LOSING RELIGION: ADOLESCENCE AND THE NONRELIGIOUS IDENTITY

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ABSTRACT

This study investigates how changes in values over time impact religious involvement, orthodoxy, and affiliation among adolescents. More specifically, I am interested in what ways individuals lose religiosity and how they compare to those who maintain or gain religiosity. Using the National Study of Youth and Religion (NSYR) longitudinal dataset, I examine if changes in values surrounding the meaning of life, equality and care, and marriage between waves significantly affects changes in levels of religiosity. I look at three dimensions of religiosity, involvement, orthodoxy, and affiliation, as my dependent variables. First differences modeling, also known as change score modeling, along with OLS and logistic regressions were used to assess the relationships of the dependent and independent variables between Waves 1 and 3 of the NSYR. Results suggest that among the three dimensions of religiosity, changes in values impact changes in religious involvement and orthodoxy over time, but not affiliation. Furthermore, changes in thinking about the meaning of life increased respondents’ likelihood of losing religious affiliation whereas changes in valuing equality and care and conservative marriage ideals decreased this likelihood. Future research should continue to look at religiosity as a complex, multi-dimensional concept rather than measuring it with one variable alone while investigating adolescence and emerging adulthood as a time of self-exploration and religious identity development.
Chapter 1

INTRODUCTION

Until recently, the sociology of religion literature has emphasized the religious lives and attitudes of adults, neglecting the importance of adolescence in the development of a religious identity. Contemporary scholars assert that adolescence is a focal point for the development of a religious identity because this period represents a crucial transition from childhood to young adulthood (Pearce and Denton 2011; Smith, Denton, Faris, and Regnerus 2002). During this period, individuals become more autonomous in many aspects of their lives, allowing for growth and discovery that in turn informs decisions and ideas going into early adulthood. Researchers argue that autonomy may help to explain why questioning and exploring other religions most often occur between the ages of 18 and 25 (Gooren 2010). Along with this, adolescence also allows researchers the opportunity to explore how family characteristics, parent-child relationships, and peer relationships impact the development of a religious identity.

Social scientists have also devoted increasing attention to the loss of a religious identity among individuals. According to the U.S. Religious Landscape Survey, 16.1% of the American population identify as unaffiliated, 2.4% identify as agnostic, 1.6% as atheist, and 12.1% as “nothing in particular” (Pew Report 2011). This population has grown significantly, up from 9.2% in 1994 and 5% in 1972 (General Social Survey 2008). What is most intriguing about this population is that individuals choose to disaffiliate from religious institutions although social sanctions are so high. Edgell,
Gerteis, and Hartmann (2006), for example, find that a majority of Americans believe
atheists are least likely to agree with their vision of American society compared to
homosexuals, racial minorities, and other religious minorities. Along with this, a similar
study done by Harper (2007) illustrates that religious participants negatively categorized
nonreligious individuals as immoral, anti-Christian, prejudiced, and self-centered. Many
social scientists aim to understand why individuals choose to disaffiliate from religion
despite undesirable assumptions shared by a majority of American society. It is key then
for researchers to look at adolescence as a period of questioning and exploring as well as
a stage of acquiring knowledge that may inform decisions to disaffiliate later on in
adulthood.

Connecting these literatures, this paper examines changes in social values and
overall religiosity among American adolescents. My main objective is to explore whether
or not individual values impact beliefs and religious involvement, orthodoxy, and
affiliation over time, specifically from adolescence into emerging adulthood. Data from
Wave 1 and Wave 3 of the National Study for Youth and Religion is analyzed using
change score modeling in order to address the following questions: As an individual’s
social values shift over time, do religious involvement, orthodoxy, and affiliation shift as
well? Or does his or her religiosity remain the same although social values have shifted?
Drawing on the secular literature, I aim to focus on losing religious involvement,
orthodoxy, and affiliation, and how these individuals’ ideas in other aspects of life (i.e.
the meaning of life, equality and care, and marriage, etc.) compare to their religious

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peers. This work contributes to the literature in three distinct ways. First, it pushes future studies to look at religiosity as a multi-dimensional construct rather than in terms of affiliation or religious service attendance alone. Here, I look specifically at three dimensions of religiosity, religious involvement, orthodoxy, and affiliation, and how each are related, but can be impacted differently by change in values. Second, this work makes strong connections between two distinct literatures: religiosity among adolescents and nonreligious identity development. Scholars typically study adult religious development and do not focus on nonreligious identities, especially those who are secular, agnostic, or otherwise unaffiliated. Third, the study also highlights the importance of studying adolescence and emerging adulthood as critical periods in understanding what impacts ways in which individuals lose religiosity.
Chapter 2

RELIGIOUS IDENTITY DEVELOPMENT AMONG ADOLESCENTS

Researchers make clear distinctions among the concepts of development, transformation, and conversion when discussing religiosity and religious identities. Desmond, Morgan, and Kikucki (2010) assert that religious development emphasizes a gradual process where a range of different factors occur at varying times during an individual’s life. These life events may then impact religious attitudes, behaviors, and identity. Relationships with family members and friends as well as social contexts in which individuals grow up in all play important roles in religious development. This is quite different from theories of religious transformation and conversion. Regnerus and Uecker (2006) contend that religious transformation usually is a swift or rapid change in religiosity while religious conversion is typically a response to strong emotions or an ongoing stressor in an individual’s life. Transformation and conversion may then stem from a dramatic event in an individual’s life such as a death of a loved one (McIntosh, Silver, & Wortman 1993) or a large historical event like September 11th (Ai, Tice, Peterson, & Huang 2005). Researchers also note that religious conversion and transformation denote a shift into or the negotiation of an entirely new religious identity (Snow & Machaleck 1989). Religious development, on the other hand, is not necessarily linked to an entirely new religious identity nor do emotions and life stressors become defining characteristics, although they are seen as part of the process (Desmond et al. 2010). Adolescence exemplifies this developmental process since this is a time where an
individual’s identity is explored and shaped as he or she transitions from child to an adult (Pearce & Denton 2011; Smetana, Campione-Barr, & Metzger 2006; Smith et al., 2002).

Smetana et al. (2006) assert that adolescence “begins with biology and ends in culture” (258). In other words, the start of adolescence is marked by the onset of puberty where the brain, sex organs, and the structure of the body gradually mature. These biological changes allow for distinctions to be made between children and adolescents. The transition into adulthood, on the other hand, does not have distinct biological markers. Instead, adulthood is distinguished from adolescence by culturally constructed life events such as marriage, family, and entering the workforce (Hogan & Astone 1986). However, these transitions are often occurring later in life for individuals living in contemporary societies, creating a new distinct stage of life between the ages of 18 and 25 that Arnett (2000, 2004) refers to as “emerging adulthood.” According to recent research in the field of sociology, scholars contend that this delay in adulthood extends exploration and identity development past adolescence (Schwartz, Côté, & Arnett 2005). Many argue that this time of exploration and questioning is why religious exploration most often occurs between the ages of 18 and 25 (Gooren 2010).

Two major aspects of adolescence and emerging adulthood that impact the development of a religious identity have been explored within the literature: abstract thought and autonomy. Occurring throughout adolescence and into young adulthood, developmental psychologists find that individuals have an increased capacity for abstract thought as the brain develops (Inhelder & Piaget 1958). Pertaining specifically to
religiosity, for example, Markovits (1993) suggests that adolescents who are well versed in religious teachings ask questions during this stage of development such as “How can God be considered loving yet allow people to experience pain and suffering?” and “Why doesn’t God end evil in the world?” Individuals then are able to think through these abstract questions rationally while constructing attitudes towards social values and religious beliefs. The development of rational thought may lead to questioning previously accepted religious beliefs and impact decisions on how individuals view their identity as a religious person later on in adulthood.

