RELATIONSHIP AMONG PERSONALITY, RELIGIOSITY, AND POLITICAL

ORIENTATION USING STRUCTURAL EQUATION MODELING

by

Heechun Moon

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Arts in Quantitative Psychology

Middle Tennessee State University
2013

Thesis Committee

Dr. Jwa Kim

Dr. Dana Fuller

Dr. Michael Hein

ACKNOWLEDGEMENTS

This research project would not have been possible without the support of many people. I

wish to express my gratitude to my supervisor, Professor Dr. Jwa K. Kim, for his support,

encouragement, and guidance. Deepest gratitude is also due to the members of the thesis

committee, Professor Dr. Dana Fuller and Professor Dr. Michael Hein, without whose

knowledge and support this study would not have been successful. Also, I want to thank

all the participants in my survey, who have willingly shared their precious time for the

survey. Last, I wish to express my love and gratitude to my beloved families for their

understandings and support in completing my thesis.

ABSTRACT

The purpose of this study is to establish the relationship among personality (Openness, Agreeableness, and Conscientiousness), religious orientation (Religious Fundamentalism), and political orientation (Conservatism). A total of 363 respondents of a state-funded regional university in the Southeast participated in this survey. A Structural Equation Modeling (SEM) method was used to examine three models depending on the personality traits, assuming (1) each of the personality traits (Openness, Agreeableness, and Conscientiousness) influence religious orientation, as well as (2) political orientation, and (3) the religious orientation influences political orientation. The results showed that each of the models had a good model fit to the data. Main findings can be summarized as follows: Religious fundamentalism influenced political orientation; Openness personality trait negatively affected individuals' religious fundamentalism; and Agreeable personality trait negatively affected individuals' political conservatism.

Keywords: personality, religiosity, political orientation, factor analysis, SEM

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

Introduction

The main purpose of this study is to establish relationships among three latent traits, personality, religiosity, and political orientation utilizing Structural Equation Modeling (SEM). For more than half a century, continuous themes in psychological literature have been the study of possible relations between personality and religiosity (e.g., Francis, 1992); between personality and political orientation (e.g., Jost, Glaser, Kruglanski, & Sulloway, 2003; Mehrabian, 1996; Pratto, Sidanius, Stallworth, & Malle, 1994); and between religiosity and political orientation (e.g., Van Gyes & De Witte, 1999; Wald & Wilcox, 2006). The main relationships among the three traits that the researchers found in the previous studies can be summarized as follows: (1) some personality traits (Conscientiousness, Openness, Agreeableness) affect religiosity as well as (2) political orientation, and (3) religiosity is associated with political conservatism. Based on these findings and theories, we hypothesized that a combined model that simultaneously represented the relationship among the three latent traits should warrant a scientific inquiry. This study aimed to examine the combined model using SEM. In order to form the relationships among the three traits, it is necessary to discuss each trait individually and to validate the connections between and among the traits.

Personality

The concept of personality is not easy to define because of its own ambiguity that has come from a variety of definitions established by researchers depending on their own

theoretical perspectives. As Allport (1958) mentioned, because "each assessor has his own pet units and uses a pet battery of diagnostic devices" (p. 258), the systematic integration of the findings was difficult due to the diversity of concepts and scales. From the beginning of the twentieth century, researchers tried to find overarching domains which could include a variety of instances. Natural-language dictionaries which people ordinarily used in order to explain themselves and others were generally employed as the source of attributes for a scientific taxonomy. Allport and Odbert's (1936) complete list of the personality terms found in an unabridged dictionary became an important root of later taxonomic work (John & Srivastava, 1999). According to Allport and Odbert, personality was defined as "generalized and personalized determining tendencies-consistent and stable modes of an individual's adjustment to his environment" (p. 26). Despite criticism about the ambiguous boundaries of the category made by Allport and Odbert, it has been used as a prototype conception.

Among the 18,000 trait terms established by Allport and Odbert (1936), only 4,500 trait terms was selected by Cattell (1943) to create a personality trait category. Through both clustering procedures and his own literature reviews, Cattell drastically reduced the terms to 35 variables and finally identified 16 personality factors using oblique factor analysis, which were later used to develop a general taxonomy of personality traits, the Big Five personality traits (John et al, 1999). From Fiske's study (1949), researchers (e.g., Borgatta, 1964) approached consensus on five factor traits which were usually labeled: (1) Extraversion or Surgency, (2) Agreeableness, (3) Conscientiousness, (4) Emotional Stability/Neuroticism, and (5) Intellect or Openness.

These five latent traits have become known as Big Five (Goldberg, 1993), which indicated that the meaning of each dimension was broad enough to contain as many personality characteristics as possible (John et al., 1999).

According to the Five Factor theory (McCrae & Costa, 2006), personality traits are defined as basic tendencies that are rooted in biological bases. Basic traits were formed through the effect of surrounding environment (e.g., situation/context), objective biography (e.g., a specific instance of behavior), and characteristic adaptations (e.g., attitudes, goals, beliefs, and self-schemas) (John et al., 1999). Characteristic adaptations mediated external influences and situational factors resulting in an individual's objective biology which includes both overt behavior and emotional reactions (John et al., 1999). Thus, characteristic adaptations naturally vary depending on environment like family and culture, but personality traits do not. Several studies proved that the Big Five traits were found across cultures and stable across portions of the lifespan (McCrae & Costa, 1997). Based on this conceptual understanding, the five dimension theories of personality traits have been developed as a reliable scale to measure individually different genetic characteristics (Goldberg, 1993; McCrae, 2002). In behavioral science, many studies have adopted the Big Five personality traits to reveal relationships with other latent traits. In terms of religiosity traits and political orientation traits, researchers found three dimensions--Openness, Agreeableness, and Conscientiousness-- were correlated to religiosity traits and political orientation (McCullough, Tsang, & Brion, 2003).

For this project, we employed the three dimensions among the Big Five factors to examine relationships with religiosity and political orientation based on the findings of the previous research.

Religious Orientation: Religious Fundamentalism

Through the history of modern psychology, the term 'religion' has been used as both an individual and institutional construct (Hill & Pargament, 2003). The term 'religion' is generally relevant to the outward practice of spiritual understanding and framework for a system of beliefs, values, codes of conduct and rituals, having some form of communal religious observance (King, Speck, & Thomas, 1995). Similarly, religiosity, often used as religiousness, indicated a personal trait referring to a variety of aspects of religious activity, dedications, and belief in an individual characteristic (Wikipedia, 2012).

The meaning of 'religion' or 'religiosity' is conceptually connected to a particular religion or a fixed system of ideas, showing a limitation of representing the dynamic personal element in human piety (Wulff, 1996). On the other hand, the term 'spirituality' refers more broadly to a person's belief in a sacred or higher (ultimate) power apart from the person's own existence regardless of any specific religion (Wulff, 1996). Spirituality is the sense of relationship or connection with a power or force in the universe that transcends the present context or reality (King et al., 1995). According to Blando (2006), it was focused on connection with others, containing three main components: (1) connection to someone or something beyond oneself, (2) sense of compassion for others, and (3) desire to contribute to the good of others. Because most people tend to experience

spirituality within an organized religious context, however, researchers failed to orthogonally separate the meaning of spirituality from religious practice and experience (Marler & Hadaway, 2002). Rather, both religiosity and spirituality have been developed in an individual person by cooperating with each other (Armstrong & Crowther, 2002). For instant, many religious practices improve spirituality, while spiritual practice can enforce a person's belief in a specific religion. For the present study, the term, 'religiosity' will be used in order to better represent individual differences in a specific belief, Christianity.

