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Sacred changes on campus the effects of higher educational experience on religiosity and spirituality, and resolving cognitive dissonance

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SACRED CHANGES ON CAMPUS: THE EFFECTS OF HIGHER EDUCATIONAL
EXPERIENCE ON RELIGIOSITY AND SPIRITUALITY, AND RESOLVING
COGNITIVE DISSONANCE

by

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A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Sociology
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Abstract

Changes in religious and spiritual trends over the past few decades are contradicting previously held assumptions in academia pertaining to personal religious and spiritual definitions, identities and how these religious and spiritual identities are affected by higher educational attainment. In addition, there is limited research on how students may resolve cognitive dissonance if it develops due to discrepancies between their college experiences and their personal spiritual or religious convictions.

The intent of this thesis is to explore the effects of college experience and higher educational attainment on students' religious and spiritual identities; to explore the growing trend to identify as 'spiritual, but not religious;' and to explore whether any changes in their religious and spiritual identity are as a result of adjustments spurred by cognitive dissonance. This study helps fill in gaps in current literature about the effects of higher education on religious and spiritual identity and their resolutions of cognitive dissonance.

Dedications

For my mother, father, grandmothers Carole and Shirley, Michael and Heather, and the rest of my family who have always been there, loved me and supported me no matter what. Thank you for everything.

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Table of Contents

Introduction	1
Literature Review	3
Methods	10
Hypotheses.....	10
Measurements	11
Procedure.....	11
Demographic.....	11
Dependent variables.....	12
Independent variables.....	12
Data Analysis.....	13
Results	14
Sample.....	14
The Effects of Higher Education and College Experience of Students' Religiosity and Spirituality	14
Spiritual, But Not Religious	15
Adjusting Religious and/or Spiritual Beliefs Due to Cognitive Dissonance.....	16
Discussion	18
APPENDIX A: SURVEY ITEMS.....	21
APPENDIX B: IRB APPROVAL LETTER.....	25
References	27

List of Tables

Table 1.....	14
Table 2.....	15
Table 3.....	15
Table 4.....	16
Table 5.....	17

Introduction

Over the past few decades, social scientific research has explored new trends in definitions of religiosity and spirituality. These studies indicate that spirituality and religiosity are being defined as separate, but overlapping concepts (Marler and Hadaway 2002; Zinnbauer et al. 1997). There is also a small, but growing trend to define oneself as spiritual, but not religious (Grossman 2010; Marler and Hadaway 2002; Zinnbauer et al. 1997). Spirituality and religiosity may also be affected by higher educational attainment and college experience, but the current literature provides mixed and contradictory results. Some studies suggest higher educational attainment has a negative effect on religious behavior (Brant, Yun and Yasuno 2003) and a liberalizing effect on students' religiosity for a minority of students (Raimer 2010). While other studies claim that higher educational attainment is associated with a strengthening of religious beliefs (Lee 2002) or an increase in religious behavior, such as prayer (MacFarland, Wright and Weakliem 2010). Lying in between these polarized results, research indicates that while religiosity in students decreases, their religious identity is unaffected (Clydesdale 2007). Previous research also reports an increase in spiritual interest during students' college years (Brant, Yun and Yasuno 2003; Hatley 2004).

As students leave their social, familial and religious networks and environment and immerse themselves into new networks, they enter a scholastic environment that focuses on academia that introduces them to diverse views. As well, they experience unique events in their college years that may have a negative or positive effect on their previous religious beliefs (Brant, Yun and Yasuno 2003). Cognitive dissonance theory states that when there

is a discrepancy between two cognitions, individuals attempt to reduce the psychological tension (Festinger 1962; Dunford and Kunz 1973; Mahaffy 1996). One possible method of resolution is to change or add a new cognition (Festinger 1962; Dunford and Kunz 1973; Mahaffy 1996). Another is to change one's behavior that causes the dissonance (Festinger 1962; Mahaffy 1996).

