don't know

There are 10 different values listed below. Please mark an "X" by the 4 that you think are most important for you and your life

_____Thinking for myself   _____Enjoying life
_____Serving God   _____Caring for family and friends
_____Being successful   _____Getting good grades
_____Being honest   _____Doing the right thing
_____Work hard   _____Respecting others