Religious fundamentalism is one of the religiosity traits which indicated individual's religious tendency orientation in social changes. The people who show high fundamentalism have a set of well-defined values as absolute that tend to develop into a movement against social changes, such as gender equality and gay marriage. Depending on perspectives, religious fundamentalism was differently defined as follows: (1) Orthodox elements of theological beliefs (Kellsted & Smidt, 1991), (2) denominational affiliation (Danso, Hunsberger, & Pratt, 1997), (3) self-identification , (4) religious ethnocentrism (Altemeyer & Hunsberger, 2004), and (5) biblical literalism with a narrow-minded mode of thinking that is unable to consider different points of view (Laythe, Finkel, & Kirkpatrick, 2001). Altemeyer et al. (2004) developed a 20-item Religious Fundamentalism scale, defining religious fundamentalism as "the belief that there is one set of religious teachings that clearly contains the fundamental, basic intrinsic, essential, inerrant truth about humanity and deity…; that this truth must be followed today according to the fundamental, unchangeable practices of the past; and that those

who believe and follow these fundamental teachings have a special relationship with the deity" (p. 118). Religious fundamentalism, as common phenomena in religion, was considered to involve personality and political orientation. The concept and its scale of religious fundamentalism will be used in this study. According to Altemeyer et al. (2004), the Religious Fundamentalism scale was connected with some political traits such as right-wing authoritarianism and hostility toward homosexuals as well as some personality traits such as the Social Dominance Orientation scale (Altemeyer, 1998). These connections of religiosity to personality and political orientation were emphasized in this study.

Political Orientation: Political Conservatism

Political orientation, as a tendency that characterizes the thinking of a person or group, can be discussed with a variety of theories and ideologies generated from numerous perspectives, such as totalitarianism, communism, radicalism, and segregationism. For the last few decades, psychologists have examined the hypothesis that "different psychological motives and tendencies underlie ideological differences between the political left and the right" (Jost et al., 2003, p. 339). From the early work of Adorno, Frenkel-Brunswik, Levinson, and Santford, researchers concentrated their attention on understanding political conservatives associated with a variety of political perspectives such as authoritarianism, fascism (Jost et al., 2003), fundamentalism, totalitarianism (Mehrabian, 1996), social dominance orientation (SDO, Pratto et al., 1994), and modern racism (Akrami, Ekehamamar, & Araya, 2000).

This study focused mainly on political conservatism in that political conservatism

has been most frequently used as subject matter among historians (e.g., Diamond, 1995),

political scientists (e.g., Carmines & Berkman, 1994) and sociologists (e.g., Mannheim,

1927/1986). Conservatism has usually been explained with two main characteristics:

"fear of change" and "attitude toward equality" (Jost et al., 2003). First, fear of change is

one of the most key characteristics of conservatism when it comes to definition. About

conservatism, Neilson (1958)'s Webster's Dictionary defined, "the disposition and

tendency to preserve what is established; opposition to change" (p. 568) and also Morris

(1976) explained, "the disposition in politics to maintain the existing order" (p. 312).

Wilson (1973) found a general factor based on conservative belief was "fear of

uncertainty". Another characteristic of conservatism is preferences for inequality. As

Giddens (1998) argued, "One major criterion continually reappears in distinguishing left

from right: *attitudes toward equality*. The left favors greater equality, while the right sees

society as inevitably hierarchical" (p. 40). In general, radical historical changes like the

French Revolution and the Civil War have been triggered by equality issues. However,

conservatism cannot be defined with a single universal meaning because of its variety of

meanings in terms of "what is considered traditional in a given place and time"

(http://en.wikipedia.org/wiki/Conservatism).

　　　Psychologists attempted to find the ideological differences between left and right.

A meta-analysis study conducted by Jost and his colleagues (2003) was a milestone in

psychological research on political conservatism. Based on analyses of several decades of

research and its empirical data (22,818 cases), the author found that personal political

conservatism was predicted by psychological factors, such as death anxiety ($r = .50$),

system instability ($r = .47$), intolerance of ambiguity ($r = .34$), and openness to

experience ($r = -.32$). Jost et al. (2003) also concluded that political conservatism was an

ideological belief system which psychologically managed uncertainty and fear. This

characteristic of political conservatism is related to a main characteristic of religiosity.

In order to establish the relationship of political orientation with personality and

religiosity, the 10-item Conservatism scale developed by Goldberg et al. (2006) was

employed to measure a political orientation trait. Since each of the three constructs--

personality, religiosity, and political orientation--was defined and discussed separately,

the relationship between each pair of the constructs will be described below.

Personality and Religiosity

Through the early history of modern psychology, the psychological aspect of

human religiosity has been considered as a serious part of their work (e.g., Freud, 1927).

However, the lack of scientific method to prove their theories led the pioneers to relying

on experience and reasoning to develop their ideas. From the 1950s, personality

researchers were devoted to understanding religiosity by using scientific approaches from

diverse theoretical approaches (e.g., Piedmont, 1999; Saucier & Goldberg, 1998). Among

major scales of personality, two personality scales, Eysenck's model and the Big Five

model have been popularly used to find the association with religiosity.

Eysenck suggested two dimensions of personality, extraversion and neuroticism

in his Maudsley Personality Inventory (Eysenck, 1959). Later, an additional dimension,

psychoticism, was included in his model, as expressed through the Psychoticism,

Extraversion and Neuroticism (PEN) inventory (Eysenck, 1969) and the Revised Eysenck

Personality Quesionnaire (Eysenck, 1985). The PEN model was used by many researchers to explore the relation with religiousness.

Francis (1992) raised a question whether psychoticism, a dimension of the PEN model, was fundamental to religiosity as concluded in the previous studies. Using two measures of religiosity, the Francis Scale of Attitude towards Christianity and a question about the frequency of church attendance, Francis's study supported the negative relation between a dimension of personality, psychoticism, and religiosity (Francis, 1992). Researchers proved the Eysenckian Psychoticism was fundamental to religiosity regardless of age and ethnicity, by using a variety of religiosity indicators, such as frequency of attendance at worship services, frequency of private prayer, and positive attitudes toward religion (Lewis & Maltby, 1995; Robinson, 1990).

The Big Five, or Five Factor personality taxonomy, was also popularly employed to examine the association of religiousness and personality (John et al., 1999; McGrae & Costa, 1997). Kosek (1999) and MacDonald (2000) found that measures of Agreeableness and Conscientiousness were positively associated with measures of religious involvement and intrinsic religious orientation. These results were not surprising in terms that Eysenckian Psychoticism appears to be a combination of Conscientiousness and Agreeableness in the Big Five factors (Costa & McCrae, 1995). McCullough et al. (2003) examined the associations of the Big Five personality factors with religiousness in adulthood for a 19-years longitudinal sample of 492 adolescents ages 12 to 18. Among the Big Five factors, Conscientiousness in adolescence was uniquely related to higher religiousness in early adulthood. Also, the longitudinal study

indicated that "an emotionally unstable individual might be more likely to adopt levels of religiousness that are similar to those of their parents" (p. 980).

Religious fundamentalism scales were popularly used to reveal the link between personality and religiosity. Jakubowska et al. (2010) sought for the determinants of religious fundamentalism among generic influence, environmental influence, and psychological variables using Structural Equation Modeling. Using the revised Religious Fundamentalism Scale (Altemeyer et al., 2004), Jakubowska et al. found that religious fundamentalism was mainly determined by environmental influences (38%) while anxiety trait and assumptions about the nature of the social world were largely determined by genetic influence (60%). Also, the multiple regression models indicated that anxiety trait was the only predictor of religious fundamentalism. Thus, this study employed religious fundamentalism as an important factor to disclose the relationship with personality.

Personality and Political Orientation

A variety of political issues such as group conflict and group-based inequality are an inevitable aspect of our human existence. However, researchers have questioned why each individual shows his/her own unique attitude. Pratto et al. (1994) explored whether a personality variable, Social Dominance Orientation (SDO), predicted social and political attitudes. The SDO was measured with 14 item SDO scales which were balanced to measure one's degree of preference for inequality. Social dominance theory was supported by the results that (1) men tend to be higher on SDO than women; (2) high SDO people tend to have less concern for others, communality, and tolerance; (3) SDO

had a strong and consistent relation with belief in hierarchy-legitimizing myths, especially with anti-Black racism and nationalism; and (4) SDO had strong correlations with opposition to social programs, racial policies, women's rights, environmental programs, and gay and lesbian rights, as well as with support for military programs, U.S. chauvinism, and Republican party identification (Pratto et al., 1994).