Furthermore, adolescence is also a period where youth become more autonomous in many parts of their lives. Adolescents tend to move away from parental control and spend more time with peer groups. Scholars contend that others should keep in mind the growing amount of agency among adolescents along with other social factors. Newfound autonomy allows for growth and discovery, which in turn informs their ideas about adulthood (Pearce & Denton 2011). Youth may attach their own values and importance to particular concepts, reconfigure and renegotiate formal religious meanings and practices, or draw on a wide range of sources in order to make sense of religious issues and concerns (Hemming & Madge 2011).

Although adolescents and young adults are moving towards independence, their religious development is still embedded in social structures, such as family arrangements, parent-child relationships, and peer relationships. Pearce and Denton (2011) state that there are three key aspects of family life that impact the development of religious
identities among adolescents. First, religious characteristics of parents expose adolescents early on to a model of religiosity that they are comfortable with, which in turn provides a basis for their religious identity later on in emerging and late adulthood (Myer 1996). Second, socioeconomic resources of the family, including level of parental education and household income, play a role in shaping religious attitudes. Studies have shown that adults who are less educated and have lower income are more likely to adhere to orthodox or conservative religious beliefs. Since the family is the earliest foundation for identity development, adolescents from lower income families are then more likely to be exposed to strong beliefs in God and more traditional views on religion (Smith & Faris 2005; Ammerman 1987). However, there are ongoing debates on whether or not less education is strongly correlated with orthodoxy. Wuthnow (2010), for example, finds that since the 1980s, young adults with no college education are less likely to be orthodox compared to those who attended colleges. This may be due to the fact that the population of college students has become more diverse, including women and minorities.

Third, stability of the home environment is shown to strongly impact adolescent religious involvement. Parent-child relationships tie into stable family environments. Positive bonds between parent and child promote higher religious involvement since children are more willing to attend religious functions with their families (Pearce & Axinn 1998; Myer 1996). Events such as separation and divorce of parents often lead to a decrease in overall religious participation of the family (Mahoney, Paragament, Murray-Swank, & Murray-Swank 2003). Also, traditional religious institutions tend to be less
accepting of non-traditional family structures and favor families that resemble the traditional nuclear family form (Edgell 2005). In turn, families with single parents or step-parents may then limit religious involvement since they do not fit with the ideals of the church.

Researchers such as Regnerus, Smith, and Smith (2004) find that although family and parent-child relationships are primary influences on an adolescent’s church attendance habits, school and friends factor in as well. This research reinforces the notion that friendships are increasingly important during adolescence (Cooper & Cooper 1992) and that maintaining these relationships have a strong impact adolescent’s beliefs and attitudes towards religion (Schwartz 2006). Scholars state that adolescents are more likely not to regularly attend church services if their friends’ attendance rates are low. Likewise, Hoge and Petrillo (1978) find that peer pressures have a strong influence on adolescent involvement in and attitudes toward religious youth programs. Both parental involvement and peer relationships provide an interesting dynamic in the ways religiosity is shaped among adolescents.

In addition to religious development, adolescence is a time for individuals to think critically of and acquire knowledge about social values. It is key to distinguish values from other concepts such as norms and attitudes. Although values can be informed by group decisions, they are not situational like social norms and are often measured at the individual level (Hitlin & Piliavin 2004). Social norms then are seen as the standard of behavior that is acceptable by a given society while social values conceptualize what is
deemed right or wrong for an individual. Along with this, values are much more complex and stable throughout a person’s lifetime compared to attitudes (Konty & Dunham 1997). According to Hitlin (2003), values focus on ideals rather than concrete objects and are central to understanding how individuals create their own personal identity. In this fashion, looking at the construction of value systems can help sociologists of religion understand how individuals shape religious identities. A small yet growing amount of literature describes a link between values and religiosity. For example, Schwartz & Huismans (1995) find that individuals valuing “certainty” and “self-restraint” tend to be more religious whereas those who value “openness to change” and “self-expression” tend to be less religious. However, this study, like many others, conceptualizes religiosity through one avenue: in terms of church attendance. I argue that using one measure of religiosity does not allow sociologists to see the full extent of an individual’s religious identity. Values then may impact various dimensions differently depending on how religiosity is measured. For example, traditional religions often value ideals surrounding conservative marriage and family. However, individuals who are more liberal in such ideals may decline in orthodoxy, but still remain affiliated.

Adding to this literature, my study focuses on the social values and overall religiosity of individuals as they move from adolescence into emerging adulthood. I add to Pearce and Denton’s (2011) study, which explores trends in religiosity during adolescence through a life course perspective, describing religion as a dynamic feature of an individual that is constantly changing through exploration and questioning. Their work
involves looking closely at the content of religious belief, conduct of religious activity, and centrality of religion in everyday life, documenting shifts in religious stability and changes over time. Their main focus lies on creating religious profiles to categorize adolescents, risky behaviors among respondents, and the structure of family, peer, and religious institutions guiding religious beliefs. My study, in contrast, focuses on how values pertaining to the meaning of life, equality and care, and marriage can impact overall religiosity. I then draw on Pearce and Denton’s research in order to look at change in perceptions of religion among individuals, but also exploring ways in which values and religiosity change or remain stable from adolescence into emerging adulthood. This work also furthers the discussion of religious identity development among adolescents as well as urges future research to pay attention in particular to those individuals who claim secular identities. It is imperative to study the unaffiliated since socially constructed assumptions depict this population as lacking any sense of social values and/or belief system, which is used to justify the continuing prejudice against them.
Chapter 3

THE EMERGENCE OF A NONRELIGIOUS IDENTITY

Research on individuals who are unaffiliated with religion and/or lack belief in God has garnered an increasing amount of attention. This is partially due to the fact that the United States has seen an increase in adults identifying as atheist, agnostic, or secular. The 2008 General Social Survey shows that about 16% of adult Americans consider themselves to have no religious affiliation, up from 9.2% in 1994 and 5% in 1972. Furthermore, Zuckerman (2005) estimates that there is between 500 million and 750 million adults worldwide that do not believe in God. Much of the current research on the unaffiliated center around the atheist identity, including demographics, attitudes towards atheists as a minority group, and how atheists differ from their religious counterparts in terms of social values, religious beliefs, worldviews, moral conduct, and personal well-being. However, questions pertaining to the ways in which individuals come to the decision to disaffiliate and how they negotiate their identities, whether agnostic, atheist, or secular, with others still remain largely unanswered. For this study, I will use the term “nonreligious identity” to describe those who are unaffiliated with organized religion.

One of the major debates among sociologists of religion centers on how to properly define categories of people who are nonreligious. Zuckerman (2009) discusses three distinct categories: atheism, agnosticism, and secularism. Generally speaking, the term atheist is given to an individual who denies the existence of God and/or who finds the very concept of God meaningless (Baggini 2003). These individuals are separate from
those who are unsure about the existence of God or else believe the very existence of God cannot be understood by human thought, otherwise known as agnostics or humanists (Pasquale 2009; Eller 2005). On the other hand, secularists are typically described as individuals who are generally indifferent towards religion or do not hold any particular religious belief (Kosmin 2007). However, these definitions, especially the one ascribed to atheists, are rather simplistic. For instance, some people consider themselves atheists, but still remain religious or spiritual (Eller 2007). Also, those who adhere to Eastern religious traditions, such as Buddhism and Hinduism, do not believe in a specific God or gods (Martin 2007). Many argue that strictly defining who is an atheist is increasingly difficult since atheist movements do not have a uniform belief system (Smith 2010). For this paper, it is important to rely on the data provided by respondents. Questions then taken from the National Study for Youth and Religion on religious involvement, orthodoxy, and affiliation are used in order to appropriately looking at losing religiosity over time.

