TO DRINK OR NOT TO DRINK: THE ROLE OF RELIGION AND FAMILY IN DRINKING PATTERNS AMONG EMERGING ADULTS

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by

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TO DRINK OR NOT TO DRINK: THE ROLE OF RELIGION AND FAMILY IN DRINKING PATTERNS AMONG EMERGING ADULTS

Abstract

by

Brooke Elizabeth Underwood Fischer

The following dissertation looks at individuals who have transitioned out of the teenage or adolescent years yet have not fully established themselves as independent adults in order to address the question of religion’s role in shaping behavior. Despite previous research considering the connections between religion and alcohol consumption, theoretical insights into the mechanisms that link religion and substance use or abuse remain incomplete. This dissertation primarily examines the influence of religion and religious practice on alcohol consumption among 18 to 25 year olds. With religion as the principal factor under investigation, this work also looks at social and familial context to further understand the competing factors that affect patterns of consumption. Using data from all three waves of the National Study of Youth and Religion (NSYR), which is a comprehensive investigation into the religious lives of American youth, I argue that religious belief and participation contributes something unique to the lives of young adults that shapes the way they behave in positive ways.
Results indicate that when examining patterns of alcohol use, within the emerging adult population, religion and religious involvement are important factors to consider in conjunction with social and familial context. Specifically, religious affiliation, organizational religious participation, and non-organizational religious participation each affect consumption to differing degrees. However, the principal mechanism by which religion influences consumption is through the non-organizational act of reading sacred scriptures, suggesting the utility of spiritual capital in producing positive outcomes.

Additionally, results indicate that family context exerts an indirect effect on binge drinking while prior heavy drinking and social context exert strong direct effects. Results reveal that prior antisocial behavior wields a stronger influence on later antisocial behavior than peer relationships. Lastly, findings show that not all conservative Protestants are alike in whether or how often they drink alcohol and differences in the factors that influence that behavior are present. Disaggregating conservative Protestants into smaller subgroups for analysis reveals heterogeneity that would otherwise be missed.
Dedicated to my best friend and husband, Benjamin, without whom this work would have been impossible to complete.

Proverbs 16: 3 – Soli Deo Gloria
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CHAPTER 1:
INTRODUCTION

1.1 Overview

Does religion matter in the everyday lives of young Americans? Does religious belief and practice affect behavior post adolescence? Recent research indicates that, on the whole, younger American adults are less likely to be religious than older American adults (Smith, 2009). Looking at whether religion matters in the everyday lives of young Americans, Smith (2009) suggests that while these individuals are less religious religion does not altogether disappear as a factor in their lives. This dissertation looks at individuals who have transitioned out of the teenage or adolescent years yet have not fully established themselves as stable, independent adults in order to address the question of religion’s role in shaping behavior.

The connection between religion and deviant behavior has long been debated. In their study “Hellfire and Delinquency,” Travis Hirschi and Rodney Stark (1969) found that religious youth were, in fact, not different from their nonreligious peers when it came to delinquency. Their study prompted other scholars to investigate further if and how religion actually influenced the behaviors and attitudes of youth. In contrast to Hirschi & Stark’s (1969) findings, recent scholarship has generally shown that religion and religious
participation do shield adolescents from delinquent tendencies (Regnerus, 2003a, 2003b; Smith & Faris, 2002; Johnson, Jang, Larson, & Li, 2001). By and large, an inverse relationship between religiosity and delinquency is consistently found with the strength of the correlation depending on type of deviance and dimension of religiosity (Baier and Wright, 2001). When considering non-violent deviance such as substance use, the influence of religion is found to be most strong (Baer, 2002; see Baier & Wright, 2001 for a detailed discussion; Regnerus, 2005).

Despite previous research considering the connections between religion and alcohol consumption, theoretical insights into the mechanisms that link religion and substance use or abuse remain incomplete. In particular, further understanding on the associations between religion and substance use among post adolescents is necessary. My dissertation primarily examines the influence of religion and religious practice on alcohol consumption among 18 to 25 year olds. With religion as the principal factor under investigation, I also look at social and familial context to further understand the competing factors that affect patterns of consumption. I argue that religious belief and participation contributes something unique to the lives of young adults, which shapes the way they behave in positive ways. In the sections that follow I expound upon the unique life stage of the individuals examined in this study, why the issue of substance use is acutely relevant for this group, how I think religion plays a part in their behavior, and, finally, I give a brief description of chapters 2 through 5.
1.2 Emerging Adulthood

Over the past few decades changes have taken place in the way that American adolescents transition into adulthood. Far from being a simple move from their parent’s home to starting a family and life of their own, the transition to adulthood has developed into a more drawn out, complex phase of life than in previous generations. Recognizing this change in the life course, researchers have begun to understand the period between ages 18 and 25 as a time distinct from both adolescence and adulthood. Referred to as “emerging adulthood” by Stephen Arnett (2000), this period of development between the teen years and adulthood is characterized by high levels of change, exploration and independence coupled with instability, confusion and uncertainty. With family formation and economic independence delayed, emerging adults tend to be free from normative adult expectations and responsibilities, such as parenting or career interests.

The late teens to mid-twenties are distinguished by multiple transitions in work, residence, education, and relationships and high incidence of substance use (Arnett, 2004; Maggs & Schulenberg, 2004; Nelson & Barry, 2005). For many emerging adults, changes in where they live, how they spend their time, and with whom they spend time are common place. They often spend time living outside their parents home and pursuing education, in addition to holding down a variety of types of employment (Arentt, 2004). All of these transitions inevitably bring changes in relationships with both friends and family. With less restriction on their time, money, and bodies, emerging adults find themselves exploring their identity and experimenting with risk-taking behaviors, such as consuming alcohol (Dworkin, 2005; Johnston, O’Malley, & Bachman, 2003).
My research looks only and specifically at individuals during this period of emerging adulthood both because of the tendency to experiment and the general lack of accountability to elders, such as parents or school officials. Many emerging adults are experiencing freedom from the rules and regulations of adolescence for the first time, which means they are making decisions about beliefs, behaviors, and commitments on their own, outside the purview of parents. With less restriction from elders and ample opportunities to explore, many emerging adults find themselves experimenting with substance use and, occasionally, substance abuse. I outline the extent of this use and abuse among emerging adults in section that follows.

1.3 Substance Use

For most emerging adults today, the years post high school bring with them a multitude of newness, opportunities, and choices together with uncertainty and ambiguity. With the security of mandated, structured education behind them, emerging adults must decide, often for the first time, what they will do next. Options include further education, work, traveling, military service, loafing off parents, all of the above, etcetera. Despite the decision they make, adjustments and connections will need to be made in new settings, with new people and less structure. For a significant majority of emerging adults, getting adjusted and connected during this time involves consuming alcohol.

Although moderate, social alcohol use during the transition years is often seen as a benign, normal activity for emerging adults, particularly for college students, the
National Institute of Alcohol Abuse and Alcoholism (of the National Institutes of Health) (NIAAA), considers alcohol consumption by emerging adults, both college attending and non-attending, a serious public health issue that should not be ignored (NIAAA, 2006). Multiple studies consistently find that 60% to 70% of emerging adults (many of whom are still underage) report drinking alcohol on a regular basis (Johnson, O’Malley, Bachman, & Schulenberg, 2009; NIAAA, 2006; Substance Abuse and Mental Health Services Administration [SAMHSA], 2008).

However, the issue is not simply that a high number of emerging adults drink but, more specifically, it’s the way they drink as compared to older adults. Emerging adults are particularly prone to abusing alcohol and drinking heavily. Nearly half of all 21 to 25 year olds and more than a third of 18 to 20 year olds reported binge drinking\(^1\) in the past month. Compared to all other age groups, emerging adults binge drink the most (SAMHSA, 2008). In turn, these high levels of drinking put them at increased risk for alcohol-related problems (NIAAA, 2006).

These alcohol-related problems include academic struggles, sexual risk-taking and assault, decreased physical and emotional wellbeing, legal troubles, and, even, death (Crosnoe, Muller, & Frank, 2004; NIAAA, 2006; Perkins, 1987). Additionally, alcohol related traffic accidents and fatalities are a serious concern. In 2003 alone, one third of drivers age 16-20 who died in an accident and more than half of drivers age 21-24 who died in an accident tested positive for alcohol in their blood (NIAAA, 2006). Because of the high prevalence of risky drinking among emerging adults and the (sometimes tragic)

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\(^1\) For the most part, researchers use the terms binge, heavy, and party drinking interchangeably to describe the consumption of 5 (for males)/4 (for females) or more drinks in a row, within a two-week period.
consequences, additional research that seeks to understand the risk and protective factors of consumption is merited, which is exactly what this dissertation does. This dissertation looks at substance use and abuse among individuals transitioning out of adolescence and into adulthood and, specifically, examines the role religious and social context plays.

1.4 The Role of Religion in Substance Use

Researchers often conceptualize religion’s effect on substance use in terms of social capital, either as a source of direct social control or a source of pro-social networks (Johnson, Jang, Larson, & Li, 2001; Longest & Vaisey, 2008; Regnerus, 2005). I argue, however, that religion influences lives through more than just the provision of beneficial social capital. Understanding religious belief and practice merely as a source of social capital falls short of capturing the fullness of religion’s influence in the daily lives of emerging adults. To build upon the social capital perspective, I rely upon Christian Smith’s (2003) theory of influence as a rough framework and buttress this framework with Robert Woodberry’s (2005) conception of spiritual capital.

Theorizing about how religion affects the lives of adolescents, Smith (2003) moves beyond the simple social capital explanation and outlines three specific dimensions of influence: moral order, learned competencies, and social and organizational ties. He defines moral order as ideas of right and wrong, good and bad, honorable and dishonorable. These ideas are based on criterion that exist outside and above an individual’s personal needs, wishes, or assessments thereby supplying a standard by which to judge or evaluate human belief, behavior, and interaction. The
dimension of learned competencies refers to the increase youth experience in skills and knowledge by being involved in and connected to religious organizations, specifically in the form of leadership skills, coping skills, and cultural capital. And, finally, the dimension of social and organizational ties considers the relational connections that youth acquire as they take part in religious activities. The social ties that religious involvement offers have the unique characteristic of being cross-generational thereby connecting youth to both peers and adults within the religious congregation.

I suggest that these three dimensions of religious influence – moral order, learned competencies, and social and organizational ties – can be distilled down to two basic types of capital, social and cultural capital, with a third overarching type of capital that is unique to religion, spiritual capital. Social capital includes social norms and sanctions, connections to information and opportunities through social relationships, and the obligations and expectations that come with being socially connected (Coleman, 1988). Within the context of religious involvement, social capital tends to be cross-generational (Smith, 2003). Cultural capital refers to the skills, knowledge, practices, and attitudes acquired within a specific context. Woodberry (2005) suggests the idea of spiritual capital as a way of further understanding the influence of religion. Spiritual capital includes religious ritual, symbolism, and practices which are not related to other forms of capital. In this way, the spiritual capital afforded by religious involvement can shape the way the social and cultural capital of religion is used.

Smith (2003, pg.19) affirms that there is “something particularly religious in religion, which is not reducible to nonreligious explanations.” I argue, therefore, that to understand this uniquely religious influence we must acknowledge religion as a source of
not only social and cultural capital but spiritual capital as well. The capital that religion imparts for many people should not be reduced merely to a form of social capital that provides social control and networking or cultural capital that provides valuable skills and knowledge. Religious involvement offers a distinctly religious context. Therefore, the theoretical understanding of religion’s effect on behavior should be considered with respect for its patently religious dimension.

The concept of spiritual capital furthers the discussion of religion’s effect on substance use by considering spiritual belief, meaning, personal devotion, and action when explaining religion’s role in shaping behavior, thereby recognizing the possibility of a uniquely religious effect. While cultural and, especially, social capital have been widely identified as provisions of religious involvement, which are used in arenas outside of religion to help youth succeed and are found to promote positive behavior outcomes, the concept of spiritual capital has yet to be sufficiently explored or explained. Woodberry’s (2005) writing outlined the concept of spiritual capital, but I found no studies that further examined the concept of spiritual capital as a mechanism for explaining the unique, positive, and beneficial effect of religion on behavior, much less substance use. I address this gap in the literature in this work.

Before continuing with a delineation of the organization of this dissertation, I must clarify my use of the term “capital” in general. The idea of capital suggests the acquisition of a resource or competence that allows one to gain rewards within a specific setting (Lareau & Weininger, 2003). For example, cultural capital has been heavily used by sociologists of education to explain differences in educational attainment according to
race or ethnic background. In this work, capital is generally thought of as symbolic in nature and attained at the expense of labor, effort, or sacrifice.

According to Bourdieu, capital may be seen as having negative value in one setting but high value in another, thus the setting in which the capital is amassed and/or divested affects the return gained (Bourdieu, 2001; Verter, 2003). While some scholars may consider “rewards” strictly in terms of upward mobility (in society or education), rewards (or returns)—whether material or symbolic—come in numerous forms including mobility, status attainment, group membership, goal achievement and various positive outcomes or advantages. Hence, the value of the capital gained via religious involvement, whether cultural, social, or spiritual, may or may not be valued or profitable in other arenas. For instance, personal piety is considered a marker of status within religious settings but is not necessarily valued in non-religious settings. Nonetheless, piety can result in exclusive access within religious circles and translate into positive behavioral outcomes for an individual even though it may not provide wealth or educational advantage in the larger social setting. Subsequently, in this instance, the notion of spiritual capital is useful in clarifying the sphere of benefit.

1.5 Methods and Organization of the Dissertation

This dissertation uses longitudinal data to investigate the role of religion on the alcohol consumption of emerging adults. Using data from the National Study of Youth and Religion (NSYR), I examine the frequency of consumption, the frequency of binge drinking, and the tendency among some groups to abstain from drinking all together. By
using longitudinal data, I am able to control for prior drinking. Controlling for prior drinking is important as research shows that those who initiate drinking when they are younger are more likely to use and abuse alcohol later in life (Muthén & Muthén, 2000). Thus, controlling for the level of consumption during adolescence diminishes the possibility of a selection effect of drinking during the emerging adult years. Many studies use cross-sectional data when looking at consumption, thus allowing for the possibility of selections effects distorting results (ex. Ellison, Bradshaw, Rote, Storch, & Trevino, 2008; Perkins, 1985).

This dissertation is organized in the form of three separate studies, preceded by the current introduction section, and followed by a conclusion. The data used for all three studies comes from the NSYR. Each substantive chapter stands alone, without the assumption that a reader has read the other chapters, thus overlap and incongruence between the chapters does occur. The intent of these chapters is not to comprehensively cover and examine the role of religion in the lives of emerging adults in terms of social, cultural, and spiritual capital. Rather, the hope is to shed new light on the unique influence of religious practice on a specific form of behavior, namely alcohol use and abuse, which is particularly relevant for this age group. Part of the purpose of the final chapter is to draw out consistent findings from across all three substantive chapters and position the findings of this dissertation within the broader scope of literature that looks at religion and behavior.

Chapter two of this dissertation looks specifically at college student drinking and looks particularly at the spiritual capital component of religious influence in conjunction with social capital. The purpose of this study is to empirically examine the relationship
between the religious participation of college students (both organizational and non-organizational involvement) and alcohol consumption. This study furthers the current conversation in the literature by looking more extensively at religious group involvement, non-organizational religious practices and the idea of spiritual capital. The concept of spiritual capital is most extensively and explicitly considered in this chapter. Using a sample of college attending respondents from Wave 2 of the NSYR this chapter addresses four specific questions about religion and consumption: (1) Controlling for consumption prior to college, does religious affiliation and organizational religious involvement significantly influence the drinking habits of college students?; (2) Do non-organizational religious practices negatively affect consumption over and above the impact of affiliation and organizational involvement (i.e. are they mechanisms by which religion affects drinking habits)?; (3) Does the content of religious teachings matter or does religious practice in and of itself affect drinking habits (i.e. are there interaction effects?)?; (4) Are the effects of affiliation, organizational religious involvement, and non-organizational religious on consumption the same when considering excessive consumption?

The study in chapter 3 seeks to better understand binge drinking among all emerging adults. Thus, this study looks at both college attending and non-college attending individuals. The purpose of this study is to examine the relationship between family context, social context, and substance abuse using a Social Development model within a mediation framework. Using data from Waves 1 and 3 of the NSYR, this study specifically addresses three key questions: (1) Does an adolescent’s family context, in terms of parental involvement and religiosity, directly affect the likelihood of binge
drinking post adolescence? (2) Does an emerging adult’s social context directly affect their binge drinking habits (controlling for life course factors and personal religiosity)? (3) Does an emerging adult’s social context mediate the effect of adolescent family context on binge drinking?

The study in chapter 4 furthers the discussion of the influence of religious tradition on behavior by looking at variation in alcohol consumption within conservative Protestantism. This chapter looks at how alcohol consumption is influenced by the cultural differences of specific faith traditions, with cultural capital conceptualized as the distinct ways certain groups engage the outside world. While the previous chapters look at respondents across multiple faith traditions, chapter 4 focuses in on conservative Protestants in particular. Primarily using Wave 3 data from the NSYR, this study investigates whether between group differences exist among Evangelical, Fundamentalist, and Pentecostal in the tendency to abstain from drinking and the frequency of consumption. Additionally, this chapter looks at whether the risk and protective factors of alcohol use are consistent across these groups. With an understanding that differences exist in the cultures of conservative Protestant subgroups and in the ways these subgroups approach secular society, this study examines two specific questions: (1) Do conservative Protestant subgroups differ from one another in their likelihood of abstaining from alcohol or in their frequency of consumption? (2) Does religious and non-religious involvement affect the alcohol use of emerging adults in consistent ways across conservative Protestant subgroups?

Chapter five brings the dissertation to a close by extracting a number of important themes that are woven into the three separate studies. By identifying these themes I
position the findings of the dissertation within the broader scope of current literature and highlight the value of the dissertation as a whole. After looking at general themes, I close the dissertation by suggesting possibilities for further research within the area of religion and behavior.
CHAPTER 2:
FAITH IN PRACTICE: THE EFFECTS OF ORGANIZATIONAL AND NON-ORGANIZATIONAL RELIGIOUS INVOLVEMENT ON COLLEGE STUDENT ALCOHOL CONSUMPTION

2.1 Overview

Largely credited with opening Pandora’s Box on the topic of religion’s effect on adolescent delinquency, the counterintuitive findings of Travis Hirschi and Rodney Stark’s (1969) study “Hellfire and Delinquency” prompted scholars to investigate further if and how religion actually influenced the behaviors and attitudes of youth. Despite Hirschi & Stark’s null findings that religious youth were, in fact, not different from their nonreligious peers when it came to delinquency\(^2\), on the whole scholars have found that religion and religious participation do shield adolescents from delinquent tendencies (Regnerus, 2003a, 2003b; Smith & Faris, 2002; Johnson, Jang, Larson, & Li, 2001). Baier and Wright’s (2001) meta-analysis indicates that an inverse relationship between religiosity and delinquency is consistently found in the research, with the strength of the correlation depending on type of deviance and dimension of religiosity. The most potent

\(^2\) The terms deviant, delinquent, and antisocial are all used to refer to behaviors generally thought of as inappropriate, undesirable and/or unlawful for youths. Conversely, the term pro-social refers to behaviors considered good and desirable for youth, behaviors such as self-discipline, honesty, politeness, cooperation, self-control, etc.
influence of religion is found when looking at non-victim or ascetic delinquency such as substance use (Baer, 2002; see Baier & Wrght, 2001 for a detailed discussion; Regnerus, 2005).3

Religious variations in substance use among adolescents and young adults have been debated by scholars for some time now (see references in Ellison, et al., 2008; and Regnerus, 2005). In their recent systematic review, Chitwood, Weiss, & Leukefeld (2008) examined 105 recent studies that specifically addressed substance use or misuse and religion or religious measures. Three quarters of the studies examined early through late adolescents (about twenty-five percent of these being studies of college students), with the vast majority looking at some form of alcohol use. Generally, researchers reported a protective effect of religiosity on alcohol use or misuse, though findings were mixed.

The concentrated interest in this topic for youth, particularly college students, makes sense due to the potential negative consequences of consumption. Elevated levels of alcohol consumption among youth contributes to academic problems, sexual risk-taking and assault, decreased physical and emotional wellbeing, and legal troubles (e.g. underage drinking, DUls, etc) among other things (Crosnoe, Muller, & Frank, 2004; Perkins, 1987). Furthermore, research shows that the college environment supports the norm of alcohol consumption in a way that non-college environments do not (Johnston, O’Malley, & Bachman, 2003).

3 Because of the normative nature of college drinking, some researchers do not consider alcohol consumption by college students a deviant behavior. This study refers to alcohol consumption by students under 21 as deviant because it is unlawful. Excessive drinking (i.e getting drunk) by college students, even those of legal age, is also considered deviant due to the undesirable and dangerous outcomes associated with it.
Even with considerable research about this subject, theoretical insight into the mechanisms that link religion and substance use or abuse continues to lack. Further clarity on how or why associations between religion and substance use exist is necessary. A good deal of the research conceptualizes religion’s effect in terms of social capital, either as a source of direct social control or a source of prosocial networks (Johnson, Jang, Larson, & Li, 2001; Putnam, 2000; Regnerus, 2005). Yet, no published studies were found that considered the concept of spiritual capital in conjunction with these existing theories as a deeper understanding of religion’s uniquely religious effect on alcohol abuse.

Additionally, existing studies, which look principally at religion’s effect on student alcohol consumption, tend to use cross-sectional, campus specific samples to test the relationship (Ellison, et al., 2008; Templin & Martin, 1999; Patock-Peckham, Hutchinson, Cheong, & Nagoshi, 1998; Perkins, 1985). By using a cross-sectional data, researchers are unable to control for prior drinking. These studies also tend to have minimal or weak measures of religion and religious practice. While religious affiliation, weekly service attendance, and importance of religion are commonly used measures, none of the studies measure involvement in religious activities and groups outside of weekly services or forms of non-organizational religious practice other than prayer. Researchers have not examined the possibility of religious participation as an alternative social outlet for college students, and, therefore, as a possible means to avoid social group activity based on substance use.

The purpose of this study is to empirically examine the relationship between religious participation and alcohol consumption and excessive use among college
students. While these relationships have received some recent attention in the literature, this study furthers the conversation by looking more extensively at religious group involvement, non-organizational religious practices and the idea of spiritual capital. Using longitudinal data from the National Study of Youth and Religion, which is rich with information about the religious and spiritual lives of students, this study specifically addresses 4 key questions: (1) Controlling for consumption prior to college, does religious affiliation and organizational religious involvement significantly influence the drinking habits of college students?; (2) Do non-organizational religious practices negatively affect consumption over and above the impact of affiliation and organizational involvement (i.e. are they mechanisms by which religion affects drinking habits)?; (3) Does the content of religious teachings matter or does religious practice in and of itself affect drinking habits (i.e. are there interaction effects?)?; (4) Are the effects of affiliation, organizational religious involvement, and non-organizational religious on consumption the same when considering excessive consumption?

2.2 Religious Affiliation and Substance Use

One of the most often investigated dimensions of religiosity connected to substance use is religious affiliation. Different faith traditions and denominations disagree as to whether and how alcohol should be consumed. More “proscriptive” groups such as Conservative Protestants or Mormons, tend to discourage or forbid alcohol use

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4 The terms Conservative Protestant and Evangelical Protestant are often used interchangeably in the literature, as are the terms Mainline Protestant and Liberal Protestant. For this study, the terms Conservative Protestant and Mainline Protestant will be used.
among members and promote abstention as the best option for maintaining integrity as a believer, while more permissive groups tend to hold lax views of consumption, brooking moderate use among parishioners and often including alcohol in sacrament practice (e.g. using real wine in Holy Communion) (Clarke, Beeghley, & Cochran, 1990; Cochran, Beeghley, & Bock, 1992).

Findings regarding the effect of affiliation on alcohol consumption, however, are mixed (Perkins, 1987; Forthun, Bell, Peek, & Sun, 1999). There is evidence that college students with no religious affiliation drink a significantly higher amount of alcohol and report more incidence of excessive drinking than students with either Protestant or Catholic affiliations (Patock-Peckham, et al., 1998). Yet, a recent study reported that Jewish, Catholic, and nondenominational Protestant students had higher rates of drinking than students with no affiliation (Ellison, et al., 2008). Conservative Protestants of all ages are more likely than others (i.e. Catholics, Mainline Protestants) to affirm belief in moral absolutes and to claim the Bible as the authority on what is right and wrong (Smith et al., 1998). Thus, adolescents who identify themselves as Conservative Protestant are, therefore, more likely to esteem obedience to biblical values and moral norms and to uphold views about drinking that are black and white, uncompromising. Considering the assorted findings and the proscriptive nature of certain faith traditions, I develop my first hypothesis:

**H$_1$: Affiliation with a Mormon or Conservative Protestant denomination is related to lower levels of alcohol consumption as compared to other religious affiliations or no affiliation.**
2.3 Social Capital and Spiritual Capital

Researchers often explain the effect of religion on substance use in terms of social capital (Longest & Vaisey, 2008). Social capital refers to the resources an individual receives through involvement in social structures, such as organizations, groups, institutions, and the like. According to Coleman (1988), social capital includes social norms and sanctions, connections to information through social networks, and obligations and expectations. In his review of the possible reasons why religion would influence the actions of adolescents, Christian Smith (2003) proposes that social capital is likely augmented by religious involvement. From his perspective, regular involvement in a religious community increases extra-familial, and often cross-generational, interaction and ties that are beneficial to youth in terms of information, norm reinforcement, care, and accountability. These relationships, in turn, “foster and reinforce positive, constructive life choices and behaviors” in youth (Smith, 2003, pg 25).