Do students with religious beliefs that experience both the college lifestyle and the secular education acquire psychological discrepancy? Does this discrepancy result in cognitive dissonance for these students? As students seek to resolve this discrepancy, do their religious and spiritual identities become redefined as a way to alleviate these pressures? The purpose of this research is to explore the effects of college experience and higher educational attainment on students' religious and spiritual identities. As newer trends in religious and spiritual identity are being played out in younger generations, college may have a role in these trends and this research seeks to explore the relationship between the two.

The findings of this research will extend our understandings of the effects that college education and experiences have on current trends in religious and spiritual beliefs and identity. The findings are important to the overall literature on educational attainment, students' religious and spiritual identity and how students navigate between the two. This study helps fill in the gaps in current literature about the effects of higher education on religious and spiritual identity and how students neutralize any cognitive dissonance incurred from college experience.

Literature Review

Recent media attention has been brought to a trend in younger individuals identifying themselves as ‘spiritual, but not religious.’ In a recent survey reported by both USA Today and CNN, 72% of Millennials identified themselves as “spiritual, but not religious” (Blake 2010; Grossman 2010). The USA Today and CNN articles referred to data from a LifeWay Christian Resources Millennial Study in which 12,000 18-29 year olds were surveyed. According to the data, 65% “rarely or never pray with others”, 65% “rarely or never attend worship services” and 67% don’t “read the bible or sacred texts” (LifeWay Christian Research 2010). A recent pew poll, also mentioned in the USA Today article, reports similar findings, that Millennials are less religiously affiliated than previous generations (Pew Research Center 2010). These recent findings are an example of trends where individuals are redefining religion and spirituality and defining themselves as spiritual, but not religious.

In an often cited study by Roof and reported by Marler and Hadaway, in 1989, 536 ‘baby boomers’ were interviewed from four states (Marler and Hadaway 2002; Roof 2000). Respondents were asked if they considered themselves religious and/or if they considered themselves spiritual. 86% of the respondents answered “yes” to considering themselves religious, 65% answered “yes” to considering themselves spiritual, but interestingly, 9 percent considered themselves “spiritual, but not religious” (Marler and Hadaway 2002). Roof called this unique group “highly active seekers” (Marler and Hadaway 2002; Roof 2000). Many more studies would explore this apparent schism between two concepts that were once interchangeable (Zinnbauer et al. 1997).

In a classic study from Zinnbauer et al. (1997), a total of 346 participants from 11 sample groups from selected churches, New Age groups, college campuses and mental health facilities were given questionnaires asking for their self-definitions of religiousness and spirituality as well as their self-rated religiosity and spirituality. Zinnbauer and colleagues found that 19% of respondents identified themselves as “spiritual, but not religious.” In addition, these respondents were more likely to engage in spiritual experiences with groups and less likely to believe in traditional Christian beliefs.

Marler and Haday (2002) compared their study with Roof’s 1989 study, Zinnbauer and colleagues’ 1997 study, a 1999 Gallup poll, a 2000 Spiritual health poll and Roof’s follow-up study in 2000. Results show findings that ‘baby busters,’ the generation born after the ‘baby boomer’ generation, are much less likely to identify as religious and spiritual and much more likely to say that they are neither religious nor spiritual than any of the other age groups. In addition, a significant finding is that the percentage of individuals that identify as “spiritual but not religious” increased steadily from the oldest age group to the youngest age group. Respondents from the oldest age cohort, born before 1927, indicated that 14.5% identified themselves as spiritual, but not religious whereas 22.6% of the ‘baby buster’ age cohort identified themselves as spiritual, but not religious. These studies show that there is a growing trend in younger individuals to identify themselves as spiritual but not religious.