Mehrabian (1996) raised questions whether a person's political orientation is driven, at least in part, by the person's personality as well as the relation between conservatism/liberalism and totalitarianism. The results indicated that there were positive relations between conservatism to age, religiousness, and libertarianism, but negative relations between conservatism and either intellect/sophistication factor, Conscientiousness factor of the Big Five, the Pleasure-Arousability-Dominance (PAD), or Temperament scales. According to Saucier's (2000) analysis, a dimension of the Big Five, Openness, was negatively related with political conservatism and right-wing authoritarianism. This result was supported by Heaven and Bucci (2001). In terms of candidates and elections, Caprara and Zimbardo (2004) found those who supported liberal candidates tended to be higher on Openness and Agreeable, while those who supported conservative candidates tended to be higher in Conscientiousness.

Religiosity and Political Orientation

Founders of modern sociology stressed the role of religion and religious leaders in affecting the acceptance and stability of the existing social order (e.g., Duriez, Luyten, Snauwaert, & Hutsebaut, 2002; Durkheim, 1912/1995). However, religion was forgotten by researchers in political science because of its ambiguity of measurement in the early

20th century. From the 1980s on, as politics was increasingly personalized, people became interested in religiosity as trait of individual personalities for the politics study (Caprara et al., 1999, 2002; Giddens, 1998; Wald et al., 2006).

Researchers argued that religious people tended to have more conservative political positions (Guth, Kellstedt, Smidt, & Green, 2006; Layman & Carmines, 1997). Two possible explanations were usually supported by researchers (Malka, Lelkes, Srivastava, Cohen, & Miller, 2012). First, some of the values and predispositions which deeply identify religiosity itself affected people's political orientation (Graham, Haidt, & Nosek, 2009; Jost, 2007). As sociological theorists have stressed the role of religion and religious leaders in supporting the acceptance and stability of the existing social order (Durkeim, 1912), religions were considered to influence an individual's political attitudes by teaching certain value systems, usually related to the social order, which were used as a guideline in forming their political attitudes (Van Gyes et al., 1999).

According to Hunter (1991), a political division between religious conservatisms and secular liberals was too obvious to bridge each other, because of "different systems of moral understanding" (p. 42). This argument was supported by Graham et al. (2009)'s findings that liberals had a totally different basis from conservatives who were more involved in religious issues, such as purity and sanctity. Duriez et al. (2002) explored whether religiosity and values predict political attitudes. The results showed that both economic conservatism and racism were negatively related to relativism, as well as universalism and benevolence had significantly negative relation to all the political attitude measures (Duriez et al., 2002).

Another explanation is that certain context which includes denominations, traditions, and the religious leaders affects individuals' choice of political attitudes, usually conservative positions (Layman, 2001). People were affected by information through direct exposure to the news media (Iyengar & Kinder, 1987) and through expose to both formal and informal communication with religious elites, friends, and family (Fiorina, Abrams, & Pope, 2006). Kellstedt et al. (1991) found that fundamentalism measures, especially, denominational and doctrinal measures, were significantly correlated to religiosity. Therefore, it was assumed that the religious orientation (Religious Fundamentalism) connected to traditional liturgy, religious doctrine, and activity, influenced individual's preference in choosing political orientation.

As we mentioned above, researchers separately examined dual relations among the three traits, personality, religiosity, and political orientation. However, the relationship among the three traits has not been simultaneously examined yet. This study will attempt to examine a theoretical model which shows the relationship among the three traits by combining the previous theoretical models.

Measurement and Statistical Methods

SEM is one of the advanced statistical methods, which allows confirmatory decisions for sets of relationships between latent and observed variables. Hoyle (1995) explained, "SEM is a comprehensive statistical approach to testing hypotheses about relations among observed and latent variables" (p. 1). Also, Rigdon (1998) stated that SEM was a methodology in order to represent, estimate, and test a theoretical model of linear relations among variables. These characteristics of SEM have encouraged social

scientists to examine their theories which usually have complex causal relations with actual data (Fox, 2006). According to Joreskog and Sorbom (1996), latent models were popularly used because the latent models "can summarize information contained in many response variables by a few latent variables,… Second, a latent variable model can minimize the biasing effects of errors of measurement in estimating treatment effects. Third, latent variable models investigate effects between primary conceptual variables rather than between any particular set of ordinary response variables" (p. 226).

It may be said that SEM is a combination of exploratory factor analysis (EFA) and multiple regression (MR). SEM has more advantage in analyzing actual data collected in real fields (Hayduk, 1988). Although multiple regressions can accurately estimate the relationship only when there is a linear relationship between dependent and independent variables, SEM has a more flexible assumption applicable in the condition of multi-collinearity among the variables. Also, SEM can eliminate the model error terms, while the multiple regression model cannot eliminate. Most of all, while multiple regression models can explain relations among only observed variables, SEM can explain relations among observed and latent variables, which allows researchers to examine more complex models and to explore more potential models.

The mathematical models for a single sample were the structure model and measurement model. According to Hayduk (1988), the equation for the measurement model for q exogenous observed variables can be explained as follows:

$$\mathrm{x} = \Lambda_x \xi + \delta$$

where

> x = a (qx1) vector of observed exogenous indicators,
>
> Λ_x = a (qxn) matrix of structural coefficients,
>
> ξ = an (nx1) vector of exogenous concepts,
>
> δ = a (qx1) vector of errors in the measurement model,
>
> q = the number of x-variables, and
>
> n = the number of ξ-variables.

The Θ_δ is a (qxq) matrix generated by the covariances among these errors.

The equation for the measurement model may be expressed as

$$\mathbf{y} = \Lambda_y \eta + \varepsilon$$

where

> y = a (px1) vector of observed endogenous indicators,
>
> Λ_y = a (pxm) matrix of structural coefficients,
>
> η = an (mx1) vector of endogenous concepts,
>
> ε = a (px1) vector of errors in the measurement model,
>
> p = the number of y-variables, and
>
> m = the number of η-variables.

The Θ_ε is a (pxp) matrix made with the covariances among these errors.

The equation for the structural (latent) model may be expressed as

$$\eta \;=\; \mathbf{B}\eta \;+\; \Gamma\xi \;+\; \zeta$$

where

η = an (mx1) vector of endogenous concepts,

$\mathbf{B}$ = an (mxm) matrix of structural coefficients,

Γ = an (mxn) matrix of structural coefficients,

ξ = an (nx1) vector of exogenous concepts, and

ζ = an (mx1) vector of errors in the latent model

The (nxn) Φ matrix is made with the covariances among these exogenous

variables (ξ).

The (mxm) Ψ matrix made with the covariances among these errors (ζ) in the

latent model.

SEM can be utilized for data analysis related to single-group confirmatory factor

analysis (CFA), second-order CFA, path analysis, and multi-group invariance tests

(Bynes, 2001). For this study, SEM was used with confirmatory factor analysis (CFA)

and path analysis (PA). The CFA was used to confirm previously established models by

examining the relationship between the observed and unobserved variables with actual

data. Also, path analysis was used to test the casual structure among the unobserved

variables.

Item Parceling was employed to reduce the number items by combining individual items. Parceling is a measurement technique "that is used most commonly in multivariate approaches to psychometrics, particularly for use with latent-variable analysis techniques" (Little, Cunningham, Shahar, & Widaman, 2002, p. 152). Bandalos and Finney (2001) illustrated the main reasons to use item parceling: (1) to remedy small sample sizes, (2) to improve the stability of the parameter estimates, and (3) to improve the variable to sample size ratio. Despite the benefits, item parceling also has been a controversial issue in that item parceling could seriously distort or hide the information of items, especially in the case of multidimensional factor structure (Hall, Snell, & Singer Foust, 1999). However, many researchers (e.g., Hall et al., 1999; Little et al., 2002) supported the practice of parceling, especially in the study of the underlying structure among latent variables. Hall and his colleague (1999) suggested that the items could be combined into parcels depending on similarity in factor loading as well as a rational analysis of item content.