Participation in non-religious groups, such as a sports team or social club can provide social capital similar to religious involvement in terms of connections to people, opportunities, and information. Yet, involvement in a religious organization provides a distinctly religious context as well, which involvement in other, non-religious groups cannot offer. The theoretical understanding of religion’s effect should be considered, therefore, from a multidimensional standpoint, with consideration for the patently religious dimension. If there is “something particularly religious in religion, which is not reducible to nonreligious explanations” and religious elements are consistently shown to “exert causal influence,” (Smith, 2003, pg.19) then currently there remains something missing in the understanding of how religion translates into pro-social outcomes.
I assert that understanding religion and religiosity strictly through the lens of social capital fails to fully capture the richness of religion’s place and influence in the daily lives of individuals. Religion is unique as a source of capital in that it not only provides a social and cultural component but a moral, spiritual component as well. In other words, the resources that religion imparts for many people cannot be reduced to a mere generic form of social capital that provides a source of prosocial networks.

Sociologist Robert D. Woodberry (2005) proposes the concept of “spiritual capital” as a way of investigating and understanding the unique resources that religion generates. According to Woodberry, spiritual capital (i.e. religious or spiritual resources) is connected to social, cultural, and material capital but also includes religious ritual, symbolism, and practices which are completely unrelated to other forms of capital but may well shape how these other resources are used. Examples of spiritual capital include partaking in the sacrament of Holy Communion, conviction of “sin,” and belief in the power of prayer. The concept of spiritual capital adds a dimension to the substance use discussion in that it facilitates the consideration of spiritual belief and meaning when explaining religion’s role in shaping behavior, thereby acknowledging the possibility of a uniquely religious effect. As I will delineate later, this study explores the concepts of both social and spiritual capital when considering the effect of religion on substance use.

2.4 Religious Service Attendance and Group Involvement

Research confirms Smith’s (2003) assertion concerning increased religious participation and positive outcomes. Evidence exists that organizational religious
participation, such as regular religious service attendance, is related to lower rates of alcohol consumption among college students. In fact, after adding regular attendance to the model, Ellison and colleagues (2008) found that the previously strong negative effect of being affiliated with a Conservative Protestant group fell out of significance, suggesting that organizational participation in religion is one of the mechanism by which proscriptive groups affect change in youth. Regular attenders are more likely than inconsistent or non-attenders to be connected to people who support specific social norms concerning alcohol use and to be more aware of the expectations of the religious community (Cochran, et al., 1992). Regular attendance serves to validate and constantly re-validate one’s religious beliefs and the norm and values of the religious community. Those who attend services regularly are also likely to be more invested with regards to time, energy, and emotions, and, consequently, be more vulnerable to the effect of social sanctions if they deviate from the norm (Iannaccone, 1994).

Despite the strong support that involvement in organizational religion leads to positive outcomes, most researchers have failed to include additional measures of organizational religious involvement as a compliment to the traditional religious service attendance measure. Part of Smith’s (2003) theory of religion’s effect suggests that social capital is increased via religious involvement by bringing students into more positively leaning social networks. Woodberry (2005) suggests that because the relationships formed in a religiously based group have a spiritual context, they likely provide spiritual capital in addition to shaping the way social capital is used. Thus, being involved in a religious youth group would serve to further bolster the social and spiritual resources students have to pull from when making decisions about substance
use. Students who seek out social interaction based on common religious beliefs and values are creating for themselves additional social network options, which validate their personal religious convictions and are plausible alternatives to social group activity based on substance use.

With the idea that regular attendance and religious group involvement boost both social and spiritual capital, my second and third hypotheses are as follows:

**H2**: Regular attendance at religious services is related to decreased alcohol consumption, net of its relationship to religious affiliation.

**H3**: Being part of a religious youth group is related to decreased alcohol consumption, net of its relationship to religious affiliation and regular service attendance.

To further test the idea of spiritual capital and a distinctly religious effect as opposed to a generic social capital effect, this study will also look at involvement in religious versus non-religious activities. I expect involvement in activities organized by religious groups would serve to influence drinking in a manner similar to being part of a religious youth group. On the other hand, non-religiously based activities would increase a student’s connections to networks outside the realm of religion, thereby increasing social capital based on secular norms, which are likely more in line with the general college norm of alcohol consumption, but not increasing spiritual capital. Thus, my fourth hypothesis:

**H4**: Participating in activities organized by religious groups is related to decreased alcohol consumption, while participating in activities not organized by religious groups is related to increased alcohol consumption.
2.5 Non-Organizational Religious Practice and Spiritual Capital

In addition to organizational religious involvement, such as attendance, scholars have considered the possibility that private religious practice or belief (i.e. Non-organizational), such as prayer or importance of religion, might, too, have a negative relationship with substance use (Regnerus, 2005; Cochran, 1992; Perkins 1987). Researchers looking at whether non-organizational aspects of religion influence individual behavior surmise that personal practices point to the salience of religion in a person’s life, i.e. strength of commitment or how important religion is in day to day living (Ellison, et al., 2008; Perkins, 1985). Not unlike attendance, practicing non-organizational religion on a regular basis could indicate that religion is more salient in a person’s life and, therefore, more likely to have an affect on the choices they make and the way that they live than it would for someone to whom religion is not important. Additionally, the idea is that those who, for instance, pray regularly or think religion is very important are more likely to internalize religious teachings and norms and then behave out of their conviction rather than out of obligation or guilt. From this I develop my fifth and sixth hypothesis:

$H_5$: Praying on a regular basis is related to decreased alcohol consumption, net of its relationship to affiliation and organizational religious involvement.

$H_6$: The more important religion is (i.e. higher salience of religion) the less alcohol a student will drink.

Even though the literature concerned with the connection between religion and substance use makes use of a broad range of religious indicators, no study was identified
that included the reading of sacred scripture (e.g. Bible, Koran, Torah) as a measure of non-organizational religious practice and a possible mechanism by which religion affects behavior. This gap in the literature is likely due to the fact that many studies use data not purposely intended to understand religion or religious belief, and, therefore, does not contain a satisfactory measure of scripture reading. Nonetheless, looking at this form of non-organizational religious practice holds promise. Personal scripture reading, while encouraged (and sometimes strongly) by many faiths, is by no means a compulsory act for religious believers, nor is it often public. Unlike attendance, it’s possible for no one to ever know whether or not a follower takes the time to read sacred scripture. Unlike prayer, which can be done spontaneously almost anywhere at any time without detection (e.g. while taking a test, while driving), setting aside time to read scripture typically takes some forethought (e.g. to read scripture one must have the text with them in some form and not be otherwise engaged) and dedication. Thus, those who read scripture are likely to exhibit a stronger commitment to and clearer understanding of their religious faith than followers who do not read, even if they attend and pray regularly. Those who invest time, energy, and emotion into reading sacred scripture are more fully internalizing their faith and accumulating distinctly spiritual capital, which likely affects the choices they make concerning substance use.

My seventh hypothesis, therefore, is founded on the idea that reading scripture serves as a key mechanism through which religion influences substance use patterns:

\[ H_7: \text{Reading sacred scripture is related to decreased alcohol consumption, over and above the effects of other organizational and non-organizational religion measures.} \]
My final hypothesis looks at the content in religious messages. Not all religious teachings are the same. Does the content of the message matter or does simply practicing religion, i.e. attending services or reading scripture, build spiritual capital and thereby affect drinking habits? This question points to possible interaction effects between religious affiliation and religious practice. If content matters, significant interactions will exist between religious affiliation and attendance or scripture reading; if content does not matter then the effect of attendance or scripture reading will not differ by affiliation.

Considering the proscriptive nature of certain faith traditions concerning issues of personal conduct, particularly Conservative Protestant and Mormonism, the content of their message is likely to be consistently anti-alcohol or, at the very least, heavy-handed in moderation. This message could be further reinforced by passages from sacred texts concerning prohibition toward drunkenness or treating the body as a temple. Thus, my 8th and final hypothesis is as follows:

$$H_8: \text{The effect of religious service attendance and scripture reading on consumption is moderated by religious affiliation.}$$

2.6 Data

Data used in this study comes from the National Study of Youth and Religion (NSYR). The NSYR, a comprehensive investigation into the religious lives of American Youth, is a nationally representative telephone survey of 3,290 U.S. English and Spanish

5 The National Study of Youth and Religion, <www.youthandreligion.org>, whose data were used by permission here, was generously funded by Lilly Endowment, Inc., under the direction of Christian Smith, of the Department of Sociology at the University of Notre Dame and Lisa Pearce, of the Department of Sociology at the University of North Carolina at Chapel Hill.

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speaking teenagers, plus an additional oversample of 80 Jewish respondents, who were ages 13 to 17 at wave one, and one of their co-resident parents. Wave One of the study was conducted from July 2002 to August 2003 using a random-digit-dial (RDD) telephone survey method with a random sample of telephone numbers representative of all household telephones in the 50 United States. All households with at least one teenager between the ages of 13 and 17 living in the house for at least six months of the year were considered eligible for the survey. To facilitate randomization of responses within households and to better represent age and gender, interviewers requested to conduct the survey with the teenager in the household with the most recent birthday. To further confirm the nationally representative character of the NSYR data for U.S. households with a teen ages 13 to 17, investigative analysis comparing NSYR data with 2002 U.S. Census data on equivalent households and with similar adolescent surveys – such as Monitoring the Future and the National Longitudinal Study of Adolescent Health – revealed no identifiable sampling or non-response biases (for details, see Smith & Denton, 2005). A comparison between the Jewish cases drawn for the nationally-representative sample and the Jewish over sample was also conducted to check for sampling bias. No statistically significant differences between the two groups were found with regards to pertinent demographic and religion measures, suggesting that the two groups are extremely similar along important dimensions of analysis\(^6\). Nonetheless, a Jewish oversample dummy variable is included in all analyses to statistically remove

\(^6\) The two groups differed on only two tested measures, neither of which is pertinent to this study: (1) the parent respondent for the oversample cases was six percent more likely to be a mother than a father; and (2) the educational attainment of the mothers of the oversample respondents was greater (only five percent of them had not attended any college, compared to fourteen percent of the national Jewish sample mothers).
any potential unidentified effect of sampling bias inherent in the Jewish oversample cases net of other independent variables in the model\textsuperscript{7}.

Wave Two of the NSYR was collected from June to November 2005 and conducted only in English\textsuperscript{8}. At the time of the second survey respondents were between the ages of 16 to 21. Of the original respondents, 2,604 participated in the second survey, for a full retention rate (including the Jewish oversample) of 78.6\%\textsuperscript{9}. Reasons for attrition from the original sample included uncompleted surveys (3.8\%), refusal (3.9\%), ineligibility (e.g. being imprisoned, deceased, etc) (1.7\%), and those who could not be contacted or located (13.3\%).

2.6.1 Analytic Sample

Due to the fact that the current study seeks to understand drinking in the college setting, only respondents from Wave 2 who indicated that they were enrolled in either a vocational/tech school, community/junior college, or four year university/college in the spring of 2005 were kept for the sample. Even by Wave 2 a number of respondents were still in high school during the spring 2005 semester. Dropping any respondent either not enrolled in school at all or enrolled in a pre-college institution (i.e. middle or high school) resulted in a base sample of 555 students, the majority of whom attended a four year institution during the spring 2005 semester. Next a list-wise deletion was performed on

\textsuperscript{7} The Jewish Oversample dummy variable does not reach significance (lowest two-tailed significance is .798) in the model and the coefficient is, thus, not reported.

\textsuperscript{8} Four respondents did not participate in the wave 2 interview due to not being able to understand or speak English.

\textsuperscript{9} The figure 2,604 includes 23 respondents who partially completed surveys.
all the variables included in the final model, creating a final analytic sample of 552 cases. This final sample is the base for all of the descriptive statistics presented in the following section. Most of the independent variables are from Wave 2, with two exceptions – pre-college drinking and parent’s educational attainment are from Wave 1.

2.7 Measures and Analytic Strategy

2.7.1 Dependent Variables

The dependent variables used in this study are measures of alcohol consumption. For my first dependent variable, respondents were asked how often, if at all, they drank alcohol such as beer, wine, or mixed drinks, but not including at religious services. Seven response choices included never(0), a few times a year, about once a month, a few times a month, about once a week, a few times a week, and once a day or more(6). For my second dependent variable, which measures excessive consumption (or abuse), if respondents indicated they drank at least a few times a year they were asked how often, if ever, they had been drunk in the last year. Responses for the drunk variable included never (0), once or twice, a few times, every couple of weeks, once a week, and more than once a week (6).

2.7.2 Independent Variables

The primary independent variables used in this study are measures of affiliation, organizational religion, and non-organizational religion. For most of the respondents
religious affiliation is determined by their self-declared religious identity and/or by the place where they attend religious services. Dummy variables are used to identify the following affiliations – Conservative Protestant, Mainline Protestant, Black Protestant, Mormon, Catholic, Jewish, Other Religion, and Not Affiliated. The specific denominational affiliations are classified according to the guidelines set forth by Steensland and colleagues (2000). Additional information is used to determine a respondent’s religious or denominational affiliation if they indicated they were Christian/Another kind of Christian/Protestant (C/A/P) but indicated no specific denomination. Even after these guidelines are followed, the affiliation of a small number of respondents, who claim that they consider themselves as part of a religion, is indicated by an affiliation dummy variable labeled Indeterminate/Unknown as their religious affiliation was not reasonably clear (yet they have valid responses for every other variable). Although a small Other Religion category remains in the analysis, given its heterogeneity I do not attempt to substantively interpret the findings for this group. Conservative Protestant is the modal category and the reference category in the multivariate models.

Two binary measures of organizational religion are included in the analyses. The first is a measure of regular religious service attendance; the second is a measure of youth

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10 Respondents who indicated they were C/A/P but indicated they never attended religious services anywhere are coded as Not Affiliated. For respondents who indicated they were C/A/P and that they attend a Protestant or Christian/Just Christian church the following additional variables were considered before including them in a specific group: belief about Jesus Christ, belief about heaven, belief in the truth of religion, and race.

11 The Other Religion category includes Muslim-Islamic, Buddhist, Hindu, Jehovah’s Witness, Greek Orthodox, Pagan or Wiccan, and unspecific other.
group involvement. Respondents were asked how often they usually attended religious services (not counting weddings, baptisms, and funerals), with response options including never, a few times a year, many times a year, once a month, 2-3 times a month, once a week, and more than once a week. Based on results of preliminary analyses, which showed no significant differences in drinking frequency among persons who attended irregularly (once a month or less) or not at all, I created a binary variable to identify those students who attend services regularly (i.e. 2-3 times a month or more) where 1=regular attenders and 0=all others. Students were also asked whether they were currently involved in any religious youth group, defined as an organized group of young people that meets regularly for social time together, prayer, or to learn more about their religious faith. Current involvement in a youth group is coded 1 for Yes and 0 for No.

To further look at a student’s religious and non-religious social outlets, two activity variables are included in the analyses. Respondents were asked how many organized activities such as groups, clubs, sports, extracurricular activities they were involved in and whether or not those activities were organized by a religious organization (not including regular worship services or youth group meetings). Answers ranged from 0-9 for religious activities and 0-15 for non-religious activities.

The influence of non-organizational religion is tested in this study using three different indicators: daily prayer, religious salience, and sacred scripture reading. Respondents were asked how often, if ever, they prayed by themselves alone with response categories ranging from never (1) to many times a day (7). Much like attendance, preliminary analyses revealed that variations in drinking frequency were not significant between those who did not pray and those who prayed on less than a daily
basis. Thus, a binary variable of daily prayer is included in the analysis where praying daily or more is coded 1 and all others are coded 0. The religious salience of a student is indicated by their response to the following question: “How important or unimportant is religious faith in shaping how you live your daily life? Response categories ranged from extremely important (5) to not at all important (1).

Two dummy variables indicating different amounts of time reading sacred scripture are included in this study. Respondents were asked how often, if ever, they read from sacred scripture (i.e. the Bible, Koran, Torah)\textsuperscript{12} to themselves alone, with responses including never, less than once a month, one to two times a month, about once a week, a few times a week, about once a day, many times a day. Preliminary analyses using t-tests to compare means revealed two distinct cut points (i.e. three groups) in the original scripture reading variable when looking at frequency of drinking. Those who never read scripture were significantly different from those who read irregularly (less than once a month to about once a week), while those who read irregularly were significantly different from those who read on a regular basis (a few times a week or more). Given these group differences and in order to more fully capture the effect of scripture reading on drinking and aid in interpretation of the coefficients, I included two scripture reading dummy variables in the analysis. For the Infrequent Scripture Reading variable, students who do read but do not read more than once a week are coded 1 and all others are zero.

\textsuperscript{12} Respondents were asked whether they read from a specific type of sacred scripture based upon their stated religious affiliation. Respondents who indicated they were Catholic, Another kind of Christian, or Protestant were asked how often they read the Bible. Those who indicated they were Jewish were asked how often they read the Torah. Respondents who indicated they were Muslim were asked how often they read the Koran. If respondents indicated that they were Another Religion, Not Religious, didn’t know, or refused to specify, they were asked how often they read Sacred Scripture, with no particular text identified.
For the *Regular Scripture Reading* variable, students who read multiple times a week or more are coded 1 and all others are coded zero. With both of these variables in the analysis, the reference group is students who never read scripture.

2.7.3 Control variables

In order to place confidence in this study’s findings factors that could potentially confound the association between religion and alcohol consumption among college students must be statistically controlled. Extant research indicates that along with religion, gender, minority status, and pre-college alcohol use are commonly associated with college consumption (O’Malley & Johnston, 2002). Gender (female = 1, male = 0), minority status (minority = 1, white = 0), and prior consumption (scale ranging from 0 (*never*) to 6 (*almost every day*)) are explicitly controlled in all models. Given the differences between various types of educational settings, college sector is also controlled in every model. Dummy variables are used to indicate whether a student attends a vocational/technical college, community/junior college, or a 4-year college/university. Students attending a *four-year institution* make up the model category and the reference group in these analyses. Socio-economic status is controlled using a continuous variable indicating the educational attainment of a student’s parents. The value used to indicate a parent’s educational attainment is the highest level of attainment from either parent (mother or father, whichever is higher) and is measured in years. In this sample,

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13 Preliminary models also included dummy variables for region of the country. These variables did not significantly add to the model and were subsequently left out. These analyses are available upon request.
parent’s education ranges from 6 (only elementary school) to 20 (PhD or Professional Degree). Additionally, underage status is controlled by the fact that all respondents in the sample are under 21 years of age (age range is 16-20)\textsuperscript{14}.

2.7.4 Interaction Terms

To test the hypothesis that the effect of attendance and scripture reading on drinking differs by religious affiliation, a total of 24 interaction variables are included in two sets – one set for attendance and one set for scripture reading. Eight interaction variables are tested in the first set– one for each religious affiliation category minus Evangelical Protestants (the comparison group). For the second set, each affiliation dummy variable is multiplied by each of the two scripture reading variables, producing 16 (18 minus 2), with the comparison group again being Evangelical Protestants.

2.7.5 Analytic Strategy

Although the dependent variables used in this study are ordinal, I treat them as if they were continuous and use Ordinary Least Squares (OLS) regression to estimate the effects of my independent variables on both frequency of alcohol consumption and frequency of excessive consumption. Because both of these dependent variables have an extended range (7 and 6 categories respectively), using OLS to estimate the models is fitting and makes interpretation of the findings more intuitive for the reader. Ancillary

\textsuperscript{14} Preliminary models were run with an age variable included, which did not significantly add to the model and was subsequently left out. These analyses are available upon request.
analyses using Ordered Logistic (Ordinal) regression (not shown, but available upon request) confirm that using OLS does not seriously distort or substantively change the findings.

My primary aim in this study is to further understand the mechanisms by which religion might influence the alcohol consumption of college students, including excessive consumption. First, to test each of the proposed hypotheses I regress frequency of alcohol consumption on all of the predictor variables, entering religious affiliation, organizational participation, and non-organizational religious practices as groups into successive models. The hierarchical or nested organization of the models will indicate whether some measures operate through the others. After looking at the direct and indirect effects of the predictor variables, I estimate two additional models, which include the full set of independent variables plus a set of interaction terms – one set for attendance by affiliation and one set for scripture reading by affiliation. After looking at frequency of consumption, I regress excessive alcohol consumption on the same predictor variables and interaction variables to see if the influence of religion is different when considering more extreme behavior.

2.8 Results

Table 2.1 contains sample characteristics and descriptive statistics on all the variables used in the analyses. Just over half the sample is female (55.6%), just over a quarter are non-white respondents (26%), the average age is 19, and the typical student comes from a home where at least one parent attended college and/or completed a
Bachelor’s degree (14 = AA degree, 16 = BA/BS, m= 15.6, see table 2.1). The vast majority of students attend a 4-year institution (72%), with 5% attending a technical college and another quarter attending a junior college (23%). The average student in the sample drank alcohol a few times a year prior to college, drinks alcohol a couple times a month (m=2.4) as a college student, and reports having been drunk a couple times in the last year (m=1.6). The sample is characterized by a moderately high degree of religious heterogeneity. Conservative Protestants compose the largest group (25.7%), followed by respondents with No Affiliation (22%), Catholics (21%), and Mainline Protestants (10%). There are also small, but nontrivial, numbers of Jews (6.5%), Black Protestants (5.8%), Mormons (1.8%), and others (3%).

Given the amount of organizational and non-organizational religious involvement, religion does appear to play a noteworthy part in the lives of many of the respondents in the sample. Forty percent of the sample attends religious services on a regular basis (at least a couple times a month), while about 25% are part of a religious youth group. However, the average respondent, while involved in 1-2 non-religious activities, rarely participates in religious activities outside of religious services or youth group. Nonetheless, the average respondent considers religious faith to be somewhat important in shaping how one lives, while nearly 30% report praying on a daily basis. Half of the sample reads sacred scripture to some extent, with 37% reading irregularly (up to once a week) and 13% reading on a regular basis (multiple times a week or more).
TABLE 2.1
DESCRIPTIVE STATISTICS

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking</td>
<td>2.39</td>
<td>1.835</td>
<td>0 - 6</td>
</tr>
<tr>
<td>Getting Drunk</td>
<td>1.60</td>
<td>1.553</td>
<td>0 - 5</td>
</tr>
<tr>
<td>Conservative Protestant</td>
<td>.257</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Mainline Protestant</td>
<td>.101</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Black Protestant</td>
<td>.058</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Catholic</td>
<td>.210</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Jewish</td>
<td>.065</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Mormon</td>
<td>.018</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Unaffiliated</td>
<td>.221</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Other Affiliation</td>
<td>.033</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Indeterminate/DK Affiliation</td>
<td>.036</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Attends Services Regularly</td>
<td>.404</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Prays Daily</td>
<td>.288</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Part of Religious Youth Group</td>
<td>.248</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Religious Activities</td>
<td>.491</td>
<td>1.103</td>
<td>0 - 9</td>
</tr>
<tr>
<td>Non-religious Activities</td>
<td>1.61</td>
<td>1.908</td>
<td>0 - 15</td>
</tr>
<tr>
<td>Importance of Faith/Salience</td>
<td>3.22</td>
<td>1.281</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Reads Scripture Irregularly</td>
<td>.373</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Reads Scripture Regularly</td>
<td>.130</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Racial Minority</td>
<td>.262</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Female</td>
<td>.556</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Pre-college Drinking*</td>
<td>1.06</td>
<td>1.365</td>
<td>0 - 5</td>
</tr>
<tr>
<td>Age</td>
<td>19.1</td>
<td>.700</td>
<td>16 -</td>
</tr>
<tr>
<td>Technical college student</td>
<td>.051</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Junior college student</td>
<td>.234</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Four-year college/university student</td>
<td>.716</td>
<td></td>
<td>0 - 1</td>
</tr>
<tr>
<td>Parent’s educational attainment*</td>
<td>15.6</td>
<td>2.489</td>
<td>6 - 20</td>
</tr>
<tr>
<td>Jewish Oversample</td>
<td>.052</td>
<td></td>
<td>0 - 1</td>
</tr>
</tbody>
</table>

N 552

SOURCE: National Study of Youth and Religion, Wave 1* and Wave 2
Table 2.2 contains the regression coefficients for five nested OLS models in which frequency of alcohol consumption is regressed on religious affiliation, organizational involvement, social activities, and non-organizational practices. Each of the subsequent columns progressively adds a group of predictor variables with demographic control variables in every model. Consistent with prior research, minority status negatively impacts consumption, while prior consumption positively impacts consumption. Being female, on the other hand, does not have a significant effect on frequency of drinking for the students in this sample.