This trend follows another underlying trend: changing definitions of religion and spirituality. Previously in research, spirituality and religion were interchangeable terms resulting in inconsistent definitions (Zinnbauer et al. 1997). Newer research shows that

these two terms are becoming concepts that are “distinct, but interdependent” (Marler and Hadaway 2004) or “separate, but not independent” (Zinnbauer et al. 1997). For the lay person, religion is associated with “higher levels of authoritarianism, religious orthodoxy, intrinsic religiousness, parental religious attendance, self-religiousness, and church attendance,” and the “belief in God or a higher power, and organizational or institutional beliefs and practices such as church membership, church attendance, and commitment to the belief system of a church or organized religion” (Zinnbauer et al. 1997). It is also a “strongly felt and followed belief system relating to a higher power,” and it is “associated with a sense of community” and “connected with others” (Schlehofer, Omoto and Adelman 2008). As spirituality is earning a distinction, it is bringing with it some of its previous religious elements (Hill et al. 2000). Spirituality is associated with “mystical experiences, New Age beliefs and practices” and “a belief in God or higher power, or having a relationship with God or a higher power” (Zinnbauer et al. 1997).

While these concepts have on certain levels diverged, they share many commonalities, many more than differences (Schlehofer, Omoto and Adelman 2008). Both religion and spirituality incorporate the search for the sacred (Zinnbauer et al. 1997; Schlehofer, Omoto and Adelman 2008; Hill et al. 2000). In a conceptual framework proposed by Hill et al. (2000), the criterion given for spirituality was “the feelings, thoughts, experiences, and behaviors that arise from the search for the sacred.” The criterion for religion includes the criterion for spirituality, but also includes either the search for the non-sacred to facilitate the search for the sacred and/or the means and methods of the search for the sacred.

The long held assumption that higher education has a negative effect on religious beliefs was shaken about a decade ago. A study by Lee (2002) unexpectedly found evidence that contradicted some of these assumptions. Lee found that while students experienced a change in their beliefs, more experienced a strengthening of their beliefs (about a third), instead of a weakening (13.7%). Religious activities were found to decrease, but there was an increase of religious conviction. Following studies resulted in mixed results.

Brant, Yun and Yasuno surveyed 3,680 first year students from 50 universities and colleges around the nation with two longitudinal surveys in the fall of 2000 and the spring of 2001. Results indicated that while students do not become more religiously active, they are interested in integrating spirituality into their lives. Highly religious students were usually very spiritual and very spiritual students were usually religious, but to a lesser degree. Of the students that claimed no religious preference, 12% classified themselves as highly spiritual. College students were also less likely to partake in religious activities as much as they did in high school and their spiritual identity declined significantly over their first year. Conversely, students had an increase in integrating spirituality into their lives.

Raimer (2010) finds that higher education has a liberalizing effect on a significant minority of Americans. Seven hundred church attending Protestants from three different denominations (Episcopal, United Methodist, and Assemblies of God) were surveyed. Exposure to secular theories was found to have either a positive or negative effect on their “theological liberalism,” depending on the level of network closure. In line with the network closure argument, different religious traditions have different levels of network

closure and thus are able to act as a buffer to any secularizing effects of higher education (MacFarland, Wright and Weakliem 2010). Network closure is the connectedness of an individual to a network that disseminates information and gives them a “means to develop trust and accountability” (MacFarland, Wright and Weakliem 2010). MacFarland, Wright and Weakliem (2010) found that religious denominations with weaker network closure (such as mainline Protestants and the non-affiliated) and a higher educational attainment corresponded in a lessening of religious beliefs, such as seeing the Bible as a set of fables, instead of the word of God.