The Present Research

This study was designed to examine relations among personality, religiosity, and political orientation. In order to examine the relationships, five scales were employed: three scales for personality, Big Five-factor Personality scales (Openness to experience, Agreeableness, and Conscientiousness); one scale for religiosity, Religious Fundamentalism scale; and one scale for political orientation, Conservatism scale. Based on the previous research, it was assumed that personality (5-NEO) would influence religious and political orientation, and religious orientation would affect political

orientation. The conceptual model is shown in Figure 1, which represented the

simultaneous relationship among personality, religiosity, and political orientation.
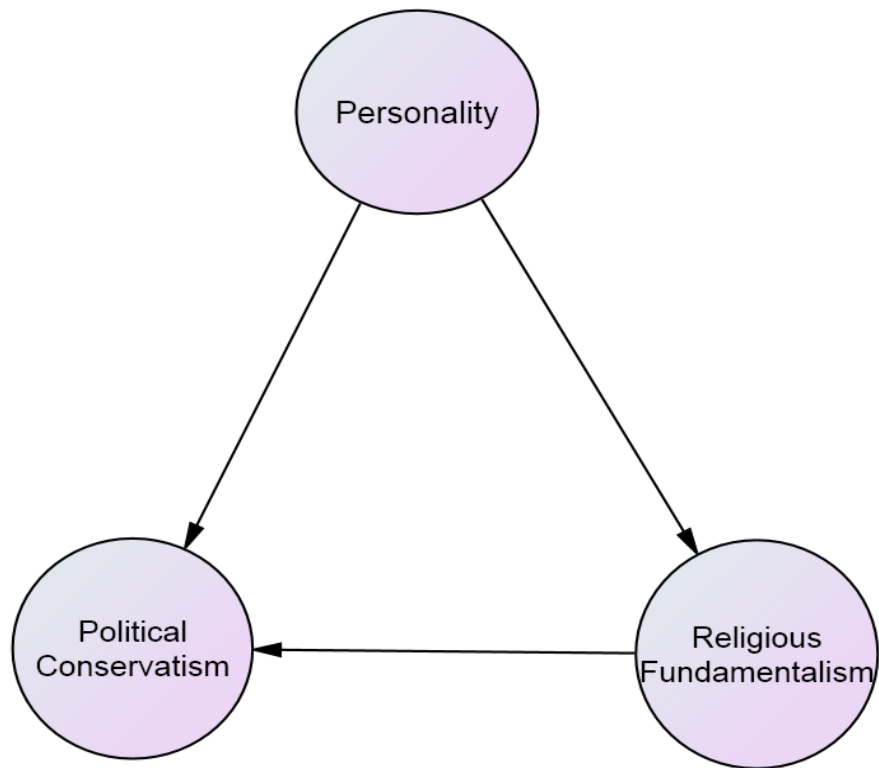
Figure 1 Conceptual Model

CHAPTER II

Methods

Participants

A total of 482 respondents took part in this survey. All the respondents were students of a state-funded regional university in the Southeast in the 2013 spring semester. All the participants were sampled through the on-line survey system during the 2013 spring semester at the university. The participants were given one credit for their participation in this survey. All the participants were asked to fill out an informed consent form before the survey. Among the participants, only those who belonged to Protestant churches, Roman Catholic churches, or Christianity-related beliefs in the United States were chosen for this survey, resulting in a total of 363 participants for analysis. The multiple imputation technique with the Expectation-Maximization (EM) algorithm was employed to find appropriate substitutes for any missing data. The respondents were predominantly females (255 students, 70.2%). The majority of the participants (257 students, 80.7%) were under 20 years old. Non-Hispanic, White Americans ($n = 217$, 59.8%) was the majority group, and non-Hispanic, African Americans ($n = 106$, 29.8%) was the second largest ethnic group.

Materials

A total of 50 questionnaire items were included in this survey. In general, it took a range of 10 to 30 minutes for most participants to complete the survey. At the beginning of the survey, five (5) demographic questions were asked: gender, age, ethnicity, religion,

and education level. Five (5) scales were adopted for this survey project. Three (3) scales (Consciousness, Openness, and Agreeableness) were used to measure personality, one (1) scale (Religious Fundamentalism) for religiosity, and one (1) for political orientation (Conservatism). All the items of these five scale were rated on a five-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree). Seven items were included in this survey to sort false responses out.

The personality traits were measured with Five Factor personality scale (5 NEO domains). Among the five NEO factors taken from Goldberg and his colleagues (2006), only three factors were employed: Agreeableness, Conscientiousness, and Openness based on the previous findings. Each of the three factors was measured with 10 items. The reliability of each scales ranged from .77 to .86. Sample items for Agreeableness were "I believe that others have good intentions" and "I feel others' emotions" (http://ipip.ori.org/newNEOKey.htm#Agreeableness).

Religiosity was measured with one scale, the Revised Religious Fundamentalism scale. The revised 8-items Religious Fundamentalism Scale was developed by Altemeyer et al. (2004) and measured religious fundamentalism to understand a structure of religious attitudes. This 8-item Religious Fundamentalism scale had high internal consistence (*alpha* = .92). The scale included such items as "God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed" and "The basic cause of evil in the world is Satan, who is still constantly and ferociously fighting against God."

The political orientation was measured with the Conservatism scale developed by International Personality Item Pool (IPIP, Goldberg et al, 2006, http://ipip.ori.org/newMPQKey.htm#Conservatism). We modified this scale by adding two items which were related to current controversial issues, gay marriage and abortion. (http://ipip.ori.org/). IPIP has allowed researchers to use or modify all the scales from IPIP, pursuing scientific collaboration (Finholt, & Olson, 1997). The reliability of the original scale was .83. The scale includes such items as "I tend to vote for conservative political candidates" and "I believe in one true religion."

Procedure

The survey questionnaires consisted of a total of 50 items: five (5) demographic items, 29 items of the Big Five personality scale (Goldberg et al., 2006), six (6) items of the Revised Religious Fundamentalism Scale (Altemeyer et al., 2004), and ten (10) items of Conservatism scale (Goldberg et al., 2006). All the procedures of the survey were approved by IRB of the University. The informed consent forms approved by the University were given to all the participants to make sure that the participants were fully informed about the survey and not harmed by this survey procedure. Only respondents who completely filled out the informed consent form were selected for this study. The consent form and approval letter from IRB can be found in Appendix A and B. The participants in the university in the Southeast took online survey through online survey (www.qualtrics.com). The online survey website, Qualtrics, interactively helped the participants to complete the survey. The collected data were analyzed with SPSS 20 and AMOS 20.

Descriptive statistics were calculated to provide the basic information of the data. According to the previous research, three hypotheses were made (1) personality affects religiosity, (2) religiosity affects political attitude, and (3) personality affects political orientation. Based on these hypotheses, three theoretical models were created to represent relationships among the latent and observed variables for each personality trait (Agreeableness, Conscientiousness, Openness). Using AMOS 20, SEM was employed to test the theoretical model.

CHAPTER III

Results

Descriptive Statistics

The descriptive statistics for each item were conducted using SPSS 20. Demographic information for respondents is in Table 1. Female students ($n = 255$) participated in the survey more than male students ($n = 104$). Four students did not specify the gender. The majority of the participants had the age of between 18 and 20 years old ($n = 257$). Almost 60% of the participants were Non-Hispanic, White Americans ($n = 217$, 59.8%), and the second largest ethnic group was non-Hispanic, African Americans ($n = 106$, 29.8%). Other ethnic groups included Hispanic/Latino/Spanish ($n = 21$, 5.8%), Asian/Asian American/Pacific Islander ($n = 5$, 1.4%), American Indian/Native American ($n = 3$, .8%), and other ethnic groups ($n = 11$, 3.0%).

