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Religiosity and Spirituality According to the Laity

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Abstract

Religiosity and Spirituality According to the Laity

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Research has assessed various definitions of religiosity and spirituality. The present study reviewed past research on these constructs to allow for more accurate definitions. This research suggested that there were three groups, each with a unique role in defining these constructs. In addition, past research revealed three dichotomies within the research literature. These dichotomies concern these constructs as unitary or distinct, the role of God and Higher Powers, and the issue of states and traits. Participants completed a series of qualitative and quantitative questions to assess these constructs as well as these three dichotomies. The present study revealed over 4000 idea units. In addition, the majority of laity viewed these constructs as distinct. Higher Power was viewed as essential to both Religiosity and Spirituality. Religiosity and Spirituality were both viewed as states. The implications of 3GH were discussed.

Keywords: Religiosity, Spirituality, Psychometrics, Laity, Qualitative

Table of Contents

List of Tables	v
List of Figures	vi
Introduction	1
Method	20
Results	26
Discussion	31
Appendix A: Qualitative Questions	59
Appendix B: Quantitative Questions	60
Appendix C: IRB Approval Form	62
Appendix D: Informed Consent	64
Appendix E: Debriefing Form	66
References	90
CV	104

List of Tables

Table 1: Table of Dependent t Tests Results from the Training Sample for the Linguistic Inquiry Word Count Variables	67
Table 2: Table of Dependent t Tests Results from the Verification Sample for the Linguistic Inquiry Word Count Variables	77

List of Figures

Figure 1: Pie Graph of Participant Religious Affiliations within the Present Study	87
Figure 2: Mean Scores of all Dichotomy 2 Variables	88
Figure 3: Mean Scores of all Dichotomy 3 Variables	89

Religiosity and Spirituality According to the Laity

Psychologists have struggled with conceptualizing religiosity and spirituality. Regrettably, research has yet to propose a universal definition as to what constitutes religiosity; neither was there a proposed universal definition of what constitutes spirituality. In the face of this ambiguity, the conclusions of research studies have been questioned.

Given that studies assess the relationship between religiosity, spirituality and other variables, such as deviance and health, it would be prudent for researchers to understand what these constructs mean as well as the distinction between them. It was therefore the purpose of the present study to better understand the constructs of religiosity and spirituality, and to show how the two constructs differed from one another. The present study assessed how researchers have attempted to define and to measure these terms as well as the problems which arose from said definitions and measuring instruments. In addition, the present study proposed a new system for defining these constructs. Further, the present study focused on one aspect of this system, the laity.

Theoretical Definitions of Religiosity and Spirituality

Before considering any operational definition of these constructs, it may be prudent to first investigate their theoretical foundations. In previous literature, numerous definitions of religiosity and spirituality have been proposed. For example, Cohen, Holley, Wengel, and Katzman (2012), assessed religiosity and spirituality from a nursing perspective. In a review of the literature, the authors surveyed multiple different theoretical definitions of religiosity and spirituality. The authors elected to use the definition of religiosity and spirituality as proposed by the Physician Data Query (PDQ). PDQ is a database formed by the National Cancer Institute which contains information on

numerous different constructs relating to cancer research, constructs such as religiosity and spirituality. Within this database, religiosity was defined as “a specific set of beliefs and practices, usually within an organized religion” (p. 804). In contrast, spirituality was defined as, “an individual’s sense of peace, purpose and connection to others, and beliefs about the meaning of life” (p. 804; Cohen et al., 2012). In a reply to the work of Cohen et al., Yablonsky (2013), commented on the Daily Spiritual Experience Scale (DSES) and its applicability to clinicians and nurses. Yablonsky however offered a different definition of these constructs as compared to the definition proposed by PDQ. In regards to religiosity, Yablonsky defined religiosity as “self-identification with a group of people who share a common set of beliefs and practices” (p. 1222). In contrast, spirituality was defined as “personal life experiences of the transcendent” (p. 1222; Yablonsky, 2013).

These definitions present many limitations and inconsistencies. A significant limitation of these definitions was their inability to agree on and measure an operational definition. For instance, when assessing the definition of spirituality as proposed by the PDQ, it would be difficult to measure tranquility, life purpose, connections and beliefs. This definition did not specify if each of these terms equally impact one’s spirituality. Further, concepts such as tranquility may be very difficult to measure. Similarly, Yablonsky’s definition of religiosity focused on group membership. This definition however does not allow for any in depth analysis of the term. Group membership under this definition would be considered a binary concept, where an individual either belongs to a group or does not, without any degrees of group membership. If however, this definition did imply that levels of group membership were possible, the definition offered no insight into how to determine what these levels of group membership were. The

present study elaborated the impact of various different theoretical definitions and operational definitions (Cohen et al., 2012; Yablonsky, 2013).

In addition, the definitions of religiosity and spirituality that researchers have employed were not consistent. Among religiosity for example, Cochran and Beeghley (2013), defined religiosity as "the extent to which people are committed to and involved in their faith group" (p. 48). In contrast Ellor and McGregor (2011) defined religiosity as a reflection of "the amount of importance of religion in life of a person" (p. 276).

Cochran and Beeghley suggested religiosity to be behavioral whereas Ellor and McGregor suggested religiosity to be cognitive. It was observed, that these definitions were not in agreement with one another. According to Cochran and Beeghley, a person is religious if they act and believe as a religious person does. Cochran and Beeghley's definition however, may not apply to young children who are brought to churches at an early age. Many of these children act and behave in a religious manner, yet the degree of importance of religion may be suggested to be low. As such, it is difficult to say whether or not this person is religious. Similarly, the application of Ellor and McGregor's definition was equally problematic. According to Ellor and McGregor, a person is religious if religion is important to them. This definition however, did not require the person to act in accordance with their religion. As another example, it is possible for a person to say that religion is important to them but act or behave in a manner inconsistent with their religion. According to Ellor and McGregor, this person is religious despite not acting in a religious manner. This person however does not behave in accordance with their specific religion. As such it is difficult to determine whether or not this person is

religious. It may therefore be suggested that these definitions were in agreement with one another (Cochran & Beeghley, 2013; Ellor & McGregor, 2011).

A similar trend was seen in spirituality that may make it difficult to validly define this construct on a theoretical level. For instance, Kremer and Ironson (2014) defined spirituality as “the connection to a higher presence” (p. 144). In contrast, Sessanna, Finnell, Underhill, Chang, and Peng (2010), have defined as “whatever or whoever gives ultimate meaning and purpose in life, that invites particular ways of being in the world in relation to others, oneself and the universe” (p. 1691). These theoretical definitions were not in agreement with one another. Kremer and Ironson viewed spirituality as a connection whereas Sessanna and colleagues viewed spirituality a sense of purpose. It was observed that these definitions were not in agreement with one another. According to Kremer and Ironson, a person is spiritual if they are connected to something greater than themselves. Kremer and Ironson’s definition would apply to an individual who meditates in private for the purpose of understanding the nature of the universe. According to Kremer and Ironson, this person would be spiritual. However, according to Sessanna and colleagues as this person is socially isolated from others, they may not display any sense of purpose or self-actualization. According to Sessanna and colleagues definition, this person would not be spiritual as they are only displaying a connection to the transcendent without any observable impact on their behavior. As such it is difficult to determine whether or not this person is spiritual. Similarly, the application of Sessanna and colleagues definition is equally problematic. According to Sessanna and colleagues, a person is spiritual if they have a sense of purpose or fulfilment in their lives. This definition does not necessarily require a person to believe in a God. As an example,

consider a person who is actively trying to live a personal life independent of any supernatural entities. According to Sessanna and colleagues, this person would be spiritual given that they are concerned with living a purposeful and meaningful life. According to Kremer and Ironson, as this person has no connection to a Higher Power, this person would not be spiritual. As such, it is difficult to determine whether or not this person is spiritual (Sessanna et al., 2010; Kremner & Ironson, 2014).

Operational Definitions of Religiosity and Spirituality

As evidenced, the theoretical definitions of religiosity were not in agreement with one another. Similarly, the theoretical definitions of spirituality were not in agreement with one another. As such, this has led to a variety of operational definitions which contributed to inconsistent findings. Research assessing the relationship between religiosity and deviance using the operational definition of church attendance is a prime example of this. In one study, Tittle and Welch (1983) assessed the relationship between religiosity and acts of deviance. Participants completed survey material assessing both history and frequency of deviant behavior. Religiosity was assessed using a single item measure of church attendance. Results suggested that religiosity was associated with lower levels of deviance among religious individuals under certain conditions such as such as decreased social integration (Tittle & Welch, 1983). In response to the work of Tittle and Welch, Laner (1985) assessed the relationship between religiosity and a specific form of deviance (i.e. dating violence). Multiple religious and nonreligious individuals completed a series of surveys which assessed dating history, dating violence and religiosity. Religiosity was assessed using a single item self-report measure of the importance religion. Results were opposite to the findings of Tittle and Welch.

Religiosity was suggested to limit acts of deviance in certain conditions, for instance in situations of increased social integration. It was suggested that this inconsistent finding may be due in part to a different measure of religiosity. Church attendance does not adequately represent certain aspects of religiosity including but not limited to the daily effects of religion and religious beliefs on the individual (Laner, 1985). As thus observed, church attendance as a sole measure of religiosity is not the most accurate measure of religiosity. Similarly, a self-report measure does not indicate any conformity to religious behavior or doctrine. As thus observed, self-report measures as a sole measure of religiosity are not the most accurate measures of religiosity. Given the evidence above, it was clear that the definitions of religiosity employed were not consistent with one another. The present study suggested that the use of these improper operational definitions of religiosity has contributed to the discrepancies observed above (Tittle & Welch, 1983; Laner, 1985).

Similar to religiosity, researchers also disagreed upon the operational definitions of spirituality. These inconsistent operational definitions may have contributed to the inconsistent findings observed in research assessing spirituality. For instance, Brelsford, Luquis, and Murray-Swank (2011) assessed the relationship between religiosity, spirituality, gender, and sexual attitudes among college students. Participants completed a series of questionnaires assessing spirituality, religiosity, and sexual attitudes. Spirituality was assessed through the use of the Brief Multidimensional Measurement of Religiousness and Spirituality (BMMRS) other scales. The BMMRS assessed spirituality in terms of spiritual experiences. The Spiritual Disclosure Scale (SDS) assessed spirituality in terms of a participants willingness to discuss spirituality with others.

Results suggest that, while religiosity was associated with lower levels of sexually permissive attitudes, said attitudes were associated with lower levels of spirituality (Brelsford, Luquis, & Murray-Swank, 2011). In another study Burris, Smith, and Carlson (2009), assessed the impact of both religiosity and spirituality on sexual behaviors. Participants completed a series of questionnaires assessing religiosity, spirituality, sexual behavior and other factors. Spirituality was assessed using the Spiritual Transcendence Scale (STS). The STS assessed spirituality in terms of one's connection to something greater than the self. Results suggested that spirituality has a positive impact on the frequency and number of sexual partners for women (Burris, Smith, & Carlson, 2009). As seen above, the measures of spirituality used were not consistent with one another. While Brelsford and colleagues adopted a more broad understanding of spirituality, several elements were not assessed such as a nontheistic view of spirituality. Similarly, while Burris and colleagues viewed spirituality as a connection to something greater than the self, other aspects of spirituality were not assessed such as metaphysical experiences. Both measures of spirituality assessed part of the construct while failing to assess other parts of the construct. Given the evidence above, it was clear that the definitions of spirituality employed were not consistent with one another. The present study suggested that the use of this incomplete operational definition of spirituality may be suggested to contribute to the discrepancies observed above (Brelsford, Luquis, & Murray-Swank, 2011; Burris, Smith, & Carlson, 2009).

Formulating a Theoretical Definition of Religiosity and Spirituality

Based upon the above evidence, these inconsistent definitions of religiosity and spirituality have been frequently observed within the research literature. Past researchers

have employed numerous different methods for composing more accurate theoretical and operational definitions of these constructs. For instance, Hilty and Morgan (1985) used a cross-validation method to create a measure of religiosity. In this study, three separate samples, consisting of Methodist Churches as well as samples from previous studies completed the measuring instrument. Following this, both exploratory and confirmatory factor analyses were conducted. This process resulted in the Religious Involvement Inventory (RII). Hilty and Morgan suggested that religiosity was a combination of: personal faith, intolerance of ambiguity, orthodoxy, social conscience, life purpose, and church involvement. This method however was not successful in developing a more accurate operational definition as the results suggested a significant deviation from the proposed model. While religiosity was composed of a series of different factors, the hypothesized factors were not the ones which manifested (Hilty & Morgan, 1985).

In another study Faulkner and DeJong (1966) attempted to construct a measure of religiosity, the Five Dimensional Scale of Religiosity (FDSR), based upon an existing structure proposed by Glock. Glock suggested that religiosity was composed of five separate dimensions: ideology, rituality, experiential, intellectual and consequential. Based upon these dimensions, items from various other measures were compiled and subsequently tested by interviewing college students. Following this pretest, the measure was revised and administered again. Results suggested that the present measure successfully assessed the five various aspects of religiosity as hypothesized by Glock. This method however was also unsuccessful as the experiential and consequential domains were highly correlated to the point these factors could be suggested to be equivalent (Faulkner & DeJong, 1966).

Similar methods have been employed when attempting to construct a measure of spirituality. For instance, Baily and Roussiau (2010) assessed the cross-cultural applicability of the DSES. The DSES was assessed using exploratory and confirmatory factor analyses across two studies. The DSES displayed adequate reliability and predictive validity. While this measure did have adequate psychometric properties, this measure was a theistic measure of spirituality (Baily & Roussiau, 2010). As elaborated upon later, it was unclear whether or not spirituality required God. Most researchers suggested that spirituality can exist in a nontheistic manner (Ellor & McGregor, 2011; Sessanna et al, 2011). While this measure may be acceptable in accessing some forms of spirituality, it may fail to accurately access other forms of spirituality.

A Three Group Hypothesis

The present study suggested a different method for devising a universal theoretical definition of religiosity and spirituality which in subsequent studies may be used to create a more accurate operational definition of these constructs. For the purposes of the present study, this new method will be referred to as the Three Group Hypothesis (3GH). 3GH is a theoretical framework for conceptualizing religiosity and spirituality resulting in psychometric instruments which operate across religious affiliations. The foundation of 3GH was discussed later. Past researchers have suggested that there were different groups each of which possesses their own unique definitions of religiosity and spirituality (la Cour & Götke, 2012; Skrzypińska & Chudzik, 2012; Gunawardana, 1979). More specifically, religiosity has been defined by the laity (Gunawardana, 1979; Skrzypińska & Chudzik, 2012), the religious official (i.e. priest, rabbis, imams; Fowler, 1997; Morgan 2010) and by researchers (Stratta, Capanna,

Riccardi, Perugi, Toni, Dell'Osso, & Rossi, 2012; Farrington, Holgate, McIntyre, & Bulsara, 2014). Similarly, spirituality has been defined by the laity (Conant, 1991; Tiew, Creedy, & Chan, 2013) the religious official (Rahlby, 2012; Silberstein, 1987) and the researcher (Seidlitz, Abernethy, Duberstein, Evinger, Chang, & Lewis, 2002; Hall & Edwards, 1996).

The Layperson

Unfortunately, within these groups, there is significant deviation as to what these constructs are. It may be suggested that a universal definition of these constructs may be proposed only after the prior three definitions have been reconciled. It was the purpose of the present study to reconcile the definitions of religiosity and spirituality according to the layperson by identifying similarities and differences among members of this group.

Among laypersons however, there is frequently disagreement as to what religiosity and what spirituality are. For example, Cantini (2012) observed Muslim college students from both an affluent and middle class economic standing in Jordan in the hopes of identifying their religiosity. Cantini observed numerous differences between these two socio-economic statuses despite both being Muslim. While the beliefs of these groups were very similar, the practices manifested very differently. These groups differed in numerous aspects such as: the essential aspects of a Muslim, rules about gender division, dress code as well as relating to other Muslims (Cantini, 2012). In another study, Bunnang (1973) assessed Buddhist laypersons in Thai society through the use of historical and archival data. The layperson was to refrain from: stealing, premarital sex, lying, drinking and killing, to the best of their abilities as circumstances

allow. Furthermore, a religious layperson was expected to contribute to the Buddhist community (Bunnag, 1973).

