"Religion, College Grades and Satisfaction Among Students at Elite Colleges and Universities"

Margarita Mooney
University of North Carolina at Chapel Hill
Department of Sociology
263 Hamilton Hall
CB #3210
Chapel Hill, North Carolina 27599-3210
e-mail: margarita7@unc.edu
Tel: 1 919 962 4524
Fax: 1 919 962 7568

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Biography

Margarita A. Mooney is as an Assistant Professor of Sociology at the University of North Carolina at Chapel Hill and a Faculty Fellow at the Carolina Population Center. Mooney teaches an undergraduate course on economic sociology and both an undergraduate and a graduate course on sociology of religion. Her book entitled *Faith Makes Us Live: Surviving and Thriving in the Haitian Diaspora*, which grew out of her dissertation work at Princeton University (Ph.D. in 2005), will be published by the University of California Press in 2009. In addition to several other articles on Haitians immigrants and religion, Mooney has co-authored a book on minority achievement in higher education called *Taming the River: Negotiating the Academic, Financial, and Social Currents at Selective Colleges and Universities* (Princeton University Press, 2008) and two articles on Latinos in higher education.

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ABSTRACT

Using data from the National Longitudinal Survey of Freshmen, a sample of nearly 4,000 students at 28 of the most selective college and universities in the United States, this paper tests hypotheses about religion, academic performance, and satisfaction at college. Two measures of religiosity—attending religious services every week or more and a 1 to 10 scale of observance of one’s religious traditions and customs—increase the amount of hours students reported spending on academic work and extracurricular activities, as well as reduce the hours students report going to parties. Even when controlling for time spent partying, studying and in extracurricular activities, regular attendance at religious services increases academic achievement. Finally, students who attend religious services weekly and those who are more observant of their religious traditions also report being more satisfied at college.

INTRODUCTION

One of the primary ways though which secularization was theorized to occur was through the expansion of higher education (Wuthnow 1988). Although the mechanisms through which education led to secularization were not always well specified, something about higher levels of education seemed to make individuals lose their religious worldviews. In addition, higher education seemed to produce a plurality of belief systems that weakened society's sacred canopy of religiously-based worldviews. The wide-spread acceptance of the secularization thesis and its links to higher education may be one of the reasons why, in the last few decades, there was a dearth of empirical studies of the religious beliefs and practices of college students. However, along with a revival of interest in religion and youth more generally (Smith and Denton 2005; Wuthnow 2007), several recent studies have documented that young college students continue to be interested in religion, and in some cases, youths' general interest in spirituality may even increase during college (Kuh and Gonyea 2006; UCLA Higher Education Research Institute 2005). Recent findings about college students' interest in spirituality lead me to further ask whether and how religion impact on their college achievement and general satisfaction at college.

In order to make an argument about religion influencing college achievement, however, I begin by looking at how students' background factors influence later college achievement, and then I see whether, even when controlling for demographic differences and high-school achievement, religion still matters for college-level outcomes. Any theory of how religion might affect college achievement should also attempt to identify possible mediating pathways through which religion might influence educational

outcomes, such as behaviors like studying and partying, that then influence achievement. Finally, as we know that women are generally more religious than men and African-Americans are generally more religious than whites, I ask whether the effect of religion on college achievement and satisfaction vary by race, class and gender.

Secularization and Higher Education Revisited

First let us recall the argument linking secularization and higher education. Scholars such as Peter Berger (1967) viewed secularization as a natural, perhaps even inevitable, consequence of the advance of modern science being developed and taught at colleges and universities. Similarly, Robert Wuthnow (1988) argued that the rapid expansion of higher education in the 1960s, especially in the areas of science and technology, led to the liberalization of culture and attitudes, which then led to the declines in religious involvement observed during the same time period. Christian Smith (2003) further argued that universities—namely the professors and administrators who run them—were *agents* of secularization. Regardless of whether secularization occurred naturally or through the agency of one or more groups in society, prior to the 1960s, there was no gap in church attendance according to education level, but through the 1960s and 1970s church attendance fell amongst college graduates but not amongst those who had never attended college (Wuthnow 1988). Adding fire to academic arguments about higher education and secularization were influential popular books like William F. Buckley's *God and Man at Yale* (1951). Longing for the time when American institutions of elite higher education were the bastions of reason *and* faith, not reason *over* faith, Buckley and other traditional voices in American politics clamored against the secularizing,

liberalizing influence of higher education, especially at elite institutions such as Ivy League schools.

More recently, however, *The Chronicle of Higher Education* has reported that on many college campuses, including selective state universities, small liberal arts colleges and Ivy League universities, organized religion is indeed alive and well (Bartlett 2005; Jaschik 1994). Even the religious group most likely thought to be nearly absent from elite secular higher education—Evangelicals—appear to be present and even to thrive in elite college settings (Lindsay 2008). Despite increasing attention to religion on college campuses, it is difficult to discern whether college students' religiosity is actually a new phenomenon or if religious students have simply become more vocal of late. For example, Darren Sherkat (2007) points out that the apparent rise of religiosity on college campuses could be due to the fact that more African-Americans, Latinos, Asians and women are attending college than ever before and that members of these groups tend to be more religious than white males.

Several studies indicate that, compared to their parents' generation, youth may have a weaker institutional affiliation with religion, yet are still interested in practicing religion and learning about spirituality As Wuthnow wrote in 2007, whereas Baby Boomers' religious identity was often strongly linked to particular religious denominations, "the religion and spirituality of young adults is a cultural bricolage, constructed improvisationally from the increasingly diverse materials at hand" (xvii). Similarly, Smith and Denton (2005) argue that, compared to previous generations where doctrinal differences and observing particular pious practices mattered greatly to one's self identity as Catholic, Methodist, Baptist, etc., most youth exhibit little substantial

knowledge of the tenets of their religion. Rather, for the national sample of youth Smith and Denton surveyed and interviewed, their beliefs in God resemble a kind of moral, therapeutic Deism, a belief structure in which God provides something of a general sense of meaning for life and some kind of psychological relief to life's struggles.