As mentioned briefly before, much of the research drawing attention to the growing population of atheists in the United States focuses on the demographic makeup of who is more likely to self-identify with this label. Using the 2001 American Religious Identification Survey (ARIS), Keysar (2007) found that men are more likely to become atheist than women, making up 70% of atheist population in the United States. Also, he found that approximately one-third of American atheists are under the age of 25 and half are under the age of 30, suggesting that adolescents and emerging adults are more likely to self-identify as atheists or otherwise unaffiliated. Research has also shown that
individuals who have obtained higher levels of education are more likely not to believe in the existence of the supernatural compared to those with lower levels of education (Sherkat 2008). In terms of ethnicity, Kosmin and Keysar (2009) found higher rates of disaffiliation from religious organizations among White Americans and Asian Americans compared to Hispanics and African Americans. Although this research highlights demographic characteristics of the atheist population, it still does not answer questions pertaining to why individuals disaffiliate from religious institutions nor how social values held by the unaffiliated compare to those who identify as religious.

Other research in this field of study aims to deconstruct notions that individuals who are nonreligious have underdeveloped value and belief systems. Edgell, Gerteis, and Hartmann (2006), for example, find that a majority of Americans believe atheists are least likely to agree with their vision of American society compared to homosexuals, racial minorities, and other religious minorities. Harper (2007) reiterates this point, finding that religious participants negatively categorize nonreligious individuals as immoral, anti-Christian, prejudiced, and self-centered. Researchers argue that religious groups in particular engage in this in-group/out-group distinction in order to draw symbolic boundaries, separating those individuals who do not belong while simultaneously bringing together those who do (Alexander 1992). However, recent research has shown that, contrary to the stereotypes, those who are nonreligious tend to have strong social values. Some scholars even argue that these individuals have stronger, even more ethical views on social justice than those who are religious (Zuckerman 2009).
For instance, Hayes (1995) asserts that atheists are more likely to be supportive of gender equality and women’s rights as well as more accepting of homosexuals when compared to religious individuals. Others find that the religiously unaffiliated are more progressive and take more liberal stances on contemporary social issues such as war, the death penalty, and stem cell research (Beit-Hallahmi 2007; Smidt 2005; Nisbet 2005). Although these studies have shown valuable insight to the beliefs and values of the unaffiliated, they only focus on adults, missing the stage of adolescence where people grapple with abstract ideas which allows individuals to question religion and make decisions based on their own rational thought processes. Along with this, the majority of these studies do not explore how social values and overall religiosity interact to shape not just an atheist identity, but other nonreligious identities as well.

Besides research on demographic characteristics and stereotypes, very few studies focus on the construction of nonreligious identities. One study done by Heiner (1992) explores strategies used by atheists in order to combat prejudice and discrimination. He finds that atheists engage in “othering” strategies similar to those used by theists, creating symbolic and social boundaries to create in-groups and out-groups. Other studies have focused on the construction on atheist identities and how these individuals negotiate atheism with a theist society (Fitzgerald 2003; Hunsberger & Altemyer 2006; Smith 2010). Although these studies have provided insight on atheist identity development, the majority focuses attention on adults and their retrospective accounts. Scholars often criticize the use of retrospective accounts for analysis due to cognitive limitations of
respondents, memory concerns, reconstruction of past events, and measures are unable to eliminate error or bias (Henry et. al. 1994; Nisbett & Rozz 1980). It is especially important for this literature to incorporate the discussion of religious identity development during adolescence since research has shown that younger generations are disaffiliating at higher rates than older generations (Ueker et al. 2007; Sandomirsky & Wilson 1990). Furthermore, research should come away from narrowly concentrating on atheists and begin to focus more broadly on other nonreligious identities.

Connecting the literature on nonreligious identities to the literature on adolescence and emerging adulthood, my project explores the ways in which individuals’ social values change over time and if these changes impact overall religiosity and the development of religious identities. My research questions are as follows: (1) As an individual’s social values shift over time, do religious involvement, orthodoxy, and affiliation shift as well? Or does his or her religiosity remain the same although social values have shifted?; and (2) In what ways do non-religious individuals’ social values compare and contrast to their religious peers? I argue that it is key for researchers to look at adolescence as a period of religious exploration since knowledge acquired during this point in time may inform decisions to disaffiliate during emerging adulthood.
Chapter 4

METHODOLOGY

Data

Data for this project comes from the National Study of Youth and Religion (NSYR), which capture a wide range of adolescents representing different religions, races, genders, socioeconomic statues, residences, and regions of the country. The NSYR is a nationally representative telephone survey of U.S. households that began in 2002. Households were eligible to take part in the study if they consisted of at least one teenager between the ages of 13 and 17. Between July 2002 and March 2003, interviews were conducted with one parent and one teenager from each household using a Computer Assisted Telephone Interviewing (CATI) system, making up Wave 1 of the survey ($n = 3,370$). Two subsequent waves of data were collected, one in between June 2005 and November 2005 and the other September 2007 through April 2008. Wave 2 involved another telephone survey re-interviewing just the adolescent respondents who completed Wave 1, then ages 16 though 21 ($n = 2,604$). Wave 3 also attempted to re-interview respondents from Wave 1, including those who did not complete the Wave 2 survey, then ages 18 through 24 ($n = 2,532$). Unlike Wave 1 and 2, Wave 3 tried to better capture the respondents’ adult lives by asking fewer questions on parental monitoring and more on post-school aspirations. For this study in particular, I use data from Wave 1 and Wave 3 since Wave 1 captures the time period of early to late adolescence whereas Wave 3 focuses on emerging adulthood.
Analytical Strategy

Using two waves of data poses unique issues in data analysis. For instance, panel data such as the data taken from the NSYR violates basic assumptions made in multiple regression analysis, including that the observations are independent from each other since they are collected from random data. However, in panel data, each respondent has two observations from two separate waves of data, doubling the observations. Since we cannot assume that observations in Wave 1 and Wave 3 of the NYSR data are uncorrelated, a simple multiple regression analysis cannot be used. To best account for correlation between panel data that spans two waves then, this study will use a type of longitudinal data analysis called first differences or change score modeling.

As Allison (1990) illustrates, longitudinal data analysis can be very effective in order to make causal inferences with nonexperimental data, allowing researchers to best understand how a change in the independent variable affects the dependent variable. Although during the past few decades many modeling techniques have been developed to include three or more waves of data such as growth curve models and longitudinal multilevel linear models, I choose to only look at two waves of data because it allows for a longer period of time for identity development, showing transitions that may occur during adolescence into emerging adulthood. In other words, it is reasonable to assume that transitions in life events such as living situations and education will be more prevalent during the span of five years than two years.
As explained in Johnson (2005), first difference modeling examines the relationship between the independent variable (X) and the dependent/outcome variable (Y) from Time 1 (t1) and Time 2 (t2). Johnson states that data collected at t2 shows whether or not event X occurs between these two time periods. In order to test whether or not X impacts Y at t2, researchers must control for the possibility that respondents who experience the event are different from those who did not. All variables then are treated as change scores in this model since the main focus is to examine the change in these variables from Time 1 to Time 2. For example, this study looks at the relationship between social values and religious beliefs and whether or not a change in values impact beliefs over time. If there is a relationship where values impact religiosity, then as values change from Wave 1 to Wave 3 so should religious involvement, orthodoxy, and affiliation.