These definitions of religiosity, however, were not in agreement with one another. What constitutes religiosity for a Muslim layperson in Jordan was not the same as what constituted religiosity for a Buddhist layperson in Thailand. A Muslim layperson was religious if they abide by certain societal rules yet did not necessarily have to conform to what their religious leaders view as religious. In contrast, a Buddhist layperson was religious if they abide by certain individual rules and were in agreement with the religious leaders.

A similar trend emerges when assessing spirituality according to the layperson. For instance, Tiew, Creedy, and Chan (2012) assessed the views of a specific lay population (i.e. nurses), and their views on spirituality and spiritual health care. Nurses in various universities throughout Singapore were given the Spiritual Care Giving Scale which assessed their views of spirituality and spiritual health care. Results suggested that the nurses viewed spirituality as individualistic and developmental, in nature (Tiew, Creedy, & Chan, 2012). In a similar study, Ashton (1992), surveyed historical literature and evaluated spirituality among Jewish laypersons. Ashton noted that Jewish laywomen used religious stories as the basis for constructing their own view of spirituality. This view of spirituality was seen as theistic, relating to religion, and individualistic (Ashton, 1992). While there were some similarities between these definitions, there were also discrepancies among these definitions. Ashton suggested that spirituality had its origins in religion while Tiew and colleagues suggested spirituality to be a separate construct from religiosity. As such, Ashton's definition of spirituality incorporated a connection

specifically to a Higher Power as opposed to nature (Tiew, Creedy & Chan, 2012; Ashton, 1992).

It has therefore been observed that there is some degree of disagreement among certain lay populations. Some studies have attempted to reconcile these differences (la Cour & Götke, 2012, Fow, 2010). For example, Schlehofer, Omoto, and Adelman (2008) assessed religiosity and spirituality among older adults. Semi-structured interviews were conducted to determine the meaning of these constructs. Participants were asked to define religiousness and spirituality, the impact these variables have on the individual's life, as well as other aspects of these constructs. The transcripts were coded based upon which aspects of life related to the search for the sacred (e.g. personal beliefs, self-discovery, life meaning, etc.) as well as aspects related to the search for the non-sacred (e.g. positive affect, self-esteem, etc.). Results suggest that spirituality was a more abstract construct as compared to religiosity (Schlehofer, Omoto, & Adelman, 2008).

There were however limitations to the study conducted by Schlehofer and colleagues. Primarily, Schlehofer and colleagues analyzed a very specific population: elderly individuals who were either in a religious retirement community and a non-religious retirement community. These communities did not include several key populations which are relevant to understanding these constructs. These populations include younger individuals and other geographic regions. As such, if the authors had elected to propose a new definition of religiosity and spirituality, such a definition would not adequately account for the entire population.

Another important limitation to the study conducted by Schlehofer and colleagues was that the study operated on an existing theoretical framework developed by Hill,

Pargament, Hood, McCullough, Swyers, Larson, and Zinnbauer (2000), and by Zinnbauer, Pargament, Cole, Rye, Butter, Belavich, Hipp, Scott, and Kadar (1997).

These existing frameworks lead to the use of testing hypotheses regarding institution and non-institutional behaviors, search for the sacred and other theistic ideas. These hypotheses however rested on the assumption that the past theoretical framework was accurate. The above theoretical frameworks are debatably accurate and not exhaustive (Schlehofer, Omoto, & Adelman, 2008; Hill et al., 2000, Zinnbauer et al., 1997)

Three Dichotomies

Additionally, there are, however, numerous points of discrepancy within these terms. Of the various discrepancies within these constructs, three were investigated as these discrepancies were believed to be central to the view of these constructs. The first dichotomy assessed whether or not religiosity and spirituality are the same construct. The second dichotomy assessed whether or not religiosity and spirituality necessitate god. The third dichotomy assessed whether or not religiosity and spirituality are states or traits.

One Construct View

Primarily, it is unclear whether or not religiosity and spirituality are different constructs or the same construct. For example, Capanna, Stratta, Collazzoni, and Rossi (2013) assessed the cross cultural applicability of the BMMRS, specifically in an Italian culture. Participants completed the measuring instrument. Results suggested that the BMMRS was a valid measure of religiosity across cultures. In regards to measuring religiosity and spirituality, Capanna and colleagues, noted several problems with measuring these constructs. Primarily, it was unclear whether or not spirituality and

religiosity are differing constructs or the same construct though no clear hypothesis was stated (Capanna et al, 2007).

In another study, Good and Willoughby (2013) assessed the impact of both spirituality and religiosity on adolescent development. Students from a Canadian High school were asked questions about their religiosity and spirituality as well as questions relating to their personal development. The questions were administered longitudinally in both 11th and 12th grade. Results suggested that religiosity and spirituality promote adolescent adjustment yet in different ways. This suggested that religiosity and spirituality are separate constructs. In contrast to past research, Good and Willoughby suggested that religiosity and spirituality were not separate constructs but rather one construct with two levels to it: a religiosity level and a spirituality level. The structural equation modeling however called to question this theory. The structural equation model revealed that a two factor conception was superior to a one factor conception (Good & Willoughby, 2013). While Good and Willoughby believed that these constructs were synonymous, the results of the study suggested that religiosity and spirituality were better thought of as independent constructs.

Given that the majority of research suggests that religiosity and spirituality are separate constructs, it was therefore predicted that regardless of any demographic characteristics, all groups will view religiosity and spirituality to be separate constructs.

God and Higher Powers

A second discrepancy within the research literature is whether or not religiosity or spirituality required the belief in a deity, specifically God. Looking first at religiosity, most definitions and measures explicitly referenced God. For instance, Maranell (1974)

designed the Religious Attitudes Scale (RAS). One of the subscales of this measure was the theism scale. All 12 items of the theism scale referenced God. Thus, God may be suggested to be a requirement for religiosity (Maranell, 1974). Similarly, DeJong, Faulkner, and Warland (1976), developed the Cross Cultural Dimension of Religiosity (CCDR) based off of the FDSR. Several items in the belief dimension referenced God. Thus God may be suggested to be a requirement for religiosity (DeJong, Faulkner, & Warland, 1976).

Looking at spirituality however, many definitions and measures referenced a deity while others did not. For instance, Seidlitz and colleagues (2002) designed the Spiritual Transcendence Index (STI). Several of the items on this index explicitly referred to God (Seidlitz et al., 2002). Similarly, Hall and Edwards (1996) designed the Spiritual Assessment Inventory (SAI). In this measure, several items on all the various subscales explicitly referred to God (Hall & Edwards, 1996). As such, in some instances, spirituality may necessitate a God.

However not every measure of spirituality refers to God. Among measures of spirituality which do not reference a deity, these measures may rather reference the Sacred. The Sacred has been defined as “a person, an object, a principle, or a concept that transcends the self” (p. 64; Hill et al., 2000). Using this definition, the sacred may or may not encompass a deity. This was seen in several measures of spirituality where a reference to the sacred was made, but not necessarily a reference to an overarching deity. For instance, Greenfield, Hallgren, Venner, Hagler, Simmons, Sheche, and Lupee (2015) reported on the Native American Spirituality Scale (NASS). Item 4 of this scale reads referenced the “Creator” and “Ancestors” (p. 133). While the Creator might have

referred to God, an ancestor would not have been considered God. An ancestor would be considered something that was Sacred. As such, Native American Spirituality may be suggested to not necessarily require God (Greenfield et al., 2015). It appears that the majority of spirituality measures assessed a theistic view of spirituality. This however was not true of every measure of spirituality.

Several studies assessing both spirituality and religiosity have further suggested that spirituality does not necessitate a deity. For instance, Skrzypińska and Chudzik (2012) conducted a study on the differences between how laywomen and nuns conceptualize spirituality. In this study, nuns and laywomen were given a series of questionnaires assessing spirituality, personality traits and other factors. Results suggested that nuns hold a more theistic view of spirituality than laywomen (Skrzypińska & Chudzik, 2012). In another study, la Cour and Götke (2012) assessed views of spirituality according to laypersons and theologians within a Danish culture. Participants were asked to associate words with spirituality. These words were then factor analyzed revealing a series of overarching themes. Results suggested that the theologian group and the lay group hold fundamentally different views of spirituality. More specifically, theologians ascribed to a theistic view of spirituality whereas laity did not (la Cour & Götke, 2012). As such, it may be suggested that the laity will view spirituality as not requiring a deity.

It was therefore predicted that the laity would view religiosity as requiring a God. This was suggested to be true regardless of any demographic factors. In contrast, it was hypothesized that spiritual would necessitate a Higher Power.

States and Traits

A third discrepancy within the research literature is whether or not religiosity and spirituality are states or traits. In many studies, religiosity was believed to a trait. For instance, a study conducted by Vasilenko and Lefkowitz (2014) assessed the impact of religiosity on sexual behavior. College participants completed a series of surveys assessed religiosity and sexual behaviors. Results suggested that prior to sexual intercourse, college students displayed similar levels of religiosity. However, following sexual intercourse, there was a decline in religiosity followed by an eventually return to baseline (Vasilenko & Lefkowitz, 2014). As religiosity was suggested to gravitate around a natural baseline, it is possible that religiosity may be better viewed as a trait rather than a state. In a similar study, Bott and Duffy (2015) assessed the impact of several predictors, including intrinsic religious orientation, on career calling in a longitudinal study. Participants completed a series of surveys which assessed intrinsic religiosity and other factors believed to be related to career calling. Participants were surveyed, then received a follow up survey six months later. Result suggested that intrinsic religious orientation did not change across testing sessions (Bott & Duffy, 2015). As religious orientation was relatively constant in participants, it may be suggested that religiosity is better conceptualized as a trait than as a state.

However, there is also evidence that religiosity is better viewed as a state. For instance, Durante, Rae, and Griskevicius (2013) assessed the impact of ovulation on religion and political views. In the first study, female participants completed a series of surveys assessing relationship status, ovulation, and religiosity. Results suggested that women in relationships were more religious when ovulating then when not ovulating. In

contrast, single women were more religious when not ovulating than when ovulating. Both interactions reported a moderate effect size (Durante, Rae, & Griskevicius, 2013). As ovulation may be suggested to have a critical impact on religiosity, it is possible that religiosity may be better viewed as a state than as a trait. In a similar study, Shenhav, Rand, and Green (2012), assessed the impact of cognitive style on religiosity. In the third study, participants were primed with an intuitive thinking style and were tested on the degree to which they believed in God. Results suggested that participants primed with intuition reported higher levels of belief in God and were thus more religious (Shenhav, Rand, & Greene, 2012).

A similar trend emerges in spirituality. For instance, Harvey (2005) conducted a study developing and validating the State-Trait Spirituality Inventory (STSI). This measure was initially piloted, factor analyzed and revised. The final measure was a two factor instrument which assessed spirituality as both a state and a trait. As such, under some circumstances spirituality can be viewed as a state or as a trait (Harvey, 2005). Given that there were numerous different views as to whether or not religiosity and spirituality are states or traits, no hypotheses were made regarding this dichotomy.

The Present Study

The present study was an exploratory analysis of both religiosity and spirituality. The present study seeks to answer the question of what religiosity and spirituality are, as well as the distinctions between them, within the laity only. This study contained both qualitative and quantitative data. Qualitative data was used to determine general themes while the quantitative data was used to address specific discrepancies within the research literature. The present study expanded on the previous literature by attempting to analyze

qualitative data provided by participants under a new theoretical structure for conceptualizing religiousness and spirituality, 3GH. It was believed that this data was a first step towards developing a more accurate across-religions measure of religiosity and spirituality.

The purpose of the present study was to address some of these limitations by replicating and expanding upon the work of Schlehofer, Omoto, and Adelman (2008). The present study sought to explore the constructs of religiosity and spirituality without operating upon any pre-existing theoretical or operational structure. The present study sought to address religiosity and spirituality, across various ages, genders, racial ethnic groups, and religious affiliations in the hopes of finding the key idea units which would underlie the laity's view of religiosity and lay spirituality. The present study did not seek to propose a new definition as the idea units would not have appeared within a meaningful organized framework. As such, any definition proposed would be premature and flawed. Further, the present study did not address religiosity and spirituality according to researchers or religious official as these were separate groups within the 3GH.

Further, the present study also sought to reconcile the dichotomies observed in past research by determining if these discrepancies within the research literature were dichotomous in nature. These discrepancies related to religiosity and spirituality being a unitary construct, the relationship between religion spirituality and a Higher Power or God, and whether religiosity and spirituality were states or traits. In the event that these discrepancies were dichotomous, the present study sought to determine which demographics were likely to view religiosity and spirituality in a given manner. It was

predicted that the majority of individuals would view religiosity and spirituality as distinct constructs. It was predicted that religiosity would require a God while spirituality would require a Higher Power. Further, it was hypothesized that a series of demographic factors would discriminate whether religiosity and spirituality were better conceptualized as states or traits.

Method

Participants

Six hundred and sixty-nine participants attempted to participate in the present study. The sample consisted of 356 women and 176 men, 5 transgender, 2 gender unspecified, and 130 participants declined to answer. These participants were approximately 37 years old ($SD = 14.36$). Demographically based on race, participants were 417 (62.3%) Caucasian, 27 (4%) African American, 31 (4.6%) Asian American, 7 (7%) Native American or Pacific Islander, 16 (2.4%) Hispanic Latino, 12 (1.8%) multi-racial, 24 (3.6%) other, and 135 (20.2%) declined to answer. Participants were 279 (41.7%) single, 186 (27.8%) married, 8 (1.2%) separated, 59 (8.8%) divorced, 7 (1%) widowed, and 130 (19%) declined to answer. In terms of geography, participants were 97 (14.5%) Region 1 Northwest, 59 (8.8%) Region 2 Midwest, 234 (35%) Region 3 South, 108 (16.1%) Region 4 West, 35 (5.2%) not located in the United States, and 130 (19.4%) declined to answer. In regards to politics, participants were 76 (11.4%) republican, 212 (31.7%) democrat, 104 (15.5%) unaffiliated, 90 (13.5%) independent, 50 (7.5%) other, 2 (.3%) moderate, and 135 (20.2%) declined to answer. In regards to education, participants were 24 (3.6%) Doctoral Degree, 77 (11.5%) Master's Degree, 136 (20.3%) Bachelor's Degree, 80 (12%) Associates Degree, 57 (8.5%) Some college,

113 (16.9%) High School Diploma or GED, 38 (5.7%) no diploma, 11 (1.6%) Other, and 133 (19.9%) declined to answer.

With respect to religious affiliation, the sample consisted of 44 (6.6%) agnostic 55 (6.6%), 45 (6.7%) atheist, Buddhist, 55 (8.2%), 233 (34.8%) Christian, 9 (1.3%) Hindu, 51 (7.6%) Jewish, 19 (2.8%) Muslim, 28 (4.2%) other, 55 (8.2%) not religious individuals, and 130 (19.4%) participants declined to answer. For 318 (47.5%) participants, this was their first religion. For 193 (28.8%) of participants, they converted into this religion. For 158 (23.6%) participants, they did not indicate if this was their first religion, nor if they converted into this religion. On average, participants self-rated religiosity was 4.3 (SD = 2.2). On average, participants self-report spirituality was 5.5 (SD= 2.0).

Participants who were not above the age of 18 were not allowed to participate in the present study. Further, participants who were considered to be clergy or researchers were not allowed to participate in the present study. For the purpose of the present study, a clergy individual was someone who defined their primary occupation as working with a religious organization in a teaching or religious leader profession. This included but was not limited to occupations listed as Rabbi, Priest, Imam, etc. For the purpose of the present study, a researcher was someone who defined their primary occupation as working within academia in some field relating to religious studies. This included but was not limited to: Sociologist, Psychologist, Nurse, Professor of Religion, Professor of Philosophy, etc. Lastly, participants who had incomplete data were excluded from the present study. A total of 232 participants were disqualified based upon the above criteria. This is a dropout rate of approximately 34.7%.