A revised sociological approach to youth and religion also emphasizes how life transitions influence religious practice. Leaving home and going to college, for example, may decrease attendance at religious services, but young adults who attend college today may nonetheless keep seeking spiritual meanings. Wuthnow notes that when young adults get married and have children, their formal religious participation likely will increase again. Furthermore, he adds that that most young adults are not *either* spiritual *or* religious, but rather are spiritual *and* religious, framing even their formal religious practice as their personal choice rather than an traditional obligation or ascribed category. Emphasizing that they are both spiritual and religious seems to allow for young adults' "joining together of seemingly inconsistent, disparate components" (Wuthnow 2007:15) into a set of practices and beliefs more consistent Smith and Denton's depiction of a moral, therapeutic God than the God of any particular organized religion.

COLLEGE STUDENTS AND RELIGION

Growing sociological interest in youth and religion has reignited debates on higher education and secularization. Using a nationally representative study of youth Uecker and colleagues (Uecker, Regnerus, and Vaaler 2007) found support for the idea that late adolescence is something of low point of religious practice in the life course. However, contrary to the Wuthnow and Berger's argument that higher education sped the

the transition from traditionalism to secularization in the 1960s, Uecker and colleagues found that on all three of their measures of religiosity (personal salience, attendance and affiliation), youth who attended college in the early years of the 21st century saw their religious belief and practice decline *less* than those who did not go to college. In other words, something about the teenage years and young adulthood may indeed be secularizing, but it may not (or may no longer be) attending college *per se* that leads to this change. Similarly, Tim Clydesdale found that even if students decreased their religious practices when then entered college, students who had been religious in high school nonetheless managed aspects of the transition to college, such as time management, differently from those who had not been religious in high school (Clydesdale 2007). In other words, one's religious background can still matter in college independent of one's level of religious practice during college, perhaps because religious involvement earlier in life leads to habits or attitudes that continue to affect one's behaviors even when that practice declines. Thus, dropping affiliation or even weekend attendance at services should not be equated with a lack of interest in spirituality and religion among youth, nor should we assume that students who were once religious but whose practice declines are just like those students who were never religious.

Further evidence that college students are interested in religion comes from the UCLA Higher Education Research Institute National Study of College Students' Search for Meaning and Purpose.[1] In their survey of more than 100,000 students at 236 colleges and universities, they found that approximately 80% of students said they believe in God and a similar percentage said they attended religious services at least once during the

[1] See http://www.spirituality.ucla.edu/

previous year (UCLA Higher Education Research Institute 2005). Consistent with the idea that religious participation may decline but spiritual interest can remain steady or even increase during college, Byrant and colleagues (2003) found that college students initially became less religiously active, but a year later were more committed to integrating spirituality into their daily lives.

Thus, we can say that even if college students' interest in religion changes or even declines, religion and spirituality still matter for the daily lives of many college students. The next question becomes: what, if anything, are the consequences of college students' religiosity for academic achievement, social life and happiness at college? The UCLA study discusses numerous correlations between religious practice and the college experience. For example, students who engage in religious or spiritual practices report greater satisfaction with their social life on campus, a more positive evaluation of interaction with other students, a higher overall satisfaction rating of their college experience, and higher GPAs.

Yet another large survey—the National Survey of Student Engagement (NSSE)—surveyed nearly 150,000 first-year and senior students from 461 colleges and universities in the U.S. and asked detailed questions about how their religion and spirituality relates to their overall college experience. They found high levels of interest in spirituality among college students and reported that students who engage frequently in religious practices report higher levels of engagement in campus life, such as participating in extracurricular activities and doing volunteer work, and spend less time relaxing and socializing. In addition, religious students report higher levels of overall satisfaction with college and specifically with the non-academic environment on their campuses (Kuh and Gonyea

2006). Several studies with small samples and generally limited to one college campus suggest other reasons that religion may be associated with greater satisfaction at college, such as that religiosity is associated with leadership (Gehrke 2008), cognitive development (Love 2002) and self-esteem (Knox, Langehough, and Walters 1998).

Others have argued, however, that religious students could be less satisfied with their college experiences. In particular because college faculty are less likely than college students to claim adherence to a religion (Ecklund 2008; Tobin and Weinberg 2007), religious students would find hostility to their beliefs and therefore disengage from academic work or campus life. In her study of 1,646 faculty in natural and social sciences at 21 universities, Elaine Howard Ecklund (2008) found that, compared to the general public, university professors are indeed less likely to claim a religious affiliation and less likely to practice a particular religion.[2] In addition, some religious groups may clash with university administrators over funding for their activities or the types of social and political activities they bring to campus (McMurtrie 2000; Young 2002). Furthermore, some religious groups may request a lot of students' time, thereby decreasing academic performance and creating a subculture that could make students feel socially isolated from the mainstream campus. A few small studies of college students have found that students whose faith is challenged report higher levels of anger and stress (Schafer 1997; Schafer and King 1990; Winterowd, Harrist, Thomason, Worth, and Carlozzi 2005). Some religious groups may even feel or act like members of a minority group akin to

[2] Ecklund (2008) and Lindholm and Astin (2006) find that some faculty are nonetheless interested in spirituality and a few are actively involved in religion. However, even if not all university faculty are completely secularized, they are still more so than their students and the general public.

racial minorities (Hoffman 2002) or form a subculture where they feel more welcome (Magolda and Ebben 2007; Moran 2007; Moran, Lang, and Oliver 2007).

Given that young adulthood is a time of many transitions, it is not surprising that studies of religion and satisfaction or happiness find mixed results. Among high school students, a few studies find significant and positive correlations between religiosity and happiness among teens (Demir and Urberg 2004; Francis, Katz, Yablon, and Robbins 2004) while others do not (Francis, Ziebertz, and Lewis 2003; Lewis 2002; Lewis, Maltby, and Berkinshaw 2000). Clearly, the social context in which one's religious beliefs are enacted is one factor in whether or not those beliefs lead to greater satisfaction.

RELIGIOSITY AND EDUCATIONAL ATTAINMENT

Another line of inquiry has examined how religiosity influences academic achievement. Research done mostly at the high school level indicates that individual religiosity increases educational attainment (Dijkstra 1999; Loury 2004; Regnerus 2000; Regnerus and Elder 2003). To explain this positive association between religiosity and academic attainment, some scholars argue that the particular teachings of a religion can create a disciplined life or a general work ethic (Albrecht and Heaton 1984; Jeynes 2003; Regnerus and Elder 2003). According to Loury (2004), religious groups act as external buffers. Frequently in opposition to much of the surrounding culture, religious groups promote certain positive norms and can sway students towards more studious behaviors and provide positive role models and authority figures.