Not all researchers are in agreement. In the same study by MacFarland, Wright and Weakliem (2010), religious denominations with a greater network closure, such as evangelical Protestants and Black Protestants, and a higher educational attainment saw an increase in church attendance and prayer. Why such a difference between denominations? One possibility the authors suggest is that highly educated individuals in closed networks would be highly valued for their resources and status and so their behaviors would be more rewarded, thus acting as a buffer to the effects of secular beliefs. Hartley's (2004) review of literature spanning fifteen years also provides contradicting conclusions; particularly that attending college does not impact the student's religious practices. Compiling the research reveals that studies repeatedly contradict other studies on a multitude of dimensions. The effect of higher educational attainment on religiosity is still unclear and needs further research that better measure for both spirituality and religiosity (Maryl and Oeur 2009).

Furthering the point that research on college students' religious beliefs yield disparate results, Clydesdale (2007) conducted a series of in-depth interviews from 75 different college teens, focus groups from 12 different college teens, and an open ended group survey of 24 college students, all from 1999 to 2003. The author concluded that most students' religious beliefs are unaltered because they place much of their personal identities in a "lockbox" during their college years. Instead of exploring their identities and issues of political, racial or religious nature as new adults in new surroundings, college students focused on managing their daily lives and gaining acceptance into the mainstream culture. Only a minority resists placing their identities in "lockbox" in exchange for playing the "life management game." Clydesdale describes these students as future "intelligentsias", "antireligious", and the strongly religious. While strongly religious teens do open their "lockbox" during religious services, they close it during school. The majority of the students though Clydesdale argues are "semireligious", use the "lockbox" so that while their religious attendance may diminish some, their religious identity is unchallenged. Most students also, according to the author, do not differentiate religiosity from spirituality, but rather see spirituality within the confines of religion.

Uecker, Regenerus and Vaaler (2007) find that normative deviance was a possible explanation for some religious decline and that cognitive dissonance could occur if individuals were aware of the religious teachings. Cognitive dissonance theory states that when there is a discrepancy between two cognitions, individuals attempt to reduce the psychological tension (Festinger 1962; Dunford and Kunz 1973; Mahaffy 1996).

Cognitions, for the purposes of Festinger's theory, extend to "knowledge", which he

explains as any “opinions, beliefs, values or attitudes, which function as “knowledge.””

Dissonance, or an inconsistency between cognitions, can occur when new events, new knowledge or one’s actions conflict with some cognitive schema. To reduce the pressure, the individual could change his or her behavior, seek new information that would reduce the dissonance or add new cognitive “elements” that might “reconcile” the dissonance. The magnitude of the dissonance is relevant to the importance of the cognitive elements in question. An example of major dissonance might be when “two or more established beliefs or values, all relevant to the area of cognition in question, are inconsistent.” While there is not much literature that explores the cognitive dissonance of students when their religious or spiritual identity is in conflict with their college education and experiences, there is similar literature on how cognitive dissonance is resolved when their religious beliefs and homosexuality conflict and result in psychological tension.

Mahaffy (1996) looked at how lesbians resolved cognitive dissonance when the teachings of their religious beliefs conflicted with their sexuality. Those that were most likely to struggle with their religious beliefs and their sexual orientations were evangelical before they came out as a lesbian. For lesbians with internal conflict between their religious belief and their sexuality, they were more likely to alter their cognitions unless they became Christian during adulthood. If they became Christian during their adulthood, they were more likely to live with the tension. The later the respondent suspected her homosexuality, the more likely that she would change her beliefs or leave the church. One method to live with the tension was to realize that religion and spirituality were separate entities.

Methods

This study examines the effects of higher education on student's levels of religiosity and spirituality, their religious and spiritual identity, and how students navigate in their identity in their new environment. The study has three aims. The first aim is to explore the effects of college experience and higher educational attainment on students' religious and spiritual identities. The second aim of the study is to explore any correlations between higher educational attainment and college experience and defining one's beliefs as spiritual, but not religious. The third aim is to explore whether any changes in their religious and spiritual identity is a result of cognitive dissonance. The third aim then uses cognitive dissonance theory as a theoretical framework.

Hypotheses

Hypothesis 1: College education and experience will have an effect on students' religiosity and/or spirituality.