The remaining sample consisted of 437 participants. Within this study, 337 (77.1%) participants completed both the qualitative and quantitative portions, 119 (27.2%) participants only completed the quantitative portions and 1 (.2%) participant only completed the qualitative portions of the study.

The remaining sample consisted of 292 (66.8%) women, 136 (31.3%) men, 4 (.9%) transgender and 2 (.5%) gender unspecified participants (mean age = 36.8, SD = 14.5). Demographically based on race, participants were 344 (78.7%) Caucasian, 18 (4.1%) African American, 19 (4.3%) Asian American, 6 (1.4%) Native American or Pacific Islander, 16 (3.7%) Hispanic Latino, 8 (1.8%) multi-racial, and 21 (4.8 %) participants reported other. Participants were 229 (52.4%) single, 145 (33.2%) married, 8 (1.8%) separated, 45 (10.3%) divorced, and 7 (1.6%) widowed. In terms of geography, participants were 80 (18.3%) Region 1 Northwest, 48 (11%) Region 2 Midwest, 193 (44.2%) Region 3 South, 83 (19%) Region 4 West, and 26 (5.9%) not located in the United States. More specifically, by geographic division, 26 (5.9%) participants were Division 1 New England, 0 (0%) were Division 2 Mid Atlantic 17 (3.9%) were Division 3 East North Central, 30 (6.9%) were Division 4 West North Central, 168 (38.4%) were Division 5 South Atlantic, 10 (3.3%) were Division 6 East South Central, 16 (3.7%) were Division 7 West South Central, 32 (7.3%) were Division 8 Mountain, 51 (11.7%) were Division 9 Pacific, and 25 (5.7%) were not located in the United States. By Continent, 416 (95.2%) of participants were from North America, 9 (2.1%) were from Europe, 3 (.7%) were from Asia, 3 (.7%) were from Australia.

In regards to politics, participants were 66 (15.1%) republican, 173 (39.6%) democrat, 104 (15.5%) unaffiliated, 71 (16.2%) independent, 76 (17.4%) other, and 2

(.5%) moderate. In regards to education, participants were 17 (3.9%) Doctoral Degree, 56 (12.8%) Master's Degree, 112 (25.6%) Bachelor's Degree, 69 (15.8%) Associates Degree, 43 (9.8%) Some college, 95 (21.7%) High School Diploma or GED, 32 (7.3%) no diploma, 8 (1.8%) Other, and 5 (1.1%) declined to answer.

Participant religious affiliation was presented in Figure 1. With respect to religious affiliation, the sample consisted of 36 (8.2%) Agnostic, 35 (8%) Atheist, 22 (5%) Buddhist, 193 (44.2 %) Christian, 6 (1.4%) Hindu, 46 (10.5%) Jewish, 13 (3%) Muslim, 44 (10.1%) Other, and 39 (8.9%) Nonreligious individuals.

Within Christianity, participants were 1 Anglican, 1 Apostolic, 28 Baptist, 2 Born Again, 65 Catholic, 1 Christian Mystic, 1 Ethiopian Episcopalian Church, 6 Episcopalian, 1 Evangelical, 1 Follower of Christ, 1 Foursquare, 1 Hebrew Roots, 1 Jehovah's Witness, 6 Lutheran, 15 Methodist, 5 Mormon, 42 Non-denomination, 2 Orthodox, 5, Pentecostal, 6 Presbyterian, 3 Protestant, 2 Quaker, 1 Seventh Day Adventist, 1 Spiritual Christian, 1 Unitarian, 3 United Church of Christ and 28 Unspecified. Within Judaism, participants were 2 Agnostic, 2 Ashkenazi, 2 Conservadox, 7 Conservative, 1 Moderate, 1 Orthodox, 22 Reform, 1 Secular, and 8 Unspecified. Within Islam, participants were 5 Shia, 5 Sunni, 3 Unspecified. Within Buddhism, participants were 1 Humanistic, 1 Mahayana, 7 New Kadampa, 2 Secular, 1 Theravada, 1 Tibetan, and 9 Unspecified. Within Hinduism, Participants were 1 Brahmin, 1 Hare Krishna, 1 Nepali, 1 Sri Lankan and 2 Unspecified, Among other religions, participants were 1 Asatru, 1 Baha'i, 1 Deist, 1 Jedism, 1 Kabbalah, 1 Native American Religion, 2 Pagan, 2 Pantheist, 2 Sikhism, 1 Skepticism, 8 Spiritual not otherwise specified, 1 Taoist, 1 Theist not otherwise specified, 1 Unitarian

Universalist, 1 Unity Church, 1 Vegetarian, 3 Wiccan, 6 Multi-Religious, and 4 Unspecified.

For 260 (59.5%) participants, this was their first religion. For 151 (34.6%) of participants, they converted into this religion. On average, participants self-rated religiosity was 4.4 (SD = 2.2). On average, participants self-report spirituality was 5.5 (SD = 2.0). As seen in past studies, a 2 by 2 taxonomy was used to separate those participants who were neither religious nor spiritual, religious only, spiritual only, or both religious and spirituality (Stratta et al, 2012; Aarnio & Lindeman, 2005). Within this taxonomy, 52 (11.9 %) of participants identified as neither religious nor spiritual, 14 (3.2%) of participants identified as religious only, 87 (19.9%) of participants identified as spiritual only, and 278 (63.6%) of participants identified as both religious and spiritual.

Participants were recruited through social psychology research websites such as Psychology Research on the Net (<http://psych.hanover.edu/research/exponnet.html>) and Social Psychology Network (<http://www.socialpsychology.org/>). Participants were recruited online through social media (i.e. Facebook). Participants were recruited at various religious groups around a local university. Participants were recruited from religious institutions around the country. Participants belonging to a university were offered research credit for participation in the present study. All other participants were entered into a raffle to win one of two \$100.00 Amazon.com gift cards.

All online website advertisements and other recruiting material directed the participants to Qualtrics which was used to administer the survey. Participants were entered into a raffle to win one of two \$100.00 gift cards to Amazon.com.

Materials

Demographics. A brief demographics questionnaire was employed. This questionnaire included basic demographic information such as age, gender, race and ethnicity, the participant's current religious affiliation, etc. The demographics questionnaire was used to determine which participants were laity and which participants were clergy. The demographics questionnaire was also used to establish the external validity of the present study.

Religiosity and Spirituality. A short open ended questionnaire was used to determine what religiosity and what spirituality are according to the layperson. This included the same five questions as used by Schlehofer and colleagues (e.g. what does religion/spirituality mean to you). These questions can be found in Appendix A. This questionnaire will also include a one items self-report measure of religiosity and spirituality (Schlehofer, Omoto, & Adelman, 2008; i.e. How important is your religion/spirituality to you?).

The questionnaire asked open ended questions regarding what religious persons are and the types of behaviors they engage in. These questions required participants to identify what the activities and characteristics of a religious individual are. Similarly, for spirituality the questionnaire asked open ended questions regarding what spiritual persons are and the types of behaviors they engage in. These questions required participants to identify what the activities and characteristics of a spiritual individual are. The order of these questions were counterbalanced in such a way that some participants were presented with spirituality items first while others were presented with religiosity items first.

Three Dichotomies. The questionnaire asked a series of questions assessing each dichotomy. These questions were reworded so as to prevent any order effects. Participants were asked each dichotomy question, then be asked to rate their agreement with the statement on a 7-point Likert scale. The order of these questions was randomized. These questions can be found in Appendix B.

Results

Qualitative Data

Unlike the work of Schlehoffer and colleagues, the present study did not operate upon any theoretical assumption or hypotheses regarding what ideas were suggested to manifest within the data. As such, ideas will be coded using a different method (Schlehoffer, Omoto, & Adelman, 2008).

Word Frequencies. Qualitative data was first coded to determine the underlying ideas which appeared within religion and spirituality. To do this, all participant responses were divided into two categories: words relating to religiosity and words relating to spirituality. In instances where participants indicated, “see above”, “same as above” or any of the following, content from the appropriate corresponding question was entered into the data file. In regards to questions regarding religion and spirituality, this content was separated and placed into the appropriate category. Typically this separation was pre-existing given how the participant wrote about religion and spirituality. In instances which one sentence referenced both religion and spirituality, these sentences were divided based upon the clauses which explicitly referred to religion and those explicitly referring to spirituality. It was believed that this extraction method would

allow for the maximum possible words to be generated while minimizing any overlap between religion and spirituality.

Secondly, these data were checked for appropriate spelling and grammar. This is necessary as the program which computed word frequencies will have difficulties if words are spelled improperly. Spelling decisions were advised through the spell-check function within Microsoft Word with some input from the principal investigator. Of the list of words provided, the principal investigator decided which word made the most sense in the context of the sentence. It should be noted that subsequent analyses of idea units could not be conducted without proper spelling and grammar. While there was some interpretation presented using this method, this interpretation was minimal. Furthermore, given that large volume of qualitative data provided, it was unlikely that any new idea units would be introduced through spell-check which another participant did mention. Also, it was important to note that the present study is concerned primarily with identifying the underlying ideas units. If an idea unit was created by spell check, a subsequent factor analysis of the data would likely to reveal this error.

Thirdly, this data was entered into the NVivo program for data analysis (QSR International, 2014). NVivo computed a series of word frequencies. The first word frequencies computed frequencies on every word (e.g. religion, religious, religiosity, etc.).

Within religiosity, this analysis yielded a total of 4012 different words. Within Spirituality, this analysis yielded a total of 3983 different words. As it is not practical to analyze all 4012 words within religiosity nor is it practical to analyze all 3983 words within spirituality, a second word frequency analysis was computed.

A second word frequency analysis categorized words based upon their similar stems (e.g. follow, followed, follower, followers, following, follows). Within Religiosity, this analysis yielded a total of 2677 words. Within spirituality, this analysis yielded 2709 words.

NVivo did not conduct subsequent word frequency analyses. These were unable to reduce the data meaningfully without creating an overlap within the ideas units. As such, the second word frequency analysis was retained for both religiosity and spirituality. Within religiosity, 2677 idea units appeared. Within spirituality, 2709 idea units appeared (QSR International, 2014).

LIWC2015. Qualitative data was also coded to determine if any differences appeared within religion and spirituality. To do this, all participant responses were divided into two categories: words relating to religiosity and words relating to spirituality. This data was not modified in any way. Thirdly, this data was entered into the Linguistic Inquiry Word Count (LIWC2015; Pennebaker, Booth, Boyd, & Francis, 2015; Pennebaker, Boyd, Jordan, & Blackburn, 2015). This program has a series of built in dictionaries which categorized words based upon numerous different variables such as the tense of the word, the emotional content of the word, etc. LIWC2015 then generates scores for each of these variables.

Once entered into LIWC2015, the analysis was run. It should be mentioned that this data was not modified nor separated in any way as the program performed specific frequencies related to proper spelling and grammar. By adjusting these words, the data would be artificially contaminated. Secondly, it was important to note that this was an exploratory analysis within religion and spirituality. Any significant findings produced

from LIWC2015 were subject for further review and examination. This procedure was used to reduce the possible variables which future research may wish to assess into a more manageable list (Pennebaker, Booth, Boyd, & Francis, 2015; Pennebaker, Boyd, Jordan, & Blackburn, 2015).

From this data, two scores were generated, a score relating to religiosity and a score relating to spirituality. A series of dependent t tests were conducted using split sample validation to assist in determining which variables consistently separate religion and spirituality. Assumptions of statistical tests and data screening were not assessed while performing these dependent t tests as the present analysis was exploratory. The results of these analyses are presented below in Table 1. Results of the verification sample are presented in Table 2.

Overall, several of the LIWC2015 variables were seen with consistently greater frequency in religiosity than in spirituality. Specifically, participants used more dictionary words, conjunctions, negations, anger words, differentiation words, drive words, affiliation words, past focus words, motion words and religion words when describing religiosity than spirituality. Similarly, several types of words were seen with consistently greater frequency in spirituality than religiosity. Specifically, participants used more insight words, health words, present focus words and punctuation when describing spirituality than religiosity.

Several types of word were seen with greater frequency in religiosity than spirituality; however these results were not consistent across the training and verification samples. Specifically, when describing religiosity, participants used more 3rd person plural words, prepositions, negative emotion words, family words, and risk words.

Similarly, several types of word were seen with greater frequency in spirituality than religiosity; however, these results were not consistent across the training and verification samples. Specifically, when describing spirituality, participants used more emotional tone words, pronouns, impersonal pronouns, common verbs, adjectives, positive emotion words, perceptual process words, feel words, biology words, achievement words, present focus words, and space words. No other significant differences were detected in the training or verification samples.

Quantitative Data

Dichotomy 1. The first dichotomy asked participants to indicate if religiosity and spirituality are the same construct. A One Sample t Test was conducted to test this. Statistically speaking, this test assessed if there was a difference from the scale midpoint (4). This analysis revealed a significant effect ($M = 2.12$, $SD = 1.53$), $t(427) = -25.45$, $p < .001$, $d = -2.46$. Results suggest that while at an absolute, the overwhelming majority of individuals viewed the constructs as distinct.

Dichotomy 2. The second dichotomy presented asked participants to indicate if religiosity and spirituality required a God, or merely a non-God-Higher-Power-Entity (i.e. a figure that is equivalent to God while not explicitly being God; NGHPE). To test this, a Repeated Measures ANOVA was employed using all four of the dichotomy 2 questions. Initially screening of the data indicated that the assumption of sphericity was violated. A Greenhouse-Geisser correction was used. The results were significant, $F(2.52, 1076.98) = 136.74$, $p < .001$, $\eta^2_p = .24$. Figure 2 indicates the average score for each dichotomy. Bonferonni post hoc analyses revealed that religiosity was more likely to require a NGHPE than a God. Spirituality was more likely to require a NGHPE than a God. Further, religiosity was more likely to require a God and NGHPE than Spirituality.

Dichotomy 3. The third dichotomy presented asked participants to indicate if religiosity and spirituality were traits or states. To test this, a Repeated Measures ANOVA was employed using all four of the dichotomy 3 questions. Initially screening of the data indicated that the assumption of sphericity was violated. A Greenhouse-Geisser correction was used. The results were significant, $F(2.32, 981.11) = 1157.37, p < .001, \eta^2_p = .73$. Bonferroni post hoc analyses revealed that religiosity was more likely to be a state than a trait. Spirituality was more likely to be a state than trait. Neither construct was more likely to be a state or trait than the opposing construct.

Discussion

Overview of Present Study

The purpose of the present study was to investigate religiosity and spirituality as well as to clarify the discrepancies observed in past research. This was done through both qualitative and quantitative methods. In regards to the qualitative data, no hypotheses were made regarding the existence of any idea units. In regards to the quantitative data, it was predicted that all participants, regardless of demographics would view spirituality and religiosity as two distinct constructs. It was predicted that religiosity did not require God while spirituality would require a Higher Power. It was predicted that some combination of demographic factors would explain whether these constructs were states or traits.

Qualitative Data. In regards to the qualitative data, over 2000 words appeared within religiosity and within spirituality. Within religiosity, some words are: religion, believe, church, follow, and faith. Within spirituality, some words which appeared were:

spirit, life, religion, world, and connection. Further, certain words appeared in both texts while other terms were exclusive to one text.

Overall, the results of the qualitative and quantitative portions of this study confirm to what was seen in past research as well as within the other groups of 3GH. The results of the present study were consistent with each other to a certain degree. There were however a few notable inconsistencies.

Within the qualitative portions of this study, the results of the word frequencies are fairly similar to what is seen in past research. For instance, many participants used the idea unit Church. This idea unit was composed of the words church and churches. This idea unit appeared 245 times within the religiosity text.