Whereas Loury focuses on the relationship between religion and social structures that influence youth behavior, Jeynes (2003) points to individual-level attributes. According to Jeynes, religious belief and practice produce an "internal locus of control" (2003:119) that give believers solace in times of trouble and stress, thereby enabling them to better cope with difficulty than non-believers. In other words, Jeynes sees religion as providing an internal buffer that helps them deal with stressful events or pressure that might otherwise negatively impact their academic achievement.

Another way through which religion may exert an influence on education is by improving parent-child interactions or through the association by creating a family-like atmosphere for students from single-parent homes (Jeynes 2003; Muller and Ellison 2001; Regnerus 2000). For example, Regnerus and Elder (2003) and Jeynes (2003) find that religion has a greater impact on the educational achievement of poor, urban youth than on middle or upper class youth. These authors attribute the difference to the role of churches in providing a secure environment in these otherwise impoverished neighborhoods. In the inner-city with many broken families, churches provide youth with authority figures, discipline, and caring relationships with adults, whereas parents or secular organizations may fulfill this role in wealthier areas.

Religion can also indirectly influence education through its influence on family life. For example, from their research on youth from two-parent African-American families, Brody, Stoneman et al. (1996) argue that religious participation positively influences education mainly because religious practice contributes to creating healthy family relationships and establishing social control, all of which promote positive educational outcomes. For example, religious students are less likely to bear children in

high school, which increases their high school completion rates (Evans, Oates, and Schwab 1992; Ribar 1994).

Using data from the National Educational Longitudinal Study (NELS), Muller and Ellison (2001) found that religious involvement was associated both with various forms of social capital and individual resources (such as locus of control and attitudes) that positively influence academic outcomes. Nonetheless, when controlling for the ways religious involvement mediates the relationship between social capital, individual attributes and educational outcomes, they still found a modest independent effect of religious involvement on educational attainment. Thus, religious involvement can have an effect on educational attainment even after controlling for known mediating mechanisms.

RESEARCH QUESTIONS AND DATA

A growing body of evidence indicates that college students are interested in religion, but much debate remains about the effects of this religiosity for personal satisfaction and for educational achievement. Using longitudinal data on a nationally random sample of 4,000 students from the four major racial/ethnic groups in the United States (White, African-American, Asian and Latino) enrolled at elite colleges and universities, I ask: are students who are religious more satisfied with college? Do students who regularly attend religious services achieve higher or lower grades than their peers? What are some of the mechanisms through which religiosity might influence college satisfaction and grades earned?

The National Longitudinal Survey of Freshmen surveyed nearly 4,000 students at 28 of the most selective colleges and universities in the United States. NLSF employed a probability sample of students who began attending selective U.S. colleges and universities in the fall semester of 1999.[3] In total, the NLSF researchers invited 35 schools to participate in the study. Of the 35 institutions invited to participate, seven institutions declined or were unable to participate for various reasons, making the institutional participation rate for the survey 80%.[4]

At the 28 colleges and universities that participated in the study, the NLSF researchers invited 4,573 randomly selected students to participate in the survey, of whom 3,924 completed face-to-face interviews in the first wave, producing an individual response rate of 86% (Massey, Charles, Lundy, and Fischer 2003). This first wave, conducted in 1999, collected baseline information about each student's family, school, and neighborhood conditions at age 6, 13, and 18. Because examining the achievement gap between members of different ethnic groups was one of the main motivations behind the survey, NLSF interviewed roughly equal numbers of White (998), Asian (959), Latino (916), and African-American (1,051) students. Massey et al. (2003) provide a detailed description of the sampling methodology employed in NLSF, including the size and average SAT scores of the 28 institutions in the survey.

After the baseline survey was completed, subsequent waves surveyed students over the telephone in 2000 to 2003 when most participants were in the spring semesters

[3] The sample of selective colleges and universities based on institutional mean SAT scores as reported in US News and World Report.

[4] See Appendix A for a full list of schools that participated in NLSF. The schools that declined participation were Duke, Hamilton, Morehouse, Spelman, Vanderbilt, Wellesley, and Xavier.

of their college freshman through senior years. In these waves, researchers asked questions about courses taken, grades received, extra-curricular activities, and social interactions. Overall response rates in the four follow-up surveys were remarkably high for college students 95%, 89%, 84%, and 80%, respectively.

The studies cited above suggest that religion may influence the college experience in a variety of ways—both as measured in terms of grades earned, behavior at college, and satisfaction with college. However, these effects might disappear when we control for other elements of social background known to influence college achievement and education, such as race/ethnicity, socio-economic status and high school academic preparation. NLSF allows me to answer research questions about religion and higher education while controlling for not only background factors known to influence college satisfaction and achievement such as family structure, race, class and gender, but also three measures of high school achievement—high school grades, SAT scores, and the number of AP classes taken. Previous studies generally contained some, but not all of these controls, in particular for prior achievement. It remains to be seen if religion still impacts college grades and satisfaction once controlling for many of the best-known influences on those outcomes. In other words, as NLSF data provide detailed information on students' class background and high school achievement, I measure religiosity's impact on college achievement and satisfaction while accounting for the fact that religious students might also be more likely to come from two-parent families and may have earned higher grades in high school.

NLSF researchers asked detailed questions about religion only in the baseline wave of the survey when students were in the fall semester of their freshman year.

Students were asked detailed questions about their upbringing, including how frequently they attended religious services during the previous year (their senior year of high school) and how observant they are on a scale of 1 to 10 of the traditions and customs of their religion. Unfortunately, however, the NLSF survey did not ask questions that would allow me to identify Christian fundamentalists, Evangelicals, or otherwise theologically conservative students who have been argued to have lower levels of educational attainment and whose beliefs and activities may clash the most with the liberal, secular environment of much of elite higher education.[5] NLSF does allow me to create categories for the three largest religious affiliations in the US—Protestant, Catholic and Jewish—who together make up 88% of the sample, but I cannot test for differences within these groups according to theological tendencies, such as Evangelical or Fundamentalist Protestants.