Johnson (2005) compares first differences models to a different analytical model, lagged dependent variable model (LDV). He explains that both share key features with other related statistical methods that affect validity. For example, first differences analysis is statistically similar to fixed effects repeated measures ANOVA models and fixed-effects pooled time-series models. I chose first differences modeling over LDV modeling for several reasons. First, first differences models eliminate time invariant factors from the model of analysis because all the variables considered are change scores. This is a potential advantage of using first differences models instead of LDV models since LDV models may omit important invariant variables, which can lead to biased
results (Allison 1994). This is important for this study because there are various time-invariant features that can influence values and religiosity over time, eliminating the need to consider them reduces the bias and increases the statistical power of the analysis. With LDV models, only control variables that are explicitly included will be a part of the analysis, so omitted variable bias is more likely in these models. Second, unlike the LDV model, the first differences model does not include the outcome variable at time one (Y1) as an independent variable, a lagged dependent variable. Including the lagged dependent variable can bias estimates by not accounting for errors in Y1. In LDV models, this becomes problematic since measurement error in Y allows for spurious significant effects of other variables. The first differences model rectifies this problem by not including the lagged dependent variable, decreasing the chance of spurious results. (Johnson 2005).

Third, the first differences model specifically focuses on change and transition, making it a more appropriate method for answering my research questions and produces less biased estimates.

Although I am using change scores as variables, not all models in my analysis are purely first differences or change score models. Instead, models specifically looking at loss of religiosity are logit regression models since the dependent variables are dummy variables of change (where 1 indicates a change and 0 indicates no change). What I am interested in here is change in a particular direction, so these models are more appropriate than strict first differences models. However, I do keep the logic of first differences intact in that all variables are change scores, with the exception of interaction terms. In this
way, I keep the advantages of the first differences modeling strategy. I also ran each model as a lagged dependent variable model and a fixed effects model, producing extremely similar results.

Although I am using longitudinal data, there still remain some concerns about causal ordering since all variables are change scores occurring simultaneously. Theory talks about change in beliefs and values dictating change in religiosity, but there is a way to force causal ordering methodologically by using three waves. Despite having this advantage with the NSYR dataset, I was not able to complete this diagnostic check. First, questions about equality and care that make up my equality and care scale were not asked in Wave 2. So, in order to look at causal ordering, this variable would not be included in the analysis. Second, there is the problem with differential attrition. Some respondents were only interviewed at Wave 1 and 2 whereas others were only interviewed at Wave 1 and 3. Sample size is then non-equivalent to the sample size of my models. Third, limiting the data in this way makes the change in values temporally too far away from change in religious involvement, orthodoxy, and affiliation, which also adds to the causal ordering concerns. With this said, I am confident that changes in values comes before changes in religiosity as it is discussed in the literature.

Measures

Dependent Variables

In order to address the first research question, data taken from the NSYR dataset related to religious involvement, religious orthodoxy, and religious affiliation are used as
dependent variables to assess the respondents’ religiosity between waves. Data was organized in a pooled time-series, or long format, in order to use Stata 12’s time series operators to create change scores. Change scores were then created by subtracting the score of the first variable at Wave 1 from the score of the same variable at Wave 3. The difference between these two waves becomes a new variable, the change score.

Adapting Myers’s (1996) religiosity measures, I created a scale using four items that captures aspects of respondents’ religious behavior. The scale includes religious service attendance, how often the respondents pray alone, how often the respondents read religious scripture such as the Bible, and how important is religion in their daily lives. All variables have Likert-type responses going from 1 = “Never” to 7 = “Many times a day” except importance of religion in day to day life, which was recoded so that responses are ordered from 1 = “Not important at all” to 5 = “Extremely important.” These items were added together with alpha reliabilities of .74 at Wave 1 and .82 at Wave 3. A change score was then created from these scales by subtracting the scores of the variables at Wave 1 from the scores of the same variables at Wave 3 (see Table 1). Interestingly, the change score illustrates that overall respondents decrease their religious involvement from Wave 1 to Wave 3, with a mean decrease of .58. In other words, as respondents aged from Wave 1 to Wave 3, the majority lost religious involvement, as illustrated by Graph 1.
Similarly, another scale was created to assess respondents’ overall religious orthodoxy (Davis and Robinson 1996). Six items were used to create the scale, including how close respondents believe they are to God, their views regarding the presence of God, whether or not respondents have had doubts in their faith, if they experienced an answer to their prayers, if they experienced a miracle, and if respondents positive or negative response to organized religion. Scaled together, these items have an alpha reliability of .56 at Wave 1 and .68 at Wave 3, showing moderate reliability. Just like the scale for religious involvement, a change score was created in order to assess the difference in religious orthodoxy between Waves 1 and 3. Generally, respondents increased slightly in their religious orthodoxy between Waves 1 and 3, with a mean increase of .02. As illustrated by Graph 2, the range of cases in the 25th percentile is again larger (going from -.286 to -1.3) than the 75th percentile (.333 to 1.095).
Graph 1: Change in Religious Involvement

Graph 2: Change in Religious Orthodoxy
Lastly, two variables from the dataset, “religion” and “atheist” were used to evaluate changes in respondents’ religious affiliation. The variable “religion” categorized respondents by their religious affiliation (1 = “Catholic,” 2 = “Protestant,” 3 = “Jewish,” 4 = “Muslim,” 5 = “Mormon,” 6 = “Another religion,” and 7 = “Not religious”). The variable “atheist” then helped flesh out the category of “not religious” by separating respondents into four different categories: “not religious,” “agnostic,” “atheist,” and “something else.” These variables were subsequently combined to generate a new variable “religious affiliation” that includes the categories “Catholic,” “Protestant,” “Jewish,” “Muslim,” “Mormon,” “Another religion” from the variable “religion” and the categories “not religious,” “agnostic,” “atheist,” and “something else” from the variable “atheist.” A dummy variable was then created so that the value 1 was given to respondents who changed their religious affiliation between waves and the value 0 if otherwise.

For the second research question, dummy variables were created to look at individuals who decreased in their overall religiosity. A dummy variable called “losing religious involvement” was created to look specifically at those individuals who had a large decrease in religious involvement, defined as individuals that fell in the 25th percentile in the distribution of change scores (-1.25 or less). As shown in Table 1, 31% of the respondents lost religious involvement between Waves 1 and 3.

Another dummy variable called “losing religious orthodoxy” was created from the “religious orthodoxy scale” in order to look at those individuals significantly lose
orthodoxy between Waves 1 and 3. Again, much like the variable “loses religious involvement,” I look specifically at those cases that fall in the 25th percentile. Accordingly, 25% of the respondents lost religious orthodoxy between waves.

Lastly, the dummy variable “losing religious affiliation” was created to look at cases where individuals became atheist, agnostic, or not religious between Waves 1 and 3. In this case, respondents who had no change or gained religious affiliation were labeled with a 0 whereas respondents who changed to atheist, agnostic, or not religious were labeled as 1. Looking at the data, 18% of respondents stated that they lost religious affiliation from Wave 1 to Wave 3.

Table 2 contains a correlation matrix as well as a series of simple regressions in order to better understand the relationship among the dependent variables, which produced some interesting results. As the table illustrates, each dependent variable significantly impacts the others although they are not highly correlated. Looking at the regressions among the dependent variables, we see that with each unit increase in religious orthodoxy between waves 1 and 3, respondents’ change in religious involvement increases .93 units. Along with this if respondents changed their religious affiliation, they also increased change in religious involvement between waves. Both religious involvement and affiliation also had significant impacts on change in religious orthodoxy. Respondents’ change in religious involvement increased the likelihood of an increase in change in religious orthodoxy whereas change in religious affiliation decreased this likelihood. Lastly, with each unit increase religious involvement, the odds
of respondents changing religious affiliation increase 13% \((1.13-1)^*100\) whereas with each unit increase in change in religious orthodoxy, their odds decreased 70% \((1-.30)^*100\).

The dummy variables for losing religiosity also showed similar patterns. The odds of losing religious orthodoxy are 127% higher and the odds of losing religious affiliation are 41% higher for those who lost religious involvement between waves compared to those who did not. Moreover, for those respondents who lost religious orthodoxy between waves, the odds of losing religious involvement are 127% higher and the odds of losing religious affiliation are 618% higher compared to those who did not. Lastly, those who lost religious affiliation increased their odds of losing both religious involvement and orthodoxy.