The descriptive statistics for each item are shown in Table 2. For personality traits, most respondents showed higher average scores for items of Agreeableness, ranging 3.92 to 4.40, than for those of Conscientiousness, ranging 3.18 to 4.01, as well as those of Openness, ranging 3.26 to 4.25. For instance, the item with the highest average score was "I take time out for others" (*Mean* = 4.40, Agreeableness), while the item with the lowest average score was "I get chores done right away" (*Mean* = 3.08, Conscientiousness). For political orientation, the average scores of the items for Political Conservatism showed the respondents were slightly conservative in politics, ranging 3.06 to 4.23. The item with the highest average score was "I like to stand during the national

anthem" (*Mean* = 4.23), while the item with the lowest average score was "I believe gay marriage should be allowed by law" (*Mean* = 3.06). Last, the average scores of the items for Religious Fundamentalism also showed the respondents were slightly conservative in religious orientation, ranging 3.06 to 3.86. The item with the highest average score was "The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against life" (*Mean* = 3.86), while the item with the lowest average score was "When you get right down to it, there are basically only two kinds of people in the world: the Righteous, who will be rewarded by God; and the rest, who will not" (*Mean* = 3.06).

Reliability

The reliability coefficient for internal consistency for each factor was calculated with *Cronbach's α*. The reliability coefficients for all the personality traits, Agreeableness ($α$ = .81), Conscientiousness ($α$ = .80), and Openness ($α$ = .82) was acceptable in terms of the cutoff value of $α$. over .70 (Nunnally, 1978). The reliability coefficient for political Conservatism was .74, and the reliability coefficient for Religious Fundamentalism was .85. All the reliability coefficients were acceptable with the cutoff point of .70. Also, according to DeVellis (1991), the coefficient between .70 and .80 was respectable, and the coefficient over .80 was considered as a very good reliability. Therefore, we concluded all the items for each factor had an acceptable internal reliability.

Table 1 *Demographic Characteristics*

	Item	Response Options	Count	%
1	Gender	Male	104	28.7
		Female	255	70.2
		None	4	1.1
2	Age	10-20 years old	257	80.7
		21-30 years old	90	24.8
		31-40 years old	13	3.6
		Over 41 years old	3	.8
3	Ethnicity	American Indian or other Native American	3	.8
		African American, Non-Hispanic	106	29.2
		Asian, Asian American, or Pacific Islander	5	1.4
		Hispanic, Latino, or Spanish	21	5.8
		White, Non-Hispanic	217	59.8
		Others	11	3.0
4	Religion	Catholicism / Other Orthodox Church	60	16.5
		Protestant	204	27.3
		Christianity-related / Independent believers	99	56.4
		Total	363	100

Table 2 *Descriptive Statistics*: Personality traits

Agreeableness (*alpha* = .81)			Conscientiousness (*alpha* = .80)			Openness (*alpha* = .81)		
Item	*Mean*	*SD*	Item	*Mean*	*SD*	Item	*Mean*	*SD*
1	4.28	.77	1	3.36	.97	1	3.66	1.13
2	4.38	.76	2	3.97	.82	2	4.07	.87
3	4.21	.89	3	3.08	1.12	3	3.69	.86
4	4.40	.59	4	4.01	.85	4	4.25	.63
5	4.16	.76	5	3.81	.98	5*	3.74	1.02
6	3.92	.72	6	3.67	.85	6*	3.73	1.28
7*	4.32	.83	7*	3.18	1.18	7*	3.45	1.11
8*	3.92	.96	8*	3.61	1.01	8*	3.36	1.29
9*	4.12	.90	9*	3.31	1.22	9	4.09	.96
10*	4.04	1.17	10*	3.65	.94			

Note. N = 363; *. Reversed Items

Table 3 *Descriptive Statistics*: Political Orientation

	Political Conservatism (***alpha* = .74**)	
Item	*Mean*	*SD*
1	3.06	1.14
2	3.73	1.30
3	3.26	1.27
4	3.68	.90
5*	3.09	.97
6*	3.34	1.07
7	4.23	.88
8*	3.31	1.20
9*	3.06	1.15
10	3.18	.77

Note. N = 363; *. Reversed Items

Table 4 *Descriptive Statistics*: Religiosity

	Religious Fundamentalism **(alpha = .85)**	
Item	*Mean*	*SD*
1	3.77	1.11
2	3.86	1.20
3	3.06	1.31
4*	3.47	1.37
5	3.52	1.33
6	3.38	1.31

Note. N = 363; *. Reversed Items

Structural Equation Modeling

SEM was employed to test the theoretical models. Item parceling was used to produce more stable parameter estimates and enhanced solutions of model fit for the underlying structure among the latent variables (Bagozzi & Edwards, 1998). Each item has been proved as reliable enough to indicate one latent trait through numerous studies. The items were combined into parcels with other items depending on similarity in factor loading as well as a rational analysis of item content (Hall et al., 1999). The baseline model with item parceling is shown in Figure 2, 3, and 4. The cutoff value of the model fit (*TLI* > .95, *CFI* > .95, *RMSEA* < .06, $\chi 2/df$ < 2 or 3), was applied to all the results following Hu and Bentler (1999)

The baseline models were used to test the model fit to the data. For the first model with the Agreeableness factor, the SEM result indicated that the base model did not have a good fit, $\chi 2 = 269.21$, *df* = 101, *p* < .001. However, other fit statistics supported a slightly good fit to the data, *NFI* = .88, *CFI* = .92, *TLI*= 90, *RMSEA* = .068. Modification index (MI) showed that there were potential correlations between ep3 and ep4, *MI* = 34.30, *Par change* = .58; ep4 and ep5, *MI* = 31.72, *Par change* = .61, in Political Conservatism; and e4 and e5, *MI* = 29.16, *Par change* = .48, in Agreeableness. Therefore, the baseline model was modified to find a better model fit for the data by relaxing an error covariance between the problematic error parameters. The modified model for Agreeableness was shown with standardized regression weight in Figure 2. For the modified model, the *chi-square* test showed that the model fit was not good, $\chi 2 = 173.56$, *df* = 98, *p* < .001, but other fit statistics showed an enhanced model fit, *NFI* = .92, *CFI*

= .96, *TLI*= 96, *RMSEA* = .046. These values were acceptable according to the cutoff

values. Also, the ratio (1.77) of *chi-square* to *df* supported the good model fit. The

estimates for regression weight indicated religious fundamentalism significantly

predicted political conservatism, *B* = .90, *p* < .001; and the personality trait of

Agreeableness was a negatively significant predictor of political orientation, *B* = -.15, *p*

< .001, but was not a significant prediction of religious orientation.

Second, the model with the Conscientiousness factor, SEM indicated that the base

model did not have a good fit, $\chi2$ = 349.5, *df* = 101, *p* < .001. Also, other fit statistics did

not have a good model fit, *NFI* = .83, *CFI* = .88, *TLI*= 84, *RMSEA* = .082. Modification

index (MI) showed that there were potential correlations between ep3 and ep4, *MI* =

34.30, *Par change* = .58; ep4 and ep5, *MI* = 31.72, *Par change* = .61, in Political

Conservatism; and e4 and e5, *MI* = 74.10, *Par change* = 1.13, in Conscientiousness.

Therefore, the baseline model was modified by relaxing error covariance. The modified

model for Conscientiousness was shown with standardized regression weight in Figure 3.

For the modified model, the *chi-square* test also showed a similar result, $\chi2$ = 204.1, *df* =

98, *p* < .001. However, other fit statistics showed an enhanced model fit, *NFI* = .91, *CFI*

= .95, *TLI*= 94, *RMSEA* = .055. These values were acceptable according to the cutoff

values. Also, the ratio (2.083) of *chi-square* to *df* supported the good model fit. The

estimates for regression weight indicated religious fundamentalism significantly

predicted political conservatism, *B* = .89, *p* < .001; and the personality trait of

Conscientiousness was not a significant predictor of political conservatism nor religious

fundamentalism.