In some of these instances, the surrounding text conveyed the idea of church attendance. In one case, one participant wrote: “It is what I was raised with but I hardly go to church anymore.” In another instance one participant wrote: “Growing up as one of Jehovah's Witnesses, I have always attended the church known...” It is worth noticing that sometimes this word appeared without referring to attending church. Subsequent studies may wish to investigate a potential link between the church, and attendance.

The presence of the idea unit Church, while referring to attending said church, was in agreement with past research. Several studies have assessed religiosity using church attendance as a one item measure (Bremner, Koole, & Bushman, 2011; Razmyar & Reeve, 2013; Landor & Simons, 2014; Pluhar, Frongillo, Stycos, & Depster-McClain, 1998; Manlove, Terry-Humen, Ikramullah, & Moore, 2006). Similarly, several measures of religiosity include a question asking participants about their church attendance

(DeJong, Faulkner, & Warland 1976; Fulkner & DeJong, 1966; Rohrbaugh & Jessor, 1975). In this manner, the presence of this word does confirm to past research.

However, the idea unit Church was also present in text regarding spirituality. This word appeared 50 times. In some of these instances, Church was used with reference to attending a church. For instance, one participant wrote, “Does not practice religion as in attending church or reading scripture.” Another participant wrote, “Someone who goes to church regularly...”

The presence of this idea unit does not agree with past research. Church attendance has been used as a one item measure of religiosity but not as a one item measure of spirituality. The more frequently used one-item measure of spirituality is a self-report measure of spirituality (Schlehofer, Omoto, & Adelman, 2008; McMinn, Hathaway, Woods, & Snow, 2009; Stratta et al., 2013, Luquis, Brelsford, & Perez, 2014; Lazer, 2014).

Furthermore, several measures of spirituality did not refer to attending church. For instance, the STI does not make any reference to attending church (Seidlitz et al., 2002). Similarly, the STSI does not make reference to attending church (Harvey, 2004).

In contrast however, some spirituality measures do have references to attending church. Specifically, the SAI asked participants about their mood in church and to compare their church behaviors to home behaviors. While this is different from asking participants if they go to church, there does appear to be a link between spirituality and church attendance (Hall & Edwards, 2002). Similarly, the Spiritual Well-Being Questionnaire (SWQ) does make references to being at a church. Further, this measure asked participants to report the frequency of church attendance (Moberg, 1984).

The presence of the idea unit Church may or may not agree with past research. While the majority of researchers did not appear to view church attendance as a measure of spirituality, many laity viewed church attendance as an important part of spirituality. It should be noted however that these few instances may be outliers. Church was seen far more frequently with religiosity than with spirituality. Future research may wish to assess how much of an impact church attendance has on spirituality. If Church attendance does impact spirituality, then this would suggest a deviation between how researchers view spirituality and how laity view spirituality. In contrast, if subsequent research suggests that church attendance is an outlier, then there would be no deviation between how researchers view spirituality and how laity view spirituality. Also, as stated above, spirituality may make reference to being at the church while not necessarily attending church. Given that the present study presents no data on the links between words, it was impossible to suggest an agreement or disagreement with past research.

Similar to the presence of the idea unit Church, there were other words which appear within these texts which conform to past research. For instance, within spirituality, the idea unit “Connection” was used. This idea unit was composed of the words: connect, connected, connecting, connection, connections, connective, connectivity, and connects.

This idea unit appeared 205 times. One participant wrote, “Spirituality means a connection or relationship with a higher being.” Another participant wrote, “I want to walk and talk in a way that shows my feelings of connection to the world and people around me.” It appeared that the laity saw spirituality as possessing a connection of a metaphysical nature.

This metaphysical connection seen in laity religiosity was in agreement with researchers. Many researchers argue that spirituality is a connection to someone or something. For instance, the STI did not refer to a communion or a connection with God (Siedlitz et al., 2002). Similarly, the SAI made reference to a connection or communication occurring with god (Hall & Edwards, 2002).

Within religiosity however, the idea unit “Connection” also appeared. This idea unit appeared 93 times. For instance, one participant wrote, “It provides a connection with others and a sense of community.” Another participant wrote, “religion draws a connection to a group or practice.” It appeared that the laity viewed religiosity as a more physical connection to a group.

This earthly connection was similar to how researchers view religiosity. According to researchers, a connection was seen in religiosity however this connection does not occur in the same metaphysical sense that is seen in spirituality. Numerous measures of religiosity have subscales relating to social involvement, or a connection to a group. For instance, the CCDR have a subscale devoted to social involvement. In another instance, Rohrbaugh and Jessor (1975) developed the Religiosity Measure (RM). Subscales of ritual religiosity ask questions relating to a connection to a church (Rohrbaugh & Jessor, 1975).

Overall, there appeared to be a fair amount of agreement between how researcher and laity views of religiosity and spirituality. However, it was important to note that there was also a fair degree of ambiguity in idea units. The present word frequency analysis presents only words and not context. The above sections suggested a potential context however this was purely speculative. Subsequent research may seek to determine

the links between these words and seek to further categorize them. It was very easy to overanalyze these word frequencies and to assume more than was present within the data, or to make an improper assumption. As such, these word frequencies were most likely in line with past research; however it was unclear what the degree of agreement might be between laity and other groups.

LIWC2015. When using LIWC215, several distinctions were seen within religiosity and spirituality. It was shown when writing about religiosity participants used significantly more dictionary words, conjunctions, negations, anger words, affiliation words, words regarding the past, motion words and religion words as compared to spirituality. Within spirituality, participants used significantly more insight words, health words, and words regarding the present.

Several inconsistencies emerged within the data. Within religiosity, several differences between the spirituality texts appeared inconsistently. These differences were: impersonal pronouns, prepositions, negative emotions, family words, risk words, home words, 3rd person plural words, differentiation words appeared more frequently than in spirituality. Within spirituality, several differences between the religiosity text also appeared inconsistently. These differences were: emotional tone words, pronouns, common verbs, positive emotions, perceptual processes, feel words, common adjectives, biological processes, achievement, space, other punctuation.

The results of the LIWC2015 were fairly consistent with past literature. Similar to the results of the word frequencies, these analyses must also be interpreted with caution. This might have been due to the lack of screening and the volume of statistical tests performed. Over 150 dependent t tests were performed. It was likely that at least

one of these results was a Type 1 or Type 2 Statistical Error. First, statistical assumptions were not checked. This was due to the exploratory nature of the present study. A second reason for caution was due to the effect size statistics. These effect sizes, according to Cohen (1988), were low to moderate. There were clearly group differences between how individuals write about religiosity compared to spirituality, however these differences were rather small. Due to the magnitude of statistically significant findings, a few of the results were elaborated upon.

Participants used more negations for religiosity than for spirituality. Participants also used more differentiation words when describing religion than when describing spirituality. It should be noted however that only negations replicated while differentiation did not. This unusual finding was consistent with past research. This finding could have meant that participants were talking about what religiosity is not much more than they were talking about what spirituality is not. Research has suggested that religiosity was easier to define than spirituality (Schelhoffer, Omoto & Adelman, 2008). In other words, participants were believed to talk about spirituality in terms of what spirituality is not rather than what spirituality is.

Most likely, this finding could have meant that participants wanted to clarify what religion is and is not, by comparing it to other groups. For instance, Velez-Mitchell (2011) wrote a news article on the controversial Westboro Baptist Church group, which is known for homophobia, anti-Semitism and other negative viewpoints (Velez-Mitchell, 2011). Burke (2014) noted that the majority of Christian groups denounce the teachings of Westboro Baptist Church, and their founder Fred Phelps (Burke, 2014). As such,

many religious Christians may feel a need to distinguish themselves from Westboro Baptist Church by saying that the action of this church does not reflect Christianity.

Similar tendencies were seen in other traditions such as Islam. For instance, Lister (2014) comments on the Middle Eastern Islamic Terrorist group: the Islamic State of Iraq and the Levant (ISIL) or the Islamic State of Iraq and al-Sham (ISIS) with the goal of establishing a large caliphate in the Middle East (Lister, 2014). Sanchez (2015) noted that ISIS/ISIL is responsible for numerous acts of terror, beheadings and other violent crimes (Sanchez, 2015). Volsiy and Jenkins (2014), noted that these groups do not truly reflect the religion of Islam (Volsky & Jenkins, 2014). As such, similar to Christianity, many religious groups may use negations and differentiations to clarify what groups were not accurate representations of their religious tradition.

The reason differentiation failed to replicate in the verification sample was likely a Type 2 Statistical Error. There was a differences reported between religiosity and spirituality, though not a significant one. The p value was .054. Rounding up to two significant figures would place the p value at .05. This was technically significant. However significance was only reached due to rounding error. As such, it would be improper to suggest that differentiations words appeared significantly through split sample validation. For these reasons differentiation words failing to replicate was most likely a Type 2 Statistical Error.

Anger words were seen at a greater frequency for religiosity than for spirituality. This finding was consistent with the word frequencies and other LIWC2015 variable results. An inconsistent finding was a higher amount of negative emotion words for religiosity and a higher amount of positive emotion words for spirituality. If religiosity

has greater anger words, then it was logical that it would have higher negative emotion words. Similarly, if spirituality has higher positive emotion words, then it was logical that spirituality would have lower levels of anger words.

Research has suggested a tendency for religion to display anger in participants. Amer and Bagrasa (2013) conducted a review of the research literature suggesting an anti-Islam bias being present. In another study, Bilewicz, Winiewski, Kofta, and Wójcik (2013) assessed antisemitism in Poland. Morrock (2012) also conducted a study on the psychological roots of anti-Semitism. The existence of these aggression words was consistent with past research.

In contrast, these views on the negativity of religion and the positivity of spirituality were not consistent with past research. Hill et al., (2000), noted that researchers must avoid two crucial pitfalls when studying religion. One of these pitfalls relates to viewing religion as negative and spirituality as positive (Hill et al., 2000). In this regard, the presence of this finding is in contradiction to the views of researchers. Researchers maintain that religiosity should not be viewed as negative while in contrast, the laity appeared to have embraced this pitfall as fact.

Another possible explanation for the high degree of aggression within religion is due to the online disinhibition effect. Individuals might have been more willing to express this view due to the online nature of the present study. For instance, Suler (2004) noted that individuals tend to behave differently in an online setting than in a physical setting. This is the online disinhibition effect. This display of aggression towards religion could be a form of toxic disinhibition. Online disinhibition however, operates bi-directionally (Suler, 2004). This means that some participants may be likely to talk

negatively about religion while others may be inclined to speak positively about religion. The presence of toxic disinhibition could explain the degree of aggression when writing about religion. If online disinhibition was the primary cause for this level of aggression, then if the study were conducted in a laboratory setting, or through semi-structured interviews, then this presence of aggression would be non-significant. Subsequent studies might wish to assess the impact of the online disinhibition effect on anti-theism.

It was peculiar that anger words would replicate while positive and negative emotional content would not replicate. This could be due in part to the variability in word frequency. If that were true, then the word frequency would be much higher for the training sample than for the verification sample. While a difference was seen, neither difference was statistically significant. As such, it was unlikely that the findings relating to positive and negative emotion were artificially created due to split sample validation. Future research may seek to investigate the degree positive and negative emotional words.

Participants wrote more about insight when speaking of spirituality than religiosity. Similarly, participants wrote more perception words and space words when discussing spirituality. The use of perceptual words and space words were inconsistent findings. These results were very consistent with past research. Numerous measures of spirituality make reference to an awareness or insight of something, or a connection beyond space and time (Seidlitz et al., 2002, Hall & Edwards, 1996, Moberg, 1984). It was peculiar that perception words and space words would not replicate if insight words did replicate. As such, this lack of repetition of perception words and space words could be a Type 2 Statistical Error.

Participants wrote more about health when speaking of spirituality than religiosity. Participants also wrote more about biological processes when discussing spirituality than religiosity, though this second finding was inconsistent. Taken together, these findings suggested that spiritual individuals were more aware of their own health than religious individuals. This finding was unusual. The use of health words when describing religion and spirituality was not an unusual finding. Several research document a positive impact of religion and/or spirituality on health, or have noted religion and/or spirituality being related to health issues (Cohen et al, 2012; Farrington, et al., 2014; Hill et al., 2007; Lutjen, Stilton, & Flanelly, 2012).

It was unusual that either religion or spirituality would be mentioned at a greater level than the other. While it was clear that a relationship exists, there was not enough evidence to state that religion has a much greater impact on health as compared to spirituality, or vice versa. Subsequent studies may seek to assess whether religion or spirituality is more beneficial to an individual's health.

This obscurity regarding the superiority of one construct over the other might explain why health words replicated when biological processes did not replicate. For this reasons, it was likely that the inability of biological processes to replicate was a Type 2 Statistical Error. Subsequent research may seek to explore the role of intersection of health and biological processes as they relate to religion and spirituality.

Dichotomy 1. In regards to the quantitative data, the results of the dichotomies were fairly consistent with the hypotheses and with past research. In regards to the first dichotomy, it was predicted that religiosity and spirituality were separate constructs. This hypothesis was confirmed. This however was not true of all participants. There were

some individuals who view these constructs as synonymous. However as there were not enough participants who maintained this view, it was not possible to determine which types of individuals hold to a singular construct view of religiosity and spirituality. In spite of this, the hypothesis regarding the first dichotomy was confirmed.

Religiosity and Spirituality were generally viewed by laity and researchers as separate constructs (Hill et al., 2000; Zinnbauer et al., 1997; Capanna et al., 2007). In this regard, there appeared to be agreement between laity and researchers.

Dichotomy 2. In regards to the second dichotomy, it was predicted that religiosity would require a God while spirituality would require a Higher Power. These hypotheses were confirmed for spirituality only. Religiosity was more likely to require a Higher Power than a God. Similarly, spirituality was more likely to require a Higher Power than a God. As an exploratory analysis, if God or Higher Power were more likely to appear in one construct, they would appear in religiosity as opposed to spirituality.

Participants believed that religiosity was more likely to require Higher Power than a God. This finding was not consistent with past research given that the majority of religions are theistic (Yaran, 2007; Catechism of the Catholic Church, 2000). The finding that God was more necessary in religiosity than spirituality was consistent with most clergy views of religion (Glasenapp, 1970).

Regarding spirituality participants believed that spirituality was more likely to require a Higher Power than God, though subsequent statistical tests suggested the opposite. When assessing the Higher Power view, this was more common in religiosity than spirituality. In other words, spirituality could require a Higher Power or could not require a Higher Power. In either event, laity viewed spirituality as non-theistic.

This finding that spirituality was associated with a Higher Power was largely consistent with past theoretical research. Theoretically speaking, Hill and colleagues noted that spirituality can be focused towards God, Earth or Humanity. Much theoretical research suggests a non-theistic view of spirituality (Hill et al., 2000)

In contrast, the finding that spirituality was non-theistic is inconsistent with past operational research. Numerous measures of spirituality explicitly referenced God (Siedlitz et al., 2002, Moberg, 1984; Hall & Edwards 1996). In contrast, a small number of spirituality measures do not reference God (Greenfield et al., 2015). Generally, it appeared more common to find psychometric instruments assessing theistic spirituality as opposed to non-theistic spirituality. This reflected an important distinction between laity and researchers. Researchers suggested that spirituality can theoretically exist in a non-theistic manner, but pragmatically does not. According to laity however, non-theistic spirituality was very likely. Subsequent studies may seek to assess the frequency as well as what demographic factors are association with non-theistic spirituality.

Dichotomy 3. In regards to the third dichotomy, no hypotheses were made regarding states and traits. Religiosity was viewed as a state. Similarly, spirituality was viewed as a state. Subsequent analyses however called into question this finding. When subsequent tests were conducted, neither construct was more likely to be a state or trait than the opposing construct. Thus each construct may be viewed as a state or not a state. In either event, neither construct was a trait.

Assuming religiosity was a state, this was somewhat consistent with past research yet highlights a potential clarification between the terms “Religiosity” and “Religious Affiliation”. A person’s religious affiliation can potentially change over the lifetime. In

contrast, the degree of religiousness tends to stay at around a baseline level. It is possible that laity view religiosity as synonymous with religious affiliation. Subsequent research might seek to clarify this distinction between the degree of religiousness and a person's religious affiliation.