In accordance with hypothesis 1, the findings in Model 1 indicate that members of more proscriptive religious groups drink less alcohol than their counterparts who are unaffiliated or from more permissive religious traditions. This pattern is particularly strong for Jewish respondents, as compared to Conservative Protestants, while nearly equal positive effects are found for Mainline Protestants, Catholics, and students with no affiliation. Mormon students are even less likely than Conservative Protestants to imbibe when only taking into consideration affiliation.

In addition to affiliation differences, school sector differences are also evident in model 1. Students at four-year institutions are more likely to imbibe than those from Junior or Technical colleges, with students from technical colleges being least likely to drink. However, the negative effect of attending a Junior college disappears in later models as additional predictor variables are added while the effect of attending a technical institution remains consistent through each model, unaffected by additional predictors.
### TABLE 2.2

**ORDINARY LEAST SQUARES REGRESSION**

**PREDICTING FREQUENCY OF ALCOHOL CONSUMPTION**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>-0.132</td>
<td>-0.146</td>
<td>-0.096</td>
<td>-0.052</td>
<td>-0.052</td>
</tr>
<tr>
<td>Racial Minority</td>
<td>-0.684***</td>
<td>-0.651***</td>
<td>-0.677***</td>
<td>-0.635***</td>
<td>-0.637***</td>
</tr>
<tr>
<td>Pre-college drink.</td>
<td>0.587***</td>
<td>0.551***</td>
<td>0.539***</td>
<td>0.536***</td>
<td>0.522***</td>
</tr>
<tr>
<td>Technical college</td>
<td>-0.714*</td>
<td>-0.737*</td>
<td>-0.691*</td>
<td>-0.720*</td>
<td>-0.774**</td>
</tr>
<tr>
<td>Junior college</td>
<td>-0.285+</td>
<td>-0.331*</td>
<td>-0.214</td>
<td>-0.169</td>
<td>-0.142</td>
</tr>
<tr>
<td>Parent’s education</td>
<td>0.053+</td>
<td>0.061*</td>
<td>0.042</td>
<td>0.039</td>
<td>0.041</td>
</tr>
<tr>
<td>Mainline Prot.</td>
<td>0.599*</td>
<td>0.418+</td>
<td>0.424+</td>
<td>0.363</td>
<td>0.246</td>
</tr>
<tr>
<td>Black Prot.</td>
<td>0.441</td>
<td>0.348</td>
<td>0.421</td>
<td>0.336</td>
<td>0.377</td>
</tr>
<tr>
<td>Catholic</td>
<td>0.709***</td>
<td>0.441*</td>
<td>0.447*</td>
<td>0.334+</td>
<td>0.188</td>
</tr>
<tr>
<td>Jewish</td>
<td>1.099***</td>
<td>0.753**</td>
<td>.827**</td>
<td>0.687*</td>
<td>0.552+</td>
</tr>
<tr>
<td>Mormon</td>
<td>-1.265**</td>
<td>-1.036*</td>
<td>-0.851+</td>
<td>-0.908+</td>
<td>-0.798+</td>
</tr>
<tr>
<td>Unaffiliated</td>
<td>0.739***</td>
<td>0.245</td>
<td>0.323</td>
<td>0.162</td>
<td>0.103</td>
</tr>
<tr>
<td>Other</td>
<td>1.191**</td>
<td>0.807*</td>
<td>0.846*</td>
<td>0.769*</td>
<td>0.865*</td>
</tr>
<tr>
<td>Indeterm./DK</td>
<td>0.216</td>
<td>0.038</td>
<td>0.059</td>
<td>0.008</td>
<td>-0.060</td>
</tr>
<tr>
<td>Attends Regularly</td>
<td>-0.553***</td>
<td>-0.480**</td>
<td>-0.386*</td>
<td>-0.286+</td>
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</tr>
<tr>
<td>Youth Group</td>
<td>-0.280</td>
<td>-0.332+</td>
<td>-0.304+</td>
<td>-0.108</td>
<td></td>
</tr>
<tr>
<td>Relig. Activities</td>
<td>-0.042</td>
<td>-0.016</td>
<td>0.009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-relig. Activities</td>
<td>0.145***</td>
<td>0.141***</td>
<td>0.142***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious Salience</td>
<td>-0.044</td>
<td>-0.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prays Daily</td>
<td>-0.331*</td>
<td>-0.148</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reads Irregularly</td>
<td>-0.314+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reads Regularly</td>
<td>-1.088***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.812</td>
<td>1.250</td>
<td>1.253</td>
<td>1.516</td>
<td>1.519</td>
</tr>
<tr>
<td>R squared</td>
<td>.366</td>
<td>.389</td>
<td>.410</td>
<td>.415</td>
<td>.432</td>
</tr>
<tr>
<td>N</td>
<td>552</td>
<td>552</td>
<td>552</td>
<td>552</td>
<td>552</td>
</tr>
</tbody>
</table>

**SOURCE:** National Survey of Youth and Religion, Wave 1 and Wave 2

+ p ≤ .10  * p ≤ .05  ** p ≤ .01  *** p ≤ .001  (two-tailed test)
Net of affiliation effects, regularly attending religious services decreases alcohol consumption (Model 2), which confirms hypothesis two. While both the regular service attendance and youth group participation coefficients are negative in this model, the youth group coefficient narrowly misses the minimum significance test requirements, thus disconfirming hypothesis three. With the addition of regular attendance and youth group participation in Model 2, the effects of religious affiliation are greatly reduced. The coefficients for Mainline Protestants, Jews, and Mormons are all reduced by 20-30%, while the Catholic coefficient shrinks by nearly 40%. Most remarkably, the coefficient for unaffiliated respondents is cut by two thirds and falls out of statistical significance. The large change in the religious affiliation predictors from Model 1 to 2 indicates that the effect of affiliation on alcohol consumption is at least partly mediated by organizational religious involvement. Particularly when considering students with no affiliation, these findings suggest that lower levels of consumption among Conservative Protestant students are partially a result of higher average involvement in organizational religion, thus giving credence to the concept of religious involvement providing beneficial capital.

The addition of the two activity measures – non-religious and religious - in Model 3 provides partial support for hypothesis 4. Involvement in non-religious activities does increase alcohol consumption, but involvement in religious activities appears to have little effect on consumption in college. However, by making these measures constant in the model some interesting changes occur, not the least of which is the increase in the size and significance of the youth group coefficient. The inflation of the youth group coefficient by 20% from Model 2 to 3 suggests that the effect of being involved in a
youth group partially depends on whether a student is also taking part in competing, non-religious activities and gives some credence to hypothesis 3. By not controlling for non-religious activities in Model 2, the youth group effect was diluted. Involvement in two non-religious activities increases alcohol consumption by almost as much as involvement in a youth group decreases it in Model 3. Similarly, though still not a statistically significant coefficient, the unaffiliated coefficient grew in this model by 30%, alluding to the idea that some of the variation in alcohol consumption between this group and Conservative Protestants is related to involvement in supplementary activities.

Model 4 is the first model to include non-organizational religion measures and reveals the least amount of change from one nested model to the next. This model adds measures of religious salience (how important one considers faith to be in their life) and daily prayer. Alcohol consumption appears to be scarcely affected by whether or not a student considers religion to be important to their daily living, yet praying on a daily basis decreases alcohol consumption, net of the effects of affiliation and organizational religious involvement. Thus hypothesis 5 is confirmed but hypothesis 6 is not supported. Apparently, believing or affirming that religion is important has a much lesser effect on consumption than demonstrating or acting on that conviction. Adding salience and prayer to the model decreases the affiliation coefficients for Mainline Protestants, Catholics, Jews, and Unaffiliated students in a manner similar to the changes from model 1 to 2, though to a lesser degree. Much like the mediating effect of attendance, daily prayer mediates some of the effect of affiliation on consumption. A 20% decrease in the attendance coefficient from model 3 to 4 suggests that part of the effect that regular attendance has on consumption results from the correlation between praying daily and
attending regularly. But, because praying alone does not provide social capital like attending does, this finding points to the possibility of a unique religious capital (i.e. spiritual capital), which supplies students with additional resources when having to make decisions about how they will behave.

Two dummy variables for scripture reading are added in Model 5 thereby creating the final full regression model minus interaction terms. Reading scripture, whether regularly or irregularly tends to decrease alcohol consumption among college students as compared to never reading scripture, which supports hypothesis 7. While both coefficients are robust and statistically significant, they are fundamentally different in the magnitude of their effect. The effect of reading scripture at least a couple of times a week is three times larger than the effect of reading on a more sporadic basis. Adding scripture reading to the model causes many of the other religion measures to drastically shrink and some fall out of statistical significance. The net effects of regular attendance, youth group, and daily prayer coefficients decrease by 26%, 64%, and 55% respectively. The affiliation coefficients plummet by as much as 44% (Catholics). The direct effects of affiliation, organizational involvement, and daily prayer are greatly reduced by adding scripture reading to the model, which is especially interesting because no previous study has included an indicator of this non-organizational religious practice when predicting college alcohol consumption. Apparently, reading scripture is a key mechanism by which religion affects consumption and another indication of spiritual capital at work.

In addition to the direct effect of religious participation, I also predicted that content mattered and, thus, that religious affiliation may interact with attendance and scripture reading in its influence on alcohol consumption. Of the two sets of
hypothesized relationships (attendance or scripture reading, by affiliation), only one interaction term resulted in a significant coefficient\textsuperscript{15}. The effect of Irregularly reading scripture is conditional by an Other religious affiliation (B=1.481, p=.077). All other interaction terms indicate that the influence of religious service attendance or sacred scripture reading is not conditional by religious affiliation, disconfirming the prediction of interaction between these factors (hypothesis 8). While the general disconfirmation of hypothesis 8 suggests that content does not matter, the large positive Other affiliation by Irregular reading coefficient indicates that when a student is affiliated with an Other religious group reading scripture on occasion can actually increase consumption. Even though the Other category is admittedly a hodgepodge of affiliations, they are largely a group whose sacred scripture is decidedly not the Bible, leaving open the idea that content may in fact matter when considering the effect of scripture reading on consumption.

Table 2.3 replicates Table 2.2 but instead of looking at the frequency of alcohol consumption, these models regress the frequency of excessive alcohol consumption (getting drunk) on the same predictor variables. Estimation results for excessive drinking are similar to those for frequency of consumption with some key differences. In Models 6 and 7, the gender coefficient indicates that females are less likely to get drunk than males. This finding is consistent with previous research, which shows that females have

\textsuperscript{15} Interaction model results are not shown but available upon request.
### TABLE 2.3

**ORDINARY LEAST SQUARES REGRESSION**

**PREDICTING FREQUENCY OF EXCESSIVE ALCOHOL CONSUMPTION**

<table>
<thead>
<tr>
<th></th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>-0.211+</td>
<td>-0.226*</td>
<td>-0.182</td>
<td>-0.151</td>
<td>-0.151</td>
</tr>
<tr>
<td>Racial Minority</td>
<td>-0.601***</td>
<td>-0.579***</td>
<td>-0.567***</td>
<td>-0.533***</td>
<td>-0.535***</td>
</tr>
<tr>
<td>Pre-college drink.</td>
<td>0.449***</td>
<td>0.430***</td>
<td>0.416***</td>
<td>0.413***</td>
<td>0.401***</td>
</tr>
<tr>
<td>Technical college</td>
<td>-0.250</td>
<td>-0.277</td>
<td>-0.245</td>
<td>-0.264</td>
<td>-0.306</td>
</tr>
<tr>
<td>Junior college</td>
<td>-0.155</td>
<td>-0.187</td>
<td>-0.106</td>
<td>-0.076</td>
<td>-0.059</td>
</tr>
<tr>
<td>Parent’s education</td>
<td>0.050*</td>
<td>0.055*</td>
<td>0.044+</td>
<td>0.042+</td>
<td>0.042+</td>
</tr>
<tr>
<td>Mainline Prot.</td>
<td>0.560**</td>
<td>0.443*</td>
<td>0.451*</td>
<td>0.405*</td>
<td>0.318</td>
</tr>
<tr>
<td>Black Prot.</td>
<td>0.300</td>
<td>0.230</td>
<td>0.244</td>
<td>0.183</td>
<td>0.212</td>
</tr>
<tr>
<td>Catholic</td>
<td>0.462**</td>
<td>0.307+</td>
<td>0.315+</td>
<td>0.235</td>
<td>0.114</td>
</tr>
<tr>
<td>Jewish</td>
<td>1.154***</td>
<td>0.921***</td>
<td>0.994***</td>
<td>0.884***</td>
<td>0.766**</td>
</tr>
<tr>
<td>Mormon</td>
<td>-0.383</td>
<td>-0.265</td>
<td>0.049</td>
<td>0.012</td>
<td>0.087</td>
</tr>
<tr>
<td>No Affil.</td>
<td>0.768***</td>
<td>0.469*</td>
<td>0.539**</td>
<td>0.398+</td>
<td>0.341+</td>
</tr>
<tr>
<td>Other</td>
<td>0.677*</td>
<td>0.465</td>
<td>0.531</td>
<td>0.477</td>
<td>0.546+</td>
</tr>
<tr>
<td>Indeterm./DK</td>
<td>0.164</td>
<td>0.072</td>
<td>0.087</td>
<td>0.053</td>
<td>0.003</td>
</tr>
<tr>
<td>Attends Regularly</td>
<td>-0.408**</td>
<td>-0.307*</td>
<td>-0.233</td>
<td>-0.152</td>
<td></td>
</tr>
<tr>
<td>Youth Group</td>
<td>-0.047</td>
<td>-0.015</td>
<td>0.039</td>
<td>0.187</td>
<td></td>
</tr>
<tr>
<td>Relig. Activities</td>
<td>-0.149**</td>
<td>-0.127*</td>
<td>-0.108+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-relig.Activities</td>
<td>0.116***</td>
<td>0.112***</td>
<td>0.113***</td>
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<td></td>
</tr>
<tr>
<td>Salience</td>
<td>-0.059</td>
<td>-0.022</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prays Daily</td>
<td>-0.188</td>
<td>-0.048</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reads Irregularly</td>
<td></td>
<td></td>
<td></td>
<td>-0.293*</td>
<td></td>
</tr>
<tr>
<td>Reads Regularly</td>
<td></td>
<td></td>
<td></td>
<td>-0.840***</td>
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</tr>
<tr>
<td>Constant</td>
<td>0.234</td>
<td>0.495</td>
<td>0.437</td>
<td>0.716</td>
<td>0.750</td>
</tr>
<tr>
<td>R squared</td>
<td>.332</td>
<td>.344</td>
<td>.368</td>
<td>.372</td>
<td>.386</td>
</tr>
<tr>
<td>N</td>
<td>552</td>
<td>552</td>
<td>552</td>
<td>552</td>
<td>552</td>
</tr>
</tbody>
</table>

**SOURCE:** National Survey of Youth and Religion, Wave 1 and Wave 2

+p≤.10 *p≤.05 **p≤.01 ***p≤.001 (two-tailed test)
fewer incidence of heavy drinking than their male counterparts (Wallace, Yamaguchi, Bachman, O’Malley, Schulenberg, & Johnston, 2007). In the last three models, the gender coefficient is no longer statistically significant, suggesting that differences in excessive consumption between college men and women is tied to differing levels of organizational and non-organizational religious involvement.

Model six shows that hypothesis one is confirmed when considering excessive drinking by religious affiliation without other religion measures. Yet, as with frequency of consumption, the effect of religious affiliation is mediated by other religion measures and gets gradually smaller in each successive model. Unlike the findings for frequency of consumption, the influence of affiliation on excessive drinking maintains a direct effect for Unaffiliated students in the full model (10). Even after adding organizational and non-organizational measures, this group, along with Jewish students, has higher levels of excessive drinking compared to Conservative Protestants. Net of other predictors in Model 10, Mainline Protestants, Black Protestants, Catholics, and Mormons do not significantly differ from Conservative Protestants in excessive consumption. The robust Jewish effect on both frequency and excessive consumption contrasts some previous research (Perkins, 1987), which found that Jewish students had lower consumption levels than Protestants and Catholics. Apparently, previous generations of Jewish students were considerably different in their tolerance of substance use possibly pointing to a general shift in the Jewish community away from more conservative norms or orthodoxy.

A key difference in the findings for frequency of consumption versus excessive consumption is uncovered in Models 7 and 8 when considering youth group and activity
involvement. While involvement in non-religious activities is a consistently significant influence in all of the models in which it is included, involvement in religious activities is only significant when considering its effect on excessive consumption. On the other hand, being part of a youth group has absolutely no bearing on how often a student gets drunk. Moreover, including the activity variables in Model 8 reduces the attendance coefficient by nearly a quarter, which is a much bigger drop than when these measures were added to Model 3.

The addition of non-organizational measures in Models 9 and 10 completely mediates the direct effect of regular attendance on excessive drinking. Even though neither salience nor daily prayer contributes significantly to Model 9, their addition reduces the strength of the attendance coefficient to the point of statistical insignificance. Unlike its effect on consumption in Model 4, praying daily does not result in less drunkenness. Reading scripture, however, does result in lower amounts of excessive consumption. While the coefficients are slightly smaller in Model 10 than in Model 5, reading scripture is once again one of the strongest predictors. This consistent finding again suggests that to understand religion’s unique influence on substance use the customary scope of religion measures needs to be broadened.

Identical to the results for frequency of consumption, the influence of attendance or scripture reading is generally not conditioned by religious affiliation. Again only one interaction term (results not shown) is statistically significant. Other affiliation by Irregular reading has a positive coefficient ($B=1.674$, $p=.023$) when added to the excessive consumption model.
2.9 Discussion

The goal of this study has been to understand in greater depth the ways religion influences alcohol consumption among college students. While the relationship between religion and consumption is complex, some key findings emerge. To start, Jewish students are more likely to drink and get drunk than any other group of students in this sample. Mormons are least likely to drink, though they do not differ from other students in excessive drinking habits. After controlling for religious participation, students with no religious affiliation do not tend to drink more often but when they do drink they are more likely to get drunk. Because of these differences between groups, religious affiliation must be considered to fully understand religion’s effect on alcohol consumption. While affiliation is only one aspect of an individual’s context within the college setting and the larger society, it is important in this study. However, the effect of religious affiliation is mediated by both organizational and non-organizational religious involvement.

Organizational religious involvement reduces frequency of consumption but has no bearing on excessive use. Students who attend religious services on a regular basis have a reduced tendency to drink. Taking attendance into consideration reduces the effect of affiliation thus revealing a mediating effect between affiliation and attendance. The reduced affiliation effects show that organizational religious involvement is an important piece to the religion puzzle. While associating oneself with a certain religious group may affect behavior, actually attending services is more likely to put a student in the position to benefit from the social and spiritual capital that religion can provide. The findings in table 2.2 (specifically Model 2) show that it’s not just being Conservative...
Protestant that reduces drinking, rather its involvement in the religious community that distinguishes Conservative Protestants from their unaffiliated counterparts and, to a lesser extent, their Mainline, Catholic, and Jewish counterparts.

Initially, youth group membership appears to have no effect on consumption, but in models 3 and 4 we see a change. Then when scripture reading is included in the model, the effect of being part of a youth group essentially disappears again. The changes in the coefficient reveal important facts about youth group involvement. To begin with, this diluted effect of religious involvement is consistent with Smith’s (2003) theory of “competing influences”. If religious youth group involvement is competing with other non-religious activities for the time and mental commitment of a student, the positive affect involvement could have on prosocial behavior is reduced. Simply being in the group does not necessarily affect change in behavior. While being part of a youth group can provide social capital, which is not distinctly or particularly religious in nature, if the message received is devoid of spiritual content it fails to bolster the spiritual capital of a student, which is distinct and unique. Essentially, being part of a religious youth group influences alcohol behavior only to the extent that being part of the group motivates one to take a step further by reading scripture on their own. Groups that fail to direct students toward the “meat” of their religious teaching, even though they do well at entertaining, are not likely to influence behavior.

Involvement in non-religious activities has a positive relationship with frequency of drinking and excessive drinking. The more non-religious clubs, groups, and organizations that a student is involved with in college, the more alcohol they tend to drink and the more often they get drunk. Likely, involvement in non-religious activities
leads to increased consumption as a result of the social capital gained through these activities.

Social capital reinforces social norms. Alcohol consumption among college students is commonly considered a normal, accepted diversion from academic pursuits. Non-religious social structures, which rarely (if ever) assert that underage drinking among college students should be discouraged, would subsequently maintain the social norm of drinking among students. While underage drinking of any kind is technically illegal, abstinence or extreme moderation, therefore, is a deviation from the norm in the collegiate context. Thus, the fact that increased involvement in non-religious activities raises one’s level of consumption makes sense. The social capital gained through these activities is more likely to provide support for non-religious social norms and connection to networks of people and information that legitimize the status quo (i.e. underage drinking in college) than to encourage deviation from the norm. Theoretically, the more involved a person is in non-religious pursuits, the more non-religious social norms are reinforced, and, short of other factors, the more alcohol is consumed. Participation in these activities certainly provides social capital, but it’s not the sort of beneficial capital that keeps college students from underage drinking, excessive or otherwise.

The lack of a positive effect of involvement in religious activities on frequency of consumption could arguably be considered support for hypothesis 4 and the idea that there is something unique about the effect of religion. Surely religious and non-religious activities alike provide social capital, but only increased involvement in non-religious activities increases consumption suggesting that there is something different about or additional to the social capital provided by involvement in religious activities. The
difference is that religious activities are more likely to include a spiritual component, thereby increasing spiritual capital and adding a distinctly religious component to the social capital that this kind of social involvement provides. Hypothesis 4 is further supported by the fact that involvement in religious activities does in fact negatively influence excessive intake. Religious activities provide unique social connections that discourage drunkenness, which is distinct from that provided by non-religious activities.

This study also found that whether or not a student indicates that religion is important in their daily life does not change their drinking habits. Simply affirming that religion holds a place of prominence in one’s daily life does not appear to affect decision making. Smith (2003) theorizes this lack of religious affect as a “failure to appropriate.” Students may say they believe a certain way but they fail to internalize those beliefs in such a way as to induce change or influence action. The same could be said for other religion measures such as youth group involvement and prayer. The lack of a robust effect may mean that the message is not heard or not proclaimed but, ultimately, the message is not internalized. Internalization of religious beliefs may be the key to producing spiritual capital that affects daily life.

Of all the findings in this study the most remarkable is that reading sacred scripture has a negative influence on both frequency of use and excessive use. Net of all other religion variables in the model, reading scripture at all, whether regularly or irregularly, reduces intake. This finding is particularly remarkable for a number of reasons. First, no other study of college student drinking has previously included the reading of sacred scripture as a measure of religious participation. Yet, of all the religion measures tested, scripture reading is most robust with the largest effect size.
Furthermore, null findings for all but one of the interaction terms reveal that conditional effects of attendance and scripture reading do not exist. These results could suggest that context, therefore, does not matter but rather the act of religious participation is key. However, more than 60% of all students in this study consider themselves part of a religion that uses the Bible as its primary sacred text. Of those students affiliated with a specific religion (i.e. not including unaffiliated or indeterminate affiliations) the number rises to nearly 85%. Content may appear to not matter because a majority of those reading scripture are reading the same teachings, i.e. the Bible. The positive Other by Reading Irregularly interaction term gives some weight to the theory that content does matter.