<table>
<thead>
<tr>
<th>Table 2: Correlations among the Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Religious Involvement</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>Change in Religious Involvement</td>
</tr>
<tr>
<td>Change in Religious Orthodoxy</td>
</tr>
<tr>
<td>Change in Religious Affiliation</td>
</tr>
<tr>
<td>Losing Religious Involvement</td>
</tr>
<tr>
<td>Losing Religious Orthodoxy</td>
</tr>
<tr>
<td>Losing Religious Affiliation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Regressions among the Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Religious Involvement (OLS Regression)</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Change in Religious Involvement</td>
</tr>
<tr>
<td>Change in Religious Orthodoxy</td>
</tr>
<tr>
<td>Change in Religious Affiliation</td>
</tr>
<tr>
<td>Losing Religious Involvement (Logistic Regression)</td>
</tr>
<tr>
<td>Odds Ratio</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Losing Religious Involvement</td>
</tr>
<tr>
<td>Losing Religious Orthodoxy</td>
</tr>
<tr>
<td>Losing Religious Affiliation</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001
These regressions illustrate that religious involvement, orthodoxy, and affiliation are interrelated, but not highly correlated with each other. The relationships among the variables, especially the first three dependent variables of the original religiosity scales, are not always linear. Here, we see change in religious affiliation decreases the likelihood that respondents would change religious orthodoxy although change in religious involvement increases it. This furthers the argument that religiosity should be conceptualized into different dimensions and that religious development is a complex and multilayered process.

*Independent Variables*

To explore the impact of social values on religious belief over time, questions from the NSYR dataset pertaining to values will serve as the main values of interest. I use Schwartz’s (1992) definition of values as desirable goals that vary in importance in order to guide individuals’ lives in order to discern social values from religious beliefs. Values include thoughts on the meaning of life, equality and care, and marriage.

Looking at social values surrounding the meaning of life, respondents were asked two questions (“How often, if ever, does life feel meaningless to you?” and “How often, if at all, do you think about the meaning of life?”) with Likert-type scale responses. Change scores for each score were created to assess change from Wave 1 to Wave 3.¹ As shown in Table 3, respondents thought less about the meaning of life as they got older.

¹ The variables “meaning of life” and “life as meaningless” could not be scaled together with an alpha reliability of .26 at Wave 1 and .24 at Wave 3.
with a mean decrease of .13. On the other hand, respondents had an overall increase from Wave 1 to Wave 3 in believing that life is meaningful, with a mean increase of .27.

Another set of social values considered for analysis is views on equality and care of the elderly, the poor, and racial minorities. Three questions taken from the NSYR dataset were used to create an index: “How much do you personally care or not about equality between racial groups?”, “How much do you personally care or not about the needs of the elderly in this country?” and “How much do you personally care or not about the poor people in this country?” Again, each question used Likert-type scale responses: (0) “Care very much”, (1) “Care somewhat”, (2) “Care a little”, and (3) “Do you not really care?”. These three questions were reverse coded and scaled together with an alpha reliability of .55 at Wave 1 and .62 at Wave 3, showing moderate reliability. From these indices, a change score is created that shows over time, respondents, on average, care slightly less about racial minorities, the elderly, and the poor.

Respondents were also asked their thoughts on the sanctity of marriage through three separate questions on divorce, cohabitation, and abstinence: (1) “Do you think that, in general, a couple without children should end their marriage if it is empty and unfulfilling, or should they stick with it even if they are not happy?” (0 = “End it” and 1 = “Stick with it”); (2) “In the future, would you ever consider living with a romantic partner that you were not married to, or not?” (0 = “Yes” and 1 = “No”); and (3) abstinence (“Do you think that people should wait to have sex until they are married, or

\footnote{Cohabitation” was recoded so that 0 = “Yes” and 1 = “No” to fit the direction of the scale.}
not necessarily?” (0 = “No” and 1 = “Yes”)\(^3\). These variables were then added together to create a “marriage index,” with an alpha level of .55 at Wave 1 and .68 at Wave 3. On average, respondents became more accepting of liberal marriage arrangements in that they are more open to divorce, cohabitation, and premarital sex between waves, with a mean of -.19.

Ideally, other questions would be included in this analysis to explore more pressing moral issues that are at the forefront of American politics and social life. As the atheist literature suggests, researchers find that individuals who identify as atheist often have more liberal social values, supporting a woman’s right to choose, homosexual marriage, and gender equality (Gallup Poll 2006; Hayes 1995). However, the NSYR data does not ask specific questions related to these issues that have been studied in prior literature. It would be interesting to see how adolescents understand these issues and if these issues inform their religious identities as they grow into adulthood. On the other hand, the NSYR data does have questions pertaining to the meaning of life, care and equality of others, and marriage, subjects that are touched on in a variety of religions as well as in the American public. In this way, the questions explored in this study still give some insight on how atheists’ social values compare to their religious counterparts.

\(^3\) “Abstinence” was recoded so that 0 = “No” and 1 = “Yes” to fit the direction of the scale.
Control Variables

Although change score modeling holds variables that are time invariant (i.e. gender and race) constant, there are a few control variables that may change from Wave 1 to Wave 3 that should be taken into consideration in the analysis, included in Table 3. First, questions considering the respondent’s relationship with his or her mother (“How well do you and your mother get along?”; “How often do you talk with your mother?”) and/or father (“How well do you and your father get along?”; “How often do you talk with your father?”) were asked at both Wave 1 and Wave 3. These relationships are subject to change since adolescents gain more autonomy as they move into emerging adulthood. Along with this, living situation (“Where do you live now?”) may change since young adults often move away from their parents, which in turn may affect identity development. A change score was created to see how much of the sample had moved from their parents’ homes between waves (0 = “remained at home” and 1 = “moved out”). As Table 3 indicates, 58% of the original sample moved out. Lastly, age was also added as a control variable since not all adolescents in the same panel were the same age when interviewed although they age the same amount between waves. Therefore, age may play a role in whether or not an adolescent changes their overall religiosity.

Interaction Terms

Interaction terms were created to test the interaction between race, gender, education, and religiosity and the value change scores in order to assess if the effect of
values on the dependent variables was moderated by these statuses. These variables were chosen based on the literature since scholars have found that whites are more likely to be unaffiliated compared to racial minorities (Kosmin & Keysar 2009), men more likely to be unaffiliated compared to women (Rice 2003), and higher education is linked to liberal attitudes and positively correlated with unaffiliation (Baker 2008; Sherkat 2008). Parents’ socioeconomic status was also included in the interaction terms since the literature has been mixed on whether or not children from lower income families are exposed to strong beliefs in God and more traditional views on religion (Wuthnow 2010; Smith & Faris 2005; Ammerman 1987). Many of these interaction terms did not have significant effects on the separate models and are not included in the analysis. However, interactions between change in marriage values and race were found to be significant, along with change in religious orthodoxy and losing religious affiliation. Interaction terms with significant effects were kept in the models.
<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Variable Description</th>
<th>Wave 1</th>
<th>Wave 3</th>
<th>Change Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>S.D.</td>
<td>n</td>
</tr>
<tr>
<td>Life as Meaningful</td>
<td>3362</td>
<td>4.02</td>
<td>1.04</td>
<td>2517</td>
</tr>
<tr>
<td>Meaning of Life</td>
<td>3366</td>
<td>2.74</td>
<td>1.25</td>
<td>2523</td>
</tr>
<tr>
<td>Equality and Care Index</td>
<td>3365</td>
<td>1.75</td>
<td>0.67</td>
<td>2520</td>
</tr>
<tr>
<td>Marriage Index</td>
<td>3347</td>
<td>0.46</td>
<td>0.36</td>
<td>2503</td>
</tr>
<tr>
<td>Relationship with Mother</td>
<td>3222</td>
<td>4.85</td>
<td>0.83</td>
<td>2388</td>
</tr>
<tr>
<td>Talk with Mother</td>
<td>3220</td>
<td>3.60</td>
<td>1.18</td>
<td>2388</td>
</tr>
<tr>
<td>Relationship with Father</td>
<td>2568</td>
<td>4.74</td>
<td>0.10</td>
<td>1871</td>
</tr>
<tr>
<td>Talk with Father</td>
<td>2568</td>
<td>2.88</td>
<td>1.26</td>
<td>1871</td>
</tr>
<tr>
<td>Living Situation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age</td>
<td>3369</td>
<td>15.50</td>
<td>1.44</td>
<td>2532</td>
</tr>
</tbody>
</table>