Hypothesis 2: A small proportion of students will identify themselves as more spiritual than religious.

Hypothesis 3: Respondents that adjusted their religious and/or spiritual identity during college did so in part due to tension between their college education and experience and their religious beliefs.

Measurements

Procedure

The sample consisted of college students in the Central Florida area. Online surveys, as well as paper surveys, were used for the research. Students were referred to the online survey, either through their professors or by other students. A total of 272 surveys were collected for analysis, 260 online and 22 paper surveys. First and second year students (underclassmen) were compared to students in their third and fourth year (upperclassmen and graduates). All students were asked questions on their college education and experience, subjective religiosity and spirituality, tension from their college education and experience, and adjustments to their religiosity and spirituality due to tension. See Appendix A for actual questions used.

Demographic

Religious preference measures were drawn from the General Social Survey (GSS). GSS is a national survey conducted every two years in the United States and it contains measures for religiosity and educational attainment. Respondents were asked their religious preference, with the options of Protestant, Catholic, Jewish, None or other. There was a follow-up question for those that respond with Protestant as their religious preference, which asks if their denomination is Baptist, Methodist, Lutheran, Presbyterian, Episcopal Church, Non-denominational or other. The measure on race was modeled from the U.S. Census 2010 race question; with the exception of the Asian category, which was not broken down any further. The measure for the students' year of college was broken down

into undergraduate or graduate. Age was measured in actual years. The measurement for students' sex had the options male or female.

Dependent variables

Self-rated measures for religiousness and spirituality were separated into two questions to better measure students' levels of both religiosity and spirituality. Respondents were asked how religious they consider themselves to be and how spiritual they consider themselves to be. A four-point Likert scale was used ranging from 'very religious' (value=3) to 'not religious at all' (value=0) for the religiosity measurement and 'very spiritual' (value=3) to 'not spiritual at all' (value=0) for the spirituality measurement. To measure for cognitive dissonance, two measurements on respondents tension between their religious/spiritual beliefs and educational attainment are included, as well as measurements on their adjustments to their religious beliefs due to educational attainment. The questions ask whether the respondents have experienced any tension between their religious or spiritual beliefs and their college experience or course materials, measured through yes/no responses. Whether resolving cognitive dissonance played a role in changes in religious and/or spirituality identity can be inferred by combining the cognitive dissonance measures on tension and adjustment.

Independent variables

Four measures of campus involvement were included. Respondents were asked if they are involved in a student organization or club, and if they are involved in a fraternity or sorority. Both student organizations or clubs and Greek organization were measured

dichotomously as either a yes/no involvement. Follow-up questions to students' involvement in student organizations or clubs and Greek organizations ask if the organizations are religiously affiliated. Respondents are asked how frequently they attend college parties and how frequently they volunteer in their community. A follow-up question for students' involvement in community volunteering asks if the volunteer organization is religiously affiliated. Frequency of both college partying and community volunteering through the school were measured through a five-point Likert scale ranging from daily (college parties) or 'a few times a week' (volunteering) to 'never' (both)

Data Analysis

Data were collected and analyzed using SPSS. A t-Test was used for the dichotomous independent variables (college education and college experience) and the dependent variables (self-rated religiosity and spirituality) for the first hypothesis. A correlation analysis was used to assess the relationship between partying and volunteerism, and self-rated religiosity and spirituality. A crosstabulation was used to examine the relationship between religiosity and spirituality among students for the second hypothesis. To explore cognitive dissonance among students, crosstabulations were used for college education and experience, and religiosity and spirituality. A Chi Square test was then used to test for statistical significance.

Results

Sample

The sample consisted of 82 males (33.6%) and 162 females (66.4%). The ages ranged from 18 to 44 ($\bar{x} = 21.21$). While the majority of the respondents were white (71.1%), the sample also consisted of Latin/Hispanic (12.8%), Black (9.5%), Asian Pacific Islander (2.9), Multiracial (2.9%) and Other (0.7%). The religious preferences of the sample consisted of Catholic (22.6%), Protestant (17.1%), Jewish (7.1%), Other (26%) and None (26.6%).