Finally, showing that reading sacred scripture affects behavior furthers the notion that religious involvement provides unique capital, thereby bestowing credibility on the theory of spiritual capital. By reading scripture a student is more likely internalizing or has internalized their faith and accumulating spiritual capital that will affect future choices. The capital produced by reading sacred scripture is unique in that it is not based in a social context and does not provide social capital like many other forms of religious participation. For the majority of religions, reading sacred scripture has long been prescribed as a means for both understanding religious teachings (the message) and for developing a spiritual foundation for a life well lived. This study confirms that reading scripture does in fact point college students toward better life outcomes, namely by reducing alcohol consumption. Thus, by producing uniquely spiritual capital non-organizational religious participation, in the form of scripture reading here, is a principal mechanism by which religion uniquely affects behavior.
2.10 Conclusion

This chapter looks at the effect of religion on the tendency among college students to drink and get drunk. Because of the numerous negative consequences of student alcohol consumption and its high level of use among college students understanding what factors play a role in promoting reduced consumption is important. Using a sample of students who were attending a college institution at wave 2 of the NSYR, the conclusion of this study is that religious affiliation, organizational religious participation, and non-organizational religious participation each affect consumption to differing degrees, and while the influence of some individual measures may be weak, the combined influence of religion is strong. A principal mechanism through which religion influences consumption is the non-organizational act of reading sacred scriptures. Over and above all other religion and control measures in the analysis, students who read scripture on a regular basis are less likely to drink alcohol or to drink in excess. The scripture reading finding is important both for its novelty and for the support it lends to the concept of spiritual capital. This study furthers Smith’s (2003) notion that religion influences the lives of youth in a distinct way, something that is unique to religion and otherwise unexplainable.
3.1 Overview

During the transition from late adolescence into early adulthood, the occurrence of substance use and abuse is most notable and peaks as the risk-taking behavior of choice. The highest frequency of use for most substances takes place during the life course period from 18 to 25 years of age. According to the National Survey on Drug Use and Health (SAMHSA, 2008), in 2008, in excess of 60% of 18-25 year olds drank alcohol in the past month, more than any other age group. Emerging adults aged 18 to 20 maintained a higher level of illicit drug use than any other age group at 22%, with 21 to 25 year olds following closely at more than 18%. The occurrence of substance abuse is also highest among this age group compared to all other groups. Nearly half of all 21 to 25 year olds and more than a third of 18 to 20 year olds reported binge drinking\textsuperscript{16} in the

\[\text{\textsuperscript{16} For the most part, researchers use the terms binge, heavy, and party drinking interchangeably to describe the consumption of 5 (for males)/4 (for females) or more drinks in a row, within a two-week period (see Wechsler & Austin, 1998). For this study the term binge will be used throughout, as this is the term used in the NSYR data.}\]
past month. These results coincide with results from other national surveys (Johnston, O’Malley, Bachman, & Schulenberg, 2009).

Although moderate, social alcohol use during the transition years is often seen as a benign, normal activity for emerging adults17, frequent or even occasional binge drinking continues to be a major public health concern. As the numbers discussed earlier show, abuse of alcohol in the form of binge drinking climaxes during emerging adulthood, yet a majority of emerging adults avoid participating in excessive drinking. If exploration and boundary testing is the norm during these years, what differentiates those who explore in the area of substance abuse from those who do not explore in this way – i.e. what risk or protective factors exist?

This study seeks to better understand what distinguishes those who avoid binge drinking during the tumultuous transition to adulthood from those who participate in binge drinking during this time. Within the area of alcohol research for this age group, most studies look specifically at the drinking habits of college students while ignoring the non-college population (Baer, 2002; White, Fleming, Kim, Catalano, & McMorris, 2008). Because the negative consequences of excessive consumption on the health and general well-being of emerging adults are for the most part not limited by educational status, the topic of binge drinking during this period of life for the age group as a whole merits further investigation. Elevated levels of alcohol consumption among emerging adults contributes to sexual risk-taking and assault, decreased physical and emotional wellbeing, legal troubles (e.g. underage drinking, DUIs, etc), and damaged social

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17 In this study, “Emerging Adult(s),” as coined by Arnett (2000), refers generally to the group of people aged 18 to 25, for whom the terms “youth” and “young adult” are descriptively inadequate given the typical use of these terms to refer to those in middle and late adolescence.
relationships, in addition to impaired academic performance (Wechsler, Lee, Kuo, & Lee, 2000; Perkins, 2002; Crosnoe, Muller, & Frank, 2004). The present study, therefore, looks at both college attending and non-college attending individuals.

Previous research consistently points to factors that appear to reduce participation in binge drinking in the adolescent and emerging adult years and factors that tend to increase participation. Measures commonly indicated as reducing participation include pro-social involvement (eg. religious participation, volunteering), various life course events (eg. marriage, children), and parental involvement (eg. monitoring, closeness) (Johnston et al., 2009; Dorius, Bahr, Hoffmann, & Harmon, 2004; Rankin & Kern, 1994; Warr, 1993). Indicators commonly pointed to as increasing participation include pro-alcohol peers and activities, residential status, and attending college (Johnston et al., 2009; White et al., 2008). The current study hopes to further the discussion of these known influences by using multiple points in time (before and during the transition to adulthood) and investigating whether an emerging adult’s social context mediates the effect that an adolescent’s family context has on binge drinking during emerging adulthood (see figure 3.1).
The purpose of this study is to empirically examine the relationship between family context, social context, and substance abuse using a Social Development model within a mediation framework. Using longitudinal data from the National Study of Youth and Religion, which is rich with information about the religious and family lives of emerging adults before and during their emerging adult years, this study specifically addresses three key questions: (1) Does an adolescent’s family context, in terms of parental involvement and religiosity, directly affect the likelihood of binge drinking post adolescence? (2) Does an emerging adult’s social context directly affect their binge drinking habits (controlling for life course factors and personal religiosity)? (3) Does an
emerging adult’s social context mediate the effect of adolescent family context on binge drinking?

3.2 Emerging Adults and Social Development Theory

In the United States of America, age eighteen is a milestone for adolescents. At eighteen parental consent (legally speaking) and adolescence are things of the past. Once a teen turns 18 she can vote, purchase tobacco, expunge a juvenile record, and is generally considered an adult in the eyes of the legal system. However, in the last decade researchers have given consideration to the notion that while an eighteen year old is no longer a bona fide adolescent, neither is she truly an adult (Arnett, 2000, 2004; Schulenberg & Maggs, 2002). For these researchers the years between ages 18 and 25 are recognized as a time distinct from both adolescence and adulthood.

Often referred to as “the transition to adulthood” or “emerging adulthood,” the late teens to mid-twenties are distinguished by increased levels of instability in work, residence, education, and relationships and high incidence of substance use (Arnett, 2004; Maggs & Schulenberg, 2004; Nelson & Barry, 2005). For a considerable number of emerging adults, the years following high school are characterized by frequent changes with regards to where they live, who they spend time with, and how they spend their time. The majority of emerging adults spend time living somewhere other than their parents house, embark on some form of post-secondary education and change jobs or career paths multiple times (Arnett, 2004). All of these changes inevitably bring relationship changes as old friendships are harder to maintain and new ones are formed.
Emerging adults tend to be far more independent than adolescents and, yet, far less restrained by typical adult responsibilities, such as parenting or career expectations (Arnett, 2000). Essentially, they are freer to test the limits with their time, money, and bodies. Hence, the emerging adult years are characterized by high amounts of exploration and experimentation, including involvement in risk-taking behaviors such as binge drinking (Dworkin, 2005; Johnston, O’Malley, & Bachman, 2003; Willoughby & Dworkin, 2009).

The Social Development Model (SDM) integrates social control, social learning, and differential association theories into a single framework that attempts to explain the development of prosocial and antisocial behavior18 through the life course (Catalano & Hawkins, 1996). With a focus on contextual influences, the theory supposes that socialization follows equivalent but separate causal paths of social learning for problem and positive behavior. The model suggests that an actor’s behavior will be shaped by the extent of her connection with prosocial and antisocial individuals and involvement in prosocial and antisocial activities. This framework is ideal for the present study of adolescent contextual influences on emerging adult behavior because the SDM emphasizes that socialization during earlier periods continues to have a lasting effect even as social surroundings evolve. This study considers five mechanisms within two contexts (familial and social) that the SDM suggests will affect the likelihood of

18 The terms deviant, delinquent, and antisocial are all used to refer to behaviors/activities generally thought of as inappropriate, undesirable and/or unlawful. While these three terms tend to be used interchangeably in the research, this paper will primarily refer to antisocial behavior as this is the term most typically used in conjunction with the SDM. Conversely, the term prosocial refers to behaviors/activities considered good and desirable, behaviors such as self-discipline, honesty, politeness, cooperation, and helping others, etc.
involvement in the antisocial behavior of binge drinking among emerging adults: (1) parental involvement during adolescence (time 1), (2) family religiosity during time 1 (i.e. prosocial familial context), (3) alcohol abuse during time 1 (i.e. prior antisocial behavior) (4) connection to pro-alcohol peers during emerging adulthood (time 2), and (5) personal involvement in pro-social activities during time 2.

3.3 Family Context

To understand the formation of antisocial behavior one must understand the context in which the behavior is developing or taking place. With an emphasis on contextual variables, the SDM looks at the socializing units at work, such as the family, school, peers, religion, etc. According to the theory, individuals learn and acquire behaviors and attitudes by bonding to others within socializing units across each development period.

Prior to adulthood the family (of origin) is primary among these socializing units. The family context, therefore, is important to consider when studying behavioral tendencies due to the family’s significant role in the socialization of individuals. In the current study, the familial context within which emerging adults were taught and nurtured is conceptualized in two ways – (1) parental involvement and (2) family religiosity. Parental involvement looks at the parent-adolescent relational context, while family religiosity looks at the family religious context including shared religious experience.
3.3.1 Parental Involvement During Adolescence

The relationship between an individual’s antisocial behavior and their home life is well documented. Children are more likely to participate in antisocial behavior if they are raised in homes epitomized by a dearth of affection, support, and emotional bonds (Rankin & Kern, 1994). Youth who avoid antisocial behaviors, on the other hand, tend to come from families high in warmth, parental monitoring, and time with parents (Warr, 1993).

Attachment or closeness is one of the most common facets of the parent-adolescent relationship that researchers examine. If adolescents feel close or secure in their attachment with parents, they will feel that a parent values them and that they matter (Crosnoe, Mistry, & Elder, 2002; Warr, 1993). The more secure the attachment between adolescents and parents, the more likely adolescents are to trust their parents and follow their guidance. Close attachment to parents and time spent with families can actually mediate the effect that delinquent peers have on adolescents. Warr’s (1993) study of delinquent peers vs. parental influences found that parents are a barrier to delinquent friendships. By limiting exposure to delinquent peers (time spent) and limiting the formation of the friendships in the first place, parents helped adolescents steer away from antisocial behaviors.

Another aspect of the parent-adolescent relationship found to affect behavior is parental monitoring. Monitoring refers to knowing where your child is, who they are with, and how they are spending their time and is generally grouped under the umbrella of behavioral control (Updegraft, McHale, Crouter, & Kupanoff, 2001). When parents asks their adolescents where they are going and who they will be with, the adolescents
are more likely to avoid delinquent activities, such as alcohol and drug use (Dorius, et al., 2004). Often just the fear of being caught motivates these teens to stay out of trouble. The presence of behavioral control is commonly understood as having a positive effect on adolescent behavior, as adolescents are better able to differentiate between socially appropriate and inappropriate behaviors (Lee & Bell, 2003).

This study will examine whether parental closeness during adolescence (time 1), measured by how close an adolescent feels to her parents, and parental monitoring (time 1), measured by how aware a parent is of what their adolescent is doing while away from home, continues to have an effect on an individual during the emerging adult years (time 2). Parental closeness serves as a resource for emerging adults even as they transition out of the structure of adolescence. Parents who show warmth for their children develop trust and a relationship in which their child will desire to make choices that do not disappoint parents or cause division. Also, individuals with a healthy attachment to parents are likely to receive and listen to advice from parents concerning the choices they make. Parental monitoring pushes students to establish healthy boundaries for themselves and regulate their behavior according to a developed sense of appropriateness that carries past the adolescent years. Hypothesis one, therefore, considers the effects of parental involvement during adolescence on the antisocial behavior of emerging adults:

H1: Parental closeness and parental monitoring at time 1 will be negatively associated with binge drinking at time 2.

3.3.2 Family Religiosity During Adolescence

Aspects of both the family and religion are often pointed to as protective factors when looking at antisocial behaviors like alcohol abuse. That religion is a factor in the
lives of adolescents, which influences their behaviors and attitudes in positive and beneficial ways, is widely acknowledged. Research that connects religion and antisocial behavior generally finds that religion and religious participation shield adolescents from delinquent tendencies (Abar, Carter, & Winsler, 2009; Regnerus, 2003a, 2003b; Smith & Faris, 2002). Baier and Wright’s (2001) meta-analysis shows that a great deal of research points to an inverse relationship between religiosity and antisocial behavior.

However, simply looking at individual-level measures of religion fails to take into consideration the context in which religious mechanisms may or may not be working. Research shows that the religious context in which an adolescent functions can affect their use of substances, such as marijuana, alcohol, or tobacco (Wallace, Yamaguchi, Bachman, O’Malley, Schulenberg, & Johnston, 2007). In their study of intergenerational religion, Pearce and Haynie (2004) found that whether or not parents and children share the same religious beliefs, i.e. context of religiosity, is also an important factor when considering its effect on deviance. They found that the religious characteristics of those with whom adolescents interact actually mattered. Research also shows that shared religious experience (such as attending church together) and parental religiosity during an individual’s adolescent years can have a protective effect against substance use for college students, particularly for students from more conservative religions (Merrill, Folsom, & Christopherson, 2005).

Consistent with these findings, the SDM hypothesizes that when an individual develops bonds to people within a socializing unit (e.g. the family) their behavior will be either “prosocial or antisocial depending on the predominant behaviors, norms, and values held by those to whom the individual is bonded” (Catalano & Hawkins, 1996, pg.
156). When parents are religiously active and share that experience with their children, teens have a greater opportunity to develop bonds to people within the family unit who model prosocial behavior for them. According to the theory, prosocial bonds will help them make behavioral decisions that are healthy, constructive, and mature as they enter the emerging adult years. Bearing in mind that religious participation is considered prosocial and that parents modeling prosocial participation sets a good example for their children as they develop, the next hypothesis addresses parent’s individual and shared religious experience:

**H2:** When parents attend religious services themselves or pray with their adolescent at time 1, the odds of binge drinking at time 2 are reduced.

In addition to the effect of active participation in religion, a family’s context can be affected by the nature of the religious tradition to which a parent adheres. For example, Conservative Protestants of all ages are more likely than others (i.e. Catholics, Mainline Protestants) to advocate for a Biblically based perspective of right and wrong and believe in moral absolutes (Smith et al., 1998). Thus, parents who classify themselves as Conservative Protestants are more prone to endorse compliance with biblical values and moral norms and to uphold views about behavior, such as drinking, that are black and white.

More conservative faith traditions such as Conservative Protestants or Mormons often disapprove of alcohol use among members and endorse non-use as the best option for maintaining integrity as a believer. More liberal or progressive groups lean toward permissive views of consumption, accepting moderate use among parishioners (Clarke, Beeghley, & Cochran, 1990; Cochran, Beeghley, & Bock, 1992). While no religious
tradition known by the researcher explicitly supports excessive drinking, the proscriptions offered by many conservative religious faiths concerning alcohol use have the potential to induce abstinence from alcohol use more readily than more liberal leaning traditions. As a result of their belief system, parents who identify themselves with conservative religious faiths are likely to encourage and even insist on prosocial vs. antisocial behavior by family members. Thus, hypothesis three is as follows:

**H₃:** Individuals with religiously conservative parents at time 1 are less likely to binge drink at time 2.

3.4 Prior Anti-Social Behavior

The SDM takes into consideration times of transition when hypothesizing influential factors. These times of transition bring instability and change in the terms, norms, and organization of social life (Catalano & Hawkins, 1996). To cope with the newness and unknown during these transitions, actors rely on what they know from previous experience to navigate the new setting. The level of prior antisocial behavior is one of the key factors posited to affect the extent to which actors participate in prosocial or antisocial activities and relationships in a new setting. Previous antisocial connections suppose increased antisocial connections and decreased prosocial connections in the future. Thus, if an adolescent abused alcohol during adolescence, prior to her transition into adulthood, her previous antisocial behavior is expected to increase her antisocial involvements during the emerging adult years. Hypothesis four is proposed with this piece of the SDM in mind:
H₄: The frequency of heavy drinking during adolescence will directly, and indirectly through social context, affect binge drinking as an emerging adult.

3.5 Social Context During the Emerging Adult years

In addition to an individual’s familial context in adolescence and prior alcohol abuse, this study looks at the social context of an emerging adult. As youth transition out of adolescence and begin to test the waters of adulthood, the socializing units that exert the most influence on their lives begin to change. As emerging adults take steps away from their family of origin and increasingly make decisions independently of their parents, their social activities and interactions are likely to increase in import if not in quantity. The SDM suggests that an important piece of the socialization process to consider is an individual’s involvement in prosocial or antisocial interactions and activities (Catalano & Hawkins, 2002). This study, therefore, looks at the influence of two pieces, one antisocial and one prosocial, of an emerging adult’s social context: pro-alcohol peers and prosocial group involvement.

3.5.1 Pro-Alcohol Peers

Arguably the most consistent and strongest influence on drinking among adolescents and emerging adults is their peer group (Baer, 2002; Gaugham, 2006; Perkins, 1985). Scholars find that the peer influence effect on alcohol use stems from both selection effects and socialization effects. Leibsohn (1994) found a strong selection effect of peer influence in that new college students looked for friends with comparable drinking habits to those of their high school friends. Other research suggests that despite
selection effects and various other risk factors, drinking habits among college students are affected by socialization with others who drink and within social organizations that tolerate, if not promote, drinking and excessive drinking (White et al., 2008; Cashin, Presley, & Meilman, 1998; Wechsler, Dowdall, Davenport, & Castillo, 1995). Interactions and involvement with peers that include alcohol provide both opportunities to drink and reinforcement of norms through peer modeling.

On the whole these studies show that interaction with peers who freely use alcohol influences an individual’s consumption habits. The majority of these studies look specifically at college-attending students. Likely due to an assumed college effect, researchers often neglect to look at emerging adults who choose not to attend college. Interacting with peers on a social level, however, is a common occurrence among emerging adults, whether or not they attend college. And, often this socializing occurs in conjunction with alcohol consumption (Schulenberg & Maggs, 2002; Arnett, 2000). Thus, while accounting for a possible college effect (see Life-Course section below) this study assumes that the social mechanisms that influence binge drinking among emerging adults are consistent regardless of college status. This study tests whether the number of friends who drink alcohol/do drugs that an individual has during their emerging adult years influences their likelihood of binge drinking:

\( H_5: \text{The greater the number of friends an emerging adult has who drink/do drugs the higher their odds for binge drinking.} \)

3.5.2 Prosocial Group Involvement

While pro-alcohol peers are hypothesized as a risk factor for binge drinking, prosocial group involvement is suggested by the SDM as a protective factor parallel to
the effect of pro-alcohol interactions but with an opposite result. Prosocial activities are thought to boost contact with persons who themselves maintain prohibitions against antisocial activity and claim prosocial values (Catalano & Hawkins, 1996; White et al., 2008). Increased contact with and bonding to prosocial others encourages prosocial behavior and discourages behavior that is illegal and/or damaging to one’s health and wellbeing. To test this aspect of the SDM, this study looks specifically at involvement in a religious small group.

Interacting with peers in an organized group based on a common interest, such as a leisure activity or religion, provides an alternative social outlet to partying or other social gathering based on substance use (Thorlindsson & Bernburg, 2006). This alternative outlet promotes socialization in the absence of alcohol and encourages connections with prosocial others. In their study of adolescents, alcohol, and peer influence, Thorlindsson & Bernburg (2006) found that involvement in a sport group or social club resulted in less alcohol and drug use even when youth had contact outside the group with drug-using peers. Given these findings, it would follow that emerging adults who seek out social interaction through religiously oriented groups, whose members share the same beliefs and values, are less likely to abuse it. This type of prosocial group involvement brings cohesion, bonding, and common ground based on religious beliefs. These individuals are able to stay connected with others without the lure of alcohol. The effect of prosocial group involvement is hypothesized, therefore, as follows:

\[ H_6: \text{Being part of a religiously based group will reduce an emerging adult's odds of binge drinking.} \]
3.6 Life Course Factors

A significant aspect of the emerging adult years involves specific life course changes that are much less likely to occur during adolescence. These changes include going to college, moving away from the parent’s home, getting married, and having children. Each of these changes brings new responsibilities and considerations that affect how an emerging adult uses their time and money.

Entering college after high school graduation, in lieu of going directly into the work force, is a normative, often expected, next step that millions of American youth take each year. Going to college, for many emerging adults, is their first experience of needing to adjust and get connected in a new setting, which is outside the purview of parents. For a significant majority of students, getting connected in college involves consuming alcohol.

Longitudinal research indicates that the college environment is unique from non-college environments in its effect on the normalization of alcohol consumption and abuse (Johnston, et al., 2003). Using data from MTF 2008, Johnston, et al. (2009) found that students who attend college have lower rates of binge drinking in high school than their non-college bound peers. However, the tendency to drink less in high school does not remain constant once in college. Not only do rates of binge drinking among college students after high school graduation increase at a higher rate than that of their non-college peers, according to this study, college students actually exceed their non-college peers in their amount of binge drinking. Essentially, college students “catch up and pass” their peers in binge drinking. Johnston et al.’s (2009) findings were consistent with their own previous reports of college age drinking (Johnston et al., 2003). These researchers
also reported that the rate of binge drinking among college students has remained consistent since the 1980s, which further suggests a possible college effect.

Researchers explain the college effect in different ways. Some scholars point to a normalizing effect of the college environment because students are exposed to a culture of drinking where they have increased opportunities to drink and where heavy drinking is, or is at least believed to be, a normal and accepted activity (Perkins, 1985; Rabow & Duncan-Schill, 1995). Other researchers suggest that the college effect may be due to difference in life course factors. These researchers find a greater likelihood of leaving the parental home and a reduced likelihood of marriage in the years immediately following high school among college students (Johnston et al., 2009; White, et al., 2008). For many students leaving their parent’s home goes hand-in-hand with going to college. White and colleagues (2006) observed that leaving the parental home more strongly predicted increases in heavy drinking post high school than did going to college.

The reported tendency of college students to increase their alcohol consumption post-high school and the difference among researchers as to why this happens amplify the need to consider multiple life course factors in the current study. The research is equivocal as to whether the college effect is really an effect of college attendance (i.e. a culture of drinking among college students) or a result of life course differences between those who attend and those who do not attend. Testing the effect of college attendance, residential status (i.e. living with parents), marriage, and child rearing concurrently will allow for a better understanding of whether a specific college effect or life course differences or both influence emerging adult binge drinking. Hypothesis seven, therefore, explores the effect of several life course events on binge drinking:
H7: Attending college will increase the odds of binge drinking even as marriage, having children, and living at home decreases the odds.

3.7 Mediation Model

Few studies have used mediation models in conjunction with an SDM framework to look at the protective and risk factors of antisocial behavior (Pilgrim, Schulenberg, O’Malley, Bachman, & Johnston, 2006). A key goal of the current study is to better understand the linkages between adolescent family context and alcohol abuse during later years by looking at the indirect effect of family on antisocial behavior mediated through social involvements. Exploring both the direct and indirect effects of parental involvement and family religious context allows for a deeper understanding of the long term effect that parents can have on the behavior of their children. Maybe an individual’s connection to their parents matters in the long-run not because of a direct influence on behavior but because it influences how and with whom an individual spends time outside the family. Consistent with previous research that shows a direct connection between parental involvement, religion, and adolescent substance abuse, the hypothesized model also takes into consideration the mediating influence of heavy drinking during adolescence.

Using the framework outlined by Baron and Kenny (1986), these analyses test for mediation using a series of regressions. To begin with, the relationship between the predictor variables (adolescent family context) and the criterion variables (binge drinking) is verified. Next, the relationship between the predictor variables and the mediator variables (prior drinking and social context) is verified. Third, the relationship
between the mediator variables and the criterion variables is verified. Finally, the predictor and mediator variables are both included in a regression model to test for mediation. If mediation exists then the relationship between the predictor and criterion variables should cease to be significant.

3.8 Data and Analytic Sample

Data used in this study comes from the National Study of Youth and Religion (NSYR)\textsuperscript{19}. The NSYR, a thorough investigation into the religious lives of American Youth, is a nationally representative telephone survey of 3,290 U.S. English and Spanish speaking teenagers, plus an additional oversample of 80 Jewish respondents, who were ages 13 to 17 at wave one, and one of their co-resident parents. Wave One of the study was conducted from July 2002 to August 2003 using a random-digit-dial (RDD) telephone survey method with a random sample of telephone numbers representative of all household telephones in the 50 United States. All households with at least one teenager between the ages of 13 and 17 living in the house for at least six months of the year were considered eligible for the survey. To facilitate randomization of responses within households and to better represent age and gender, interviewers requested to conduct the survey with the teenager in the household with the most recent birthday. To further confirm the nationally representative character of the NSYR data for U.S.