Source: National Study of Youth and Religion 2003-2008
Chapter 5

RESULTS

Below, I report the results of each model in detail by research question. First, I look at the impact of values on the overall change in religious involvement, orthodoxy, and affiliation. Then, I discuss the effect of interaction terms and control variables on change in religiosity. The models for change in religious involvement and orthodoxy both fit the data well, explaining between 23% and 26% of the total variance. For change in affiliation, Model 1 correctly classifies 74% of the total cases and Model 2 correctly classifies 76%. Second, I report findings on the impact of values on losing religious affiliation, involvement, and orthodoxy. As with the first research question, I then talk about the relationships between each dependent variable and interaction terms and control variables. Again, models for losing religious involvement, orthodoxy, and affiliation are a good fit to the data, correctly classifying between 71% and 84% of the total cases in the dataset.

Change in Religious Involvement, Orthodoxy, and Affiliation

Examining the effect of change in social values on religiosity over time suggests interesting and complex findings. In order to explore my first research question, change score regressions were used to analyze the change of values between Wave 1 and Wave 3 and their relationship with change in religious involvement and orthodoxy. On the other hand, a logistic regression was run for change in religious affiliation because it is nominal
variable. Each of the three dependent variables in this case have at least one model looking at the relationship between the dependent variables and the independent and control variables described. A second model was added if interaction terms were found to be significant. In this case, change in religious orthodoxy and change in religious affiliation have a second model, as shown in Table 4.

Table 4 shows the results from a series of regressions predicting what factors may play into a change in religiosity between Wave 1 and Wave 3 while controlling for relationship with parents, current living situation, age, and other religious dimensions. Change in thinking about the meaning of life, valuing equality and care, and valuing conservative ideals of marriage are all significant to the change in religious involvement, which includes going to religious service, praying, reading religious scripture, and thinking of religion as important in their daily lives. Respondents who reported thinking about life more frequently by Wave 3 decreased their religious involvement by a small amount, .08 units. Similarly, those become more caring of the poor, the elderly, and racial minorities between waves increase involvement only by .09 units. On the other hand, increasingly valuing conservative ideals of marriage from Wave 1 to Wave 3 has a much larger impact, increasing involvement by .69 units when controlling for everything else.

The second regression in the table analyzes the change in values and their impact on respondents’ change in religious orthodoxy, which includes respondents’ thoughts on the supernatural, whether they had doubts in organized religion, and whether they experienced divine intervention through prayers or miracles. While controlling for other
variables, thinking about the meaning of life and caring more for the poor, the elderly, and minorities are significant for this model. Respondents who state that they think more about the meaning of life between waves decreased in religious orthodoxy while valuing care and equality increased orthodoxy.

The final regression for the first research question looks at religious affiliation and how changes in values effect change in affiliation. Interestingly, none of the variables on change in values are significant while controlling for relationship with parents, current living situation, and age. Only the other dependent variables, change in religious involvement and change in religious orthodoxy, are significant in this model. As respondents increase in change religious involvement, the odds of respondents changing religious affiliation increase 11% ((1.12-1)*100). On the other hand, as change in religious orthodoxy increases, the odds of changing religious affiliation decreases 78% ((1-.22)*100). The magnitude of religious involvement and orthodoxy’s impacts on affiliation is very similar to what I find when I ran the simple regressions illustrated in Table 2. Although the independent and control variables are included in the regression, it seems as though the relationships among the dependent variables are the main factors driving a loss in affiliation.

Along with the main effects of social values, some interaction terms are found to be significant in two of the three models: change in religious orthodoxy and affiliation. These interaction terms dealt specifically with conservative marriage ideals. Among African American and Hispanic respondents, developing more conservative values about
Table 4: Results from Regressions of Change in Religiosity

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>OLS Regression of Change in Religious Involvement</th>
<th>OLS Regression of Change in Religious Orthodoxy</th>
<th>Logistic Regression of Change in Religious Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>S.E.</td>
<td>B</td>
</tr>
<tr>
<td>Change in thinking about life as meaningless</td>
<td>0.003</td>
<td>(.023)</td>
<td>-0.04***</td>
</tr>
<tr>
<td>Change in thinking about the meaning of life</td>
<td>-0.08***</td>
<td>(.018)</td>
<td>0.001</td>
</tr>
<tr>
<td>Change in care and equality</td>
<td>0.09*</td>
<td>(.036)</td>
<td>0.05**</td>
</tr>
<tr>
<td>Change in marriage values</td>
<td>0.69***</td>
<td>(.074)</td>
<td>0.04</td>
</tr>
<tr>
<td>Change in relationship with mom</td>
<td>0.01</td>
<td>(.032)</td>
<td>-0.002</td>
</tr>
<tr>
<td>Change in how often talk to mom</td>
<td>-0.06**</td>
<td>(.024)</td>
<td>0.01</td>
</tr>
<tr>
<td>Change in relationship with dad</td>
<td>0.02</td>
<td>(.028)</td>
<td>0.02*</td>
</tr>
<tr>
<td>Change in how often talk to dad</td>
<td>-0.01</td>
<td>(.023)</td>
<td>0.02*</td>
</tr>
<tr>
<td>Change in current living situation</td>
<td>-0.16**</td>
<td>(.056)</td>
<td>0.002</td>
</tr>
<tr>
<td>Age</td>
<td>0.03</td>
<td>(.020)</td>
<td>0.01</td>
</tr>
<tr>
<td>Change in religious involvement</td>
<td>-</td>
<td>-</td>
<td>0.13***</td>
</tr>
<tr>
<td>Change in religious orthodoxy</td>
<td>0.83***</td>
<td>(.061)</td>
<td>-</td>
</tr>
<tr>
<td>Change in religious affiliation</td>
<td>0.12*</td>
<td>(.062)</td>
<td>-0.27***</td>
</tr>
<tr>
<td>Change in marriage values* black</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Change in marriage values* Hispanic</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Change in marriage values* other</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Change in marriage values* losing orthodoxy</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Change in marriage values* losing involvement</td>
<td>-0.005</td>
<td>(.024)</td>
<td>-</td>
</tr>
<tr>
<td>Change in marriage values* losing affiliation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.97*</td>
<td>(.040)</td>
<td>0.15</td>
</tr>
<tr>
<td>Observations</td>
<td>1508</td>
<td></td>
<td>1508</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.226</td>
<td></td>
<td>0.236</td>
</tr>
<tr>
<td>F</td>
<td>36.27</td>
<td></td>
<td>38.44</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>129.00***</td>
<td></td>
<td>136.40***</td>
</tr>
<tr>
<td>Percent correctly classified</td>
<td>74.3</td>
<td></td>
<td>75.60</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>16.2</td>
<td></td>
<td>20.30</td>
</tr>
<tr>
<td>Specificity</td>
<td>96.3</td>
<td></td>
<td>96.5</td>
</tr>
</tbody>
</table>


*p<.05,  **p<.01,  ***p<.001
marriage between Wave 1 and Wave 3 leads to a decrease in religious orthodoxy. The interaction between conservative marriage values and religious affiliation also had an impact on orthodoxy. If respondents’ values surrounding marriage became more conservative and affiliation increased, respondents religious orthodoxy also increased between waves. Finally, the interaction between marriage values and orthodoxy is significant in the second model for change in religious affiliation. As religious orthodoxy increases, the impact of having more conservative views on marriage increases 169%. In other words, religious orthodoxy increases the positive effect of conservative marriage change on changing religious affiliation between waves.