The Effects of Higher Education and College Experience of Students' Religiosity and Spirituality

The measure for students' college year was made dichotomous for the t-Test by collapsing the upperclassmen and graduates into one category and underclassmen comprising the other category. The t-Test results are shown in Table 1. Neither higher educational attainment ($p = .435$ and $p = .961$ respectfully), nor student organizations ($p = .117$ and $p = .475$ respectfully) yielded any significant relationship with students' self-rated religiosity or spirituality. Students involved in Greek organizations reported a slightly higher level of spirituality ($\bar{x} = 1.923$, $p \leq .05$) than those not involved ($\bar{x} = 1.639$, $p \leq .05$). In support of the first hypothesis, a significant relationship between Greek organizations and students' subjective spirituality emerged. A relationship between Greek organization and students' subjective religiosity also emerged, but the relationship was not significant ($p = .063$). Table 2 shows that the correlations test for college experience measuring both

partying and volunteering against students' self-rated religiosity and spirituality also did not yield a significant relationship.

Table 1
t-Tests of College Education and Experience, and Religiosity and Spirituality

		<u>Religiosity</u>	<u>Spirituality</u>
<u>Class Level</u>			
	Lower	1.209 (1.024)	1.6 (1.006)
	Upper	1.106 (1.04)	1.8 (.111)
<u>Student Organization</u>			
	Involved	1.252 (1.068)	1.756 (1.003)
	Not Involved	1.047 (.991)	1.667 (.972)
<u>Greek Organization</u>			
	Involved	1.354 (.975) †	1.923 (.924) *
	Not Involved	1.076 (1.048) †	1.639 (1.001) *

Note. † = $p \leq .10$, * = $p \leq .05$, ** = $p \leq .01$

Table 2
Correlation of College Experience, and Religiosity and Spirituality

	<u>College Experience</u>	
	<u>Partying</u>	<u>Volunteering</u>
Religiosity	0.105	0.383
Spirituality	0.184	0.111

Note. * = $p \leq .05$, ** = $p \leq .01$

Spiritual, But Not Religious

To explore the frequency distribution of students' subjective spirituality and religiosity, a crosstabulation was analyzed. Following the example by Zhai et al. (2008) in their study on young adults and the impact of divorce on their religious and spiritual identities, a four-point fold typology of religiosity and spirituality is constructed. The four categories for students' religious and spiritual identities are (1) Religious And Spiritual

(39.6%), (2) Religious, But Not Spiritual (3.2%), (3) Spiritual, But Not Religious (23.2%) and (4) Not Spiritual Or Religious (34%). In support of the second hypothesis, a small proportion of students identified themselves as more spiritual than religious, or ‘spiritual, but not religious.’ The percentage of ‘spiritual, but not religious’ was also slightly higher than those reported by previous studies. There was also a high frequency of respondents that identified as ‘not religious at all’ (37.8%). A significance level was not established due to very low frequency (3.2%) in the Religious, But Not Spiritual category.

Table 3
Crosstabulation of Subjective Religiosity and Subjective Spirituality

	Spiritual	Not Spiritual	Total
Religious	39.6%	3.2%	57.2%
Not Religious	23.2%	34%	42.8%
Total	37.2%	62.8%	100%

Adjusting Religious and/or Spiritual Beliefs Due to Cognitive Dissonance

Table 4 shows the crosstabulations between experiencing tension from college education and adjusting one’s subjective religiosity and/or spirituality. Table 5 shows crosstabulations between experiencing tension from the college experience and adjusting one’s subjective religiosity and/or spirituality. Both the total and the rows percentage are presented. A significant relationship ($p \leq .05$) was established for adjustments to spiritual beliefs due to tension from college experience. The third hypothesis was partially supported. Just over 10% of the students reported experiencing tension from college experience and adjusting their spiritual beliefs. Also, of the students that adjusted their spiritual beliefs, 38.5% reported doing so because of tension from college experience.