In regards to spirituality, this construct was much more likely to be a state than a trait. The majority of spirituality measures adopt of a state view with few measures adopting a trait view (Fetzer, 2002, Harvey, 2004).

Measuring religiosity and Spirituality. The present study was an important first step towards developing a new measure of religiosity and spirituality. Past studies have repeatedly stressed the importance of more accurate measures of these constructs at both the theoretical and operational level (Schlehofer, Omoto & Adelman, 2008; McMinn et al., 2009; Hill et al., 2000; Leach & Sato, 2013; Amer & Bagasra, 2013). The various problems with measuring these constructs included but was not limited to their overall accuracy, there across religion applicability, and reliance on self-report measures, as well as other factors.

While studies have repeatedly stressed the importance of creating a more accurate measure of religiosity, several measures have failed to accurately measure these constructs. For instance, the FDSR previously discussed was not an accurate measure of religiosity. This was due to questions regarding the factor structure, the use of Guttman scaling, etc. Questions regarding the construct validity and item wording have also been raised (Weigert & Thomas, 1969). These criticisms eventually led to a revision of this scale (DeJong, Faulkner & Warland 1976). Despite these revisions however, the CCDR

was still based upon a Judeo-Christian culture and therefore may not be generalizable to other religious groups (Faulkner & DeJong, 1966).

As evidenced above, subsequent studies have often failed to yield a more accurate measure than prior instruments. This study proposes a new theoretical framework for devising a more accurate measure of these terms: 3GH.

Theoretical Foundations of 3GH

3GH was a new way of conceptualizing religiosity and spirituality based upon past research. Past research has stressed the importance of a multidisciplinary team in attempting to understand these constructs, however, both the members and roles of each member have not been properly specified (Amer & Bagrasa, 2013). 3GH was based upon the principal that there are multiple groups which define religiosity and spirituality. Further, each group has a unique roll to defining these constructs. The groups are: researchers, clergy and laity. The following information presented outlines the rationale behind 3GH as well as theoretical concerns relating to this conceptualization.

The Groups. A large volume of research has assessed spirituality and religiosity from these perspectives individually. Researchers have written numerous articles on these topics (Bainbridge, 1989; Bradley, 2010; Gebauer, Sedikides, & Neberich, 2012; Goeke-Morey, Taylor, Merrilees, Shirlow, & Cummings, 2014; Griffin, Gooding, Semesky, Farmer, Mannchen, & Sinnott; 2009). Similarly, clergy have written on these topics (Augustine, Zema, Walsh, & Gilson; 2008; Luther, Jacobs, & Spaeth, 1930; Bstan-'dzin-rgya-mtsho & Cutler, 2009; Maimonides, Friedländer, & Taffel, 2004; Iqbal, 1954).

Within the research literature, scholarly studies have been conducted on these groups. Specifically, Tiew, Creedy, and Chan (2013) assessed spirituality according to

hospice nurses. In another study, Zyzak (2013) assessed spirituality of laity following the Second Vatican Council. In another study, Lazar (2014) assessed spirituality and religiosity among Jewish laity. As such, there has been research conducted assessing these three groups (Tiew, Creedy, & Chan, 013; Zyzak, 2013; Lazar, 2014)

The formations of these three groups were based upon the sum of several research studies which compared religiosity or spirituality across a certain demographic. For instance, la Cour and Götke (2012) compared spirituality among layperson and theologians. Similarly, Skrzypińska and Chudzik (2012) compared spirituality of Polish clergy compared to laity. In another study, McMinn and colleagues (2009) assessed religiosity and spirituality among members of the APA. Comparisons were then made to the laity. While there were differences within these demographic comparison studies, certain overarching trends emerged. Based upon the above evidence, researchers, clergy and laity had differing opinions of these terms (la Cour & Götke, 2012; Skrzypińska & Chudzik, 2012; McMinn et al., 2009).

From these demographic comparison studies, as well as individual group studies, the criterion for each of these three groups was refined. Researchers are defined as any psychologist, nurse, sociologist or other researcher who is assessing religiosity and/or spirituality. Notable researchers include but are not limited to Hill, Hood, Pargament, Freud, and others. Clergy are defined as any individual, regardless of gender, whose primary occupation is working for a religious or spiritual institution. Examples of clergy would include: the Pope, priests, nuns, Rabbis, Imams, etc. The third group is the laity. Laity was defined as any individual who does not fit into either of the above categories. Laity is primarily focused with neither the study nor practice of religion and spirituality.

This was not to say that the laity was ambivalent to religion. The laity had their primary occupational focus directed at another area, as opposed to religion and spirituality

Group Specifications. Certain specifications regarding these three groups should be noted. First, while clergy is generally considered a Christian term, in the context of the 3GH, clergy is merely a label assigned to this group. Second, it is important to specify that clergy can be either male or female.

Third, group of laity was broad and may include other subdivisions, or may be a combination of multiple separate groups. This group is the most diverse group in 3GH. This group however could potentially have many subdivisions within which religiosity and spirituality are perceived differently. The laity can be subdivided along numerous axes such as male and female laity, races of laity, ethnicities of laity, etc. However without any quantitative data for the idea units, it is difficult to determine which subdivisions will be meaningful.

The fourth clarification between these groups concerns the difference between a clergy and a researcher. In the context of this new theory, the clergy are considered to be practitioners of religion whereas researchers are studiers of religion. It is worth noting that clergy are primarily practitioners and researchers are primality studiers. This is not an absolute distinction but rather a general tendency within each group.

The fifth clarification was that there may be crossover within these groups. Similar to the above point regarding the laity, without any quantitative data it was impossible to determine if there were statistically significant crossover within these groups to the point where said groups are considered the same group. The hypothesis of these groups was made based upon preexisting research. As future research is conducted,

these three groups may be expanded, or contracted depending upon those future research findings. With these five points of clarification noted regarding the identity of each group, the roles of each group were subsequently discussed.

Group Roles. Unlike past theoretical structures, 3GH assumed different roles for each of the three groups. First, clergy and laity are concerned with the theoretical definition of religiosity and spirituality, as opposed to operational definitions. Secondly, researchers should not attempt to formulate their own theoretical definition, but should rather focus on operational definitions.

The reasons the clergy and laity should focus on theoretical definitions was due to the historical biases against religion and spirituality that researchers have displayed. In the past, researchers have attempted to define religiosity in terms of illness, and psychopathology. Freud, Strachey, and Gray (1989) viewed religion as a mental illness. Freud argue that religion was the result of culture which was brought about in order to allow mankind to survive nature and promote group cohesion. Freud adopts a position of atheism in his reasoning. Ultimately, Freud argues that society can survive without religion however a substitute would be required (Freud, Strachey, & Gray, 1989).

There are several flaws with Freud's reasoning. Primarily, Freud's reasoning lacked significant proof and justification. Freud offered some evidence for his views on religion, such as psychoanalytic theory and other researchers. However, no methodology or statistical data was presented to justify these statements. Additionally, Freud's work was refuted by other evidence (Freud, Strachey, & Gray, 1989).

These flaws in methodological reasoning are not exclusive to Freud but are much more pervasive in the research literature. For instance, Dawkins (2006) wrote a book on

the existence of a creator deity. Dawkins strongly refuted the argument of a creator deity by suggesting that religion was the product of memes. Dawkins also addresses other issues of morality and the social impact of religion (Dawkins, 2006).

Similar to Freud, Dawkins own atheistic biases did not allow him to accurately assess religion. First, the postulated meme theory was merely a theory. No numerical data has been presented to confirm that memes exist or that a meme theory was valid. As such, the suggestion of memes was merely a theory subject to later proof or refutation and should not be viewed as fact until such concrete proof has been established Dawkins also displays a very high degree of anti-theism. Dawkins repeatedly addresses the negative aspects of religion relating to homophobia, sexual abuse and other issues. As such, Dawkins ignored the positive aspects of religion and spirituality relating to health, adjustment and other factors (Ferraro & Kim, 2014; Clements & Ermakova, 2012; French, Eisenberg, Sallquist, Purwon, Lu, & Christ, 2013; Goeke-Morey, et al., 2014; Good & Willoughby, 2013). For these reasons as well as other, it was clear that Dawkins own personal views of religion and spirituality clouded his judgement as a researcher (Dawkins, 2006)

As thus observed, researchers have displayed an unfortunate tendency to let any theist or non-theistic bias impacted their view of these constructs. While in modern times, most measures no longer assess religion and spirituality in this way, it has been known to occur. As such, researchers are unlikely to act in an unbiased manner when composing theoretical definitions. Given that these biases are known to the laity, it is further likely that the laity will not acknowledge a researcher devised theory of religiosity.

The reason the researchers should focus on the operational definitions are due to many factors. First, the researchers are more likely to possess the necessary amount of training required to formulate these measures. Most laity and clergy lack the statistical training necessary to factor analyze the idea units and determine what the overarching themes are. Once idea units have been provided by the clergy and laity, it is up to the researcher to organize these idea units into a meaningful pattern as to what the overarching factors are within the idea units. The specific methods advised to reduce these idea units were subsequently discussed.

Further, clergy and laity should have little input into the operationalization of religiosity and spirituality due to their own biases. Laity and clergy bias, while assuming theism, focused more on the accuracy of their specific religion relative to other religions. For instance, Stewart (2013) assessed Christianity's claim as being the only valid religion. Similarly, Sonn and Sonn (2010) assessed Islam as being the only valid religion. As thus observed, clergy have a tendency to view their religion as the only true religion (Stewart, 2013; Sonn & Sonn, 2010)

This bias of the clergy and laity could result in measures which only have applicability to one religion and are thus biased against other religions. For instance, Cornwall (1989) developed the RM. Several items in this scale have explicit references to Mormon doctrine. As such, this measure was not advised to be used in religious traditions outside of Mormonism (Cornwall, 1989). In another instance, the FDSR included explicit references to Christianity (Faulkner & DeJong, 1966). As such, these measures are not advised to be used in religious traditions outside of Christianity (Cornwall, 1989; Faulkner & DeJong, 1966).

While this biased language was seen frequently in measures of religiosity (Joseph & DiDuca, 2007; Francis, Flere, Klanjšek, Williams, & Robbins, 2013), it was occasionally seen in measures of spirituality. In another instance, the SWB has explicit references to Christian doctrine. As such, this measure was likely to be biased against individuals who were not of a Christian religious affiliation (Moberg, 1989). For a religiosity or spirituality measure to have applicability across various religious affiliations, then it is advisable that biased language be removed.

As such, the clergy and laity should have little input towards the operationalization of religiosity and spirituality. The accuracy of any one religion over another religion is a question of theology, not of psychology and therefore was not to be assessed in this context.

The roles of the specific groups within 3GH are unique. The clergy and laity are to form theoretical definitions of these terms. From there, the researchers are to form operational definitions of these terms.

Proof and Refutation. It is important to mention what information would subsequently prove or disprove 3GH. Assuming 3GH was accurate; it would be assumed that the following conditions are met. First, in regards to the initial qualitative data, it would be expected that laity and clergy differ in which idea units they produce. Second, it would also be expected that a factor analysis of the laity idea units and a factor analysis of the clergy idea units would not be equal. If idea units and factor analysis of researchers were conducted, it would be expected that these idea units and factors differ strongly from the laity and clergy. Finally, it would be expected that any measure derived from 3GH would display adequate psychometric properties. This includes but is

not limited to acceptable reliability, comparable predictive validity and concurrent validity with the already established validity, adequate norms, etc.

These three conditions would constitute adequate proof for 3GH. Refutation of 3GH would occur if laity and religious officials produced the exact same idea units with no deviation, the factor analysis of the laity and clergy were equal, and if any measure derived from 3GH did not display adequate psychometric properties.

It should be noted however that these differences between laity, clergy and religious officials do not have to be large. It was predicted that these differences exist and account for some degree of error within religiosity and spirituality. No predictions were made regarding the magnitude or direction of these differences. Any difference in religiosity and spirituality across these three groups, no matter how small would provide support for 3GH.

The present study postulated about potential differences between laity and clergy as well as researchers. These differences however were not statistically tested yet. While the present qualitative and quantitative data suggested that the laity do have fundamentally different views, without adequate statistical testing, to suggest that the present data confirmed 3GH would be premature.

Limits of 3GH. 3GH does attempt to more accurately conceptualize and measure religiosity and spirituality. There were a few key limitations. First, 3GH attempted to assess only religiosity and spirituality among western societies, specifically the United States.

Secondly, 3GH does accommodate mysticism. This was because mysticism is either a subset of religiosity or a subset of spirituality. According to Levin and Taylor

(1997), mysticism was a subset of religiosity. However, Skrzypińska and Chudzik (2012), suggest mysticism can be a subset of spirituality. Further, Hill and Hood (1999) described mysticism scales with spirituality scales, thus implying the two factors are related. As it is unclear whether mysticism falls under religiosity or spirituality, 3GH cannot assess this third construct.

3GH currently existed in a developmental stage and will indeed require refinement as future research is conducted. As this theory is still in its infancy, further refinement is necessary. Generally 3GH assumed that there are different groups defining religiosity and spirituality and that each of the three groups has a unique role in defining these terms. It was believed that once these groups have been reconciled, a more accurate measure of religiosity and spirituality can be formed. The purpose of such a measure will be to assess religiosity and spirituality across various religious affiliations.

Directions for Future Research

There are several directions for future research. One direction of future research could seek to reduce the idea units which manifested into the data. This could determine which idea units may appear in the same questions in a subsequent measuring instrument. This could also determine which idea units appear exclusive to one construct or another.

This could be accomplished through machine learning. As noted above, researchers should have little to no input into the theoretical views of these terms. Machine learning bypasses these views as machine learning will determine which ideas are connected to one another. This will produce the accurate meaningful connections which appear within the data, without artificially generating new connections (Witten & Frank, 2005).

It is worth noting that many individuals displayed a distrust of psychology. Lilienfeld (2012) reported on this distrust and on the criticisms many laity had with psychology. It was believed that machine learning will ease this distrust. While laity may not accept a research build theory or measure, a computer generated measure may be much more accepted. If such a computer generated measure were produced, this could potentially increase participation from certain religious groups such as Islam and Judaism (Lilienfeld, 2012).

Future research might also assess other dichotomies. In addition to the unclear relationship between states and traits, several participants commented on whether religiosity precedes spirituality or vice versa. In other words, can one construct exist in the complete absence of another? Such measures like the BMMRS assess religiosity and spirituality at the same time (Fetzer, 2003). Several other measures employed an experimental dimension which could be viewed as analogous to spirituality (Glock & Stark, 1966; Cornwall, 1989). It appeared from a researcher perspective, that this was a dichotomous outcome. Further, it appeared that spirituality preceded religiosity. This view however was tentative and may or may not manifest in the laity. Subsequent studies may seek to test this new dichotomy.

Finally, research may seek to assess the clergy view of religiosity and spirituality. Once this view has been analyzed, a comparison can be made between laity and clergy. This will allow for a legitimate confirmation or refutation of 3GH as opposed to the predicted differences suggested above.

Limitations

There are however several limitations to the present study. First, this study relied heavily on qualitative data. While the frequency analysis of the idea units was quantitative, this does not allow for a factor analysis of idea units to occur. This was due to the frequency of idea units not being equivalent to importance of idea units. Certain ideas, such as God, may have been implied in certain definitions. While there was no way to prove implied answers, there was no way to refute it. Further, these idea unit frequencies would be heavily skewed by participant word length. Those participants who write more will identify more idea units than participants who write less. This means for certain ideas, (i.e. God), this idea unit may occur ten times in a longer text and a one time for a shorter text. While frequency is likely associated with importance, this correlation is not likely to be high enough to allow us to conclude that frequency and importance are the same. Statistically speaking the Pearson r correlation between frequency and importance is unlikely to be .95 or higher. As such, quantitative analysis of the idea units was not used. Subsequent studies may wish to employ quantitative methods to address the importance of these idea units as well as the association between the idea units.