Furthermore, I note that there are a few control variables that provided interesting findings within these models. For example, as respondents talk more often to their mothers between waves, their change in religious involvement decreases .06 units when controlling for all else. Similarly, change in religious involvement decreases as well for those respondents who moved from their parents’ homes between waves. Other variables such as relationship with their fathers and talking to their fathers also showed an impact on the dependent variable, both increasing respondent’s change in orthodoxy. Again, the other religiosity measures, change in involvement and affiliation, effect change in religious orthodoxy.
Losing Religious Involvement, Orthodoxy, and Affiliation

For my second research question, I focus primarily on those individuals who lose religiosity between Waves 1 and 3. Again, three separate logistic regressions were ran in order to explore the relationships between changes of values and losing religious affiliation, losing religious involvement, and losing religious orthodoxy. As previously discussed, these dummy variables were created from the change in religious involvement, orthodoxy, and affiliation scales, giving respondents who had no change or gained religiosity the value 0 and giving respondents who lost religiosity the value 1. Each of the three dummy dependent variables also has at least one model looking at the relationship between the dependent variables and the independent variables as well as control variables. A second model is included for the analysis of losing religious affiliation since interaction terms are significant, as shown in Table 5.

The first regression looks at those who lose religious affiliation between waves. Again, much like the model on change in religious affiliation, I find that all four independent variables are not significant while controlling for relationship with parents, current living situation, age, losing religious involvement, and losing religious orthodoxy are added. However, the other religious dimensions, losing religious involvement and orthodoxy, both show a considerable significance.

With the addition of control variables, generally thinking about the meaning of life and valuing conservative marriage ideals are highly significant. As respondents increasingly think about the meaning of life, the odds of respondents losing religious
involvement increases 13%. Along with this, the odds of respondents losing religious involvement decrease 68% as they value more conservative ideals of marriage over time.

The last logistic regression analyzes the relationship between changes in values and losing religious orthodoxy. As illustrated in Table 5, both thinking about life as meaningless and valuing equality and care are significant in this model. While controlling for other variables, as they increasingly think about life as meaningless, the odds of respondents losing religious orthodoxy increases 17%. On the other hand, with each increase in caring for the poor, the elderly, and racial minorities, the odds of respondents losing religious orthodoxy decreases 23% when all other variables are controlled. Along with these independent variables, losing religious involvement and affiliation also are significant in the model.

Moreover, the interaction between change in marriage values and race had a significant impact on losing religious affiliation so a third model was used to explore this relationship further. As shown in Table 5, respondents who identify as black and change towards more conservative views of marriage are 642% more likely to lose religious affiliation. This is an interesting finding since the change in marriage values does not have a significant impact on losing religious affiliation for whites, Hispanics, or those who categorize themselves as “others.”
### Table 5: Results from Logistic Regression of Losing Religiosity

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Losing Religious Affiliation</th>
<th>Losing Religious Involvement</th>
<th>Losing Religious Orthodoxy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 1</td>
</tr>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>S.E.</td>
<td>Odds Ratio</td>
</tr>
<tr>
<td>Change in thinking about life as meaningless</td>
<td>1.03 (0.069)</td>
<td>1.04 (0.064)</td>
<td>1.03 (0.053)</td>
</tr>
<tr>
<td>Change in thinking about the meaning of life</td>
<td>0.95 (0.050)</td>
<td>0.95 (0.050)</td>
<td>1.13** (0.045)</td>
</tr>
<tr>
<td>Change in care and equality</td>
<td>1.09 (0.111)</td>
<td>1.10 (0.111)</td>
<td>0.93 (0.072)</td>
</tr>
<tr>
<td>Change in marriage values</td>
<td>0.89 (0.194)</td>
<td>0.78 (0.196)</td>
<td>0.32*** (0.053)</td>
</tr>
<tr>
<td>Change in relationship with mom</td>
<td>0.99 (0.091)</td>
<td>0.99 (0.091)</td>
<td>1.01 (0.071)</td>
</tr>
<tr>
<td>Change in talk to mom</td>
<td>1.03 (0.072)</td>
<td>1.03 (0.072)</td>
<td>1.12* (0.059)</td>
</tr>
<tr>
<td>Change in relationship with dad</td>
<td>1.07 (0.087)</td>
<td>1.06 (0.087)</td>
<td>0.92 (0.056)</td>
</tr>
<tr>
<td>Change in talk to dad</td>
<td>1.09 (0.073)</td>
<td>1.10 (0.073)</td>
<td>0.92 (0.049)</td>
</tr>
<tr>
<td>Change in current living situation</td>
<td>0.72* (0.118)</td>
<td>0.70* (0.119)</td>
<td>1.27 (0.158)</td>
</tr>
<tr>
<td>Age</td>
<td>1.03 (0.061)</td>
<td>1.02 (0.061)</td>
<td>0.90* (0.040)</td>
</tr>
<tr>
<td>Losing religious involvement</td>
<td>8.68*** (1.40)</td>
<td>8.57*** (1.40)</td>
<td>- (0.05)</td>
</tr>
<tr>
<td>Losing religious orthodoxy</td>
<td>1.51** (0.246)</td>
<td>1.49* (0.246)</td>
<td>1.87*** (0.261)</td>
</tr>
<tr>
<td>Losing religious affiliation</td>
<td>- - (0.054)</td>
<td>0.20 (0.173)</td>
<td>1.51* (0.248)</td>
</tr>
<tr>
<td>Change in marriage values*</td>
<td>black - - (6.73)</td>
<td>- - (0.37)</td>
<td>- - (0.37)</td>
</tr>
<tr>
<td>Change in marriage values*</td>
<td>Hispanic - - (2.14)</td>
<td>- - (1.37)</td>
<td>- - (1.37)</td>
</tr>
<tr>
<td>Change in marriage values*other</td>
<td>- - (0.054)</td>
<td>0.20 (0.173)</td>
<td>- - (1.83)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.05** (0.054)</td>
<td>0.05* (0.061)</td>
<td>2.07 (1.83)</td>
</tr>
<tr>
<td>Observations</td>
<td>1509</td>
<td>1501</td>
<td>1508</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>230.92***</td>
<td>239.48***</td>
<td>154.57***</td>
</tr>
<tr>
<td>Percent correctly classified</td>
<td>84.0</td>
<td>84.68</td>
<td>70.6</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>11.5</td>
<td>15.29</td>
<td>24.11</td>
</tr>
<tr>
<td>Specificity</td>
<td>97.9</td>
<td>98.01</td>
<td>92.1</td>
</tr>
</tbody>
</table>


* p<.05, ** p<.01, *** p<.001
As with the models for my first research question, control variables show a substantial effect on whether or not a respondent loses religious involvement. First, as respondents talk to their mothers more often, the odds of respondents losing religious involvement increase 12% even after controlling for relationship with father, current living situation, age, and other religious characteristics. Second, as age increases by one year, the odds of respondents losing religious involvement decreases 10% when controlling for other variables.
Chapter 6

DISCUSSION AND CONCLUSION

Adolescence and emerging adulthood are prime periods of time to investigate religious development since individuals become increasingly more autonomous from parents, allowing for self-discovery and questioning of religious beliefs. Connecting the literature on adolescent religious development and secularism, this paper investigates changes in values pertaining to the meaning of life, equality and care, and marriage and how these values impact overall change in religiosity. My research questions are twofold: (1) As social values shift between waves, do religious involvement, orthodoxy, and affiliation shift as well or remain the same?; and (2) In what ways do non-religious individuals’ social values compare and contrast to their religious peers? My work makes strong connections between the two distinct literatures and highlights the importance of studying adolescence and emerging adulthood as critical to understanding why individuals lose religiosity.