\textsuperscript{19} The National Study of Youth and Religion, <www.youthandreligion.org>, whose data were used by permission here, was generously funded by Lilly Endowment, Inc., under the direction of Christian Smith, of the Department of Sociology at the University of Notre Dame and Lisa Pearce, of the Department of Sociology at the University of North Carolina at Chapel Hill.
households with a teen ages 13 to 17, investigative analysis comparing NSYR data with 2002 U.S. Census data on equivalent households and with similar adolescent surveys – such as Monitoring the Future and the National Logitudinal Study of Adolescent Health – revealed no identifiable sampling or non-response biases (for details, see Smith & Denton, 2005). A comparison between the Jewish cases drawn for the nationally-representative sample and the Jewish over sample was also conducted to check for sampling bias. No statistically significant differences between the two groups were found with regards to pertinent demographic and religion measures, suggesting that the two groups are extremely similar along important dimensions of analysis\(^{20}\). Nonetheless, a Jewish oversample dummy variable is included in all analyses to statistically remove any potential unidentified effect of sampling bias inherent in the Jewish oversample cases net of other independent variables in the model\(^{21}\).

Wave Three of the NSYR was fielded from September 2007 to April 2008 and conducted only in English\(^{22}\). At the time of the third survey respondents ranged in age from 18 to 24. Of the original wave one respondents, 2,532 participated in the third survey, for an overall wave 1 to wave 3 retention rate of 77.1%. The main source of attrition in the third wave was non-located respondents. The Wave 3 refusal rate,

\(^{20}\) The two groups differed on only two tested measures, neither of which is pertinent to this study: (1) the parent respondent for the oversample cases was six percent more likely to be a mother than a father; and (2) the educational attainment of the mothers of the oversample respondents was greater (only five percent of them had not attended any college, compared to fourteen percent of the national Jewish sample mothers).

\(^{21}\) The Jewish Oversample dummy variable is nowhere near significant in any of the models, so the coefficients are not reported.

\(^{22}\) Wave 2 of the NSYR was conducted between June and November 2005 when respondents were between the ages of 16 to 21. No Wave 2 variables are used in the current study.
calculated as the number of eligible respondents who refused, was 6 percent. Additional reasons for attrition from the original sample included uncompleted surveys, refusal, and ineligibility (e.g. military active duty, institutionalized, deceased, etc) (Smith & Denton, 2008).

3.8.1 Analytic Sample

The current study seeks to understand the risk of binge drinking among emerging adults, both college attending and non-attending. Current research concerning this group of individuals distinguishes them both by age (roughly 18 to 25 years old) and post adolescent status. All of the respondents in Wave 3 of the NSYR were between the ages of 18 and 24. However, some of these individuals were still attending high school at the time of the Wave 3 interview. Only Wave 3 respondents who indicated that they were not enrolled in a high school or K-12 institution were kept for the analytic sample because this study seeks to understand binge drinking for those individuals who are no longer considered adolescents and high school is traditionally considered an adolescent institution. Dropping respondents enrolled in high school (N=170) resulted in a base sample of 2,362 respondents. Listwise deletion was performed on all the variables included in the final model, creating a final analytic sample of 2,318 cases. This final sample is the base for all of the descriptive statistics presented in the results section. The measures used in these analyses come from both Wave 1(time 1) and Wave 3 (time 2) of the NSYR.
3.9 Measures and Analytic Strategy

3.9.1 Criterion Variable

The criterion variable used in this study is a binary measure of binge drinking at time 2, where 0 equals non-binge drinker and 1 equals binge drinker. Respondents were originally asked how many times, if at all, in the past two weeks they drank at least 4 (for female)/ 5 (for male) drinks in the same night\(^{23}\). The four response choices included never (1), once or twice, three or four, and five or more times (4). If respondents indicated that they ever binge drank (i.e. value greater than 1), then they were categorized as 1 in the binary binge drinking measure.

3.9.2 Predictor Variables

Five predictor variables that gauge an individual’s family context during adolescence are used in this study, all of which are time 1 (t1) variables. Two of these variables are indicators of parental involvement and three are indicators of family religious context. The parental involvement indicators look at monitoring and closeness. For parental monitoring respondents were asked how often their parent(s) knew what they were actually doing when not at home. Answers were given on a 5-point scale ranging from Never (0) to Always (4). To measure closeness of the parent-adolescent relationship, teens were asked how close or not close they felt to their mother and/or their

\(^{23}\) A drink is defined as a 12-ounce bottle or can of beer, a 4-ounce glass of wine, a 12-ounce wine cooler, or a 1.25-ounce shot of liquor, either straight or in a mixed drink.
father, with responses ranging on a 6-point scale from Not Close at All (0) to Extremely Close (5). In order to reduce the loss of cases due to missing data (for respondents from single-parent homes), only one closeness measure is included in the model, the higher value of either closeness to mother or closeness to father. A dummy variable indicating which value, mother or father, was included in the full model and indicated no significant difference between those whose closeness to mother value was used versus those whose closeness to father value was used. The value of this coefficient is, therefore, not reported.

Three indicators of family religious context are included in the study – parent’s religious service attendance, shared religious experience, and conservative religious affiliation. Parent’s religious service attendance is measured by how often a parent reported that they attended religious services (not including weddings, baptisms, and funerals) in the last twelve months. Response options included never(0), a few times a year, many times a year, once a month, 2-3 times a month, once a week, and more than once a week (6). To measure shared religious experience, a binary measure of whether or not an adolescent reported ever praying with their parent is included in the model. Respondents were asked whether, in the last year, they had prayed together with one or both parents other than at mealtimes or religious services, where 1=yes and 0=no. A binary variable for a parent’s religious affiliation is included in the model where 1=conservative religious affiliation and 0=other. A parent who self identified as one of the following is considered religiously conservative: fundamentalist Protestant, evangelical Protestant (aka conservative Protestant), traditional Catholic, orthodox Jew, conservative Jew, or Mormon.
In addition to the family context variables, four life course variables from time 2 are included in this research and considered possible predictors of binge drinking. Each of the included life course variables represent an important event, circumstance, or status that can take place or change during the emerging adult years. Binary variables (1=Yes, 0=No) are used to indicate whether a respondent attends a 4-year college/university, is married, has children, or still lives with one or more parent at t2.

3.9.3 Mediation Variables

In the hypothesized model, social context during the emerging adult years mediates the effects of adolescent family context on the likelihood of being a binge drinker. Social context in time two is conceptualized in two ways: 1) connection to pro-alcohol peers and 2) involvement in a prosocial group. Respondents were asked to think of up to five of their closest friends and were then asked a series of questions about their friends’ beliefs, behaviors, and involvements. The measure for connection to pro-alcohol peers is a continuous variable indicating the number of their closest friends that a respondent reports does drugs or drinks a lot of alcohol (0 to 5). The measure for prosocial group involvement is a binary measure indicating whether a respondent is “involved in any organized religious group such as Bible study, prayer group, or religious group, not including regular service attendance.” Involvement in a prosocial group is coded 1 for Yes and 0 for No.

---

24 Friends could be from their neighborhood, work, school, family, religious congregation, a boyfriend or girlfriend, but did not include parents. If they couldn’t think of five of their closest friends, they were promoted to think of people they liked and spent time with the most.
Heavy drinking during t1 is considered both a predictor variable and a mediation variable in these analyses. Respondents who reported having ever consumed alcohol (at t1) were asked how often, if ever, they had gotten drunk in the past year. Responses ranged from *Never* (1) to *More than once a week* (6). While this measure is not an equivalent measure to binge drinking at t2, it more than adequately gauges antisocial behavior, especially considering no respondent at t1 was of age and, thus, any use of alcohol constituted illegal activity, i.e. underage drinking.

3.9.4 Control variables

Factors that would likely confound the association between family context, social context, and binge drinking among emerging adults must be statistically controlled to promote confidence in this study’s findings. Research indicates that gender and minority status are commonly associated with excessive consumption (Borsari, Murphy, & Barnett, 2007), thus gender (female = 1, male = 0) and minority status (minority = 1, white = 0) are explicitly controlled in all models. The full model also includes controls for socio-economic status (SES) and age (*18 to 24*). SES is controlled using a continuous variable indicating the educational attainment of a student’s parents. The value used for a parent’s educational attainment is the highest level of attainment from either parent (mother or father, whichever is higher) and is measured in years. In this sample, *parent’s education* ranges from 0 (*no formal schooling*) to 20 (*PhD or Professional Degree*).
The full model also includes controls for religiosity at time 2. These controls are included because the measure for prosocial involvement is religiously based. By including these religiosity controls I reduce the possibility that the effect of religiously based prosocial involvement is simply a selection effect of religion rather than a result of socialization with and bonding to prosocial others, as suggested by the SDM. The first measure of religiosity at t2 is a regular service attendance equivalent to the attendance variable for parents in format and range. The second t2 religiosity control looks at frequency of prayer. Respondents were asked how often, if ever, they prayed by themselves alone with response categories ranging from never (0) to many times a day (6). Lastly, a binary variable indicating the religious conservatism of the respondent at t2 is included in the model. This measure is equivalent to the parent measure, with respondents who self-identify as fundamentalist Protestant, evangelical Protestant (aka conservative Protestant), traditional Catholic, orthodox Jew, conservative Jew, or Mormon being categorized as religiously conservative (1).

3.9.5 Analytic Strategy

My principle objective in this study is to further understand the risk and protective factors for binge drinking among emerging adults. A key means to achieve this goal entails testing for both direct and indirect effects via a mediation model, using a series of both Ordinary Least Squares (OLS) and Logistic regression analyses. The criterion or dependent variable (DV) used in this study is a dichotomous measure of binge drinking. Using OLS to predict binge drinking is not fitting because of the binary nature of the variable, thus Binary Logistic regression is used to predict the likelihood of being a binge
drinker. Logistic regression is also used to estimate the relationship between prosocial group involvement (a mediation variable) and the predictor variables (family context). Logistic regression generally has less stringent requirements than OLS and is useful in predicting a dichotomous DV on the basis of categorical or continuous independent variables (IVs). The Logistic regression model estimates the odds of an event happening by calculating the changes in the log odds of the DV. For Logistic regression, the odds ratio of the IV is the natural log base, $e$, to the exponent, $b$, where $b$ equals the parameter estimate (or regression coefficient). The odds ratios (or $Exp(b)$) are reported in the results section. The odds ratio of an IV represents the factor by which the odds(event) change for a one-unit change in the IV. An $Exp(b)>1$ means the IV increases the odds(event), while $Exp(b)<1$ means the IV decreases the odds(event). If $Exp(b)=1$, the IV has no effect.

OLS regression is used to test the relationship between pro-alcohol peers (a mediation variable) and family context (predictor variables) and between prior heavy drinking (a mediation/predictor variable) and family context. Both pro-alcohol peers and prior heavy drinking are treated as continuous measures as both have an extended range (6 categories). Using OLS to estimate these models, therefore, is fitting and makes interpretation of the findings more intuitive for the reader (than if using Order Logistic regression).

To test for mediation, I run a series of regression models. First, I regress binge drinking on family context and prior drinking to verify that a relationship exists between the criterion and predictor variables. Then, social context and prior drinking are regressed on family context to establish the relationships between the predictor and
mediation variables. Next, binge drinking is regressed on the mediation variables to confirm these relationships. Finally, all the predictor and mediation variables are included together to determine whether mediation effects do exists.

3.10 Results

Of the 2,362 eligible, non-high school attending Wave 3 respondents, 2,318 are included in these analyses. Table 3.1 contains descriptive statistics for all variables used in the models, including the mean, standard deviation, and range of each variable. For dichotomous variables, the mean is also the percentage of the sample with that particular characteristic.

In this sample, a slight majority of respondents are female (52%) and about a third are non-white minorities (29%). The average age of the sample is 20 years old, while the average respondent comes from a home where at least one parent attended some college and/or received an AA degree (m=14.66, see table 3.1). Forty four percent of the sample currently attends a 4 year college or university, and 39% still live with one or both parent(s) (i.e. not in their own apartment, in campus housing, etc.). Only a small portion of the sample reports being married (6%) or having children of their own (8%).
### TABLE 3.1

DESCRIPTIVE STATISTICS

FOR ALL ANALYSIS VARIABLES

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std Dev</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Criterion Variable</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Binge Drinking</td>
<td>.49</td>
<td></td>
<td>0-1</td>
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<tr>
<td><strong>Predictor Variables</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Parental Monitoring*</td>
<td>3.03</td>
<td>.991</td>
<td>0-4</td>
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<tr>
<td>Closeness to Parent*</td>
<td>4.21</td>
<td>.849</td>
<td>0-5</td>
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<td>Parent Religious Service Attendance*</td>
<td>3.39</td>
<td>2.19</td>
<td>0-6</td>
</tr>
<tr>
<td>Parent Prays with Teen*</td>
<td>.40</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Parent Religiously Conservative*</td>
<td>.40</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td><strong>Mediation Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior Heavy Drinking*</td>
<td>1.49</td>
<td>.984</td>
<td>1-6</td>
</tr>
<tr>
<td>Pro-Alcohol Peers</td>
<td>1.73</td>
<td>1.70</td>
<td>0-5</td>
</tr>
<tr>
<td>Part of a Prosocial Group</td>
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<td></td>
<td>0-1</td>
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<td></td>
<td></td>
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<td>2.08</td>
<td>0-6</td>
</tr>
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<td>Prays Alone</td>
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<td>2.11</td>
<td>0-6</td>
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<td>Religiously Conservative</td>
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<td></td>
<td>0-1</td>
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<tr>
<td><strong>Life Course Variables</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Attending Four-year college/university</td>
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<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Living with parent(s)</td>
<td>.39</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Married</td>
<td>.06</td>
<td></td>
<td>0-1</td>
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<tr>
<td>Has children</td>
<td>.08</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>20.16</td>
<td>1.39</td>
<td>18-24</td>
</tr>
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<td>Racial Minority</td>
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<tr>
<td>Female</td>
<td>.52</td>
<td></td>
<td>0-1</td>
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<tr>
<td>Parent’s educational attainment*</td>
<td>14.66</td>
<td>2.63</td>
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<tr>
<td>Jewish Oversample</td>
<td>.03</td>
<td></td>
<td>0-1</td>
</tr>
</tbody>
</table>

N: 2318

SOURCE: National Survey of Youth and Religion, Wave 1* and Wave 3
On the whole, the respondents in this sample came from homes where parents were aware of and close to their adolescents and where parents maintained a moderate level of religiosity. The typical adolescent reported that their parents usually monitored what they were doing away from home and that they felt very close to at least one parent. The average parent attended religious services more than once a month, while 40% of parents considered themselves religiously conservative. Fully 40% of adolescents also reported that they prayed with their parent(s).

The moderate level of religiosity that characterizes the adolescent family context of many of the respondents in the sample does not appear to carry over into the emerging adult years. Only half as many respondents who grew up in a religiously conservative family context claim to be religiously conservative as emerging adults (21%). Additionally, the average emerging adult attends religious services multiple times in a year and prays a couple times a month.

Just about half of the sample (49%) binge drank at least once in a two week period during t2. The average for prior heavy drinking fell somewhere between never and once or twice (m=1.49), however, three quarters of the respondents reported having no experience with heavy drinking during adolescence. The typical respondent reports having one or two friends (m=1.73) who regularly use substances. Only 15% of the sample reported prosocial involvement in the form of membership in a religiously based group.

25 The mode (74%) for prior heavy drinking is 1 = never. This number is not reported in Table 3.1
Table 3.2 contains the odds ratios\textsuperscript{26} for three different logistic regressions predicting binge drinking. In model one, binge drinking at time 2 is regressed on the family context variables (t1). Contrary to prior research, hypothesis one is partially disproven in model one as closeness to parents during adolescence does not significantly affect the odds of binge drinking (Warr, 1993). With closeness as an exception, it does appear that parental involvement and family religious context reduce the odds of binge drinking later on in life. The odds of binge drinking is decreased by 15\% for each additional increase in parental monitoring, while having religiously conservative parents reduces the odds of binge drinking by a factor of .666, or over 30\%. Taken all together, the more religious the family context in adolescence the more appreciably the odds of binge drinking will decrease, confirming both hypothesis 2 and 3. Model one sets the stage to consider mediation effects by verifying the relationship between most of the predictor variables and the criterion variable.

Models 2 and 3 regress binge drinking on the mediation variables and verifies a relationship between prior drinking and binge drinking and social context and binge drinking. When not controlling for other factors the odds of binge drinking during the emerging adult years is greatly increased if an individual already experienced episodes of heavy drinking during adolescence (model 2). Similarly, the odds of binge drinking are increased by spending time with pro-alcohol peers but greatly decreased by

\textsuperscript{26} Unlike regression coefficients, odds ratios are not cumulative with the intercept, so no constant is reported.
TABLE 3.2
BINARY LOGISTIC REGRESSION
PREDICTING BINGE DRINKING
WITH FAMILY CONTEXT, PRIOR DRINKING, AND SOCIAL CONTEXT

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Monitoring</td>
<td>.847***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closeness to Parent</td>
<td>.991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent Relig. Serv. Att.</td>
<td>.944**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent Prays with Teen</td>
<td>.788*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent Relig. Cons.</td>
<td>.666***</td>
<td></td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Mediation Variables</th>
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</thead>
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<tr>
<td>Prior Heavy Drinking</td>
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<td>1.736***</td>
<td></td>
</tr>
<tr>
<td>Pro-Alcohol Peers</td>
<td></td>
<td>1.539***</td>
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<td>Prosocial Group</td>
<td></td>
<td>.341***</td>
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<table>
<thead>
<tr>
<th>Nagelkerke Pseudo R^2</th>
<th>.092</th>
<th>.114</th>
<th>.228</th>
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<tr>
<td>N</td>
<td>2318</td>
<td>2318</td>
<td>2318</td>
</tr>
</tbody>
</table>

SOURCE: National Survey of Youth and Religion, Wave 1 and Wave 3
NOTE: Age, gender, minority status, and parent’s education are controlled in all models
+p≤.10  *p≤.05  **p≤.01  ***p≤.001 (two-tailed test)

involvement in a prosocial group (model 3). While these models are no in no way complete, they set the ground work for looking at the mediation effects of social context.

The models on table 3.3 do not regress binge drinking on any variables. Rather, these models look at the relationship between the predictor variables and the three mediation variables. Models 4 and 5 use OLS regression to predict prior heavy drinking and pro-alcohol peers respectively. Model 6 looks at the relationship between prosocial
group involvement and the predictor variables. Because, for this sample, closeness to parents in adolescence did not have a significant direct effect on the odds of later binge drinking, closeness was not included in these models.

In model 4, parental monitoring, parent’s service attendance, and parent’s religious conservatism are all significantly related to heavy drinking during adolescence. The parental monitoring coefficient is twice as large as any other coefficient. The standardized coefficient (not shown) indicates that a parent knowing what their adolescent is doing away from home is by far the strongest deterrent to heavy drinking when considering family context. Model 5 (table 3.3) confirms the relationship between pro-alcohol peers, family context, and prior heavy drinking. All the coefficients are statistically significant, with prior heavy drinking showing the strongest and only positive association. The number of pro-alcohol peers an individual spends time with goes up as their level of prior heavy drinking goes up. This finding is not surprising given Leibsohn’s (1994) finding that when individuals transition into college they look for friends with drinking habits similar to those of their high school friends. If an individual drank heavily as an adolescent, it is not unlikely that they had friends who also consumed alcohol. These friends either remain an individual’s friends as they get older, which is more likely if they do not go away to college, or they provide the model for subsequent friendships.
TABLE 3.3

OLS AND LOGISTIC REGRESSION

PREDICTING ADOLESCENT HEAVY DRINKING, PRO-ALCOHOL PEERS, AND PROSOCIAL GROUP INVOLVEMENT

WITH FAMILY CONTEXT

<table>
<thead>
<tr>
<th></th>
<th>(4) ( ^a ) Prior Heavy Coefficients</th>
<th>(5) ( ^a ) Pro-Alcohol Peers Coefficients</th>
<th>(6) ( ^b ) Prosocial Group Odds Ratios</th>
</tr>
</thead>
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<tr>
<td>Parental Monitoring</td>
<td>-.248***</td>
<td>-.124***</td>
<td>1.126</td>
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<td>Parent Relig. Serv.</td>
<td>-.042***</td>
<td>-.029+</td>
<td>1.275***</td>
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<td>Parent Prays with Teen</td>
<td>-.062</td>
<td>-.152*</td>
<td>2.014***</td>
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<td>Parent Relig. Cons.</td>
<td>-.118**</td>
<td>-.159*</td>
<td>2.074***</td>
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<td>Prior Heavy Drinking</td>
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<td>.806*</td>
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<td>Constant</td>
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<td>3.265</td>
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<tr>
<td>R(^2) / Nagelkerke Pseudo</td>
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<td>.092</td>
<td>.176</td>
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<tr>
<td>N</td>
<td>2318</td>
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<td>2318</td>
</tr>
</tbody>
</table>

SOURCE: National Survey of Youth and Religion, Wave 1 and Wave 3

NOTE: Age, gender, minority status, and parent’s education are controlled in all models

\(+p \leq .10 \quad *p \leq .05 \quad **p \leq .01 \quad ***p \leq .001 \) (two-tailed test) \(^a\)OLS regression results \(^b\)Logistic regression results

The last model on table 3.3 (model 6) shows the odds ratios for the Logistic regression that regresses prosocial group involvement on family context and prior drinking. The odds of being part of a religious small group go down as a result of prior heavy drinking. The odds of involvement increase the more religious the family context. When a parent either prays with their teen or is religiously conservative, the odds of being part of a religious small group increases by a factor of more than two. These
findings confirm a strong relationship between family religious context during adolescence and prosocial group involvement.

Finally, table 3.4 contains the odds ratios for four models that regress binge drinking on various sets of predictor, mediation, and control variables. The models are somewhat nested, with models 7 and 8 both nested in model 9 but not nested within each other. Each of the subsequent columns (7, 9, 10 or 8, 9, 10) progressively adds a new IV or group of IVs. Model 10 is the full model, with all predictor, mediation, and control variables included.

All models include controls for age, gender, minority status, and parent’s educational attainment (a proxy for SES). In the full model (table 3.4, model 10), Gender and minority status significantly predict binge drinking in the expected (i.e. negative) direction (based on previous research). Parent’s educational attainment and age did not significantly predict binge drinking. While these coefficients are not reported in the regression tables, they are available upon request.

Model 7 takes model 1 (table 3.2) and adds prior heavy drinking as an independent variable. Likewise, model 8 takes model 1 and adds social context variables. Both of these models are specifically used to test for mediation. If prior drinking or social context, all of which are positively affected by family context (see models 4 through 6), mediates the effect of family context on the odds of binge drinking, then the
TABLE 3.4

BINARY LOGISTIC REGRESSION ODDS RATIOS

PREDICTING BINGE DRINKING

<table>
<thead>
<tr>
<th></th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Monitoring</td>
<td>.934</td>
<td>.910+</td>
<td>.989</td>
<td>.987</td>
</tr>
<tr>
<td>Closeness to Parent</td>
<td>1.016</td>
<td>1.013</td>
<td>1.035</td>
<td>1.051</td>
</tr>
<tr>
<td>Parent Relig Serv Atnd</td>
<td>.961+</td>
<td>.975</td>
<td>.989</td>
<td>1.004</td>
</tr>
<tr>
<td>Parent Prays with Teen</td>
<td>.802*</td>
<td>.886</td>
<td>.901</td>
<td>.994</td>
</tr>
<tr>
<td>Parent Relig Cons</td>
<td>.693***</td>
<td>.746**</td>
<td>.768**</td>
<td>.795*</td>
</tr>
<tr>
<td>Prior Heavy Drinking</td>
<td>1.634***</td>
<td></td>
<td>1.516***</td>
<td>1.527***</td>
</tr>
<tr>
<td>Pro-Alcohol Peers</td>
<td></td>
<td>1.523***</td>
<td>1.497***</td>
<td>1.472***</td>
</tr>
<tr>
<td>Prosocial Group</td>
<td></td>
<td>.398***</td>
<td>.401***</td>
<td>.471***</td>
</tr>
<tr>
<td>Religious Service Atnd</td>
<td></td>
<td></td>
<td></td>
<td>.946+</td>
</tr>
<tr>
<td>Prays Alone</td>
<td></td>
<td></td>
<td></td>
<td>.920**</td>
</tr>
<tr>
<td>Religiously Conserv</td>
<td></td>
<td></td>
<td></td>
<td>1.216</td>
</tr>
<tr>
<td>Attend. 4-yr college/univ</td>
<td></td>
<td></td>
<td></td>
<td>1.211+</td>
</tr>
<tr>
<td>Living with parent(s)</td>
<td></td>
<td></td>
<td>.683***</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td></td>
<td></td>
<td>.640*</td>
<td></td>
</tr>
<tr>
<td>Has children</td>
<td></td>
<td></td>
<td>.597**</td>
<td></td>
</tr>
<tr>
<td>Nagelkerke Pseudo R²</td>
<td>.135</td>
<td>.238</td>
<td>.262</td>
<td>.289</td>
</tr>
<tr>
<td>N</td>
<td>2318</td>
<td>2318</td>
<td>2318</td>
<td>2318</td>
</tr>
</tbody>
</table>

SOURCE: National Survey of Youth and Religion, Wave 1 and Wave 3

NOTE: Age, gender, minority status, and parent’s education are controlled in all models
+p≤.10 *p≤.05 **p≤.01 ***p≤.001 (two-tailed test)
direct effects of family context on the odds of binge drinking (as seen in model 1) should disappear. When prior drinking is added to the model (7) the statistically significant effect of parental monitoring disappears, but the influence of family religious context on the odds of binge drinking, while lessened, still remains. The disappearance of the monitoring effect suggests that monitoring indirectly affects binge drinking via its effect on heavy drinking during adolescence. Adolescents who think their parents are aware of what they do away from home are less likely to drink in excess, and the odds of binge drinking as an emerging adult are lower if an individual was less prone to excessive drinking as a teen. Thus, the mediation of parental involvement, in the form of monitoring but not closeness, is confirmed in model 7. Additionally, the first half of hypothesis 4 concerning the direct effect of prior heavy drinking is substantiated in this and subsequent models.