In addition, the distinction between these idea units should be clarified. In regards to the above idea unit grew, the same basic message was also found when participants used the words House, Household, Lived, Born, etc.. As such, these categories may be collapsed into one single idea unit. In another instance within spirituality, participants used the words: Neuroscientists, Psychologist, Biology, etc. These terms could subsequently be collapsed into a science category.

To collapse these two dimensions, however, would be a researcher based decision based upon an unconfirmed hypothesis regarding a link between these words. This distinction could be accurate or could be inaccurate. Researchers may wish to investigate using non-human machine learning or data mining approaches to find the links between these idea units in order to collapse these categories further into a more manageable format.

A second limitation concerns the extraction method used for LIWC2015. As mentioned above, when using the LIWC2015, numerous different data extraction methods were tested to determine which method was the best. The first data extraction method was a complete copy of all participant responses as they appeared. No editing was performed. The questions which regarded religion and spirituality kept together and entered into both participant files. The second data extraction was similar to the first, except spell check and grammar checks were performed. The third data extraction method copied all participant data. The questions which related to both religiosity and spirituality were separated. Further, any instances of “same as above” or “see above” were copied so that the corresponding section was entered into that participants file. No spelling or grammar checks were performed. The fourth extraction method was similar to the third; however spelling and grammar checks were performed. The results of these extraction methods differed slightly, but there was a general consensus on most of the LIWC2015 variables regardless of which extraction method was used.

When using LIWC2015, the first extraction method was chosen as this yielded the least unusual results. All extraction methods were tested. Other extraction methods yielded significant results to for punctuation, and other grammatical issues. While the

first extraction method also yielded some of these peculiar findings, the number of unusual findings was smaller.

The first data extraction method was chosen as it was believed this method would limit any experimenter bias in content adjustments. While some experimenter bias may have occurred using this first extraction method, as no edits were made to the content, it was suggested that any said bias is minimal. As demonstrated above, researchers and laity were likely to have different views on religion and spirituality. By performing no adjustments to these data, this contamination of ideas was minimized.

The first data extraction method was also chosen to address issues of interrater reliability. Extraction methods 2, 3 and 4 all have some degree of subjective editing with regards to spelling, grammar and separating religious and spiritual content. By leaving that data in its original state, no edits were needed. As such, any two researchers with the qualitative data files or spreadsheets used in the present study should be able to generate the exact same results as seen above. By using extraction method 1, no inter-rater reliability tests were necessary as any individual with the original dataset and question codes could generate the exact same output.

Another limit of the present study concerns the psychometric nature of dichotomies one and three. These dichotomies concern psychometric properties of these dimensions. As previously suggested, laity did not have the necessary training to make these decisions. The laity may have viewed the constructs as distinct, and the constructs as state, however this does not mean that the laity perceptions were right. These questions assessed how the laity viewed these constructs rather than how they actually appear.

Finally, this study was severely limited by sample size. There were not enough participants present from Islam, Hinduism or Buddhism. There were some Jewish participants, however these numbers do not allow for concrete conclusions to be made about these groups.

To assist in increasing sample size, I conducted the study in an online manner, thus protecting participant identity. Additionally, a reward was provided as was suggested by Amer and Bagrasa. This however failed to generate enough participants across these religious affiliations (Amer & Bagrasa, 2013).

Conclusion

The present study represented a large accumulation of qualitative data from laity perspectives on what religiosity and spirituality are. This study included both qualitative and quantitative questions. The present study also set forth a new theoretical orientation for understanding and measuring religiosity and spirituality: 3GH

The present study was largely uninfluenced by past research theory. Past studies containing qualitative components generally used the qualitative data to address a specific hypothesis. The qualitative data in the present study was not built around a hypothesis. The result of this exploratory study was the 4000 words generated. These ideas underlie laity religiosity and spirituality. While it was not fully understood how the idea units relate to one another, knowing what the idea units were does allow future research to determine the underlying factors in laity religiosity.

Appendix A

Qualitative Questions

What does a RELIGIOUS person do? What does a SPIRITUAL person do? How are they similar, How are they different?

Describe a RELIGIOUS person. Describe a Spiritual Person. How are they similar? How are they different?

What does Religion mean to you? What does Spirituality mean to you?*

How important is religion to yourself and your sense of who you are? *

How important is spirituality to yourself and your sense of who you are? *

What events or people have influenced the way you view religion? *

What events or people have influenced the way you view spirituality? *

In what ways is religion important to you? *

In what ways is spirituality important to you? *

What role does Religion play in your life? *

What role does Spirituality play in your life? *

* indicates a question used by Schlehofer, Omoto, & Adelman (2008)

Appendix B

Quantitative questions

To what degree do you agree with the following statements

Being RELIGIOUS and being SPIRITUAL are the same thing

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

A RELIGIOUS person must believe in God

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

A RELIGIOUS person must believe in a higher power / something greater than themselves / the transcendent/ etc.

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

A SPIRITUAL person must believe in a God

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

A SPIRITUAL person must believe in a higher power / something greater than themselves / the transcendent/ etc.

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

A person can become more or less RELIGIOUS over time

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

A person can become more or less SPIRITUAL over time

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree
A person's RELIGIOUSNESS stays the same over time						
1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree
A person's SPIRITUALITY stays the same over time						
1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

Appendix C

IRB Approval Form

**EXEMPTION NUMBER: 15-X031**

To: Eric Boorman
From: Institutional Review Board for the Protection of Human
Subjects, Peggy Korczak, Member 
Date: Monday, November 24, 2014
RE: Application for Approval of Research Involving the Use of
Human Participants

Office of Sponsored Programs
& Research

Towson University
8000 York Road
Towson, MD 21252-0001
t. 410 704-2236
f. 410 704-4494

Thank you for submitting an application for approval of the research titled,
The Meaning of Religiosity and Spirituality According to the Layperson

to the Institutional Review Board for the Protection of Human Participants
(IRB) at Towson University.

Your research is exempt from general Human Participants requirements
according to 45 CFR 46.101(b)(2). No further review of this project is
required from year to year provided it does not deviate from the submitted
research design.

If you substantially change your research project or your survey
instrument, please notify the Board immediately.

We wish you every success in your research project.

CC: Jan Sinnott
File

Appendix D

Informed Consent Form

Dear Participant,

This study is designed to what it means to be religious and what it means to be spiritual. This study is also designed to investigate the similarities and differences between these two terms. These terms have been frequently and inconsistently defined. As such, the results of numerous research studies have been called into question. Researchers have consistently reported that better definitions of these terms are needed. The purpose of the present study is to determine a definition of religiousness and spirituality.

This study has been approved by the Institutional Review Board at Towson University (15-X031), (410) 704-2236). Please note that you must be 18 years of age or older to participate in this study. If you are under the age of 18, please exit the study at this time. Both religious and nonreligious individuals are welcome to participate in the present study.

This study will require you to complete a brief demographics questionnaire as well as a series of questions assessing what it means to be religious and what it means to be spiritual.

There are minimal risks associated with participation in this study. We would like to remind you that you may withdraw from this study at any time. Participation in this study is voluntary. If you feel uncomfortable answering any question, you may elect not to answer the given question.

As a reminder, all information collected in these surveys will be confidential. Your name will not be attached to any information that you provide in the following surveys. For the purposes of this study, you will be identified through a ten-digit alpha-numeric identification number (example XXXXX-00000). This identification number cannot be traced back to you. No publications or reports from the following project will include any information linking you or any other participant to participation in this study. If you have any questions about this study or your participation in this study, you can email the principal investigator Eric Boorman (eboorm1@students.towson.edu) or the faculty sponsor Dr. Jan Sinnott (jsinnott@towson.edu).

By clicking below, you give consent to participate in the present study. Thank you for taking the time to participate in this study.

Sincerely
Eric Boorman
Graduate Student

Eric Boorman
(Principal Investigator)
Towson University
eboorm1@students.towson.edu

Dr. Jan Sinnott
(Faculty Advisor)
Towson University
eboorm1@students.towson.edu

Dr. Debi Gartland
(Chairperson of the Institutional Review Board)
Towson University
irb@towson.edu
410 – 704 - 2236

Appendix E
Debriefing Form

Thank you for participating in the following study.

This study has been approved by the Institutional Review Board of Towson University (15-X031).

We would like to remind you that the results of this study are completely confidential and anonymous. The results will be stored in the faculty advisors office for a period of three year following the completion of this study. Following this period of three years, the original data collected will be destroyed. Your results cannot be connected back to you in any way. No publication or report from this study can be linked back to you or any other participant within this study.

Thank you for participating in the following study. If you have any further questions, please contact the principal investigator Eric Boorman (eboorm1@students.towson.edu) or the faculty sponsor Dr. Jan Sinnott (jsinnott@towson.edu)

Thank you again for participating in this study. Please continue to participate in future studies

Eric Boorman
(Principal Investigator)
Towson University
eboorm1@students.towson.edu

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Table 1: Table of Dependent t Tests Results from the Training Sample for the Linguistic Inquiry Word Count Variables

LIWC2015 Variable	Description / Example	Religiosity M (SD)	Spirituality M (SD)	<i>t</i>	<i>p</i>	CI	<i>d</i>
1 st Person Plural	we, us, our *	0.29 (.70)	0.29 (0.62)	-0.25	.980	-0.10, 0.09	0.00
1 st Person Singular	I, me, mine *	5.30 (3.08)	5.44 (3.05)	-0.7	.486	-0.53, 0.25	-0.05
2 nd Person	you, your, thou *	0.89 (1.33)	0.97 (1.37)	-1.1	.271	-0.20, 0.06	-0.06
3 rd Person Plural	they, their, they'd *	1.63 (1.35)	1.56 (1.51)	1.01	.312	-0.07, 0.11	0.05
3 rd Person Singular	she, he, him *	0.36 (0.83)	0.38 (0.85)	-0.47	.636	-0.12, 0.08	-0.02
Achievement	win, success, better *	1.13 (1.31)	1.21 (1.33)	-1.07	.287	-0.24, 0.07	-0.06
Affective Processes	happy, cried	4.86 (2.51)	4.80 (2.89)	0.35	.730	-0.28, 0.39	-0.02

Affiliation	ally, friend, social *	2.73 (2.33)	2.04 (1.79)	4.38	.001	0.38, 1.00	0.33
Analytical Thinking	Frequency of words which involve cognition	61.62 (22.55)	60.15 (23.05)	1.11	.267	-1.14, 4.08	0.06
Anger	hate, kill, annoyed *	0.21 (0.62)	0.06 (0.24)	3.07	.002	0.06, 0.25	0.32
Anxiety	worried, fearful *	0.12 (0.44)	0.09 (0.40)	0.78	.884	-0.05, 0.11	0.07
Apostrophes	‘	1.18 (1.48)	1.09 (1.36)	0.90	.368	-0.08, 0.22	0.06
Articles	a, an, the *	7.30 (2.77)	7.30 (2.84)	-0.01	.995	-0.28, 0.28	0
Assent	agree, OK, yes *	0.04 (0.17)	0.06 (0.23)	-0.97	.665	-0.07, 0.02	-0.1
Authentic	Authentic	59.39 (26.02)	60.35 (26.41)	-0.62	.535	-4.00, 2.09	-0.03
Auxiliary Verbs	am, will, have *	8.87 (3.12)	9.21 (3.31)	-1.64	.103	-0.75, 0.07	-0.1
Biological Processes	eat, blood, pain *	1.58 (1.60)	1.65 (1.54)	-0.84	.401	-0.24, 0.10	-0.04

Body	cheek, hands, spit *	0.16 (0.51)	0.20 (0.58)	-1.27	.205	-0.09, 0.02	-0.07
Causation	because, effect *	1.86 (1.44)	1.86 (1.53)	0.01	.996	-0.18, 0.18	0
Certainty	always, never *	1.71 (1.53)	1.83 (1.75)	-1.08	.284	-0.34, 0.10	-0.07
Clout	Clout	49.30 (22.77)	50.29 (21.87)	-0.74	.463	-3.66, 1.67	0.06
Cognitive Processes	cause, know, ought *	14.38 (4.35)	14.85 (4.99)	-1.78	.077	-1.00, 0.05	-0.1
Colons	:	0.16 (0.87)	0.14 (0.79)	0.52	.606	-0.05, 0.09	0.02
Commas	,	3.09 (2.87)	3.02 (2.80)	0.63	.529	-0.15, 0.29	0.02
Common Adjectives	free, happy, long *	4.74 (2.67)	4.94 (2.73)	-1.24	.217	-0.51, 0.11	-0.07
Common Adverbs	very, really *	3.30 (1.87)	3.48 (2.40)	-1.01	.313	-0.54, 0.17	-0.08
Common Verbs	eat, come, carry *	15.55 (4.39)	16.02 (4.20)	-2.37	.019	-0.85, - 0.08	-0.11
Comparisons	greater, best, after *	3.27 (2.12)	3.33 (2.15)	-0.39	.698	-0.33, 0.22	-0.03

Conjunctions	and, but, whereas *	6.79 (2.56)	6.34 (2.84)	3.1	.002	0.17, 0.75	0.17
Dashes	-	0.29 (0.65)	0.31 (0.79)	-1.18	.241	-0.13, 0.03	-0.03
Death	bury, coffin, kill *	0.11 (0.34)	0.12 (0.41)	-0.43	.665	-0.08, 0.05	-0.03
Dictionary Words	Frequency of words which are seen in the dictionary	92.37 (8.20)	91.99 (8.32)	2.07	.018	0.04, 0.74	-0.05
Differentiation	hasn't, but, else *	3.99 (2.30)	3.67 (2.67)	1.94	.054	-0.01, 0.65	0.13
Discrepancy	should, would *	0.88 (1.17)	0.78 (0.86)	1.19	.238	-0.06, 0.26	0.1
Drives	Motivation	8.80 (3.93)	7.87 (3.68)	4.15	.001	0.49, 1.37	0.24
Emotional Tone	Frequency of words which involve emotion	70.98 (26.10)	76.74 (22.86)	-3.35	.001	-9.16, 2.36	-0.23
Exclamation Marks	!	0.14 (1.51)	0.04 (0.39)	0.31	.756	-0.04, 0.06	0.09

Family	daughter, dad, aunt *	0.76 (1.13)	0.39 (0.81)	4.72	.001	0.22, 0.53	0.38
Feel	feels, touch *	0.49 (0.84)	0.75 (1.28)	-3.94	.001	-0.39, - 0.13	-0.24
Female References	girl, her, mom *	0.29 (0.69)	0.26 (0.58)	0.81	.422	-0.06, 0.13	0.05
Fillers	I mean, you know *	0.00 (0.05)	0.00 (0.00)	1	.319	-0.01, 0.01	0
Friends	buddy, neighbor *	0.13 (0.43)	0.09 (0.36)	0.87	.384	-0.05, 0.13	0.1
Future Focus	may, will, soon *	0.74 (0.98)	0.63 (0.86)	1.47	.144	-0.04, 0.26	0.12
Health	clinic, flu, pill *	1.12 (1.51)	1.33 (1.46)	-2.71	.007	-0.35, - 0.06	-0.3
Hear	listening, hearing *	0.19 (0.43)	0.21 (0.42)	- 0.06 1	.545	-0.09, 0.05	-0.05
Home	kitchen, landlord *	0.29 (0.63)	0.12 (0.43)	2.94	.004	0.06, 0.29	0.32
Impersonal Pronouns	it, it's, those *	6.14 (2.97)	6.57 (2.91)	-2.66	.009	-0.76, 0.275	-0.15