Although there is much interest in religious change during college, NLSF did not ask about religious attendance or observance *during* college. However, as Uecker and colleagues (2007) demonstrate that religious change occurs at roughly the same rate for all youth from their baseline point, the measure of high school religiosity suffices as a

[5] Darnell and Sherkat (1999) argue that conservative Protestants exhibit lower levels of educational attainment, but Beyerlein (2004) points out that this finding only holds for Fundamentalists but not for Evangelical Protestants. Until the 1960s, Protestants consistently demonstrated higher levels of educational attainment than Catholics, but this difference gradually disappeared as the descendants of millions of Catholic immigrants worked and studied their way into the middle class (Homola, Knudsen, and Marshall 1987). Numerous studies find that Jews consistently exhibit higher levels of educational attainment than members of all other religious groups (Homola, Knudsen, and Marshall 1987; Lehrer 1999; Sander 1992; Stryker 1981).

measure of individual-level differences in religiosity for students in the NLSF sample. More importantly, a measure of high school religious participation and observance could still matter for achievement and satisfaction during college. Many studies of education conceptualize how race, gender or class background as attributes that influence the trajectories of college students. Similarly, using NLSF data, I conceptualize that students' high school religious practice and observance could place them in a different trajectories while in college. Although I lack information on religiosity during college, I can nonetheless assess the impact of religiosity on college grades and satisfaction alongside other background factors college students bring with them to campus.

NLSF was designed based on the idea that students' experiences at the most selective institutions differ from a sample of all institutions of higher education, which would include community colleges, small private schools, and large state schools. What do we gain by focusing on religion in this particular set of institutions of higher education? First, the liberalizing and secularizing force of higher education might be presumed to be the strongest in the elite schools included in NLSF. Thus we might expect religious students to find an unfamiliar or unfriendly environment at secular elite institutions. In such a scenario, it remains to be seen if religious participation and observance leads students to report greater or lesser satisfaction with their college experience. Second, students surveyed in NLSF were all high achievers in high school—they earned an average 3.7 high school grade point average, scored an average of 1300 on the SAT and took around three advanced placement classes. As high school achievement has been shown to be associated with religiosity, we might expect that any effect of religion on education might already be picked up in NLSF's three controls for high

school achievement, but we do not know whether those measures of individual religiosity would still be relevant in predicting the grades of high-achieving students when they move on to college. NLSF also allows me to test the hypothesis that religion's impact on education operates via influencing behaviors conducive to or working against achievement, such as like the amount of time spent studying, going to parties, or participating in extracurricular activities.

Dependent Variables

Table 1 reports means of all the variables in the models. The two dependent variables I constructed are college grade point average (GPA) and overall satisfaction with college. The first dependent variable, college GPA, was assessed using grades earned during all semesters from freshmen to senior year.[6] A pilot survey carried out at the University of Pennsylvania that found that self-reported grades and official records were very similar, suggesting that these self-reported grades were likely to be accurate (Massey, Charles, Lundy, and Fischer 2003).

----Insert Table 1 about here----

The second dependent variable allows me to test one subjective measure of students' college experience: satisfaction with college. In the fall semester of students' junior year, they were asked to rate on a scale of 1 to 5 their satisfaction with their intellectual development in college, their social life, and their overall college experience. Factor analysis showed that each of these three measures load equally on one factor.

[6]Spring semester senior year grades were not included because they were received after the final survey was conducted.

Therefore, rather than look at each measure of satisfaction as a different outcome, I constructed one dependent variable which is a sum of three items.[7]

Independent Variables Measuring Religion

I use the baseline survey from the fall of students' freshman year to construct all of the independent variables measuring religion. The NLSF survey allows exploration of some of the mechanisms by which religion influences college grades and satisfaction at school. Specifically, I test theories about how the influence of observance of religious traditions and regular religious attendance on education. Wave 1 of the survey, conducted as students entered college, asked students to rate on a scale of 1 to 10 how observant they are of their religion's customs, ceremonies and traditions. The survey also gave students five possible responses for how often they attended religious services during their senior year of high school: never, rarely, often but less than weekly, weekly, or more than weekly. As these five categories do not represent equal intervals of increasing religious attendance, I isolated the regular attendees from those who infrequently or never attend religious services.[8] Therefore, I assigned all students into one of two groups: those who attend religious services weekly or more and those who attend less than weekly.

[7] The construction of the satisfaction variable replicates other analyses done with NLSF data (see omitted identifying reference).

[8] To verify this decision, I also constructed a dummy variable for each level of the five levels of attendance and, along with the controls described below, ran analyses predicting my dependent variables. These analyses, which are not shown here, confirmed that the magnitude of the effect of religious attendance does not vary greatly between weekly and more than weekly attenders but does vary greatly between those two groups and the rest of the categories.

Table 1 indicates that across the entire sample, 24% of students sample reported attending religious services once a week or more during their last year of high school. The mean on the scale of religious observance is 5.5. The top quartile of religious observance scored 8 on this scale, and the bottom quartile scored 4.

Five categories of religious background are used: Protestant, Catholic, Jewish, Other Religion and No Religion. As shown in Table 1, 43% of the sample reported a Protestant background, 37% Catholic, and 7% Jewish. Those who named another religion constitute 11% of the sample and 1% of respondents claimed no religious background. Because the Other Religions category includes faiths as diverse as Islam, Hinduism and Buddhism, I include this category in my analysis but the results for this category do not lend themselves to meaningful interpretation. The survey did not ask Protestants to name their denominational affiliation, nor did it employ the typical questions used to determine liberal or conservative theology—such as beliefs regarding biblical inerrancy or stands on particular moral questions. For these reasons, I am limited to exploring differences across the three major religious groups in America —Protestant, Catholic and Jewish.

Tables 2 and 3 present descriptive statistics of these two variables by religious affiliation and by race/ethnicity. Table 2 shows that Black and Asian students reported both the highest levels of religious attendance (28.4% and 28.8%, respectively) and observance (6.2 and 5.6, respectively). Latino students, although less religious than Black or Asian students, were nonetheless more religious than White students: 22.3% of Latino students reported attending religious services weekly or more compared to 18.3% of White students, and Latino students averaged a score of 5.30 on the scale of religious observance compared 5.08 for White students. These descriptive tables suggest that

ethnic diversity has likely brought higher levels of religiosity to America's college campuses.