When social context, both pro-alcohol peers and prosocial involvement, are added to model 8 mediation is also confirmed but in a different manner than model 7. The effect of parental monitoring is reduced in model 8 but it does not disappear entirely. The significant effect of two of the family religious context variables vanishes when social context is added to the model. The effect of parent’s service attendance and praying with a parent become statistically insignificant, while the effect of parent’s religious conservatism is reduced in size but maintains a significant influence. Subsequent analysis (not shown) indicates that the diminished effect of monitoring in model 8 is due to the mediation of monitoring’s effect through pro-alcohol peers (not through prosocial group involvement). Similarly, the effect of a parent’s service attendance and praying with their teen is mediated through involvement in a prosocial
group. Model 8 confirms hypotheses 5 and 6 and verifies that the influence of family context, particularly family religious context, on the odds of binge drinking post adolescence is mediated, in part, by the antisocial and prosocial connections that an emerging adult forms.

Model 9 combines model 1 with models 2 and 3 and tests the influence of family context, prior drinking, and social context concurrently. The second half of hypothesis 4 suggests that prior drinking indirectly affects binge drinking via social context. In this model we are able to look for change in the prior drinking odds ratio when social context is included, and a decrease would suggest the possibility of an indirect effect. From model 7 to model 9 the odds ratio for prior drinking decreases by a small percentage. Model 5 verified that prior drinking has a strong direct effect on the number of pro-alcohol peers an individual reports. Taken together, these results suggest that the effect of prior drinking is primarily a direct effect but may also exert a small indirect effect through its effect on peer connections. Given the small negative effect of prior drinking on prosocial involvement (model 6) compared to the effects of family religious context, any mediation of prior drinking through prosocial involvement is not likely. Thus the hypothesis (4) that prior drinking exerts an indirect effect on binge drinking via social context is only minimally supported in these analyses.

Model 10 is the final and full model shown in table 3.4. This model includes all predictor and mediation variables along with life course and religiosity control variables. Consistent with the previous model, only parent’s religious conservatism remains as a direct effect of family context at t1 on binge drinking at t2. Parental involvement and the
other pieces of family religious context do not maintain a direct effect, but, as we saw in previous models, they do appear to exert an indirect effect through social context.

With the addition of life course measures and controls for religious participation, the three mediation variables decline in magnitude but continue to exert a strong direct influence on the odds of binge drinking compared to most variables in the model. According to these results, adolescents who drank heavily have higher odds of binge drinking at t2 by a factor of 1.527. In other words, for each additional occurrence of heavy drinking in adolescence the odds that these individuals will binge drink increases by more than 50%, which confirms the direct effect aspect of hypothesis 4. Similarly, hypothesis 5 is confirmed by the significant 1.472 odds ratio of pro-alcohol peers. For each additional drug/alcohol using friend that a respondent reports spending time with the odds of binge drinking increases by 47%. The more relationships an emerging adult develops with people who participate in antisocial behavior, the greater their odds of participating in antisocial behavior themselves.

Hypothesis 6 asserts that prosocial involvement will reduce the odds of binge drinking. These results strongly support this hypothesis. According to model 10, the odds of binge drinking for a respondent who reports being part of a religious small group are reduced by 53%. Consistent with the SDM, this finding suggests that prosocial involvement discourages antisocial behavior, likely by encouraging and building bonds with prosocial others. To verify that the influence of involvement in a religiously based group was not a simple religiosity effect, three religiosity variables were also controlled in model 10. The odds ratios for religious service attendance and praying alone are statistically significant but much smaller in magnitude than prosocial group involvement.
The odds of binge drinking are reduced by about 5% and 8% for each one unit increase in service attendance and praying, in that order.

Unlike the effect of parent’s religious conservatism, whether or not emerging adults claim to be religiously conservative themselves has no significant influence on their odds of binge drinking. Likely, because parents have had more time than emerging adults to search, understand and internalize their faith, the faith of religiously conservative parent has more of an impact on their daily lives and the lives of their children. Emerging adults are often still discovering their identity and seeking to understand who they are or what they believe, thus religious affiliation is likely more in flux and less meaningful, with regards to decision making and behavior, than for older adults.

The last piece of model 10 is a set of measures for life course factors. All four life course variables significantly influence the odds of binge drinking. If an individual lives with her parent(s), is married, or has any children, her odds of binge drinking are lowered by 30-40%. On the other hand, if an individual is currently attending a 4-year institution, her odds of binge drinking increase by about 20%. These results confirm hypothesis 7 and support the theory of a unique college effect that is more than just a consequence of life course differences. Even when controlling for marriage, children, and residential status, the odds of binge drinking are still higher for students. Something about the college environment supports the abuse of alcohol.
3.11 Discussion

Before continuing with the discussion of these results, a point of reminder and clarification must be made. This study does not attempt to nor claim to make conclusions about the frequency of alcohol use, the frequency of binge drinking, or alcohol use in general among emerging adults. While the use of alcohol in various manners is highest among the age group of this study, only the abuse of alcohol in the form of ever binge drinking is specifically under investigation here. Those who abstain from ever drinking are not distinguished from those who never binge drink. Some of the significant risk or protective factors found in this study may or may not generalize to frequency of use or other measures of alcohol use for emerging adults.

The overall goal of this study was to better understand the risk and protective factors of alcohol abuse, in the form of binge drinking, among emerging adults. Analyses were conducted to test a mediation model (see figure 3.1) which included both direct and indirect effects on the odds of binge drinking. The results indicate that the mediation of family context does occur, and, in general, these processes are consistent with the Social Development model. Figure 3.2 shows an adjusted model that corresponds with these results.
To begin with, the effect of parental involvement on the odds of binge drinking is not uniform for both aspects of involvement, i.e. monitoring and closeness. For this sample, parental monitoring does have an indirect effect but does not have a direct effect on binge drinking among emerging adults once other important variables are considered in the model. These results do not suggest that parental involvement is not important. Monitoring has a strong direct effect on heavy drinking among adolescence. The more an adolescent thinks their parent(s) know what they are up to the less likely they are to drink in excess. Adolescent alcohol abuse, in turn, has a strong direct effect on the odds of subsequent binge drinking. By monitoring their children’s activities in adolescence parents are circuitously lowering the odds that their children will abuse alcohol as emerging adults, when experimentation and identity exploration tend to be at their peak.
Unlike parental monitoring, parental closeness has no effect on the odds of binge drinking, indirect or otherwise, in this sample. Previous research suggests that when adolescents are close to their parents this closeness can deter individuals away from antisocial behavior and away from friendships with delinquent peers (Warr, 1993). These analyses suggest that while closeness to parents during adolescence may affect antisocial behavior as a whole, or other specific antisocial behaviors (as seen in previous research), it does not appear to influence the odds of later binge drinking. Given closeness did not have a direct effect on the odds of binge drinking (model 1), it was not tested in the mediation models.

The possibility remains that the null result of parental closeness could be due to the measure itself not being a good indicator of closeness. A scale of closeness, which included multiple measures of closeness\(^{27}\), was constructed, but the reliability of the scale was below acceptable levels to use with confidence, and, therefore, was not implemented in these analyses. A different, more nuanced measure of closeness could give different results, thus parental closeness’s effect on binge drinking deserves further inquiry.

Similar to parental involvement, family religious context was found to primarily affect the odds of binge drinking indirectly. The direct effects of parent’s attendance and parents praying with their teen are mediated through an emerging adult’s involvement in a religiously based group. The more a parent attends religious services and prays with their teen, the greater the odds their child will be part of a religious small group post-high school. Being part of this type of group, then, lowers the odds of binge drinking. The

\(^{27}\) Measures included to construct a scale of parent closeness included time spent with parent(s), how well parent/teen got along, and whether child felt parent(s) cared.
SDM proposes that relationships with prosocial others in one stage will influence later behavior by encouraging individuals to establish prosocial connections and involvements in later life stages, a proposal that is supported by these mediation findings.

While family religious context influences the odds of binge drinking indirectly through prosocial group involvement, a third component of family religious context, parent’s religious conservatism, maintains a direct effect on the odds of binge drinking even after mediation is taken into account. The effect of parent’s religious conservatism is not accounted for by prosocial involvement. According to these results, if parents consider themselves part of a religiously conservative faith tradition the odds of their child binge drinking later in life are reduced. Confirming hypothesis three, this result suggests that religious conservatism among parents goes beyond simple parental preference; it affects the context in which an adolescent develops and influences her behavioral choices. Taken as a whole, the findings for family religiosity during adolescence indicate that family religious context serves as a protective factor for emerging adults, with higher levels of family religiosity in adolescence discouraging antisocial behavior later.

As hypothesized, heavy drinking during adolescence directly affects the odds of binge drinking in the emerging adult stage. The more an individual drank in excess as an adolescent the greater their odds of drinking in excess in post adolescence. Of all the risk factors tested in this study, prior heavy drinking exerts the strongest influence, stronger than either peer or college effects. This finding is consistent with the SDM, which, again, suggests that prior antisocial involvement promotes future antisocial connections and involvement (Catalano & Hawkins, 1996).
Precisely because of the above mentioned piece of the SDM the indirect influence of prior heavy drinking on the odds of binge drinking was also examined. If prior antisocial behavior encourages antisocial connections, then it stands to reason that the effect of prior behavior may be mediated through the connections it encourages. Thus, this study examined the mediation effect of pro-alcohol peers for prior heavy drinking. While a strong direct effect of prior heavy drinking on number of pro-alcohol peers was found (model 5), the addition of pro-alcohol peers to the model reduced but did not eliminate the direct effect of prior heavy drinking. Hence, this study finds that prior alcohol abuse is a risk factor for binge drinking over and above later peer relationships during the emerging adult years. Because an indirect effect of adolescent heavy drinking on emerging adult binge drinking via antisocial peers makes sense theoretically, the topic deserves further investigation. Additionally, the SDM makes no claims as to the strength of influence, whether peers or prior behavior will have a stronger effect on future behavior. However, given that previous research tends to emphasis peers as the strongest influence on an individual’s behavior (Baer, 2002; Perkins, 1985), the finding that prior behavior exerts a stronger influence on the odds of binge drinking than peers in this sample is noteworthy.

Two aspects of an emerging adult’s social context were examined in this study, both of which influence the odds of binge drinking – one as a risk factor, one as a protective factor. Maintaining relationships with peers who drink or do drugs regularly increases the risk of binge drinking, while being involved in a prosocial group serves as a protective element of one’s social context. Considering the null or mediated effect of family context, these results confirm that social connections and involvements wield
greater direct influence on the behavior of emerging adults than the family setting in which they grew up. Parents and the role they take in the lives of their children are, no doubt, important, particularly in adolescence (Crosnoe, Mistry, & Elder, 2002; Warr, 1993); but, according to these findings the influence they exert on the behavioral decisions of their emerging adult children is not direct but is generated by affecting with whom and how their children choose to spend time.

By spending time with peers who, in their own estimation, drink a lot of alcohol, emerging adults are putting themselves at risk for abusing alcohol themselves. These friends may encourage excessive drinking simply by example or by overt means of verbal persuasion and providing opportunities (and a ready supply). Either way, according to these findings, bad company promotes bad habits. On the other hand, spending time with others in an intentionally prosocial setting discourages bad habits. Consistent with Thorlindsson and Bernburg’s findings (2006), when emerging adults seek out involvement in a group based on common interest (i.e. religion or faith), their odds of abusing alcohol significantly drop. For emerging adults, religiously based small groups provide substitute sources of social connection in lieu of social connections that encourage substance use. Individuals involved in such a group have increased opportunities to interact and bond with people who endorse prosocial values and spend their time in less destructive ways. Moreover, the effect of religious small group involvement is not accounted for by the religiosity of an individual.

Finally, this study confirms the existence of a college effect on binge drinking. After controlling for life course differences in marital status, parenting, and residential status, attending college increases an individual’s odds of binge drinking. While this
study makes no attempt to identify which aspects of college life encourage excessive drinking, these results indicate that something about the college environment supports the abuse of alcohol. However, given the 30-40% decrease in binge drinking odds if an individual is either married, has a child, or lives at home, students most at risk for binge drinking are unmarried, with no parental responsibilities, and no longer live at home but live either on campus or in their own place.

3.12 Conclusion

This chapter looks at the influence of adolescent family context, prior heavy drinking, and emerging adult social context on the odds of ever binge drinking. Due to the negative consequences of alcohol abuse and its high level of use among individuals ages 18-25 understanding some of the risk and protective factors of binge drinking for emerging adults is important. Using a sample of respondents who were between the ages of 18 and 24 and participated in both wave 1 and wave 3 of the NSYR, the conclusion of this study is that family context exerts an indirect effect on the odds of binge drinking while prior heavy drinking and social context exert strong direct effects. Findings show that prior heavy drinking accounts for the relationship between monitoring and binge drinking, while prosocial group involvement accounts for much of the effect of family religious context. This study confirms the utility of the Social Development model in understanding the occurrence of antisocial behavior for emerging adults. Furthermore, results reveal that prior antisocial behavior wields a stronger influence on later antisocial behavior than peer relationships.
CHAPTER 4:
CONSERVATIVE PROTESTANT VARIATION IN DRINKING AMONG
EMERGING ADULTS

4.1 Overview

In recent years, understanding the impact of religious tradition on the attitudes, behaviors, and achievements of individuals has been of particular interest to sociologists of religion. In light of religious tradition, researchers have investigated everything from “pro-family” stances (Gay, Ellison & Powers, 1996) to educational attainment (Beyerlein, 2004; Lehrer, 1999; Darnell & Sherkat, 1997) from social trust (Welch, Sikkink, Sartain, & Bond, 2004) to parenting practices (Wilcox, 1998) and substance use (Ellison, et al., 2008). In general, this research shows that religious tradition matters and that between group differences do exist.

In particular, emphasis has been put on differences found between Protestant groups and other affiliations (or non-affiliation) or between different Protestant groups, such as mainline and conservative Protestants. Conservative Protestants are often found to be distinct from their mainline Protestant and Catholic counterparts in material pursuits, such as educational attainment (Darnell & Sherkat, 1997; Lehrer, 1999), yet not particularly distinct in substance use once religious involvement and importance of
religion are controlled (see chapter two; Ellison et al, 2008; Longest & Vaisey, 2008). However, in the majority of studies that make claims about conservative Protestant peculiarities, this group is treated as a monolithic religious bloc despite vast differences between denominations that fall under the conservative Protestant umbrella.

Some researchers doubt the legitimacy of treating conservative Protestants as a homogenous group and emphasize the need to disaggregate conservative Protestants into smaller subgroups (Beyerlein, 2004; Mitchell & Tilley, 2008; Woodberry & Smith, 1998). These researchers suggest that conceptualizing conservative Protestants as separate and distinct subgroups, specifically Evangelicals, Fundamentalists, and Pentecostals, better captures the cultural differences present within the broader categorization. Because these cultural differences affect how these different conservative Protestant subgroups view and engage with secular society, they are liable to affect whether and how individuals within the subgroups use alcohol.

Thus, the current study hopes to further the discussion of the influence of religious tradition on behavior by looking at variation in alcohol use between conservative Protestant subgroups. This study will look at whether between group differences exist within conservative Protestantism in the tendency to abstain from drinking and the frequency of consumption, in addition to looking at whether the risk and protective factors of alcohol use are consistent across subgroups. To this end, the study will investigate two specific questions using data from the National Study of Youth and Religion: (1) Do conservative Protestant subgroups differ from one another in their likelihood of abstaining from alcohol or in their frequency of consumption? (2) Does
religious and non-religious involvement affect the alcohol use of emerging adults in consistent ways across conservative Protestant subgroups?

4.2 Conservative Protestant Findings

When conservative Protestants are compared as an intact group to people from other faith traditions clear patterns are consistently found that appear to distinguish them as a cohesive group. Individuals from conservative Protestant denominations are more likely than individuals from other traditions to believe in moral absolutes and to uphold the Bible as an authority for living right (Smith et al., 1998). Likewise they are found to be theologically and culturally more conservative.

In addition to holding particular beliefs, some researchers find that Conservative Protestants emphasize abstaining from worldly endeavors, which results in them acquiring the least amount of education compared to Catholics, Jews, and mainline Protestants (Darnell & Sherkat, 1997; Lehrer, 1999). In their study of Protestant conservatism, Darnell & Sherkat (1997) found that both identifying as a member of a conservative Protestant group and holding specific, conservative views of the Bible negatively affects not only years of education attained but educational aspirations, preparation, and performance, as well.

However, when conservative Protestants are not treated as a single, cohesive group, research shows that not all conservative Protestants differ to the same degree, from other traditions, in beliefs or educational pursuits (Beyerlein, 2004; Gay, Ellison & Powers, 1996; Mitchell & Tilley, 2008). Looking at self-identified conservative
Protestant groups in Northern Ireland, Mitchell & Tilley (2008) found that identifying as either Evangelical or Fundamentalist did not predict the likelihood of a belief in Biblical literalism. Yet, the likelihood of believing in Biblical literalism was significantly increased if a respondent considered himself “born-again.”

Similarly, in his study of religion’s affect on educational attainment Beyerlein (2004) found that conservative Protestants were not uniformly constrained in achieving higher education. Using the 2000 General Social Survey, his analyses showed that, while Fundamentalists and Pentecostals tend to be less likely to receive higher education than other religious or unaffiliated groups, this pattern did not hold for Evangelicals. Evangelicals were found to be just as likely as other non-conservative Protestant faith groups (with Jews as the exception) and more likely than Fundamentalists and Pentecostals to complete a four-year college education. Beyerlein (2004) concludes that by disaggregating conservative Protestants researchers are better able to capture the heterogeneity of the group as a whole.

4.3 Conservative Protestants and Substance Use

Historically, Protestantism was associated with the temperance movement, which led many Protestant groups to endorse abstinence as the only appropriate response to alcohol use (Perkins, 1985; Young, 2002). Belief in the human body as a “temple” and unique among God’s creation in these groups, along with a traditional ascetic emphasis, likely encouraged a dislike of any substance abuse that potentially caused physical harm.
While many groups have subsequently loosened their stance to some degree, moderation in consumption is largely assumed.

Given this tradition of abstinence and/or moderation with alcohol consumption, the evidence from recent research that affiliation with a conservative Protestant denomination results in lower drinking frequency is not remarkable (see chapter 2; Ellison et al., 2008). However, this conservative Protestant affiliation effect disappears or is greatly diminished when other measures of religion are included in the model, such as attendance, religious salience, or frequency of prayer. With Jews as an exception, any affect of affiliation in these studies appears to be primarily indirect through attendance and involvement in non-organizational religiosity and not a direct result of affiliation with a particular tradition.

However, none of these previous studies takes the broad category of conservative Protestant and breaks it into smaller subgroups when looking at substance use. By treating conservative Protestants as a cohesive group, cultural distinctiveness between groups within the broad conservative Protestant tradition is glossed over. By breaking the broad conservative Protestant category into smaller sections for analysis, Beyerlein (2004) was able to shed doubt on the assumption that conservative Protestants are largely less well educated than folks from other faith traditions. He found that treating conservative Protestants as a homogenous group failed to produce an accurate picture of the current situation. In the same way, perhaps no direct effect of conservative Protestantism on alcohol consumption is found because the effect is diluted by heterogeneity within the larger group. Disaggregating conservative Protestants into Evangelical, Fundamentalist, and Pentecostal subgroups, facilitates investigation into
whether divergent ways of interacting within the wider society and existing cultural differences between subgroups affects how individuals within the subgroups approach the use of alcohol.

4.4 Evangelical, Fundamental, and Pentecostal Differences

Various scholars suggest that within the broad category of conservative Protestantism exist separate and distinct groups, namely Evangelicals, Fundamentalists, and Pentecostals, that differ from each other in important ways (Marsden, 1991; Smith, 2000; Woodberry & Smith, 1998). Whereas each of these subgroups is generally considered theologically conservative as compared to mainline or liberal Protestants, they maintain different cultural traditions and ideas about approaching the secular world. While Evangelicals emphasize reaching out to and engaging with non-Christian culture, Fundamentalists and Pentecostals promote retreating from and avoiding non-Christian culture and its influences.

Fundamentalists and Pentecostals are very similar in the manner that they engage the secular world as both emphasize separation and maintaining strict boundaries (Marsden, 1991; Poloma, 1989; Smith, et al., 1998). Sometimes described as militant or defensive, both groups oppose change in cultural values or mores. As a means for separating from the world, these groups tend toward legalism, upholding rigid rules and definite prescriptions against drinking and smoking (Poloma, 1989). They participate less in politics and take more conservative stances than other conservative Protestants (Smidt, Green, Kellstedt, & Guth, 1996; Smith, et al., 1998) Influencing the secular
world is not deemed important or necessary, especially in light of the threat that secular values pose to maintaining right living.

Even though their isolation from the world is consistent, the motivation for this isolation is different for Fundamentalists and Pentecostals. Fundamentalists maintain a commitment for preserving doctrinal and moral purity with an emphasis on scripture (Smith, et al., 1998). For example, Fundamentalists fervently oppose secular institutions because of their tendency to challenge doctrine truths and to corrupt moral purity. Fundamentalist, therefore, look for means outside the public school system for educating their children (Sikkink, 1999).

Pentecostals also oppose secular education settings but not out of a concern for doctrinal orthodoxy. Pentecostals focus on the influence of the Holy Spirit and emotional religious practices (Poloma, 1989; Smidt et al., 1996). With an emphasis on logic and rationalized thinking, secular institutions challenge the experienced-based religious authority of Pentecostal faith, thus they prefer to send their kids to Christian schools or home school them (Sikkink, 1999). Additionally, the tendency of Fundamentalist and Pentecostals to stay away from secular studies or institutions is not confined to elementary and secondary education. Research shows that both Fundamentalists and Pentecostals are significantly less likely than Evangelicals to receive a college education (Beyerlein, 2004).

Rather than retreating from the secular world to keep from being affected by changing mores and religious opposition, Evangelicals employ a strategy of “engaged orthodoxy” (Smith, et al., 1998). They pro-actively engage in intellectual, cultural, social, and political aspects of American society, hoping to shape the world around them
and make a difference. Far from being a justification for disengaging, their orthodox Protestant faith propels them to be a redemptive influence in the world. While they agree with Fundamentalists and Pentecostals that secular society challenges their faith and values, they do not see isolation as the rightful response. Unlike their conservative Protestant counterparts, they support sending children to and being actively involved in public schools (Sikkink, 1999).

4.5 Denomination Versus Self Identification

While research indicates that being a Conservative Protestant (CP) influences individuals in diverse ways, agreement as how to conceptualize who is and who is not part of this group (or subgroups within) does not exist, thus resulting in varying conclusions as to the extent of influence (Hackett & Lindsay, 2008). Some scholars use specific denomination affiliation and/or attendance to determine whether an individual is considered a CP (see Steensland, et al., 2000; Welch, et al., 2004; Willcox, 1998; Gay, Ellison & Powers, 1996). Others use self-identification as a means for categorizing, whereby respondents indicate whether they consider themselves “evangelical”, “born-again” or “fundamentalist,” etc (Mitchell & Tilley, 2008; Beyerlein, 2004). Still others use religious beliefs, such as Biblical inerrancy or the divinity of Christ, to determine whether an individual is truly a CP (Barna, 2004; Hunter 1983).
In their review of major studies that look at conservative Protestantism, Hackett & Lindsay (2008) demonstrate how different measuring strategies result in dramatically different conclusions about conservative Protestants. They show that anywhere from 38% to 5% of the American population can be categorized as conservative Protestant depending on how a researcher conceptualizes the measure, i.e. religious/denominational affiliation, self-identity, or belief. They conclude that the most sociologically sound methods for selecting respondents are affiliation and self-identification, with an understanding that affiliation measures religious tradition while self-identification more likely measures association with a “movement” (thus not necessarily or strictly tied to a specific religious tradition or affiliation). The primary analyses in this study identify three conservative Protestant subgroups using denominational affiliation.