Informal	Hey, whats up, etc.	0.19 (0.42)	0.19 (0.53)	0.24	.004	-0.07, 0.08	0
Ingestion	dish, eat, pizza *	0.11 (0.40)	0.07 (0.31)	1.91	.059	-0.01, 0.10	0.11
Insight	think, know *	4.51 (2.10)	5.16 (2.34)	-5.44	.001	-0.88, - 0.41	-0.29
Interrogatives	how, when, what *	1.69 (1.30)	1.76 (1.25)	-0.85	.397	-0.25, 0.10	-0.05
Leisure	cook, chat, movie *	0.58 (1.05)	0.58 (0.93)	0.07	.941	-0.18, 0.19	0
Male References	boy, his, dad *	0.47 (0.78)	0.40 (0.80)	1.13	.261	-0.05, 0.17	0.09
Money	audit, cash, owe *	0.15 (0.55)	0.13 (0.49)	0.96	.339	-0.03, 0.08	0.04
Motion	arrive, car, go *	1.56 (1.38)	1.36 (1.13)	2.16	.032	0.02, 0.38	0.16
Negations	no, not, never *	2.76 (7.95)	2.41 (8.08)	2.1	.037	0.02, 0.68	0.04
Negative Emotion	hurt, ugly, nasty *	0.81 (1.05)	0.49 (0.80)	3.52	.213	0.14, 0.50	0.34
Netspeak	btw, lol, thx *	0.06 (0.27)	0.07 (0.37)	-0.45	.014	-0.06, 0.04	0.15

Nonfluencies	er, hm, umm *	0.06 (0.23)	0.03 (0.17)	1.68	.095	-0.01, 0.06	0.15
Number	second, thousand *	0.56 (0.89)	0.61 (0.95)	-1.25	.213	-0.12, 0.03	-0.05
Other Punctuation	@ # \$ % ^ & etc.	0.53 (2.57)	0.63 (2.62)	-1.35	.179	-0.43, 0.08	-0.04
Parentheses	() [] { }	0.32 (0.70)	0.27 (0.64)	0.7	.483	-0.06, 0.12	0.07
Past Focus	ago, did, talked *	1.83 (1.98)	1.16 (1.31)	4.37	.001	0.37, 0.97	0.4
Perceptual Processes	look, heard, feeling *	1.45 (1.26)	1.91 (1.71)	-4.62	.001	-0.66, - 0.27	-0.31
Period	.	6.89 (4.16)	7.03 (4.24)	-1.05	.297	-0.42, 0.13	-0.03
Personal Pronouns	I, them, her *	8.45 (3.57)	8.55 (3.49)	-0.55	-.581	0.47, 0.27	-0.03
Positive Emotion	love, nice, sweet *	3.78 (2.16)	4.11 (2.52)	-2.23	.397	-0.63, - 0.04	-0.14
Power	superior, bully *	4.38 (2.58)	4.18 (2.64)	1.34	.182	-0.10, 0.50	0.08
Prepositions	to, with, above *	13.24 (3.31)	12.80 (3.34)	2.25	.026	0.05, 0.83	0.13

Present Focus	today, is, now *	12.66 (3.97)	13.34 (3.81)	-3.39	.001	-1.08, - 0.29	-0.17
Quantifiers	few, many, much *	3.33 (7.90)	3.35 (7.91)	-0.15	.884	-0.26, 0.22	-0.01
Question Marks	?	0.25 (2.98)	0.19 (1.87)	-1.87	.064	-0.14, 0.01	0.02
Quotation Marks	“	0.34 (1.11)	0.42 (1.17)	-0.17	.864	-0.12, 0.10	-0.07
Relativity	area, bend, exit *	10.20 (3.96)	9.86 (3.57)	1.37	.174	-0.15, 0.84	0.09
Religion	altar, church *	9.45 (3.61)	8.98 (4.03)	2.49	.014	0.10, 0.84	0.12
Reward	take, prize, benefit *	0.64 (0.82)	0.76 (1.11)	-1.69	.092	-0.28, 0.02	-0.12
Risk	danger, doubt *	0.29 (0.56)	0.17 (0.41)	2.63	.01	0.03, 0.21	0.24
Sadness	crying, grief, sad *	0.13 (0.34)	0.07 (0.28)	1.89	.061	-0.01, 0.11	0.19
See	view, saw, seen *	0.46 (0.66)	0.57 (0.90)	- 1.74.	.084	-0.23, 0.02	-0.14
Semicolons	;	0.06 (0.29)	0.05 (0.23)	0.49	.624	-0.04, 0.06	0.04

Sexual	horney, love, incest *	0.03 (0.17)	0.01 (0.08)	1.71	.09	-0.01, 0.06	0.15
Social Processes	mate, talk, they *	10.12 (3.76)	9.71 (3.45)	1.79	.075	-0.04, 0.86	0.11
Space	down, in, thin *	6.59 (2.80)	6.69 (2.90)	-0.6	.548	-0.43, 0.23	-0.04
Swear Words	fuck, damn, shit *	0.02 (0.12)	0.01 (0.14)	0.24	.339	-0.02, 0.03	0.08
Tentative	maybe, perhaps *	2.79 (2.00)	2.95 (2.05)	-1.36	.174	-0.40, 0.07	-0.08
Time	end, until, season *	2.01 (1.72)	1.82 (1.57)	1.34	.182	-0.09, 0.46	0.12
Total Functional Words	it, to, no, very *	53.77 (8.10)	53.86 (8.26)	-0.28	-.779	-0.65, 0.49	-0.01
Total Pronouns	I, them, itself *	14.60 (5.09)	15.15 (5.09)	-2.37	.019	0.02, - 0.09	-0.11
Total Punctuation	Frequency count of all punctuation	13.26 (6.70)	13.33 (7.29)	-0.31	.758	-0.49, 0.36	-0.01
Word Count	Frequency count of all words	193.32 (170.40)	184.01 (159.60)	1.68	.094	-1.62, 20.23	0.06

Words Per Sentence	Ratio of words used per sentence	16.49 (8.88)	16.03 (7.63)	1.48	.141	.14, 1.09	0.06
Words with more than 6	Frequency count of words with more than 6 letters	23.79 (6.57)	23.86 (6.50)	-0.25	.800	-.16, 0.49	-0.02
Work	job, majors, xerox *	1.62 (1.50)	1.50 (1.41)	1.22	.223	-0.07, 0.31	0.08

* (indicates description of variable taken directly from Pennebaker, Boyd, Jordan, & Blackburn (2015))

Table 2: Table of Dependent t Tests Results from the Verification Sample for the Linguistic Inquiry Word Count Variables

LIWC2015 Variable	Description / Examples	Religiosity M (SD)	Spirituality M (SD)	<i>t</i>	<i>p</i>	CI	<i>d</i>
1 st Person Plural	we, us, our *	0.37 (0.73)	0.38 (0.83)	-0.33	0.74 6	-0.11, 0.09	-0.01
1 st Person Singular	I, me, mine *	5.19 (3.27)	5.40 (3.18)	-1.07	0.28 7	-0.60, 0.18	-0.04
2 nd Person	you, your, thou *	0.67 (1.33)	0.73 (1.28)	-0.94	0.34 8	-0.17, 0.06	-0.05
3 rd Person Plural	they, their, they'd *	1.63 (1.40)	1.49 (1.44)	2.23	0.02 7	0.02, 0.27	0.1
3 rd Person Singular	she, he, him *	0.30 (0.67)	0.32 (0.67)	-0.39	0.69 7	-0.09, 0.06	-0.03
Achievement	win, success, better *	1.06 (1.14)	1.33 (1.29)	-3.97	0	-0.41, - 0.14	-0.22
Affective Processes	happy, cried	4.84 (3.42)	4.82 (2.74)	0.06	0.95 3	-0.37, 0.45	0.01
Affiliation	ally, friend, social *	2.62 (2.19)	2.21 (2.68)	2.22	0.02 8	0.05, 0.78	0.17

Analytical Thinking	Frequency of words which involve cognition	63.31 (22.84)	63.97 (21.27)	-0.5	0.62	-3.30, 2.05	-0.03
Anger	hate, kill, annoyed *	0.24 (0.53)	0.14 (0.45)	3.25	0.00 1	0.04, 0.18	-0.02
Anxiety	worried, fearful *	0.14 (0.45)	0.15 (0.41)	-0.44	0.66 1	-0.07, 0.04	-0.02
Apostrophes	‘	1.18 (1.47)	1.09 (1.36)	0.85	0.39 5	-0.11, 0.28	0.06
Articles	a, an, the *	6.97 (2.83)	0.06 (2.79)	-0.6	0.54 8	-0.40, 0.20	-0.03
Assent	agree, OK, yes *	0.04 (0.19)	0.02 (0.18)	1.13	0.26 2	-.01, .05	0.11
Authentic	Authentic	59.07 (26.88)	61.28 (25.91)	-1.47	0.14 4	-4.91, 0.70	-0.08
Auxiliary Verbs	am, will, have *	8.40 (2.98)	8.33 (3.01)	0.42	0.67 4	-0.25, 0.41	0.02
Biological Processes	eat, blood, pain *	1.21 (1.21)	1.43 (1.19)	-2.47	0.01 4	-.40, .05	-0.18
Body	cheek, hands, spit *	0.18 (0.57)	0.18 (0.49)	-0.22	0.82 5	-.09, .07	0

Causation	because, effect *	1.77 (1.36)	1.85 (1.51)	-0.74	0.45 9	-0.28, 0.13	-0.06
Certainty	always, never *	1.79 (2.03)	1.85 (1.66)	-0.59	0.55 9	-0.25, 0.14	-0.03
Clout	Clout	46.83 (22.94)	48.42 (22.18)	-1.16	0.24 2	-4.15, 1.01	-0.07
Cognitive Processes	cause, know, ought *	14.68 (4.62)	14.89 (4.52)	-0.88	0.38 3	-0.68, 0.26	-0.05
Colons	:	0.09 (0.65)	0.10 (0.66)	-0.97	0.33 3	-0.03, 0.01	-0.02
Commas	,	2.85 (2.50)	3.09 (2.93)	-1.26	0.2	-0.59, 0.12	-0.09
Common Adjectives	free, happy, long *	4.51 (2.62)	4.93 (2.57)	-3.08	0.00 2	-0.68, - 0.15	-0.17
Common Adverbs	very, really *	3.46 (2.11)	3.69 (2.30)	-1.54	0.12 7	-0.55, 0.07	-0.1
Common Verbs	eat, come, carry *	14.93 (4.30)	15.16 (4.28)	-1.17	0.24 4	-0.64, 0.15	-0.05
Comparisons	greater, best, after *	3.15 (2.24)	3.36 (2.25)	-1.69	0.09 2	-.45, 0.03	-0.09
Conjunctions	and, but, whereas *	6.75 (2.48)	6.45 (2.50)	2.16	0.03 2	0.03, 0.59	0.12

Dashes	-	0.29 (0.65)	0.31 (0.79)	-0.38	0.70 3	-0.09, 0.06	-0.03
Death	bury, coffin, kill *	0.13 (0.37)	0.10 (0.39)	0.74	0.46 2	-0.04, 0.09	0.08
Dictionary Words	Frequency of words which are seen in the dictionary	91.08 (10.13)	90.58 (11.25)	2.26	0.02 5	0.09, 0.96	0.05
Differentiation	hasn't, but, else *	4.03 (2.21)	3.63 (2.09)	2.29	0.02 3	0.06, 0.73	0.19
Discrepancy	should, would *	0.83 (0.93)	0.92 (0.97)	-1.2	0.23 3	-0.22, 0.05	-0.09
Drives	Motivation	8.93 (4.46)	8.39 (4.40)	2.83	0.00 5	0.16, 0.91	0.12
Emotional Tone	Frequency of words which involve emotion	70.78 (25.68)	73.50 (24.93)	-1.5	0.13 5	-6.25, 0.78	-0.11
Exclamation Marks	!	0.14 (1.51)	0.04 (3.86)	0.95	0.34 6	-0.12, 0.33	0.03
Family	daughter, dad, aunt *	0.51 (0.76)	0.37 (1.11)	1.53	0.12 8	-0.04, 0.32	0.15
Feel	feels, touch *	0.41 (0.62)	0.49 (0.76)	-1.73	0.08 5	-.15, .01	-0.12

Female References	girl, her, mom *	0.14 (0.49)	0.18 (0.48)	-1.25	0.21 2	-0.11, 0.03	-0.08
Fillers	I mean, you know *	0.00 (0.02)	0.00 (0.03)	-1	0.31 9	-.01, .01	0
Friend	buddy, neighbor *	0.15 (0.362)	0.21 (0.99)	-0.8	0.42 3	-0.21, 0.09	-0.08
Future Focus	may, will, soon *	0.75 (0.88)	0.78 (0.94)	-0.55	0.58 4	-0.19, 0.09	-0.03
Health	clinic, flu, pill *	0.86 (1.05)	1.06 (1.09)	-2.68	0.00 8	-.34, - .05	-0.19
Hear	listening, hearing *	0.34 (1.16)	0.22 (0.44)	1.38	0.16 9	-.05, .29	0.14
Home	kitchen, landlord *	0.32 (0.57)	0.21 (1.00)	1.36	0.17 4	-0.05, 0.27	0.14
Impersonal Pronouns	it, it's, those *	5.82 (2.89)	6.01 (2.95)	-1.3	0.19 4	-0.49, 0.09	-0.06
Informal Language	Hey, whats up	0.21 (0.51)	0.18 (0.53)	1.1	0.27 3	-0.02, 0.07	0.06
Ingest	dish, eat, pizza *	0.09 (0.34)	0.12 (0.49)	-0.79	0.43 2	-0.10, 0.04	-0.07
Insight	think, know *	4.61 (2.79)	4.99 (2.91)	-3.25	0.00 1	-0.61,- 0.15	-0.13

Interrogatives	how, when, what *	1.58 (1.24)	1.55 (1.41)	0.48	0.63 4	-0.11, 0.19	0.02
Leisure	cook, chat, movie *	0.68 (1.30)	0.56 (1.14)	1.01	0.31 6	-0.12, 0.36	0.1
Male References	boy, his, dad *	0.35 (0.71)	0.35 (0.71)	-0.05	0.96 4	-0.10, 0.10	0
Money	audit, cash, owe *	0.13 (0.39)	0.17 (0.53)	-1.31	0.19 3	-0.10, 0.02	-0.09
Motion	arrive, car, go *	1.63 (1.35)	1.45 (1.24)	2.36	0.01 9	0.03, 0.33	0.14
Negations	no, not, never *	2.95 (7.72)	2.34 (7.58)	3.56	0.00 1	0.29, 0.95	0.08
Negative Emotion	hurt, ugly, nasty *	0.76 (1.02)	0.68 (0.83)	1.45	0.14 9	-0.03, 0.20	0.09
Netspeak	btw, lol, thx *	0.05 (0.34)	0.05 (0.37)	0.37	0.71 5	-.02, .03	0
Nonfluencies	er, hm, umm *	0.09 (0.32)	0.08 (0.30)	0.39	0.69 9	-.02, .03	0.03
Numbers	second, thousand *	0.59 (1.01)	0.60 (0.97)	-0.16	0.87	-0.11, 0.09	-0.01
Other Punctuation	@ # \$ % ^ & etc.	0.53 (2.57)	0.63 (2.62)	-2.41	0.01 7	-0.19, - 0.02	-0.04

Parentheses	() [] { }	0.32 (0.70)	0.27 (0.64)	1.18	0.24 1	-0.03, 0.13	0.07
Past Focus	ago, did, talked *	1.77 (1.83)	1.43 (1.69)	3.58	0	0.15, 0.52	0.19
Perceptual Processes	look, heard, feeling *	1.62 (1.51)	1.69 (1.31)	-0.66	0.51	-0.31, 0.15	-0.05
Periods	.	7.04 (4.79)	7.05 (4.49)	-0.09	0.92 8	-0.27, .24	-0.01
Personal Pronouns	I, them, her *	8.12 (3.69)	8.28 (3.69)	-0.85	0.39 5	-0.53, 0.22	-0.04
Positive Emotion	love, nice, sweet *	3.88 (3.35)	3.98 (2.50)	-0.5	0.61 5	-0.49, 0.33	-0.03
Power	superior, bully *	4.87 (3.79)	4.53 (3.03)	1.66	0.09 9	-0.06, 0.73	0.1
Prepositions	to, with, above *	13.52 (3.80)	13.20 (3.58)	1.75	0.08 2	-0.05, 0.69	0.09
Present Focus	today, is, now *	11.96 (3.97)	12.41 (3.98)	-2.47	0.01 4	-0.06, - 0.09	-0.11
Quantifiers	few, many, much *	3.23 (7.49)	3.19 (7.50)	0.36	0.72	-0.19, 0.30	0.01
Question Marks	?	0.25 (2.98)	0.19 (1.87)	0.71	0.47 6	-0.11, 0.23	0.02