Although Table 3 shows that Protestants reported more weekly church attendance than Catholics, in a separate descriptive analysis not shown, this order is reversed if we only look at White students: White Catholics are more religious than White Protestants. However, because of the large numbers of minorities sampled in NLSF, these data are not easily comparable to national samples of Catholics, Protestants or even Jews. For example, half of the Catholics in this sample are Latino, 18% are Black, and 18% are Asian. Half the Protestants are black and only one-quarter of Protestants are White. Interestingly, one-quarter of the Jews are Latinos, likely representing studies whose national origins are in Latin American countries that have substantial Jewish populations, such as Argentina.[9]

To test the possibility that religion works through particular behaviors known to influence college grades and satisfaction, I constructed three independent variables measuring activities that we might expect to be influenced by religious attendance and observance—the total amount of time students reported studying, partying and doing extracurricular activities—and which in turn would likely have an independent effect on

[9] Compared to national samples of Latinos where Mexicans generally represent two-thirds of all Latinos, NLSF had relatively fewer Mexicans (33%) and more South Americans 22% (see omitted identifying reference). This national origin composition of Latinos in the NLSF sample could explain the proportion of Jews. For example, the United Jewish Communities notes that among Latin American countries, Argentina has the largest Jewish community, roughly 2% of its population, but that the population is getting smaller due to immigration. United Jewish Communities website accessed on October 17, 2008. http://www.ujc.org/page.aspx?id=80248

grades. On Waves 2, 3 and 4, which correspond to the spring semesters of students' freshman, sophomore and junior years, the survey asked students to recall the total number of hours they spent the previous week doing a variety of 13 activities. If religion promotes social norms that favor educational attainment, we would expect religious students to study more, so I averaged the amount of time spent attending class and studying from the three waves. Second, religious students have been found to be more involved in college extracurricular activities at college such as clubs and volunteering. This particular form of social integration also may positively influence college performance, so I also averaged the time spent on those activities across three waves. Third, one might expect religious students to engage less frequently in behaviors that would distract them from academic work and harm their grades, so I averaged the amount of time students spent attending parties across the three waves. One might expect religion to have the strongest effect on moderating binge drinking or drug abuse, behaviors that have been shown to have a deleterious effect on academic performance. Although the survey instrument did not ask specific questions about these behaviors, the studies cited previously (Loury 2004; Regnerus 2000; Regnerus and Elder 2003) indicate that religious involvement protects students from behaviors that negatively impact educational performance, we can reasonably expect that students who have been accepted at elite schools are not likely to engage in such behaviors. Moreover, any effect of binge drinking or drug use are probably correlated with time spent partying and thus included in my models.

As seen in Table 1, students spent more time weekly attending class and studying—42.9 hours a week—than doing extracurricular activities—10.7 hours a

week—and partying—19.66 hours a week. Regression analyses (not shown here) confirm that religious students report studying more, partying less and spending more time at extracurricular activities than non-religious students. However, observance of one's religious traditions influenced how students spent their time in different ways than regular religious attendance. Both religious attendance and the scale of religious observance increased time spent on extracurricular activities, suggesting that religious practice can inspire one to do more extracurricular activities and that religious groups can provide connections to such activities. Only religious observance increased time spent on academic activities, perhaps because those who give more value to observing religious traditions also see a purpose or meaning in their academic work. Finally, weekly attendance at religious services decreases time spent partying, possibly because regular religious attendance provides an alternative social activity to partying, but religious observance does not influence the amount of partying students report.

Control Variables

The models include independent variables that measure factors known to impact both college achievement and satisfaction with college. As African-Americans and Latinos earn lower GPAs compared to White students and Asians students at elite colleges (Massey, Charles, Lundy, and Fischer 2003), I include variables indicating the student's ethnic group as White, Black, Asian or Latino as well as a variable measuring gender. Because family structure is know to impact educational experiences (Massey, Charles, Lundy, and Fischer 2003), I also include variables that measure if the student lived with both parents during her senior year of high school. To measure the educational

level of the student's parents, I constructed a variable assigning a value of one for each parent if that parent completed college and two if the parent holds a post-college degree. Another important indicator of family background is whether the student has at least one parent born outside of the United States, as the children of immigrants often outpace natives in educational attainment. To measure the students' socio-economic background, I use two measures of family income—a dichotomous variable measuring if the student's family ever received welfare and another dichotomous variable measuring if the total family income during the student's senior year was greater than $100,000.[10] Finally, I measure the student's high school achievement using self-reported SAT scores, high school GPA, and number of AP classes taken in high school.

RESULTS

Tables 4 and 5 show the results of the models run on the two dependent variables, college GPA and school satisfaction. As both dependent variables are continuous, I fit an OLS regression model with robust standard errors. In Table 4, Model 1 is the baseline model and Model 2 includes the mediating variables of time spent studying, partying and on extracurricular activities. The models reported in Tables 4 and 5 demonstrate that, even when controlling for other background factors known to influence college educational outcomes, such as race/ethnicity, sex, family structure, family income, parents' education, high school achievement, religious attendance has a significant and

[10] NLSF asked about family income in categories in intervals of $10,000 from $0-100,000 and then higher than $100,000. As seen in Table 1, half the sample reported family incomes of greater than $100,000.

positive influence on college GPA. Both religious attendance and religious observance improve satisfaction with one's college experience.

---Insert Table 4 about here---

In the first column of Table 4, we see that attending religious services once a week or more has a statistically significant and positive effect on GPA. However, the students' self-reported level of religious observance does not have a statistically significant effect on GPA. With regards to religious affiliation, Catholics and those who reported no religious background did not have statistically significant differences in grades compared to Protestants (the reference category), but being Jewish had a positive and significant effect on GPA. Therefore, on average Catholics and Protestants and those with no religious affiliation earn roughly the same grades, and Jews earn higher grades than all other religious affiliations and the non-affiliated. In addition, particularly committed religious people do better on average than those who are not religiously committed.

The size of the effect of religious attendance, .042, is modest compared to the size of the coefficient for being Jewish, .097. Compared to White students, Black and Latino students reported lower college grades, and the magnitude of the coefficient is greater for Blacks (.136) than Hispanics (.080). The coefficients for Black and Latino are roughly three and two times the size of the religious attendance coefficient, respectively. Male students report lower GPAs, and the size of this coefficient is slightly smaller than that of being Black and nearly three times bigger than the coefficient for attending religious services weekly. Finally, model 4 also shows that parents' education increases GPA, and high school academic success is correlated with higher college GPAs.