Last, the model with the Openness factor, the *chi-square* test did not showed a good model fit to the data, $\chi 2 = 216.5$, *df* = 87, *p* < .001. Also, other fit statistics did not indicate a good model fit, *NFI* = .89, *CFI* = .93, *TLI* = .91, *RMSEA* = .064. Modification index (MI) showed that there were potential correlations between ep3 and ep4, MI = 34.58, Par change = .58; and ep4 and ep5, MI = 31.59, Par change = .60, in Political Conservatism. Therefore, the baseline model was also modified by relaxing error covariance. The modified model for Openness was shown with standardized regression weight in Figure 4. For the modified model, the *chi-square* test did not showed a good model fit to the data, $\chi 2 = 154.2$, *df* = 85, *p* < .001. However, other fit statistics indicated a relatively good model fit, *NFI* = .92, *CFI* = .96, *TLI* = .95, *RMSEA* = .047. These values were quite acceptable according to the cutoff values. Also, the ratio (1.81) of *chi-square* to *df* supported the good model fit. The estimates for regression weight indicated religious fundamentalism significantly predicted political conservatism, *p* < .001; and the personality trait of Openness was a negatively significant predictor of religious fundamentalism, *B* = -.26, *p* < .001; but was not a significant predictor of political conservatism.

Table 5 Goodness-of –Fit Statistics in Determination of Baseline Models

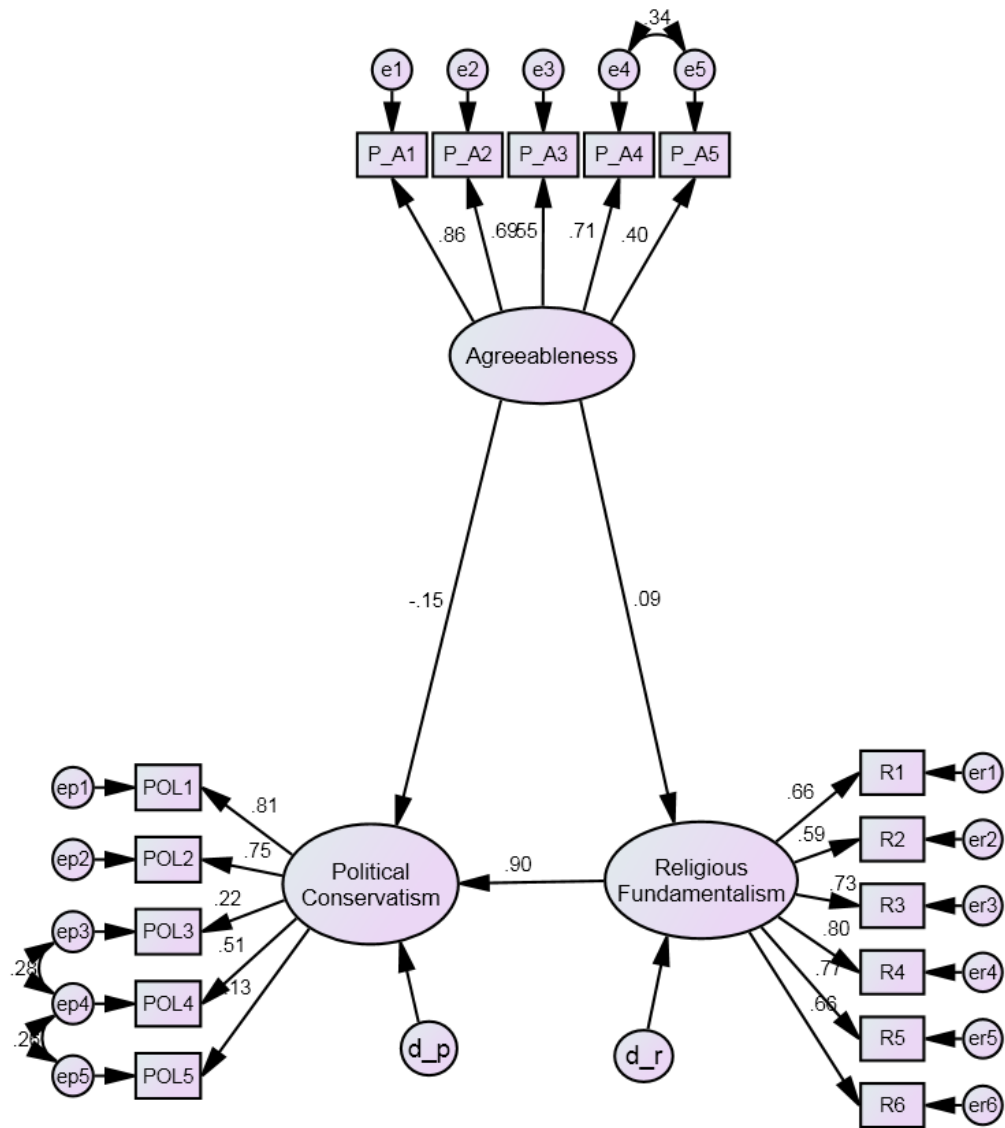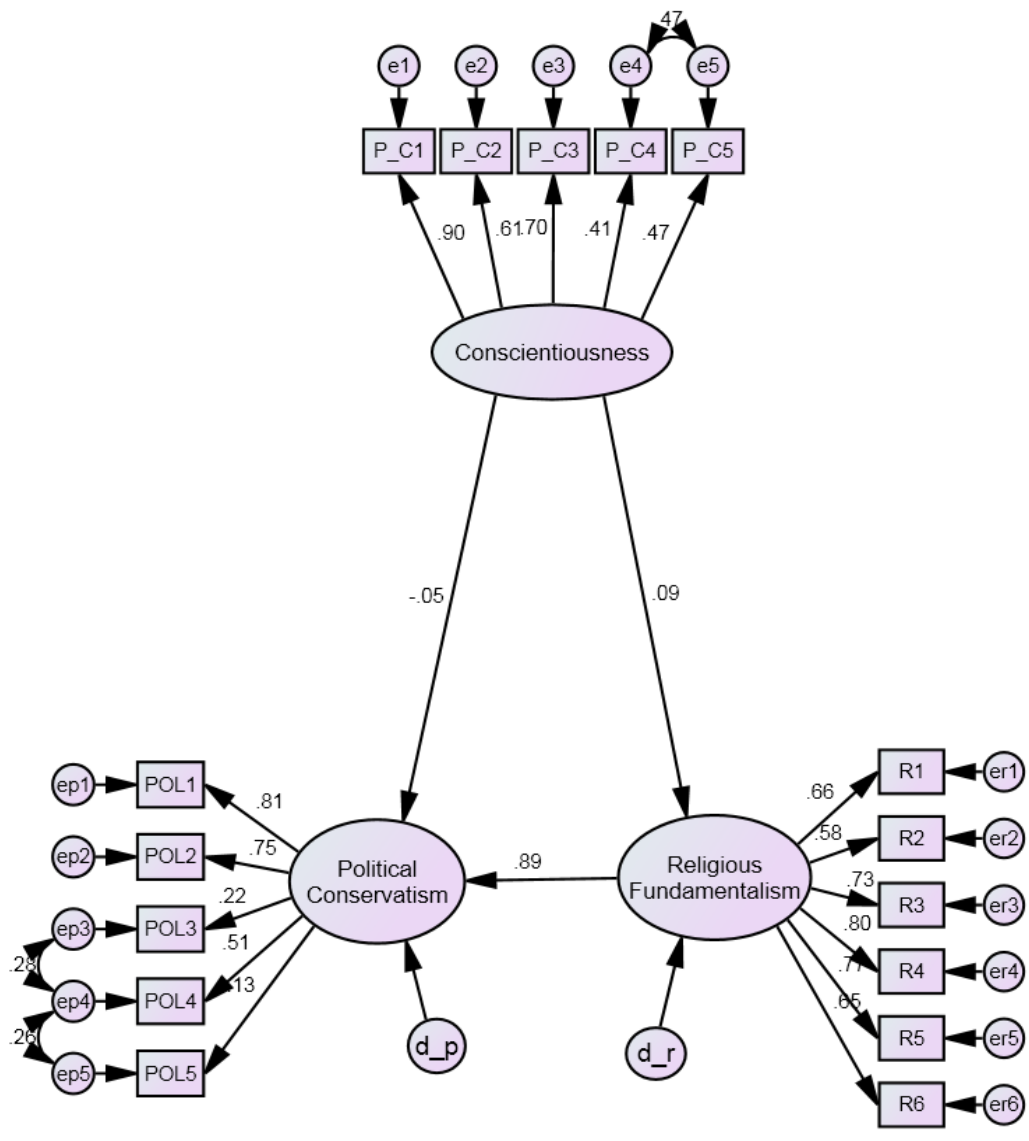|	Model	$\chi 2$	df	NFI	CFI	TLI	RMSEA
	Agreeableness						
1	Baseline model	269.21	101	.88	.92	.90	.068
2	Modified model with error covariance specified	173.56	.98	.92	.96	.96	.046
	Conscientiousness						
1	Baseline model	349.5	101	.83	.88	.84	.082
2	Modified model with error covariance specified	204.1	.98	.91	.95	.94	.055
	Openness						
1	Baseline model	216.5	87	.89	.93	.91	.064
2	Modified model with error covariance specified	154.2	85	.92	.96	.95	.047