4.6 Hypotheses

In view of the cultural differences between the various conservative Protestant subgroups, the goal of this study is to see if between group differences consequently exist in behavior and the factors that influence behavior. Specifically, I will look at alcohol consumption among emerging adults, both frequency of consumption and the odds of abstaining from drinking. No earlier literature has disaggregated conservative Protestants when looking at patterns of alcohol use. Outside of the general finding that conservative Protestants tend to drink less than those from other faith traditions, literature pertaining to

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28 In their study, Hackett & Lindsay (2008) refer to conservative Protestantism and conservative Protestants as American evangelicalism and Evangelicals.
the effect of conservative Protestantism on substance use is silent when considering subgroup differences. Given the differences in how conservative Protestant subgroups (or subcultures) engage with secular society and secular institutions, looking at whether between group differences exist in their use of alcohol or the factors that influence their alcohol use makes sense. For instance, if Evangelicals are more likely to pursue higher education and drinking in college is a common occurrence, Evangelicals may have more opportunities to consume alcohol and, thus, have higher frequency of consumption or be less likely to abstain than other conservative Protestants. Furthermore, Fundamentalists’ and Pentecostals’ desire to be separate from the world and not affected by secular influences suggests less involvement with worldly activities, such as drinking.

Furthermore, with established ties between religiosity, such as religious service attendance and religious salience, and substance use (Chitwood, Weiss, & Leukefeld, 2008; Ellison, et al. 2008) this study seeks to understand whether religiosity and non-religious social involvement affect Evangelicals, Fundamentalists, and Pentecostals in similar ways. In many studies, the protective effect of conservative Protestant affiliation fades or becomes less robust once attendance or salience is controlled in the model. These findings suggest that religious involvement and commitment are actually more protective than affiliation itself, and the initial conservative Protestant effect is explained by the fact that conservative Protestants on the whole are found to have higher rates of religious participation and commitment to their faith than individuals from Mainline or Catholic traditions (Smith, 2009). When looking at between group differences within conservative Protestantism, will religious involvement and commitment have the same impact on frequency of consumption or odds of abstaining for the conservative Protestant
subgroups? By disaggregating conservative Protestants, this study seeks to answer this question. Conservative Protestants will be split into three subgroups using a denomination based measuring strategy. The models will distinguish between Evangelicals, Fundamentalists, and Pentecostals according to their stated denominational affiliation.

Considering my research goals and the previously established cultural differences between the various conservative Protestant subgroups, hypotheses for this study are as follows:

**H$_1$:** Evangelicals exhibit lower levels of abstaining from alcohol and higher frequency of alcohol consumption as compared to Fundamentalists and Pentecostals.

**H$_2$:** The religious and non-religious factors that impact alcohol use (or non-use) are consistent for Fundamentalists and Pentecostals but not for Evangelicals.

4.7 Data and Analytic Sample

Data used in this study comes from the National Study of Youth and Religion (NSYR)$^{29}$. The NSYR, a comprehensive examination of the religious lives of American Youth, is a nationally representative telephone survey of 3,290 U.S. English and Spanish speaking teenagers who were ages 13 to 17 at wave one and one of their co-resident parents. Wave One of the study was conducted from July 2002 to August 2003 using a

$^{29}$ The National Study of Youth and Religion, <www.youthandreligion.org>, whose data were used by permission here, was generously funded by Lilly Endowment, Inc., under the direction of Christian Smith, of the Department of Sociology at the University of Notre Dame and Lisa Pearce, of the Department of Sociology at the University of North Carolina at Chapel Hill.
random-digit-dial (RDD) telephone survey method with a random sample of telephone numbers representative of all household telephones in the 50 United States. All households with at least one teenager between the ages of 13 and 17 living in the house for at least six months of the year were considered eligible for the survey. To facilitate randomization of responses within households and to better represent age and gender, interviewers requested to conduct the survey with the teenager in the household with the most recent birthday. To further confirm the nationally representative character of the NSYR data for U.S. households with a teen ages 13 to 17, investigative analysis comparing NSYR data with 2002 U.S. Census data on equivalent households and with similar adolescent surveys – such as Monitoring the Future and the National Longitudinal Study of Adolescent Health – revealed no identifiable sampling or non-response biases (for details, see Smith & Denton, 2005).

Wave Three of the NSYR was fielded from September 2007 to April 2008 and conducted only in English. At the time of the third survey respondents ranged in age from 18 to 24. Of the original wave one respondents, 2,532 participated in the third survey, for an overall wave 1 to wave 3 retention rate of 77.1%. The main source of attrition in the third wave was non-located respondents. The Wave 3 refusal rate, calculated as the number of eligible respondents who refused, was 6 percent. Additional reasons for attrition from the original sample included uncompleted surveys, refusal, and ineligibility (e.g. military active duty, institutionalized, deceased, etc) (Smith & Denton, 2008).

30 Wave 2 of the NSYR was conducted between June and November 2005 when respondents were between the ages of 16 to 21. No Wave 2 variables are used in the current study.
4.7.1 Analytic Sample

The current study seeks to understand whether between group differences in alcohol consumption exist between Evangelical, Fundamentalist, and Pentecostal emerging adults. Only respondents considered Conservative Protestant\(^{31}\) in Wave 3 of the NSYR data are included in these analyses. All of the respondents in Wave 3 of the NSYR were between the ages of 18 and 24, however, some of these individuals were still attending high school at the time of the Wave 3 interview. Because my desire is to look specifically at emerging adults, only Wave 3 respondents who indicated that they were not enrolled in a high school or K-12 institution were kept for the analytic sample. Limiting the sample to conservative Protestants and dropping respondents still enrolled in high school (N=41) resulted in a base sample of 585 respondents. Listwise deletion was performed on all the variables included in the final models, creating a final analytic sample of 577 cases. This final sample is the base for all of the descriptive statistics presented in the results section. The measures used in these analyses come primarily from Wave 3 of the NSYR, with the exception of prior drinking and parent’s education, both of which are Wave 1 variables.

\(^{31}\) In the NSYR data, Conservative Protestant is actually referred to as “Evangelical Protestant.” These terms are used interchangeably in the literature to refer to conservative Protestants as a broad category. For the sake of clarity, conservative Protestant is used throughout this study to refer to the broad group, while Evangelical refers to a conservative subgroup.
4.8 Measures and Analytic Strategy

4.8.1 Dependent Variables

The dependent variables used in this study measure alcohol consumption in some form. My first dependent variable is a binary measure of drinking versus not drinking, where 0 is a non-drinker (abstainer) and 1 is a drinker. Respondents were asked “how often, if at all, do you drink alcohol, such as beer, wine, or mixed drinks, not including at religious services.” The seven possible responses included never (0), a few times a year, about once a month, a few times a month, about once a week, a few times a week, and once a day or more (6). Respondents who said never were coded as non-drinkers (0), while everyone else was coded as a drinker (1). My second dependent variable uses all seven responses from the original variable to look at frequency of consumption.

4.8.2 Conservative Protestant Subgroups

A key component to this study is conservative Protestant subgroup classification. A constructed variable within the NSYR data indicates whether a respondent is Conservative Protestant, Mainline Protestant, Catholic, Jewish, Mormon, Not religious, other religion, or indeterminate. Only those respondents coded Conservative Protestant in the original variable are classified into a conservative subgroup. The subgroup in which a respondent belongs is determined by using denominational affiliation. Respondents are classified as Evangelical, Fundamentalist, or Pentecostal according to the denomination of the church that they report affiliating with or attending.
Denominational classification into a specific group is based primarily on the classification used by Welch et al. (2004) and independent research (see Appendix A for classification of specific denominations).

4.8.3 Independent Variables

Other than conservative Protestant subgroup affiliation, the primary independent variables used in this study are measures of religious involvement, both organizational and non-organizational, and non-religious involvements. Two measures of organizational religious involvement are included in the models. The first is a measure of regular religious service attendance; the second is a measure of small group involvement. Respondents were asked how often they usually attended religious services (not counting weddings, baptisms, and funerals), with response options including never, a few times a year, many times a year, once a month, 2-3 times a month, once a week, and more than once a week. The measure for religious group involvement is a binary measure indicating whether a respondent is “involved in any organized religious group such as Bible study, prayer group, or religious group, not including regular service attendance.” Involvement in a religious small group is coded 1 for Yes and 0 for No.

Measures for non-organizational religiosity include prayer, Bible reading, and religious salience. Respondents were asked how often, if ever, they prayed by themselves alone with response categories ranging from never (1) to many times a day (7). Preliminary analyses revealed no significant difference in mean drinking frequency between individuals who prayed once a week or less, but mean frequency for those who prayed more than once a week was significantly different from those who prayed once a
week or less. Thus, a binary variable of frequent prayer is included in the analysis where praying a few times a week or more is coded 1 and all others are coded 0. The religious salience of a student is indicated by their response to the following question: “How important or unimportant is religious faith in shaping how you live your daily life?” Response categories ranged from extremely important (5) to not at all important (1).

For Bible reading, two dummy variables are included. Respondents were asked “how often, if ever, do you read from the Bible to yourself alone,” with responses including never, less than once a month, one to two times a month, about once a week, a few times a week, about once a day, many times a day. Similar to the measure for praying, preliminary analyses using t-tests to compare means revealed significant differences in mean frequency of drinking at two specific cut points in the original Bible reading variable, resulting in three distinct groups. Those who read the Bible less than once a month were significantly different from those who read occasionally (1 to 2 times a month to about once a week), while those who read occasionally were significantly different from those who read on a regular basis (a few times a week or more). In order to more fully capture the effect of Bible reading on consumption and aid in interpretation of the coefficients, I include two Bible reading dummy variables in the analysis. For the Occasional Bible Reading variable, respondents who do read at least once or twice a month but do not read more than once a week are coded 1 and all others are zero. For the Regular Bible Reading variable, respondents who read multiple times a week or more are

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32 Respondents were asked whether they read from a specific type of sacred scripture based upon their stated religious affiliation. Since all of the respondents in the analytical sample used for this study indicated they were Protestant or Christian, all respondents were asked how often they read the Bible with no other sacred scripture referenced.
coded 1 and all others are coded zero. With both of these variables in the analysis, the reference group is individuals who never or rarely read the Bible.

In addition to involvement in markedly religious endeavors, measures of involvement in other activities in their community are included in the analyses. Respondents were asked how many organized activities such as groups, clubs, sports, or extracurricular activities they were involved in and whether or not those activities were organized by a religious organization (not including regular worship services or youth group meetings). Answers ranged from 0-10 (10 or more) for both kinds of activities – those organized by a religious organization and those not organized by a religious organization. A variable indicating if an individual spent any time volunteering is also part of the analyses. Respondents were asked whether, in the last year, they had done any organized volunteer work or community service (1 = Yes).

4.8.4 Control variables

Previous research has found that certain background and demographic factors influence alcohol consumption (Borsari, Murphy, & Barnett, 2007; Johnson, et al., 2009). To keep from confounding the effect of religious affiliation and drinking behavior I control for these factors. Included in every model are dichotomous variables (coded 1) for female and racial minority. Non-dichotomous variables for age and parent’s education, both measured in years, and prior drinking frequency, measured from 0 (never) to 6 (almost every day), are in every model. A college variable is also included, which indicates whether an individual is currently attending a four-year institution (college or university; 1 = yes).
4.8.5 Analytic Strategy

The chief goal in this study is to identify variation within conservative Protestantism in drinking behavior and the factors that affect that behavior. In order to achieve this goal and look at between group differences for Evangelicals, Fundamentalists, and Pentecostals I look at two measures of alcohol consumption – a dichotomous measure for abstaining versus ever drinking and a measure of drinking frequency. Before using regression models to understand the relationship between my dependent variables (DVs) and independent variables (IVs) for each group, I look at the mean differences, between each conservative Protestant subgroup, in abstaining and frequency of consumption. After establishing mean differences between groups, I regress each of the DVs on all of the IVs separately for each subgroup, entering religious participation variables followed by the social involvement variables, in successive models. By regressing the variables separately for each subgroup I am able to look for variation in how religious and social factors impact the drinking behavior of conservative Protestants.

The binary nature of my dichotomous DV requires the use of Binary Logistic regression to predict the odds of abstaining from alcohol versus drinking, while Ordinary Least Squares Regression is used in models predicting the frequency DV. Logistic regression is effective for predicting a dichotomous DV using either categorical or continuous IVs or both. The Logistic regression model estimates the odds of an event happening by calculating the changes in the log odds of the DV. For Logistic regression, the odds ratio of the IV is the natural log base, $e$, to the exponent, $b$, where $b$ equals the parameter estimate (or regression coefficient). The odds ratios (or $Exp(b)$) are reported in
the results section. The odds ratio of an IV represents the factor by which the odds of an event happening (or ‘odds(event)’) changes given a one-unit change in the IV. An $Exp(b)>1$ means the IV increases the odds(event), while $Exp(b)<1$ means the IV decreases the odds(event). If $Exp(b)=1$, the IV has no effect on odds(event).

Although the frequency DV is ordinal in structure, I treat this dependent variable as if it were continuous, using Ordinary Least Squares (OLS) regression to estimate the effects of the IVs on frequency of consumption. The frequency variable has an extended range (7 categories), thus using OLS to estimate the models is fitting and makes interpretation of the findings more intuitive for the reader. The regression coefficients ($b$) are reported in the results section. These coefficients indicate that a one-unit change in the IV equals a $b$ change in the DV.

4.9 Results

Table 4.1 contains descriptive statistics for all variables used in these analyses, including the mean, standard deviation, and range of each variable. For dichotomous variables, the mean is also the percentage of the sample (N=577) with that particular characteristic. In this sample, all of the respondents are conservative Protestants of some sort, with a majority considered Evangelical (58%), one quarter considered Fundamentalist (26%), and a small minority considered Pentecostal (16%). A majority of the sample is female (57%) and one fifth is non-white/minority (20%). The mean age of the sample is 20 years old, thus the average respondent has yet to reach legal drinking age. The average respondent comes from a home where at least one parent attended
some college and/or received an AA degree (\(m=14.4\), see table 4.1), while 39% of the sample currently attends a 4 year college or university. For the most part, these conservative Protestants refrained from drinking as adolescents with the average for prior drinking falling somewhere between never and a few times a year (\(m=.63\)). Fully two thirds of the respondents reported never drinking during adolescence\(^{33}\).

More than two thirds of the sample reports some instance of drinking in the last year (70%), with about one third completely abstaining from alcohol consumption. The average frequency of consumption for the entire sample is about once a month. However, if those who abstain from drinking are removed, the average level of consumption for those who ever drink is a few times a month\(^{34}\).

As for their religious involvement, the average respondent attends religious services multiple times a month and reports that their faith is very important in shaping how they live their daily life. Less than one third of the sample (29%) is part of a religious group, while two thirds (68%) report praying at least a couple times a week. A majority of residents read the Bible at least occasionally, with 33% reading at least a couple times a month and 26% reading more than once a week.

\(^{33}\) The mode (67%) for prior drinking is 0 = never. This number is not reported in Table 4.1

\(^{34}\) Average frequency of consumption for drinkers is 2.99. This number is not reported in Table 4.1
### TABLE 4.1

**DESCRIPTIVE STATISTICS**

**FOR ALL ANALYSIS VARIABLES**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std Dev</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinks Alcohol</td>
<td>.70</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Drinking Frequency</td>
<td>2.09</td>
<td>1.82</td>
<td>0-6</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evangelical Protestant</td>
<td>.58</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Fundamentalist Protestant</td>
<td>.26</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Pentecostal Protestant</td>
<td>.16</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Religious Service Attendance</td>
<td>3.49</td>
<td>1.81</td>
<td>1-6</td>
</tr>
<tr>
<td>Part of Religious Group</td>
<td>.29</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Frequent Prayer</td>
<td>.68</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Importance of Faith/Salience</td>
<td>4.02</td>
<td>.907</td>
<td>1-5</td>
</tr>
<tr>
<td>Reads Bible Occasionally</td>
<td>.33</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Reads Bible Regularly</td>
<td>.26</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Religious Activities</td>
<td>.50</td>
<td>1.05</td>
<td>0-10</td>
</tr>
<tr>
<td>Non-religious Activities</td>
<td>1.00</td>
<td>1.54</td>
<td>0-10</td>
</tr>
<tr>
<td>Volunteering</td>
<td>.49</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racial Minority</td>
<td>.20</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Female</td>
<td>.57</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>Age</td>
<td>20.1</td>
<td></td>
<td>18-24</td>
</tr>
<tr>
<td>Prior Drinking*</td>
<td>.627</td>
<td>1.13</td>
<td>0-5</td>
</tr>
<tr>
<td>Parent’s educational attainment*</td>
<td>14.4</td>
<td></td>
<td>6-20</td>
</tr>
<tr>
<td>Four-year college/university student</td>
<td>.39</td>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td>N</td>
<td>577</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*SOURCE: National Survey of Youth and Religion, Wave 1* and Wave 3
A portion of the sample spends time interacting with individuals in non church-service settings, yet a majority of respondents do not participate in such activities. The average number of activities organized by a religiously based organization that a respondent participates in is less than one, with 72% of respondents reporting zero involvement. The average for activities not organized by a religious organization is one, with 56% of respondents reporting zero involvement. About half of the sample (49%) reports volunteering in the community at some point during the last year.

Hypothesis one suggested that Evangelicals would drink more often and abstain from ever drinking less often than other conservative Protestants. Table 4.2 shows the percentage of those who do not abstain from alcohol and the mean drinking frequency for each of the three conservative Protestant subgroups. These results confirm hypothesis one. As a group, Evangelicals are less likely to abstain from drinking than either Fundamentalists or Pentecostals. However, only the mean (i.e. percentage) difference between Evangelicals and Pentecostals (10%) is statistically significant (p=.054). Evangelicals also tend to drink more often than either Fundamentalists or Pentecostals, and the mean differences in frequency (.37 and .70 respectively) are statistically significant for both comparisons. Even though Fundamentalists are only slightly (and not significantly) more likely than Evangelicals to abstain from drinking, when they do drink they drink significantly less often than Evangelicals. Fundamentalists and Pentecostals do not significantly differ from one another, though Fundamentalists tend to abstain less often and drink more frequently than Pentecostals.

35 Percentages for zero involvement are not shown in table 4.1
Table 4.2 contains the logistic regression odds ratios for two, nested models predicting ever drinking (abstaining from drinking equals 0, drinking equals 1). Each of the models is run separately for Evangelicals (a), Fundamentalists (b), and Pentecostals (c) to enable comparison of effects between the three groups. In the first model, ever drinking is regressed on demographic and religious participation variables – both organizational and non-organizational. Then in model two, social participation variables are added to form the full regression model. For all of the groups, gender, minority status, and college attendance have no bearing on whether or not they abstain from drinking alcohol. For Evangelicals, age and prior drinking do significantly increase their odds of consuming (see models 1a and 2a). For each additional increase in drinking as an
adolescent an Evangelical’s odds of consuming as an emerging adult are increased by a factor of more than 2.

As theorized in my second hypothesis, the religious participation factors that affect drinking are not the same for Evangelicals as for the other two groups. Evangelicals who report frequently praying decrease their odds of ever drinking by 60% (model 1a and 2a). Additionally, the more important faith is to an Evangelical the greater the odds they will abstain from consuming. While not significant in model 1a, when social involvement factors are added to the model religious service attendance exerts a negative effect on the odds of an Evangelical ever drinking. Being part of a religious group, however, does not impact the odds of drinking. For Fundamentalists and Pentecostals, the odds of ever drinking are not significantly affected by religious participation, with one exception. For both groups, those who read the Bible on a regular basis reduce their odds of consuming alcohol (or increase their odds of abstaining). Fundamentalist Bible readers reduce their odds by nearly 70%, while Pentecostals who read regularly are more than 80% less likely to ever consume.

Although the effects of religious participation are similar for Fundamentalists and Pentecostals, this uniformity does not remain for social involvement. Taking part in groups or activities organized by religious organizations lowers the odds of drinking for both Evangelicals and Pentecostals but does not significantly impact the drinking odds of a Fundamentalist. On the other hand, volunteering in the community greatly increases the odds that an Evangelical or Fundamentalist will drink while having no bearing on the consumption of Pentecostals. Activities not organized by a religious entity do not influence the odds of ever drinking for any group. In general, social involvement appears
TABLE 4.3

BINARY LOGISTIC REGRESSION

PREDICTING EVER DRINKING

BY CONSERVATIVE PROTESTANT SUBGROUP

<table>
<thead>
<tr>
<th></th>
<th>Evangelical (1a)</th>
<th>Evangelical (2a)</th>
<th>Fundamentalist (1b)</th>
<th>Fundamentalist (2b)</th>
<th>Pentecostal (1c)</th>
<th>Pentecostal (2c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racial Minority</td>
<td>.612</td>
<td>.649</td>
<td>.955</td>
<td>.692</td>
<td>.378</td>
<td>.331</td>
</tr>
<tr>
<td>Female</td>
<td>.914</td>
<td>.915</td>
<td>.965</td>
<td>1.216</td>
<td>.441</td>
<td>.451</td>
</tr>
<tr>
<td>Age</td>
<td>1.291*</td>
<td>1.380**</td>
<td>1.123</td>
<td>1.085</td>
<td>.878</td>
<td>.917</td>
</tr>
<tr>
<td>Prior Drinking</td>
<td>2.200***</td>
<td>2.132***</td>
<td>1.049</td>
<td>1.098</td>
<td>1.885</td>
<td>2.126</td>
</tr>
<tr>
<td>Parent’s educ.</td>
<td>1.139*</td>
<td>1.116</td>
<td>.986</td>
<td>.940</td>
<td>1.176</td>
<td>1.178</td>
</tr>
<tr>
<td>College student</td>
<td>1.407</td>
<td>1.381</td>
<td>.854</td>
<td>.616</td>
<td>.389</td>
<td>.332</td>
</tr>
<tr>
<td>Service Attendance</td>
<td>.861</td>
<td>.823+</td>
<td>.847</td>
<td>.817</td>
<td>1.043</td>
<td>1.167</td>
</tr>
<tr>
<td>Religious Group</td>
<td>.736</td>
<td>.909</td>
<td>.683</td>
<td>.748</td>
<td>.643</td>
<td>.944</td>
</tr>
<tr>
<td>Frequent Prayer</td>
<td>.391*</td>
<td>.393*</td>
<td>.673</td>
<td>.774</td>
<td>.693</td>
<td>.368</td>
</tr>
<tr>
<td>Salience</td>
<td>.538**</td>
<td>.549*</td>
<td>.753</td>
<td>.675</td>
<td>.549</td>
<td>.710</td>
</tr>
<tr>
<td>Reads Bible Occasion.</td>
<td>1.124</td>
<td>1.091</td>
<td>.687</td>
<td>.611</td>
<td>.400</td>
<td>.609</td>
</tr>
<tr>
<td>Reads Bible Regularly</td>
<td>.521</td>
<td>.607</td>
<td>.317+</td>
<td>.322+</td>
<td>.180+</td>
<td>.167+</td>
</tr>
<tr>
<td>Religious Activ.</td>
<td>.621*</td>
<td></td>
<td>.775</td>
<td></td>
<td></td>
<td>.600+</td>
</tr>
<tr>
<td>Non-religious Activ.</td>
<td>1.057</td>
<td></td>
<td>1.257</td>
<td></td>
<td></td>
<td>1.365</td>
</tr>
<tr>
<td>Volunteering</td>
<td>2.334*</td>
<td></td>
<td>3.356*</td>
<td></td>
<td></td>
<td>.885</td>
</tr>
<tr>
<td>Nagelkerke Pseudo R²</td>
<td>.366</td>
<td>.405</td>
<td>.266</td>
<td>.335</td>
<td>.440</td>
<td>.502</td>
</tr>
<tr>
<td>N</td>
<td>337</td>
<td>337</td>
<td>149</td>
<td>149</td>
<td>91</td>
<td>91</td>
</tr>
</tbody>
</table>

SOURCE: National Survey of Youth and Religion, Wave 1 and Wave 3

+p≤.10 *p≤.05 **p≤.01 ***p≤.001 (two-tailed test)
to impact a conservative Protestant’s decision to (or not to) abstain from drinking in diverse ways depending on subgroup affiliation.

The final table (4.4) contains the OLS regression coefficients for predicting drinking frequency. As in table 4.3, each of two models (3 and 4) is run separately for Evangelicals (a), Fundamentalists (b), and Pentecostals (c). In models 3 and 4, drinking frequency is regressed across the same set of independent variables as were used in models 1 and 2, respectively. Similar to the regression results for ever drinking, most demographic characteristics do not affect how often Fundamentalist and Pentecostal emerging adults drink alcohol (see table 4.4). The only exception for Fundamentalist is prior drinking; higher levels of consumption in adolescence results in increased consumption later on for both Fundamentalists and Evangelicals. Unlike their conservative Protestant counterparts, minority status, age, and parent’s education are also significant predictors of drinking frequency for Evangelicals. Being a college student does not significantly affect drinking frequency for any of the groups, suggesting that a “college effect” on drinking as seen in other studies is not a reality for conservative Protestants (Johnston, et al., 2009; Perkins, 1985; Rabow & Duncan-Schill, 1995).