We might expect the effect of religiosity on college grades to vary across subsets of the sample, such as race, class and immigration status. Fortunately, NLSF has large enough subsamples to test these hypotheses. Thus, I constructed dummy variables that interact religious attendance with each of the following the following independent variables: race/ethnicity, class, gender and immigrant origins.[11] In order to test for further effects of religion on subsamples of the data, I created three-way interactions of religious attendance, race and class—such as low-income Black students who attend church weekly—and religion, race and immigrant origins—such Black immigrants who attend church weekly. None of these two-way or three-way interactions was significant, indicating that the positive effect of religious attendance on college grades does not differ for different subgroups in the data. Therefore, the large numbers of Blacks and Latinos in the sample as well as the large number of students who are of immigrant origins, unique elements of NLSF, are not driving the positive relationship between religiosity and college grades earned.

Model 2 of Table 4 includes the three mediating variables of time spent studying, partying and on extracurricular activities. As seen at the bottom of Model 2, these three variables are significant and have the expected direction of their effect on grades: total academic hours and total hours spent on extra-curricular activities both increase GPA, while hours partying decreases GPA. When comparing the effect of religious attendance on grades in Models 1 and 2, we see that including these three mediating variables

[11] In order to exclude foreign students from the sample, NLSF only surveyed people who were U.S. Citizens or Legal Permanent Aliens at the time of the survey. However, as seen in Table 1, nearly 50% of the students reported that either they or at least one of their parents were foreign-born.

decreases the size of the coefficient for regular religious attendance by about 16%—from .042 to .035—and the religious attendance variable is significant at the .05 level in both models. Including the mediating variables does not change the significance of any other variables across the two models.

Table 5 presents the results of an OLS regression showing that both religious observance and religious attendance have significant and positive effects on satisfaction with college. The coefficients for religious attendance and religious observance are not directly comparable because they are measured on different scales and not standardized. It is nonetheless helpful to compare what the coefficients would be for the top quartile of students for these two variables. As students in the top quartile of religious attendance went to services once a week or more, that coefficient—.24—already reflects the score for the top quartile of students. The top quartile of students on the religious observance scale scored at least an 8, thus the effect of religious observance on satisfaction for the most observant students in the sample would be .48. Seen in this way, for the most religious students in the sample, religious observance is a bigger predictor of satisfaction at school than weekly religious attendance.

----------Insert Table 5 about here----------

Many of the same control variables that had a significant effect in the first two models also are significant in the model on satisfaction. I find strong ethnic effects on college satisfaction, as Blacks and Asians reported lower school satisfaction compared to Whites. Neither of the two religiosity coefficients is larger than the coefficient for being Black or being Asian. Several measures of parents' background and high school academic preparation influence college satisfaction. Those who are children of

immigrants are less satisfied with college, whereas the higher levels of parents' education are associated with greater levels of satisfaction. Higher SAT scores and higher high school GPA also increase school satisfaction. This may be because measures of high school achievement increase college GPA and students who earn higher grades may be more satisfied with their college experience.

DISCUSSION

My findings are consistent with prior studies about how race, class, gender, and family background all influence college grades and satisfaction, yet I nonetheless find that, above and beyond these factors, religiosity influences college achievement and satisfaction. Students who attended religious services once a week or more during their last year of high school reported higher grades at college than non-regular religious attendees. Importantly, even though religious students reported studying more, partying less, and dedicating more time to extracurricular activities, controlling for how students spent their time moderated but did not erase the effect of regular religious attendance on college grades earned. In addition, two separate measures of religiosity—one measuring the degree to which students observe the customs and traditions of their religion and another measuring whether students attended religious services once a week or more—have significant and positive effects on a student's satisfaction at college. Because of data limitations, I cannot test the impact of conservative religiosity on education—specifically being an Evangelical or Fundamentalist Protestant—but I do confirm findings of previous studies that Jewish students earn higher grades in college and that Protestants as a whole do not differ from Catholics in grades earned or satisfaction at college.

Previous work on religion and high school achievement, such as that of Loury (2004), Regnerus and Elder (2003) and Jeynes (2003), argues that regularly attending a church, synagogue, or other religious services in high school provides students with structure and guidance which then improves their academic dedication and performance during their college careers. I expand upon these findings by showing that a student's level of religious attendance in high school increases their GPA when they move on to college.

My findings generally suggest that religion has important subjective effects on college students' satisfaction at college and how they choose to spend their time. Importantly, even when controlling for students' socio-economic backgrounds and high school achievement, I still find that religious attendance increases GPA and both religious observance and religious attendance increase satisfaction. Furthermore, although we might have expected only certain subgroups of college students to show significant effects of religiosity—such as Black students, male students or poor students—I did not find that the effects of religious attendance interacts significantly with race/ethnicity, gender or class.

CONCLUSION

Even if religious practice may reach something of a low point during young adulthood, spirituality in general remains of interest to many youth, and many youth who entering college participate in organized religion. The findings presented here contribute to answering the important question about how religious observance and religious attendance influence academic achievement and satisfaction for college students. Unlike

previous studies, NLSF data allowed me to control for numerous background factors known to highly predict achievement—such as family structure, income, and parents' level of education, as well as race, class, gender and three measures of high school academic achievement—and I find that religiosity still matters for grades earned and overall satisfaction with college. Thus, although the current findings are modest in size and clearly do not explain everything about either college achievement or satisfaction, the findings that religiosity increases the satisfaction and grades earned of students at elite colleges and universities nonetheless represent an important contribution to the literature on religion and young adulthood.

Building on previous work at the high school level that demonstrates how religiosity influences behaviors that then influence educational attainment, I show that religiosity decreases partying at college and increases time spent studying. Yet even when controlling for those mediators, the independent effect of religiosity remains. Future work may examine ways that religion may influence college students' social lives at college, such as peer networks, dating, and participation in other types of campus groups, like fraternities and sororities. By influencing other social activities, religiosity could then influence their educational attainment, satisfaction at college, or other outcomes such as interactions with professors. Researchers should also test whether religion mitigates the negative effects of difficult experiences that may occur in college, such as death of a close relative, parental divorce, or dramatic changes in parental income. Greater work on college campuses also could explore whether religious services help bring together ethnic minorities, such as African-Americans or Asians, who are more religious than average white students or if minority students attend more religious

services as a response to a lack of broader social integration. We also know little about how religious diversity impacts how students experience ethnic diversity on college campuses, such as whether religious college students are more or less likely to cross boundaries of race/ethnicity in their peer networks and dating behavior.