Figure 2 Modified Model 1: Agreeableness

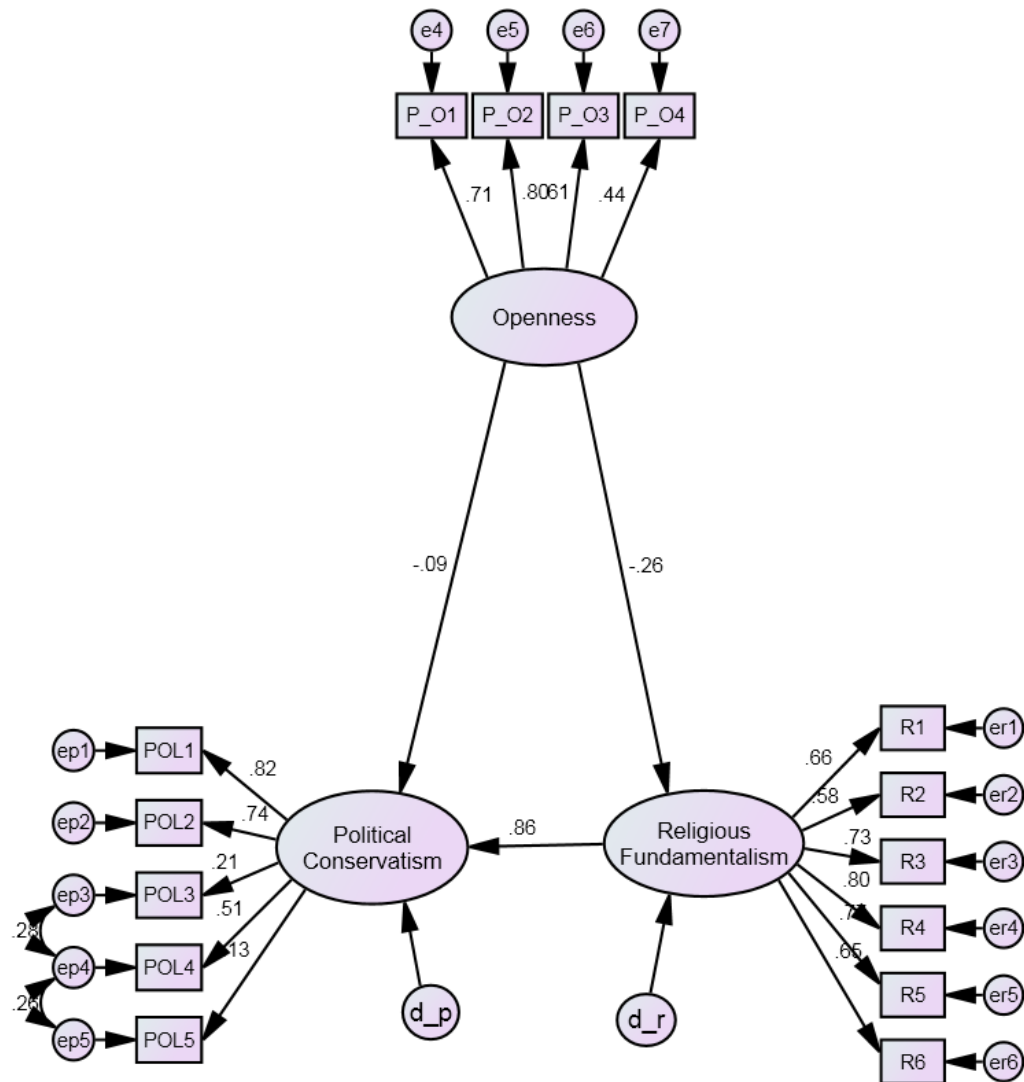Figure 3 Modified Model 2: Conscientiousness

Figure 4 Modified Model 3: Openness

CHAPTER IV

Discussion

This study has provided the opportunity to examine a combined model that simultaneously investigates the relationship among certain personality traits, religiosity, and political orientation, using structural equation modeling (SEM). Based on the previous studies, we developed three combined models, that consisted of each personality factor (Agreeableness, Conscientiousness, Openness), religious orientation (Religious Fundamentalism), and political orientation (Conservatism). Three primary hypotheses were assumed that (1) personality traits influenced religious; and (2) personality traits influenced political orientation, and (3) religious orientation would a significant predictor of political orientation.

The result shows a good model fit to the data collected from the college students. The chi-square tests did not show a good model fit for each of the three models. Because the chi-square values are sensitive to sample size (Schumacker & Lomax, 2004), erroneously skewing the results, other experimentally recommended model fit indices has been considered. The modified model for Agreeableness shows the best model fit, *CFI* = .96, *TLI* = 96, *RMSEA* = .046. Each of the other models (Openness, Conscientiousness) also shows a good model fit, which is quite acceptable according to the model fit suggested by Hu and Bentler (1999). Therefore, we can make an overall conclusion that each of the personality traits influences the person's religious and political orientation as well as political orientation is affected by religious orientation.

The SEM results provided more details of specific relations among the traits that could be discussed more. Each of the models shows a strong link between religious orientation and political orientation, indicating that people with high religious fundamentalism tend to have political conservative position. This result is in accordance with the previous studies. According to Altemeyer et al. (2004), the Religious Fundamentalism scale was associated with politically conservative traits, such as right-wing authoritarianism and hostility toward homosexuals. Researchers argued that religious people tended to have more conservative political positions (Guth et al., 2006; Layman et al., 1997).

However, every model shows different results on relations between the personality trait and either religious or political orientation. First, Agreeableness trait was not a significant predictor of religious fundamentalism, but of political conservatism. People who have a tendency to be compassionate and cooperative towards others as well as an optimistic view of human nature tend to be less politically conservative. Second, Openness trait was a significant predictor of religious fundamentalism, but not a significant predictor of political conservatism. This means people who are open to experience, intellectually curious, and appreciative of art tend to have less fundamentalism in their beliefs. Despite its insignificant result, the negative relation between Openness and political conservatism approaches significant, $p = .058$. This result is in agreement with Saucier's (2000) results that Openness was negatively associated with political conservatism and right-wing authoritarianism. According to Caprara et al. (2004), those who supported liberal candidates tended to be higher on Openness and

Agreeable. Last, Conscientiousness trait was not a significant predictor of either political or religious orientation. This result is different from Caprara and Zimbardo's and Mehrabian (1996)'s finding that proved that there was a negative relation between Conservatism and Conscientiousness factor.

Our study has several limitations and problematic issues in this study to establish a combine model. First, our study has limitation to generalize the model. All the participants were college students, most of whom were under 20 years old. The sample is representative not of normal adult people, but of a specific population. According to the Pew Forum (www.pewform.org), young Americans tended to have different ideas and attitudes in terms of religion and belief. Americans ages 18-29 were considered less religious than older Americans as well as were unlikely to belong to any specific religion (www.pewform.org/age/religious-among-the-milennials.aspx). Therefore, it will be required to examine the model using other samples which will contain diverse age groups.