Evidently, differences in drinking behavior between Evangelicals and other conservative Protestants is not a consequence of educational pursuits providing more opportunities to consume.

As the results, in table 4.4, show, hypothesis two was partially unsupported by the drinking frequency regression results. While variation does exist between conservative Protestant subgroups concerning factors that affect drinking behavior, parity between
TABLE 4.4
ORDINARY LEAST SQUARES REGRESSION
PREDICTING DRINKING FREQUENCY
BY CONSERVATIVE PROTESTANT SUBGROUP

<table>
<thead>
<tr>
<th></th>
<th>Evangelical (3a)</th>
<th>Fundamentalist (3b)</th>
<th>Pentecostal (3c)</th>
<th>Evangelical (4a)</th>
<th>Fundamentalist (4b)</th>
<th>Pentecostal (4c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racial Minority</td>
<td>-.492*</td>
<td>-.448*</td>
<td>-.558</td>
<td>-.185</td>
<td>-.221</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-.289</td>
<td>-.289</td>
<td>-.308</td>
<td>-.222</td>
<td>-.490</td>
<td>-.411</td>
</tr>
<tr>
<td>Age</td>
<td>.183**</td>
<td>.210***</td>
<td>.162</td>
<td>.141</td>
<td>.020</td>
<td>.049</td>
</tr>
<tr>
<td>Prior Drinking</td>
<td>.318***</td>
<td>.300***</td>
<td>.238*</td>
<td>.243*</td>
<td>.241</td>
<td>.235</td>
</tr>
<tr>
<td>Parent’s educ.</td>
<td>.136**</td>
<td>.120**</td>
<td>-.031</td>
<td>-.054</td>
<td>.072</td>
<td>.041</td>
</tr>
<tr>
<td>College student</td>
<td>.255</td>
<td>.240</td>
<td>.325</td>
<td>.158</td>
<td>-.158</td>
<td>-.366</td>
</tr>
<tr>
<td>Service Attendance</td>
<td>-.148*</td>
<td>-.166**</td>
<td>-.148</td>
<td>-.154+</td>
<td>-.036</td>
<td>.038</td>
</tr>
<tr>
<td>Religious Group</td>
<td>-.458*</td>
<td>-.313</td>
<td>-.258</td>
<td>-.245</td>
<td>-.655</td>
<td>-.565</td>
</tr>
<tr>
<td>Frequent Prayer</td>
<td>-.517*</td>
<td>-.525*</td>
<td>-.380</td>
<td>-.239</td>
<td>-.089</td>
<td>-.219</td>
</tr>
<tr>
<td>Salience</td>
<td>-.230+</td>
<td>-.192</td>
<td>-.309+</td>
<td>-.347+</td>
<td>-.420+</td>
<td>-.280</td>
</tr>
<tr>
<td>Reads Bible Occasion.</td>
<td>.065</td>
<td>.066</td>
<td>-.304</td>
<td>-.351</td>
<td>-.262</td>
<td>-.179</td>
</tr>
<tr>
<td>Reads Bible Regularly</td>
<td>-.547+</td>
<td>-.390</td>
<td>-.861*</td>
<td>-.841*</td>
<td>-.638</td>
<td>-.863</td>
</tr>
<tr>
<td>Religious Activ.</td>
<td>-</td>
<td>-.326**</td>
<td>-.079</td>
<td>-.255*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-religious Activ.</td>
<td>.021</td>
<td>.080</td>
<td>-.364</td>
<td>.291</td>
<td>.351</td>
<td></td>
</tr>
<tr>
<td>Volunteering</td>
<td>.456*</td>
<td></td>
<td>.593*</td>
<td>.198</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-2.785</td>
<td>-3.144</td>
<td>-.426</td>
<td>-.106</td>
<td>.511</td>
<td>.397</td>
</tr>
<tr>
<td>R²</td>
<td>.320</td>
<td>.347</td>
<td>.333</td>
<td>.364</td>
<td>.291</td>
<td>.351</td>
</tr>
<tr>
<td>N</td>
<td>337</td>
<td>337</td>
<td>149</td>
<td>149</td>
<td>91</td>
<td>91</td>
</tr>
</tbody>
</table>

SOURCE: National Survey of Youth and Religion, Wave 1 and Wave 3
+p≤.10 *p≤.05 **p≤.01 ***p≤.001 (two-tailed test)
Fundamentalists and Pentecostals is not apparent in frequency of consumption. As far as religious factors, salience of one’s faith is the only common significant predictor of drinking frequency for Fundamentalist and Pentecostals (see models 3b and 3c). However, this commonality disappears when social involvement factors are added to the model and salience ceases to be a significant predictor for Pentecostals. In fact, no religiosity factors significantly impact the drinking frequency of Pentecostals.

Unlike Pentecostals, some religious involvement factors do significantly influence how often Evangelicals and Fundamentalists consume alcohol. For Evangelicals, religious service attendance, being part of a religious group, frequently praying, regularly reading the Bible, and religious salience are all negatively related to drinking frequency in model 3a. The addition of social involvement factors in model 4a does little to change the effect of attendance and prayer, but the predictive strength of both salience and religious group participation are reduced by the addition of these variables and, thus, drop out of significance for the Evangelical group. For Fundamentalist, attendance, religious salience, and regular Bible reading are all negatively associated with drinking frequency (model 4b). For both of the these groups, any religious measure that exerts a significant effect on frequency of drinking exerts a negative effect, so as religious involvement or commitment, despite the form, goes up the amount of drinking goes down.

However, the same cannot be said for social involvement factors. Two out of the three social involvement measures included in model 4 serve to increase drinking frequency. Spending time volunteering means increased alcohol consumption for both Evangelicals and Fundamentalists, and for both groups volunteering is the second largest coefficient of the model. Similarly, participating in activities not organized by a religious
organization results in increased consumption for Pentecostals, which is the largest significant coefficient for this group. Only involvement in activities that are organized by a religious entity serve to reduce levels of consumption. For both Evangelicals and Pentecostals, increased involvement in these activities significantly reduces drinking frequency. The results from model 4 reveal that while social involvement does impact drinking behavior of conservative Protestants, the effects are not consistent across subgroups.

4.10 Discussion

Before discussing the results of this study, I must point out one weakness of the drinking measures used. Many studies look at drinking during the past two weeks to 30 days (Johnston, et al., 2003; Johnston, et al, 2009; Perkins, 1985). Because the drinking measures used in this study look at consumption in the course of a year the level of consumption is possibly inflated for this sample of conservative Protestants as compared to other studies.

The primary purpose of this study was to see whether or not conservative Protestants vary in their drinking behavior and whether the factors that impact drinking behavior are consistent across subgroups. Previous researchers have primarily found that while Conservative Protestants tend to drink less than people from other faith traditions (or with no affiliation) this difference is easily explained by a tendency to be more religious. Thus, the lower levels of drinking are not an effect of affiliation necessarily but of religious involvement (Ellison, et al., 2008). However, other research shows that
treated Conservative Protestants as a homogenous group fails to capture distinct
differences in subgroup cultures that likely affect attitudes and behaviors (Beyerlein,
2004). Specifically looking for variation in drinking behavior within conservative
Protestantism is, therefore, a reasonable endeavor. Analyses were conducted that looked
at both the odds of ever drinking and the frequency of alcohol consumption for
Evangelicals, Fundamentalists, and Pentecostals. The results indicate that variation in the
use of alcohol does exist between these groups and that the factors influencing the use of
alcohol also vary to some degree.

Fundamentalists and Pentecostals tend to isolate themselves and encourage the
avoidance of secular culture, while Evangelicals stress engaging with secular culture as a
means of reaching out and ministering (Marsden, 1991; Poloma, 1989; Smith, et al.,
1998). In order to remain separate from the world, Fundamentalists and Pentecostals
tend toward legalistic stances with specific prescriptions against drinking and smoking
(Poloma, 1989). In light of these differences concerning engagement with non-Christian
society, I hypothesized that Evangelicals would abstain from drinking less often and
drink more frequently than either Fundamentalists or Pentecostals.

Results confirm this hypothesis (see table 4.2), indicating that Evangelicals are
least likely to abstain and, on average, consume more often than their conservative
Protestant counterparts. While only the ten percent difference between Evangelicals and
Pentecostals in abstaining from drinking is statistically significant, Pentecostals are the
least likely to ever drink and Fundamentalists fall right in the middle. However, when
looking at frequency, Evangelicals’ mean level of consumption is significantly higher
than both Fundamentalists and Pentecostals. Pentecostals, again, consume the least often.
For Evangelicals, spending time with people who participate in “worldly” activities or espouse secular viewpoints is not discouraged or condemned. Consequently, their tendency to drink more often than other conservative Protestants is likely a result of spending more time with non-Christians in non-church or secular settings and, thus, having more opportunities to consume. Further, while drinking in moderation is widely expected in Evangelical circles, complete abstinence (or teetotalism) is not necessarily the standard as it is with other conservative Protestant affiliations, particularly Pentecostals.

After looking specifically at variation in drinking patterns, I then looked at the factors that influence drinking behavior. To understand whether conservative Protestant drinking is differentially affected by religious participation and social involvement, separate regressions were run for each group. I hypothesized that, given their similarly strict approach to cultural engagement, the factors influencing Fundamentalists and Pentecostals would be uniform but that Evangelicals would be distinct. Results lend only minimal support for this hypothesis.

For Fundamentalists and Pentecostals, the only religious participation factor that affects the odds of ever drinking is reading the Bible on a regular basis. For the most part, religious participation has little bearing on whether or not these two groups choose to drink. Evangelicals’ odds of ever drinking, on the other hand, are impacted by church attendance, regularly praying, and how important faith is in their daily lives. The religious participation factors that affect an Evangelical’s tendency to abstain from drinking are remarkably distinct from the other conservative Protestants.
When looking at frequency of consumption, Pentecostals are again not significantly impacted by religious participation, but Fundamentalists do not continue this pattern. Unlike Pentecostals, attending church and higher religious salience, in addition to regular Bible reading, reduces drinking frequency for Fundamentalists. Similarly, attendance and frequent prayer reduces drinking frequency for Evangelicals. In contrast to the results for the odds of ever drinking, religious participation matters for both Evangelicals and Fundamentalists and at least partially explains variation within these groups with regards to frequency of consumption.

The regression results for religious participation reveal that, in addition to variation in drinking patterns within conservative Protestant subgroups, the religious factors that influence those patterns also vary. For Pentecostals, while being affiliated with a Pentecostal denomination is a protective factor and means less frequent drinking, religious involvement or strength of commitment provide no further distinction within this group. Whether or not Pentecostals are faithful members of the flock is not relevant when considering their drinking behavior. However, although Evangelicals and Fundamentalists differ as to which aspect of religious involvement matters, being religiously active is a protective factor for members of both of these subgroups. For both of these groups, any religious measure that has a significant effect on frequency of drinking has a negative effect, so as religious participation, despite the form, goes up the amount of drinking goes down. If a conservative Protestant comes from an Evangelical or Fundamentalist denomination, actively engaging in her faith makes a difference.

In addition to religious involvement, I also looked at social involvement measures to understand whether and how they influence conservative Protestant drinking. Results
for both ever drinking and drinking frequency were fairly consistent within groups, though slight differences between groups are present. For Evangelicals, participating in activities organized by a religious organization reduced the odds of ever drinking and drinking frequency, while volunteering actually increased both. For Fundamentalists, only volunteering affects drinking habits and it serves to increase both odds of ever drinking and drinking frequency. For Pentecostals, involvement in activities that are organized by a religious entity reduces both odds of ever drinking and drinking frequency. Additionally, participating in activities not organized by a religious organization increases drinking frequency by slightly more than religiously organized activities reduce it. Volunteering has no significant effect for Pentecostals.

Although social involvement does not influence the drinking behavior of these three groups identically, a common theme of influence does exist. In general, participating in social activities planned by religious organizations suppresses drinking. Individuals who participate in such activities are likely more religious and conservative, even though the activities do not necessarily include explicitly religious practices (i.e. reading scripture, praying, etc). Thus, these activities provide social connections with like-minded others who are not likely to challenge the beliefs or cultural norms of conservative Protestants, nor are these activities a source or setting for opportunities to drink.

Participating in non-religiously organized social activities and volunteering, on the other hand, elevates drinking. The effect of volunteering is particularly robust. These types of social involvements are more likely to put individuals in contact with non-Christian, or at least less conservative, others and open them up to social connections that
run counter to the traditions of their denominations. Their cultural tradition of engaged theology helps explain why Evangelicals would participate in volunteering despite it putting them at risk for greater involvement with secular others or worldly behaviors. The fact that volunteering, however, affects Fundamentalists most potently bolsters their argument that separation from the world is the best policy since participation in secular society, even in the form of service to others, results in increased risk for unwholesome and undesirable behavior.

4.11 Conclusion

This chapter looks for variation in conservative Protestant drinking behavior and the factors that influence that behavior. Using a sample of conservative Protestant respondents from wave 3 of the NSYR, the drinking behavior of Evangelicals, Fundamentalists, and Pentecostals was assessed. No previous research disaggregates conservative Protestantism when looking at alcohol consumption, thus these analyses are novel and valuable. Overall, these analyses confirm that not all conservative Protestants are alike in whether or how often they drink alcohol. Evangelicals are the most likely to drink, while Pentecostals are the least likely. Differences in the factors that influence that behavior are also present. Religious participation does not significantly influence the drinking habits of Pentecostals. Both organizational and non-organizational religious participation do, however, reduce some of the difference between Evangelicals and Pentecostals for ever drinking and drinking frequency and between Fundamentalists and Pentecostals for drinking frequency. Social involvement influences drinking for all three
groups, with differences between groups as to which form of involvement has an effect.

This study furthers the idea of Beyerlein (2004) and others that disaggregating conservative Protestants into smaller subgroups reveals heterogeneity that would otherwise be missed.
CHAPTER 5:
CONCLUSION

5.1 General Themes of the Dissertation

The results of the three studies in this dissertation confirm that religion does impact the lives of emerging adults. Specifically, when examining patterns of alcohol use, within the emerging adult population, religious involvement is an important factor to consider in conjunction with social and familial context. Even though chapters 2 through 4 look at different segments of the emerging adult population and use varying measures of consumption, several noteworthy themes are developed.

Much of the current research that looks at the impact of religious belief and practice uses a narrow set of religious measures. Affiliation and religious service attendance top the list, with frequency of prayer and salience frequently thrown in when available. While these typical measures are not necessarily problematic in and of themselves, results from this dissertation indicate that additional and alternative measures should also be considered. In chapter 2, the effect of scripture reading on student alcohol consumption was especially noteworthy. Students who read scripture on a regular basis were both less likely to drink alcohol and to drink in excess, yet this measure of non-organizational religious involvement has rarely been used to assess religion’s impact on
behavior. This type of measure is also important because of the support it lends to the unique effect of religion and the concept of spiritual capital.

Results from chapter 3 provide another example of the fruitfulness of looking at alternative measures of religion. In addition to personal measures of current religious practice, namely praying and attending services, family religious context was investigated in this chapter. Although the effect of family religious context on the odds of binge drinking is primarily indirect, the religious conservatism of parents maintains a direct effect. These findings demonstrate the importance of understanding the religious context in which an individual grows and develops when looking at how religion impacts her behavior.

Besides using additional or alternative measures of religion, the use of more precise measures of commonly included measures also needs to be considered. The disaggregation of conservative Protestants in chapter 4 allowed for a fuller, more complete understanding of the effect of affiliation on alcohol consumption. Conservative Protestants, mainline Protestants, and Catholics alike are typically treated as homogeneous groups, but these particular affiliations cover broad and diverse swaths of the population. The results from chapter 4 strengthen the argument that to fully understand the affect of religious affiliation on behavior affiliations that encompass large portions of the population need to be disaggregated.

Another consistent theme in this dissertation is the importance of controlling for prior drinking behavior (i.e. during adolescence). As evidenced by these results, particularly in chapters 2 and 3, prior alcohol consumption is a strong predictor of use and abuse during the emerging adult years. Not controlling for such behavior would
likely exaggerate or inflate the effect of significant factors, including religion. Many studies that look at religion’s influence on antisocial behavior are unable to control for prior antisocial behavior because of the cross-sectional nature of their data. This shortfall is a definite weakness that needs to be taken into account when interpreting results from cross-sectional data. If religion is assumed to affect behavior at time 2, then it is more than likely to affect that behavior at time 1 as well; thus, not controlling for time 1 behavior distorts results due to selection effects.

Along with selection effects, some scholars believe that the apparent influence of religion on various outcomes, such as drinking, is simply an effect of social desirability bias within the data (Regnerus & Smith, 2005). According to these scholars, rather than religion or religious participation actually affecting behavior, the implication with social desirability bias is that respondents who report high religiosity or being religiously active are more likely to underreport antisocial behavior because they feel that the behavior is at odds with their stated beliefs or go against the teachings of their religious community. For example, someone who says that she attends services regularly and that religion is very important to her is more likely to understate or deny that she binge drinks because she knows that such behavior is incongruent with her religious identity.

Given the subject matter of this dissertation, considering the possibility of social desirability biasing the results is important. To address concerns about social desirability, some researchers have explicitly tested or controlled for this type of bias in their data (Ellison, et al., 2008; Regnerus & Smith, 2005). These researchers have found that even after controlling for social desirability, religion and religious participation continued to influence delinquent behaviors, including alcohol consumption. Regnerus and Smith,
2005 found that while a measure of social desirability was not related to measures of religiosity (including attendance and religious salience) it was related to the outcome variables. This finding suggests that while some respondents will tend toward giving socially desirable answers about their behavior this tendency is not dependent on or affected by the level of reported religiosity. While I do not explicitly control for social desirability in these analyses, I am confident that, given the findings of other researchers who also looked at antisocial behavior and religion, the effects of religion found in this work cannot be explained away as the result of social desirability bias and the subsequent conclusions are, therefore, entirely justifiable.

In addition to the strength of using longitudinal data for this dissertation, this dissertation suffers from an important limitation in the data with regards to examining alcohol consumption. While the data is rich with information about the religious and spiritual lives of emerging adults, it lacks more detailed data about drinking or drinking habits. Ideally the data would contain a 30-day frequency of drinking measure, which is more in step with the measure typically used in other studies. Information about attitudes toward drinking, for both parents and respondents, and about problems that arise from substance use would also have been beneficial for this work. Despite this limitation in data, I believe the findings of this dissertation cast a fresh light on the connection between religious practice and alcohol behavior.
5.2 Possibilities for Future Research

Religion is a long standing institution that continues to unite, divide, enlighten, perplex, infuriate, and influence people around the globe. Researching and understanding the mechanisms that connect religious belief and practice to the everyday, lived-out lives of individuals embedded in various contexts is a valuable endeavor within the field of sociology. My hope with this dissertation was to further that knowledge and, by doing so, point toward additional fruitful opportunities for investigation and open up new avenues of thought.

I believe one such avenue lies with the concept of spiritual capital. Currently, the concept of spiritual capital is in its infancy. Few scholars have attempted to incorporate this type of capital into theory as they speculate why and how religion matters. Admittedly, the substance of spiritual capital is amorphous and difficult to conceptualize. Yet, being difficult to conceptualize should not equate with invalidity as a concept worthy of investigation. Is social capital just another way of describing personal conscience, or is it bigger than and outside of self, a “still small voice” that gives shape and form to one’s conscience?

In his book about the religious and spiritual lives of emerging adults, Christian Smith (2009) asserts that most emerging adults see themselves as intuitively knowing the difference between right and wrong and being morally judicious. However, those who were more religiously devoted or engaged were less likely than the religiously disengaged to believe right and wrong to be relative or believe it was okay to break moral rules if it were to one’s advantage. Additionally, the religiously devoted were more likely to express concern for the less fortunate or volunteer their time. Is it possible that
religiously engaged individuals are able to engage their “moral compass” more fully because the spiritual capital they have gained through involvement in religion has shaped their conscience? Clearly, further understanding and explanation of how spiritual capital is formed, evidenced, and drawn out is a valid and potentially fruitful focus for future scholarship. Researchers in the sociology of religion should consider whether and how spiritual capital plays a role in non-deviant behaviors such as giving or generosity, social trust, consumption, or taking on debt.

With regards to deviant behavior, the hypotheses advanced in this dissertation looked exclusively at alcohol consumption. Given the high incidence of drinking among emerging adults this makes sense. However, the possibility exists that these hypotheses, particularly those looking at rarely tested religious effects or variation within affiliations, could be tested against other forms of substance use or deviant behaviors. Even though alcohol is the most pervasively used and abused substance, marijuana and illicit drugs also present serious health, safety, and legal issues. The use of these substances is less often condoned in society at large, suggesting that the gap between religious messages and secular messages about illegal drug use may be small. Thus, a significant effect of religious belief or practice would point to the unique influence of religion, influence that could not be accounted for by mere differences in message or teaching.

Another point to consider beyond this dissertation is whether the connections and conclusions made here are specific to Americans and American religion or if any of the findings are universally consistent. Is the effect of religious involvement on alcohol behavior or behavior in general a strictly American phenomenon? As a result of a longstanding and influential temperance movement in America, taboos about alcohol
consumption remain that are largely not found in other western nations. On the other side, Muslim nations hold to and enforce extremely strict principles concerning alcohol and the role of religion in establishing the principles themselves is undeniable. These differences in the cultural factors that influence drinking are likely to impact the way religious involvement in non-American contexts influences alcohol behavior specifically and substance use generally. Using multi-national data, therefore, to understand the connection between religious belief or involvement and behavior could provide new insight into the impact of religion on both individuals and the social settings in which they live their lives.

Central among the responsibilities of sociologists of religion is understanding the influence of religious belief and practice on everyday behavior. Until recently, achieving this understanding for certain age groups, such as adolescents and emerging adults, has been challenging given the lack of comprehensive, longitudinal data concerning religion. The National Study of Youth and Religion offers a valuable source of data, which helps to bridge the gap of understanding for both adolescents and emerging adults. Thanks to this and other data, my expectation is that theoretical insights into the mechanisms that link religion and behavior will continue to be uncovered, further highlighting the importance of religion as a social institution that cannot and should not be ignored as an agent of transformation.
A.1 Breakdown of Conservative Protestant Subgroups by Denomination

The following list gives the denominational breakdown of the three conservative Protestant subgroups - Evangelical, Fundamentalist, and Pentecostal - found in chapter four. Respondents indicated what type of church they attended, if they attended religious services at least once or twice a year. If they indicated that they attended a Baptist, Lutheran, Methodist, or Presbyterian church they were additionally asked what type specific of Baptist, Lutheran, Methodist, or Presbyterian church. All of the denominations are listed exactly as they appear in the National Study of Youth and Religion codebook. The number in parentheses next to each listing is the coding number used in the NSYR data.

Fundamentalist

Conservative Baptist Association of America (6, 8)
Free Lutheran (40, 3)
Free Will Baptist (6, 9)
Fundamentalist Baptist (No denominational ties) (6, 10)

General Baptist (6,12)
Independent Baptist (6, 13)
Lutheran Brethren (40, 4)
Southern Baptist Convention (6, 23)
Pentecostal

Assemblies of God (Assembly of God) (4)
Apostolic (66)
Charismatic (11)
Church of God (16)

Four Square (27)
Holiness (32)
Pentecostal (52)

Evangelical

Adventist/Seventh-day Adventist (1)
American Baptist Association (6, 1)
American Baptist Churches in the USA (American Baptist Church) (6, 2)
Baptist Missionary Association (6, 6)
Bible church/Bible believing (7)
Christian and Missionary Alliance (CMA) (13)
Church of Christ (Churches of Christ) (15)
Church of the Nazarene (18)
Evangelical (23)
Evangelical Covenant Church (24)
Evangelical Free Church (26)
Evangelical Presbyterian Church in America (EPC) (53, 4)
Free Methodist Church (28)
Interdenominational Protestant (34)
Just Baptist (6, 14)

Lutheran Church in America (LCA) (40, 5)
Mennonite (41)
Missouri Synod (40, 7)
Missionary Baptist (6, 15)
Missionary Church (43)
Nazarene (47)
Non-denominational Protestant (49)
Other Baptist (6, 26)
Other Lutheran (40, 9)
Other Methodist (42, 8)
Other Presbyterian (53, 10)
Presbyterian Church in America (PCA) (53, 7)
Presbyterian Church in the USA (PCUSA) (53, 8)
Reformed Presbyterian Churches of North America (RPC) (53, 9)
Wesleyan Church (62)


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