Analyzing Waves 1 and 3 of the NSYR produced several interesting findings. By running series of simple regressions on the dependent variables, I find that religious involvement, orthodoxy, and affiliation have significant effects on one another, but are not highly correlated with each other. I argue that each dimension should be treated separately since people often claim affiliation to traditional religions without subscribing to orthodox beliefs. For example, women may use birth control and still identify as Roman Catholic. Similarly, there is growing support for gay marriage in the United...
States even though a majority of Americans are Christian, mainly Mainline Protestant or Roman Catholic (Pew Report Forum 2012). Other studies find that religious involvement wanes during early to late adulthood without a loss of affiliation due to other commitments such as school, social relationships, and going on the job market, but increases later in life due to events such as marriage and beginning a family (Uecker, Regnerus, and Vaaler 2007; Clydesdale 2007; Astin 1997).

Furthermore, the models suggest that changes in values impact religious involvement and orthodoxy, but not affiliation. There are several reasons suggested by the literature that may explain these findings. First, as highlighted in the literature on nonreligious identity, social sanctions for those who lose religious affiliation remain high even in a religiously diverse society. Scholars find that a majority of Americans believe the religiously unaffiliated are immoral, anti-Christian, prejudiced, self-centered, and the least likely to agree with the overall vision of American society (Harper 2007; Edgell, Gerteis, & Hatmann 2006). This may play into why individuals are less likely to change religious affiliation unless involvement and orthodoxy also change drastically. This also ties into the notion that individuals are much more likely to move around within their religious denominations, changing religious beliefs and not attending church services, rather than change their affiliation altogether. Second, although five years lapsed between Waves 1 and 3, respondents are in the beginning stages in their religious identity development by becoming more independent from their parents and families. The data shows that changes in religious involvement and orthodoxy are occurring, which may
lead to a shift in religious affiliation over time. I argue that with more waves of data, researchers may see religious affiliation changing along with involvement and orthodoxy.

Change in values over time then effected both religious involvement and orthodoxy differently. First, as individuals thought more about life as meaningless between Waves 1 and 3, they are more likely to lose religious orthodoxy. Similarly, individuals thinking about the meaning of life more often between waves had an increased chance of losing religious involvement. This could be due to the fact that religion does not provide adequate answers to how life can be meaningful for respondents since adolescence and early adulthood are periods of time where individuals explore their purpose in life, in their families, and in the workforce (Damon, Menon & Bronk 2003).

Second, as they increasingly value equality and care over time, I find that respondents were less likely to lose religious orthodoxy. This may be due to the fact that religion acts as a general promotive factor for compassion towards others. As Armstrong (1993) finds, various world religions encourage followers to engage others in a positive and prosocial manner. Along with this, other scholars have found that religion can be a factor in greater propensities for individuals to engage in altruistic behaviors such as volunteering and giving to charities (Rowatt et al. 2006; Laythe et al. 2002). With this said, it is reasonable to assume that individuals who value care and equality for others would be attracted to more orthodox beliefs.

Third, when valuing conservative marriage ideals increased between waves, respondents were also less likely to lose religious involvement. This reflects the literature
on marriage, family, and religion since many traditional religions emphasize conservative ideals of marriage and the nuclear family. Edgell and Docka (2007) find religious institutions often idealize traditional family forms while stigmatizing others. Those who hold less conservative values towards marriage may then not feel accepted by religious communities, leading to their diminishing involvement in religious services.

Besides looking at the impact of changes in values on religiosity, the analysis produced several unanticipated findings. First, as respondents increasingly talked to their mothers between Waves 1 and 3, they were more likely to change and/or lose religious involvement. This finding is intriguing since the literature often describes connections to the family and parents fostering religiosity among children by being the strongest predictor of adolescent religious involvement (Smith & Faris 2005; Regnerus, Smith, & Smith 2004; Myers 1996). However, increasingly open communication could lead to a better understanding between mother and child, perhaps allowing for conversations on overall religiosity and what it means to be religious. Second, respondents who moved out of their parent’s home were less likely to lose religious affiliation compared to those who did not move. Previous literature find that individuals who move out of their parents’ homes experience life apart from their families and entered into new social environments that could encourage secular perspectives (Hoge, Johnson & Luidens 1993). Although respondents could have more secular perspectives on religion and life in general, religious affiliation may stay intact due to the high social sanctions involving unaffiliation. Third, as respondents aged, they were less likely to lose religious
involvement. Literature on the life cycle and religious involvement often discuss the loss of religious involvement in early adulthood and the transition back to the church when individuals are married and have children of their own (Stolzenberg, Blair-Loy, & Waite 1995; Chaves 1991; Bahr 1970). Third, among African American and Hispanic respondents, developing more conservative values about marriage between waves led to a decrease in religious orthodoxy. This is opposite of what would have been expected since increase conservative marriage values is expected to predict an increase orthodoxy. Even more interesting is that change to conservative marriage values was not significant for white respondents in this model.

I argue that religiosity is a multi-dimensional construct that cannot be measured with one variable alone. Although religious involvement, orthodoxy, and affiliation have significant impacts on one another, they are not highly correlated. As shown in the regression models, change in values affect each dimension in various ways; illustrating that religious development throughout adolescence into emerging adulthood is complex and multilayered. Furthermore, this study adds to the small, but expanding literature on the unaffiliated. Scholars have highlighted the strong prejudice against this population in American society because they are often associated with diminished value systems and immorality (Harper 2007; Edgell et al. 2006). The study demonstrates that the development of nonreligious identities within the context of adolescence and emerging adulthood stem from differential importance of values compared to religious individuals. Since this is a time period marked by growing autonomy and discovery, the work shows
that researchers should continue to monitor change in values in shaping religious identity rather than looking at religious switching or conversion in late adulthood. Along with this, we can see that all three dimensions of religiosity are impacted by change in different values and shows that those who are conservative in orthodoxy may not be as religious involved as once assumed. These results push for future research to take into consideration the multi-dimensional understanding of religiosity and how this complexity can affect the development of a nonreligious identity.

There are several limitations to this research. First, as with all longitudinal data, there is the issue of attrition. In this case, only 2,532 of the original 3,370 respondents participated in the Wave 3 survey. These individuals who chose not to participate may be statistically different from the ones that did. Second, I originally wanted to look more closely at the development of the atheist identity among adolescence and in what ways are atheists different from religious individuals and others who are unaffiliated. However, only 50 individuals self-identified as atheists at Wave 3, which is too small of a sample to run the appropriate analyses. Third, as stated before, the choice in values for this study was limited to the questions asked in the dataset. Therefore, other pressing moral issues such as gay marriage, abortion, capital punishment, and gender equality that are at the forefront of American politics are not a part of the analysis.

I push for further research in this area of study in order to better understand how changes in values during adolescence can impact overall religiosity later in life. With this said, other longitudinal studies with more waves of data may be particularly helpful in
investigating the pattern of change in religious affiliation. Subsequent waves may show that those individuals who experienced a change in religious involvement and/or orthodoxy due to change in values may eventually change religious affiliation. Moreover, qualitative methods can look further into how and why individuals may maintain religious affiliation even though involvement and orthodoxy wanes. Lastly, scholars should consider religiosity as a multi-dimensional, complex concept and should be measured as such in future studies. This may lead to a more accurate categorization of individuals along the continuum of religiosity.
REFERENCES


Rowatt, Wade C., JoAnn Tsang, Jessica Kelly, Brooke Lamartina, Michelle McCullers, and April McKinley. 2006. “Associations between religious personality