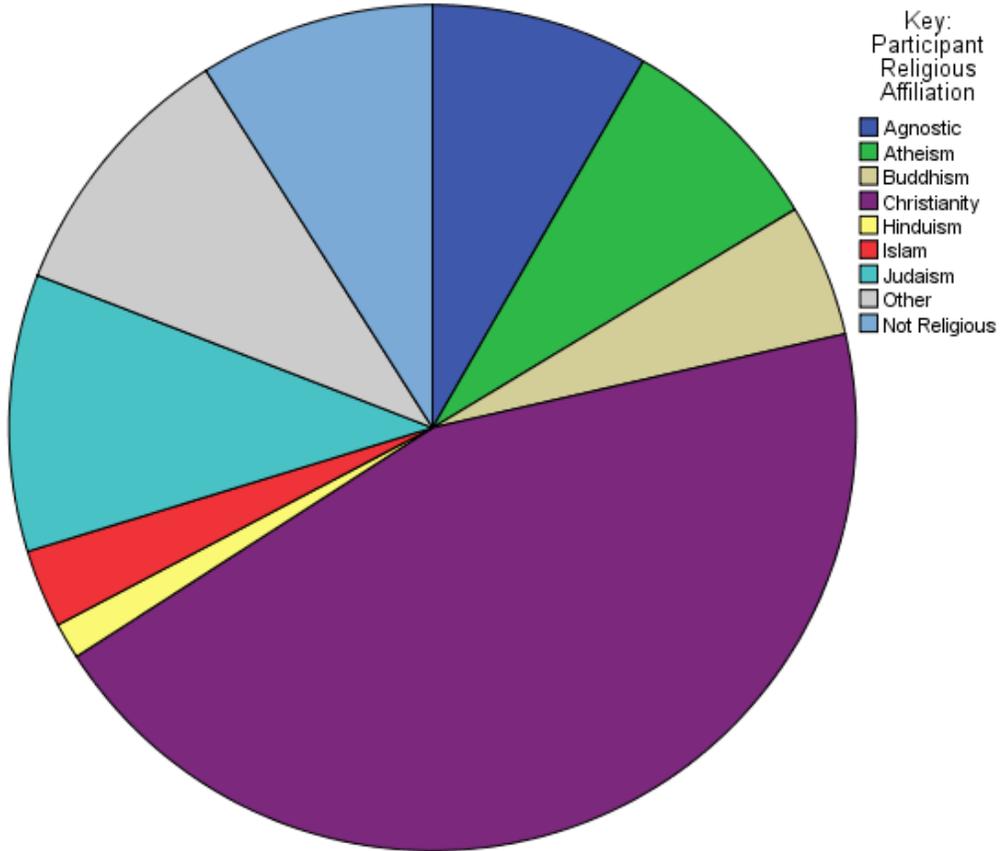
Quotation Marks	“	0.34 (1.11)	0.42 (1.17)	-1.37	0.17 4	-0.19, 0.03	0.07
Relativity	area, bend, exit *	10.20 (3.64)	10.29 (3.40)	-0.37	0.71 3	-0.06, 0.37	-0.03
Religion	altar, church *	9.46 (4.61)	8.62 (4.48)	4.55	0	0.48, 1.21	0.18
Reward	take, prize, benefit *	0.61 (0.78)	0.66 (0.73)	-0.88	0.38	-0.19, 0.07	-0.07
Risk	danger, doubt *	0.21 (0.47)	0.20 (0.41)	0.46	0.63 6	-0.06, 0.09	0.02
Sadness	crying, grief, sad *	0.14 (0.36)	0.16 (0.39)	-0.88	0.37 9	-0.09, 0.03	-0.05
See	view, saw, seen *	0.56 (0.75)	0.59 (0.76)	-0.62	0.53 4	-.15, .08	-0.04
Semicolons	;	0.06 (0.29)	0.05 (0.23)	0.42	0.67 4	-0.02, 0.03	0.04
Sexual	horny, love, incest *	0.03 (0.14)	0.02 (0.15)	0.06	0.95 6	-.03, .03	0.07
Social Processes	mate, talk, they *	9.74 (3.75)	9.41 (4.19)	1.63	0.10 5	-0.06, 0.71	0.08
Space	down, in, thin *	6.45 (2.86)	6.82 (3.11)	-1.97	0.05	-0.73, 0.01	-0.12

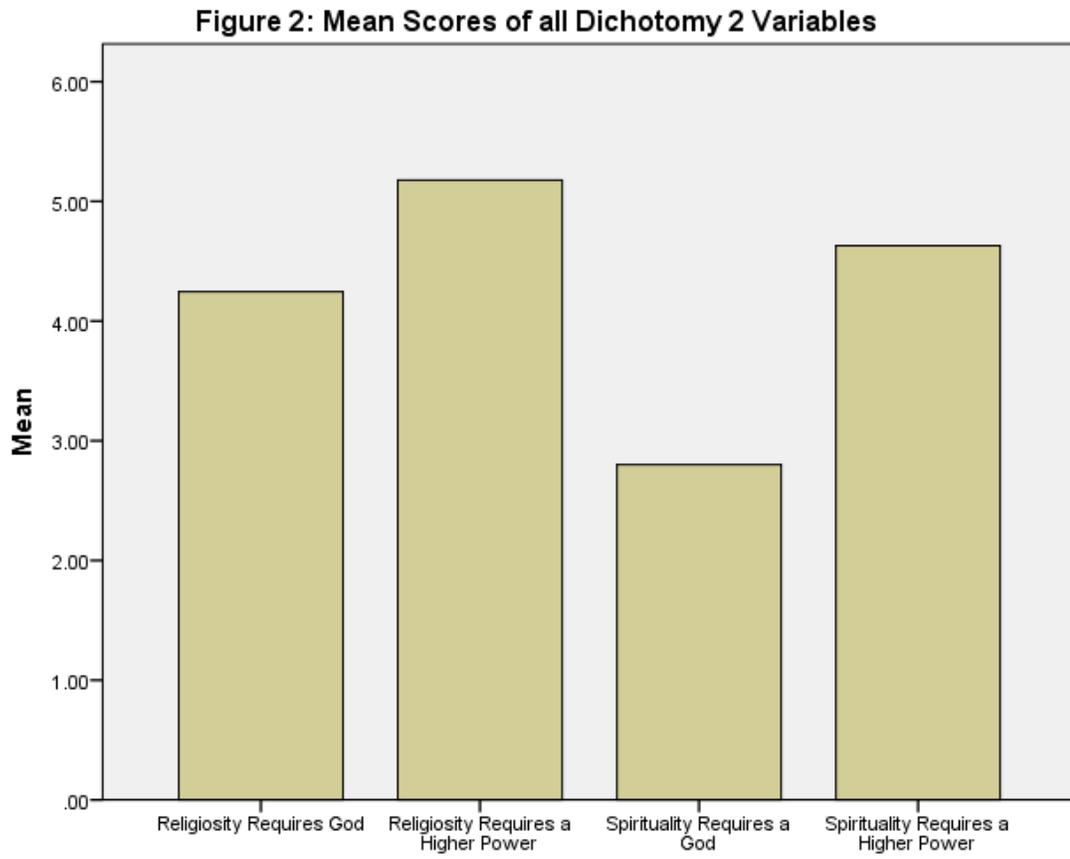
Swear Words	fuck, damn, shit *	0.02 (0.15)	0.02 (0.13)	1	0.31 9	-.01, .02	0
Tentative	maybe, perhaps *	2.90 (2.10)	3.04 (2.19)	-1.45	0.14 8	-0.33, 0.05	-0.07
Time	end, until, season *	2.10 (1.65)	2.12 (1.73)	-0.14	0.89 2	-0.24, 0.21	-0.02
Total Function Words	it, to, no, very *	52.65 (9.25)	52.35 (9.26)	1.05	0.29 7	-0.28, 0.91	0.03
Total Pronouns	I, them, itself *	13.88 (5.57)	14.26 (5.40)	-1.5	0.13 7	-0.89, 0.14	-0.07
Total Punctuation	Frequency count of all punctuation	13.14 (8.35)	13.25 (7.74)	-0.44	0.65 8	-.59, .38	-0.01
Word Count	Frequency count of all words	191.91 (167.49)	190.29 (159.56)	0.36	0.70 8	-6.75, 10.08	0.01
Words Per Sentence	Ratio of words used per sentence	17.71 (10.76)	17.31 (9.50)	1.03	0.30 4	-0.34, 1.11	0.04
Words with more than 6 Letters	Frequency count of words with more than 6 letters	24.35 (9.14)	24.17 (8.78)	0.67	0.50 1	-0.36, 0.68	0.02

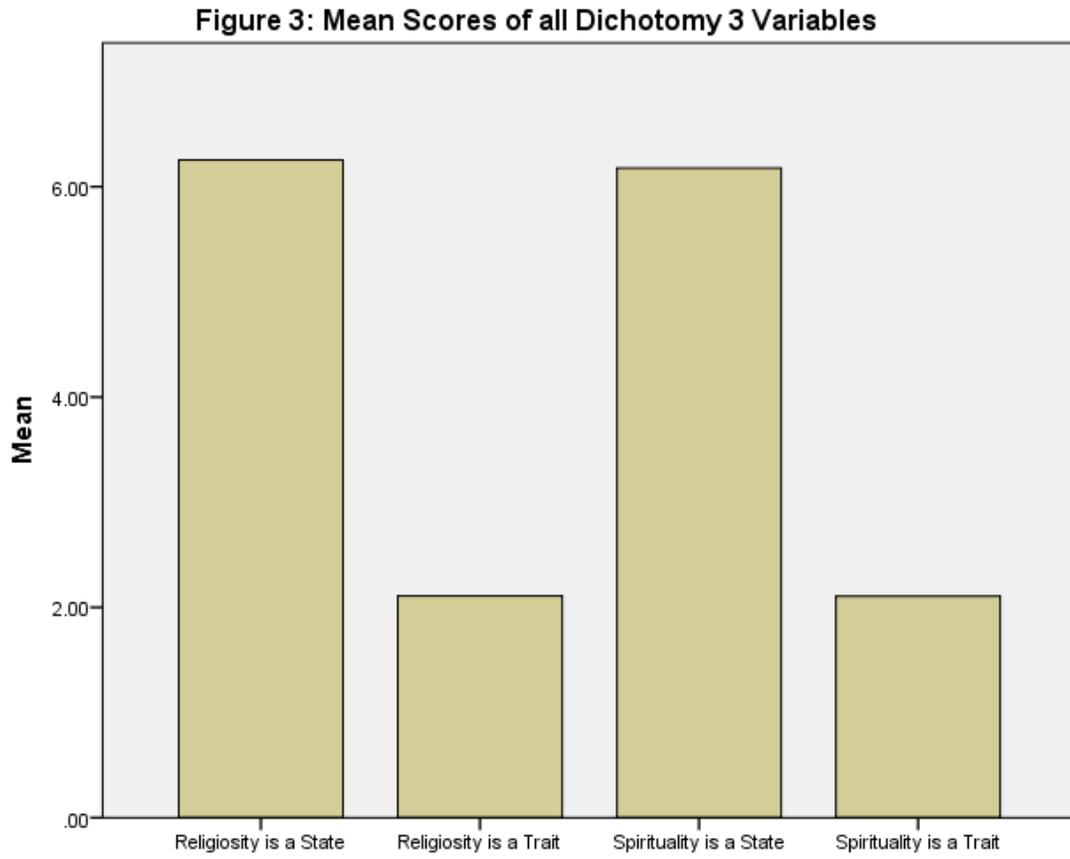
Work	job, majors, Xerox *	1.61 (1.48)	1.57 (1.55)	0.36	0.71 8	-0.16, 0.23	0.03
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* (indicates description of variable taken directly from Pennebaker, Boyd, Jordan, & Blackburn (2015))

Figure 1: Pie Graph of Participant Religious Affiliations within the Present Study







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Eric Pickering Boorman
Curriculum Vitae

PERSONAL INFORMATION:

Eric Boorman
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Baltimore MD, 21225
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EDUCATION:

MS	Experimental Psychology, Towson University (2016)
B.S.	Psychology, Towson University; (2014) Graduated with Departmental Honors
A.A College;	Transfer Studies in Psychology, Anne Arundel Community (2011)

Software Experience

- IBM SPSS statistics
- R
- LICW version 2007; 2015
- Magnum Opus
- NVivo
- Qualtrics
- Survey Monkey

TEACHING EXPERIENCE:

PSYC 432- Cross Cultural Psychology- Fall 2013
 - Proctored for Dr. Marianne Dunn as an undergraduate

PSYC 465: Physiological Psychology- Spring 2014
 - Proctored for Dr. Craig Johnson as an undergraduate

HLTH 207: Health Care in the US- Fall 2014
 - Proctored for Dr. Cyrus Engineer as graduate research assistant

HCMN 305: Community Health Administration- Fall 2014
 - Proctored for Dr. Cyrus Engineer as graduate research assistant

IDHP 600: Healthcare Professionals in a Changing Environment- Fall 2014
 - Proctored for Dr. Cyrus Engineer as graduate research assistant
 -

HCMN 305: Community Health Administration- Spring 2015

- Proctored for Dr. Cyrus Engineer as graduate research assistant
- HCMN 435: Health information and Quality Management- Spring 2015
- Proctored for Dr. Cyrus Engineer as graduate research assistant
 - 1 section of course
- HCMN 435: Health information and Quality Management- Spring 2015
- Proctored for Dr. Cyrus Engineer as graduate research assistant
 - 2nd Section of course
- PSYC 479: Honors Seminar in Psychology
- Proctored for Professor Christopher Magalis as part of College Teaching Practicum Course

Work/Research Experience

Dr. Marianne Dunn Research Lab (Spring 2013 – Spring 2015)

- Wrote proposal
- Applied to conference
- Drafted IRB application

Graduate Assistant / Research Assistant for Department of Interprofessional Health Studies (Fall 2014 – Spring 2016)

- Wrote IRB application
- Applied to research conference
- Data analysis on Emergency preparedness project
- Data analysis on Cancer diagnosis project
- Drafted surveys

RESEARCH INTERESTS:

Research interests include research on religiosity and spirituality, and their predictors and outcomes. Research interests also focus on psychometrics, qualitative and quantitative methodologies.

Publications

PROFESSIONAL PRESENTATIONS:

Boorman, E. (2014 Submitted). The Effects of Deity-Sanctioning Behaviors within the Abrahamic Religions, Towson University Undergraduate and Graduate Research Expo. Towson MD. April 2014.

Boorman, E. (2015 Submitted). Religiosity and Spirituality according to the Christian laity, Towson University Undergraduate and Graduate Research Expo. Towson MD. April 2015

Engineer, C., Nelson, H. W., & Boorman, E. (2015 submitted). Simulation in health care management - Friday Night at the ER®, AUPHA Annual Meeting Miami FL. June 2015

Boorman, E., & Sinnott, J. (2016 Submitted). Three Dichotomies within the Psychology of Religion and Spirituality, Division 36 Mid-year Conference on Psychology, Religion and Spirituality, Brooklyn NY. March 2016

Boorman, E., Gonzalez, C., & Sinnott, J. (2016 Submitted). An Association Rule Analysis of Religiosity and Spirituality, Baltimore MD. April 2016

Trainings

- Life Space Crisis Intervention (LSCI) Training

PROFESSIONAL MEMBERSHIPS:

American Psychological Association Graduate Student Affiliate

- Division 36
- Division 4

HONORS, AWARDS, & RECOGNITIONS:

HONOR SOCIETIES:

Psi Chi

Golden Key Honor Society

March 2016