Table 4**Crosstabulation of Tension Between Education, and Religious and Spiritual Beliefs**

		Tension from College Education		Total
		Yes	No	
Adjustment Religious Beliefs				
	Yes	4.9% / 35%	9.1% / 64.7%	14% / 100%
	No	18.5% / 21.5%	67.5% / 78.5%	86% / 100%
Total		23.5%	76.5%	100%
Adjustment Spiritual Beliefs				
	Yes	6.1% / 26%	17.2% / 73.7%	26.6% / 100%
	No	11.1% / 14.4%	65.2% / 85.0%	73.4% / 100%
Total		16.8%	83.2%	100.0%

Table 5**Crosstabulation of Tension Between Experience, and Religious and Spiritual Beliefs**

		Tension from College Experience		Total
		Yes	No	
Adjustment Religious Beliefs				
	Yes	9.0% / 33.8%	17.6% / 66.2%	26.6% / 100.0%
	No	7.8% / 10.6%	65.6% / 89.4%	73.4% / 100.0%
Total		16.8%	83.2%	100.0%
$\chi^2 = 12.054$				
Adjustment Spiritual Beliefs				
	Yes	10.2% / 38.5%	16.4% / 61.5%	26.6% / 100.0%
	No	12.7% / 17.3%	60.7% / 82.7%	73.4% / 100.0%
Total		23.0%	77.0%	100.0%
$\chi^2 = 18.409,$ $p \leq .05$				

Discussion

While the findings report that college experience, particularly Greek organizations, had an effect on students' religious and spiritual identities, the results reveal that higher educational attainment had no strong effect. This aligns partly with Clydesdale's (2007) research of 1st year students. Clydesdale argues that students place their religious identities in a "lockbox." In this case, their religious identities can go unchallenged by any contradictory course material students may encounter. In addition, students do not seek to challenge their own personal beliefs during their college years since these parts of their identities are locked away, only to be opened after graduation. If this is the case, it may explain both the non-relationship between higher educational attainment and students' religiosity and spirituality and the lack of tension between the two. It may also just be simply that students do not find their course material to conflict with any of their religious doctrine.

An unexpected result was that involvement in Greek organizations actually leads to a modest increase in students' subjective spirituality. The Greek organizations that students were involved in were almost entirely non-religion (93.8%). So then, the results indicate that participation in predominantly secular Greek organizations lead to minor spiritual increase. Previous research revealed that higher educational attainment can lead to spiritual increase (Lee 2002; Brant, Yun and Yusano 2003), but Greek organization affiliation was not measured. Further research may want to explore the relationship Greek organizations have on students' spirituality and how its involvement can lead to an increase in spirituality.

Some limitations of this research are worth noting. The sample of students was drawn exclusively from the Central Florida area, so the sample may not be representative of the general college population. Also, college majors were not measured. While some literature argues that college majors show no relationship with students' religiousness (Reimer 2010), some majors may still draw in more students of one religious preference or level of religiosity over another (Reimer 2010) and these factors would not be noted. This would be a factor if some majors were more predominant in the sample than others and this could not be ascertained since a measure was not included. The online surveys were distributed by professors of diverse disciplines and through students from diverse student organizations. College students in general were the focus, not students of different majors, so the exclusion of college major measures should not be an issue, but rather simply worth noting. Also, the direction of spiritual adjustment for students that experienced tension from their college experience was not explored in this research, which future research may want to explore.

Future research should look at how network closure and normative deviance affect students' religiosity and spirituality, as well as neutralizing cognitive dissonance. These factors were beyond the scope of this research model, but future research may benefit from exploring any effects it may have. If students do place their religious identities in a "lockbox," as Clydesdale argues, then looking at any long-term effects higher educational attainment and college experiences have on students may be beneficial. After students graduate and reintegrate their religious identities that were stowed away more affective elements from their college experiences may emerge.