Measuring hours spent on academic activities, partying, and on extra-curricular activities moves us closer to seeing why and how religion matters to college grades. However, one might also expect that people who party more are less focused when studying than those who sit down to study after a night of volunteering. Similarly, in addition to religious students' spending more hours studying, something about religious practice may improve the quality of time spent studying, such as concentration, self-esteem, or simply a sense of purpose. Students who sit down to take an exam after receiving positive reinforcement when attending religious services may do better not just because they studied more hours the night before but because they concentrate more and feel more confident about their intellectual abilities. At this point, such assertions remain speculation, but the larger point is that religion not only influences *what* people do but also *how* and *why* they do it.

As NLSF only surveyed students at highly selective colleges and universities, future work on religion and higher education would be necessary to know if these findings hold for all college students or just students in particular settings. The term higher education encompasses a broad range of schools all the way from community colleges to the kinds of elite schools surveyed in NLSF. Although NLSF results generalize only to the most selective schools of higher education, in combination with

findings from NSSE and the UCLA Higher Education Research Institute, these findings suggest that we need greater research on how religion influences college students' lives.

NLSF is not a random sample of all Americans or even of all American college students, but rather a random sample of students in 28 of the best American colleges and universities. Students who participated in NLSF are highly selective on traits that lead to academic success—after all, they beat the fierce competition to gain entry to schools like Swarthmore, University of North Carolina at Chapel Hill and Yale University. As we now know, religious students do not all attend Bible Colleges or even state schools in heavily religious areas of the country, but can also be found in the most selective, elite, and secular institutions in the United States. Expanding our inquiry into the religion of students at America's most selective colleges thus requires expanding our theoretical understanding of religion and education.

More studies of religion and higher education would continue to help sociologists of religion refine the much-debated relationship between secularization and higher education. If we look back a bit in history, it is not difficult to recall the religious roots of liberal education espoused by universities (cf. John Henry Cardinal Newman's *The Idea of a University* (Newman [1891] 1996). In fact, many of America's finest universities were originally founded to train future clergy in theology, humanities and even science. Further evidence questioning the causal link between secularization and science comes from Ecklund's finding that most university scientists who do not have religious faith grew up in household without religious faith, whereas those professors who grew up with faith and then became scientists did not lose their faith (Ecklund 2008). These facts should remind us that, apart from some fundamentalist sects who view intellectual life

with skepticism, scholarly life, scientific investigation and religious life do not generally contradict each other. Moreover, for students attending selective colleges, and who therefore are already highly motivated toward academic success, their religion might help them find a sense of purpose or meaning in their work that could ultimately make the time they spend at it both more personally fulfilling and more productive.

Numerous scholars, such as Astin (2004), and Kuh and Gonyea (2006), have attempted to move forward our theoretical framework of religion and higher education by presenting a broad conceptualization of students' religiosity. For example, Kuh and Gonyea state that spirituality and religion, which focus on a search for meaning, can often uphold the tradition and values of a liberal arts education. They hypothesize that religious practice may influence not only the amount of academic effort students' make, but their very styles of learning. Religious students may seek both individual meaning through their religion but also be more likely to engage in "deep learning," which includes discussing ideas outside of class with peers, teachers, and people of different opinions; synthesizing ideas across courses and fields of knowledge; making judgments about the validity of evidence or an argument; and applying theories or concepts learned to new situations. However, to the extent this admirable type of "deep learning" is adopted by college students, Kuh and Gonyea turn up little evidence to support their hypothesis that religiosity increases deep learning.

Although NLSF does not include measures that would allow me to test this intriguing hypothesis about religion and deep learning, the conceptualization of college students' spirituality in both the UCLA study and Kuh and Gonyea suggest that studies of religion and higher education need to go beyond simply measuring hours spent on

various activities but look to how religion might influence styles of learning. It also could be the case that religious students are more likely to major in heavily creative, speculative and humanistic disciplines like philosophy and literature rather than sciences, but it also might be that, regardless of their chosen field of study, religious students find in their academic work a way of serving their fellow men and women.

Regardless of whether they take classes in the humanities, social sciences or engineering, religious students at elite secular colleges and universities are quite likely to find their beliefs about the world being challenged. Some students may indeed decrease their religious practice or strength of belief while at college, but other religious students may respond to challenges to their worldview by learning more about their faith and attempting to excel in their field of study in order to show their peers and professors that religious belief and academic excellence are not mutually exclusive.

In summary, my findings demonstrate a robust positive effect of religious attendance on grades earned at college and a positive effect of both religious attendance and a scale of religious observance on satisfaction at college. Given the higher percentage of Americans attending college today compared to previous generations, the persistent religiosity of young Americans (albeit lived in different ways than earlier generations), and the increasing ethnic and religious diversity of students at America's most selective colleges and universities, the research avenues outlined here would contribute greatly to a better understanding of the influence of religion on higher education in America.

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Appendix A: Colleges and Universities Surveyed in NLSF