In conclusion, higher educational attainment had no effect on students' spiritual or religious identity, whereas involvement in Greek organizations resulted in a minor increase in subjective spirituality. A small proportion (23.2%) of students identify as 'spiritual, but not religious, a slightly larger proportion than previous studies. Spiritual adjustment occurred after experiencing tension between their spiritual identity and their college experience in a small proportion of students (10.2%). Further research may wish to explore these effects well after students graduate.

APPENDIX A: SURVEY ITEMS

To participate in the survey, you must be 18 years of age or older. The survey is voluntary and entirely anonymous. Please mark the box that best answers the question.

1. What is your current year of college?
 - 1st – 2nd Year
 - 3rd-4th Year
 - 5th+ Year

2. Are you involved in any student organizations or clubs, not including fraternities or sororities?
 - Yes
 - No

3. If yes, is your student organization or club religiously affiliated?
 - Yes
 - No

4. Are you a member of a fraternity or sorority?
 - Yes
 - No

5. If yes, is your fraternity or sorority religiously affiliated?
 - Yes
 - No

6. In the past year, on average, how frequently did you attend college parties?
 - Daily
 - A few times a week
 - A few times a month
 - A few times a year
 - Never

7. How frequently do you volunteer in your community through your school, or school related activities, that is **not** through a religiously affiliated organization?
 - A few times a week
 - Once a week
 - A few times a month
 - A few times a year
 - Never

8. How frequently do you volunteer in you community through your school, or school related activities, that **is** through a religiously affiliated organization?

- A few times a week
- Once a week
- A few times a month
- A few times a year
- Never

9. What is your religious preference?

- Protestant
- Catholic
- Jewish
- None
- Other

10. If your preference is Protestant, which specific denomination is that, if any?

- Baptist
- Methodist
- Lutheran
- Presbyterian
- Episcopal Church
- Non-denominational
- Other _____

11. How religious do you currently consider yourself to be?

- Very religious
- Somewhat religious
- Not very religious
- Not religious at all

12. How spiritual do you currently consider yourself to be?

- Very spiritual
- Somewhat spiritual
- Not very spiritual
- Not spiritual at all

13. Have you experienced any tension between your religious or spiritual beliefs and your college experience?

- Yes
- No

14. Have you experienced any tension between your religious or spiritual beliefs and the materials presented through your courses?

- Yes
- No

15. Have you adjusted your **religious** beliefs, in part, due to **college experiences**?

- Yes
- No

16. Have you adjusted your **religious** beliefs, in part, due to **college education**?

- Yes
- No

17. Have you adjusted your **spirituality**, in part, due to **college experiences**?

- Yes
- No

18. Have you adjusted your **spirituality**, in part, due to **college education**?

- Yes
- No

19. Sex

- Male
- Female

20. Age: _____

21. What is your racial/ethnic background?

- White/Caucasian
- Black/African American
- Latin/Hispanic
- Asian/Pacific Islander
- Native America/American Indian
- Multiracial
- Other _____

APPENDIX B: IRB APPROVAL LETTER



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1
FWA00000351, IRB00001138**

To: **Amy M. Donley, PhD and Co-PI: Shawn E. Gauden**

Date: **January 13, 2012**

Dear Researcher:

On 1/13/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: UCF Initial Review Submission Form
Project Title: Sacred Changes on Campus: The Effects of Higher Educational Experience on Religiosity and Spirituality, and Resolving Cognitive Dissonance
Investigator: Amy M. Donley, PhD
IRB Number: SBE-11-08061
Funding Agency: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Janice Turchin on 01/13/2012 11:29:58 AM EST

A handwritten signature in black ink that reads 'Janice Turchin'.

IRB Coordinator

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