Barnard College,
New York City, NY

Bryn Mawr College,
Bryn Mawr, PA

Columbia University,
New York City, NY

Denison College,
Granville, OH

Emory University,
Atlanta, GA

Georgetown University,
Washington, DC

Howard University,
Washington, DC

Kenyon College,
Gambier, OH

Miami University,
Oxford, OH

Northwestern University,
Evanston, IL

Oberlin College,
Oberlin, OH

Penn State University,
State College, PA

Princeton University,
Princeton, NJ

Rice University,
Houston, TX

Smith College,
Northampton, MA

Stanford University,
Palo Alto, CA

Swarthmore College,
Swarthmore, PA

Tufts University,
Sommerville, MA

Tulane University,
New Orleans, LA

University of California-Berkeley
Berkeley, CA

University of Michigan, Ann Arbor
Ann Arbor, MI

University of North Carolina, Chapel
Hill Chapel Hill, NC

University of Notre Dame,
South Bend, IN

University of Pennsylvania,
Philadelphia, PA

Washington University,
St. Louis, MO

Wesleyan University,
Middletown, CT

Williams College,
Williamstown, MA

Yale University New
Haven, CT

Table 1: Descriptive Statistics of All Variables in the Models*

DEPENDENT VARIABLES	Mean	SD	Min	Max
Grades Reported from Freshmen-Senior Year/Number of Courses Taken	3.27	0.41	0.75	4
Scale of Satisfaction with Academic Life, Social Life and Overall College Experience*	11.43	2.10	0	14
INDEPENDENT VARIABLES				
RELIGIOSITY				
Attends Religious Services Once a Week or More	0.24	----	0	1
Self-Rated Scale of Religious Observance	5.55	2.75	0	10
RELIGIOUS AFFILIATION				
Protestant	0.43	----	0	1
Catholic	0.37	----	0	1
Jewish	0.07	----	0	1
Other Religion	0.11	----	0	1
No Religion	0.01	----	0	1
ETHNICITY				
White	0.28	----	0	1
Black	0.24	----	0	1
Asian	0.24	----	0	1
Latino	0.24	----	0	1
GENDER				
Male	0.43	----	0	1
FAMILY				
Two-Parent Household Senior Year of High School	0.74	----	0	1
Both Parents Present in Household Senior Year	0.50	----	0	1
Number of College and Graduate Degrees Earned by Both Parents	1.76	1.45	0	4
Welfare: Family Ever Received Public Assistance	0.11	----	0	1
Family Income >$100,000	0.51	----	0	1
HIGH SCHOOL				
SAT	1306	151	800	1600
Number of AP Courses	3.21	1.97	0	10
High School GPA	3.73	0.31	2.17	4
MEDIATING VARIABLES				
Total Academic Hours Previous Week	42.86	13.60	0	89
Total Extracurricular Hours Previous Week	10.71	7.69	0	37
Total Partying Hours Previous Week	19.66	8.52	0	50

**All variables have N=2663, except for Satisfaction for which N=2623*

Table 2: Religious Attendance and Observance by Race/Ethnicity at Elite Colleges

	Religious Attendance	Religious Observance
White	18.3%	5.08
N=998		*SD=2.82*
Black	28.4%	6.21
N=1,051		*SD=2.61*
Latino	22.3%	5.38
N=916		*SD=2.65*
Asian	28.8%	5.62
N=959		*SD=2.79*

Table 3: Religious Attendance and Observance by Religious Affiliation at Elite Colleges*

	Religious Attendance	Religious Observance
Protestant	30.7%	6.09
N=1,520		*SD=2.67*
Catholic	25.7%	5.46
N=1,262		*SD=2.75*
Jewish	6.8%	4.25
N=249		*SD=2.45*
Other Religion	9.9%	5.47
N=35		*SD=2.49*
No Religion	0.0%	1.83
N=453		*SD=0.39*

**Information on religious affiliation was not provided by 142 students*

Table 4: Religion and College GPA (SE in Parentheses)

	Model 1	Model 2
RELIGIOSITY		
Religious Attendance	0.042*	0.035*
	(0.02)	(0.02)
Religious Observance	-0.001	-0.002
	(0.00)	(0.00)
RELIGIOUS AFFILIATION		
Protestant (omitted)	n/a	n/a
Catholic	-0.010	-0.005
	(0.02)	(0.02)
Jewish	0.097***	0.105***
	(0.03)	(0.03)
Other Religion	0.046	0.044
	(0.07)	(0.07)
No Religion	0.039	0.036
	(0.03)	(0.03)
ETHNICITY		
White (omitted)	n/a	n/a
Black	-0.136***	-0.147***
	(0.02)	(0.02)
Asian	-0.030	-0.033
	(0.03)	(0.03)
Latino	-0.080***	-0.083***
	(0.02)	(0.02)
GENDER		
Male	-0.115***	-0.113***
	(0.01)	(0.01)
FAMILY		
Two-Parent Household	0.007	0.006
	(0.02)	(0.02)
Foreign-Born Parent	0.005	-0.001
	(0.02)	(0.02)
Parents' Higher Education	0.026***	0.026***
	(0.01)	(0.01)
Welfare	-0.025	-0.028
	(0.02)	(0.02)
Family Income	0.023	0.025
	(0.02)	(0.02)
HIGH SCHOOL		
SAT	0.001***	0.001***
	(0.00)	(0.00)
Number of AP Courses	0.004	0.003
	(0.00)	(0.00)
High School GPA	0.357***	0.337***
	(0.02)	(0.02)

Table 4 (con't): Religion and College GPA (SE in Parentheses)

	Model 1	Model 2
MEDIATING VARIABLES		
Total Academic Hours		0.002**
		(0.00)
Total Extracurricular Hours		0.002*
		(0.00)
Total Partying Hours		-0.002**
		0.00
Constant	0.96***	1.006***
	-0.099	(0.10)
N	2,663	2,658
R-Squared	0.354	0.358

**** p<0.001; ** p<0.01; * p<0.05; two tailed*

Table 5: Religion and College Satisfaction (SE in Parentheses)

	Model 1
RELIGIOSITY	
Religious Attendance	0.243*
	(0.11)
Religious Observance	0.061***
	(0.02)
RELIGIOUS AFFILIATION	
Protestant (omitted)	n/a
Catholic	-0.170
	(0.10)
Jewish	0.233
	(0.17)
Other Religion	-0.323
	(0.40)
No Religion	0.259
	(0.16)
ETHNICITY	
White (omitted)	n/a
Black	-0.675***
	(0.13)
Asian	-0.397**
	(0.15)
Latino	0.020
	(0.14)
GENDER	
Male	-0.014
	(0.08)
FAMILY	
Two-Parent Household	-0.077
	(0.10)
Foreign-Born Parent	-0.239*
	(0.11)
Parents' Higher Education	0.065*
	(0.03)
Welfare	-0.048
	(0.13)
Family Income	0.117
	(0.09)
HIGH SCHOOL	
SAT	0.001
	0.00
Number of AP Courses	-0.038
	(0.02)
High School GPA	0.580***
	(0.14)

Table 5: Religion and College Satisfaction (SE in Parentheses)

	Model 1
Constant	8.434***
	(0.62)
N	2,623
R-Squared	0.054

*** *p<0.001; ** p<0.01; * p<0.05; two tailed*