Another issue would be sample size. Our total sample size was 363, the ratio of which to the number of items (45) was around 8 to 1. The ratio is acceptable according to Nevitt and Hancock (2004) who recommended 5 participants per indicator as well as Kline (2005) and Jackson (2007) who suggested samples more than 200 were large enough to conduct SEM. However, some people insisted more conservative ratio, mostly 10 to 20 observations per item (e.g., Chin, 1998) or per free parameter (e.g., Tanaka, 1987). This debate is still in progress.

Last, item parceling that we employed in the study has been a controversial issue in SEM. Although some scholars (e.g., Bagozzi et al., 1998) supported the use of item

parceling, the question has been raised whether item parceling is appropriate for SEMs. Their main concerns have been on the multidimensionality of a construct and the meaning of parameter estimates (Little et al., 2002). If a construct is not unidimensional, it is warned that the item parceling can distort measurement models because of biased loading estimates and parcel-based models can hide misspecification of the model by combining across random and systematic errors (Bandalos et al, 2001; Little et al., 2002). Also, parcels have limits to carry over original information contained in each item, which can distort the meaning of the information (Little et al., 2002) despite improvement of the fit indices. Although we followed recommended parceling techniques, putting items with high factor loadings together and a rational analysis of item content (Hall et al., 1999), therefore, we cannot avoid the criticisms on item parceling.

In conclusion, the research provides a model that illustrates the relationship among personality, religiosity, and political orientation. However, as mentioned above, further studies are required to prove generalization of the model using data collected from diverse age groups. Among the Big Five traits, other two traits, Extraversion and Neuroticism, would be contained in the model for the future studies to examine the relations with other traits. Moreover, other religiosity scales, such as Religious Orientation Scale (Allport, & Ross, 1967), or political orientation scales, such as Social Dominance Orientation (Pratto et al., 1994) can be included in this model to examine broader relations among the three traits.

REFERENCES

Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & and Sanford, R. N.(1950). The authoritarian personality. New York: Harper.

Akrami, N., Ekehammar, B., & and Araya, T. (2000). Classical and modern racial prejudice: A study of attitudes toward immigrants in Sweden. *European Journal of Social Psychology, 30,* 521-532.

Allport, G. W., & Odbert, H. S. (1936). Trait names: A psycholexical study. *Psychological Monographs, 47 (1).*

Allport, G. W. (1958). *The nature of prejudice (*2nd ed.). Garden City, NY: Doubleday.

Alfred, J. R., Funk, C. L., & Hibbing, J. R. (2005). Are political orientations generically transmitted? *American Political Science Review, 99*, 153-167.

Armstrong, T.D., & Crowther, M. R. (2002). Spirituality among older African Americans. *Journal of Adult Development, 9(1*), 3-12.

Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *International Journal for the Psychology of Religion, 2*, 113-133.

Altemeyer, B., & Hunsberger, B. (2004). A revised religious fundamentalism scale: The short and sweet of it, *The International Journal for the Psychology of Religion*, 14(1), 47-54.

Bagozzi, R. P., & Edwards, J. R. (1998). A general approach for representing constructs in organizational research. *Organizational Research Methods*, 1, 45–87.

Bandalos, D. L., & Finney, S. J. (2001). Item parceling issues in structural equation modeling. In G. A. Marcoulides & R. E. Schumacker (Eds.), *Advanced structural equation modeling: New developments and techniques*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Borgatta, E. F. (1964). The structure of personality characteristics. *Behavioral Science, 12*, 8-17.

Blando, J. (2006). Spirituality, religion, and counseling. *Counseling and Human Development, 39*(2), 1.

Bouchard, T. J., Jr., & Loehlin, J. C. (2001). Genes, evolution, and personality, *Behavior Genetics, 31,* 243-273.

Bynes, B. M. (1988). The self description questionnaire III: Test for equivalent factorial validity across ability. Educational *and Psychological Measurement, 48*, 397-406.

Bynes, B. M. (2001*). Structural Equation Modeling with AMOS: Basic concepts, Application, and Programming*. Mawhaw, NJ: Lawrence Erlbaum Associates, Inc.

Caprara. G. V., Schwartz, S., Capanna, C., Vecchione, M., and Barbaranelli, C. (2006). Personality and Politics: Values, traits, and political choice, *Political Psychology, 27(1),* 1-28.

Caprara, G. V., & Zimbardo, P. (2004). Personalizing politics. *American Psychologist, 59*, 581–594.

Carmines, E., & M. Berkman (1994). "Ethos, Ideology, and Partisanship: Exploring the Paradox of Conservative Democrats." *Political Behavior. 16(2),* 203-218.

Chin, W. W (1998). The partial leastsquares approach to structural equation modeling. In G. A. Marcoulides (Ed.). *Modern Methods for Business Research.* New Jersey: Lawrence Erlbaum Associates.

Cattell, R. B. (1943). The description of personality: Basic traits resolved into clusters. *Journal of Abnormal and Social Psychology, 38,* 476-506.

Costa, P. T., & McCrae, R. R. (1995). Primary traits of Eysenck's P-E-N system: Three- and five-factor solutions. *Journal of Personality and Social Psychology, 69,* 308-317.

Danso, H., Hunsberger, B., & Pratt, M. (1997). The role of parental religious fundamentalism and right-wing authoritarianism in child-rearing goals and practices. *Journal for the Scientific Study of Religion, 36,* 496–511.

Diamond, S. (1995). *Roads to dominion: Right-wing movements and political power in the United States.* New York: Guilford Press.

D'Onofrio, B. M., Eaves, L. J., Murrlle, L., Maes, H. H., & Spilka, B. (1999). Understanding biological and social influences on religious affiliation, attitudes, and behaviors: A behavior generic perspective. *Journal of Personality, 67,* 953-984.

Durkheim, E. (1912/1995). *The elementary form of religious life,* translated by Karen E. F. New York: Free Press.

Eaves, L. J., Health, A. C., Martin, N. G., Maes, H. H., Neale, M., & Kendler, K. S. (1999). Comparing the biological and cultural inheritance of personality and social attitudes in the Virginia 30,000 study of twins and their relatives. *Twin Research*, 2, 62-80.

Eisenstein, M. A. (2006). Rethinking the relationship between religion and political tolerance in the U.S. Political Behavior, 28, 327-348. Doi 10.1007/s11109-006-9014-5

Emmons, R., & Paloutzian, R. F. (2003). The psycholog of religion. Annual Review of Psychology, 54, 377-402.

Eysenck, H. J. (1959). *Manual for the Maudsley Personality Inventory*. London: University of London Press.

Eysenck, S. G., & Eysenck, H. J. (1969). Scores on three personality variables as a function of age, sex, and social class. *British Journal of Social and Clinical Psychology, 8,* 69-76.

Eysenck, S. B. G., Eysenck, H. J., & Barrett, P. (1985). A revised version of the psychoticism scale. *Personality and Individual Differences, 6,* 21-29.

Finholt. A., & Olson, G. M. From laboratories to collaboratories: A new organizational form for scientific collaboration. *Psychological Science, 8(1)*, 28-36.

Fiorina, M. P., Abrams, S. J., & Pope, J. C. (2006). *Culture war? The myth of a polarized America* (2nd ed.). New York: Pearson Longman.

Fiske, D. W. (1949). Consistency of the factorial structures of personality ratings from different sources. *Journal of Abnormal Social Psychology, 44*, 329-344.

Fox, J. (2006). Structural Equation Modeling with the sem Package in R. *Structural Equation Modelling, 13*, 465-486.

Francis, L. J. (1992). Is psychoticism really a dimension of personality fundamental to religiosity? *Personality Individual Difference, 13(6)*, 645-652.

Freud, Sigmund. (1927/1961). *The future of an illusion.* in James Strachey (ed.). Norton, ISBN 978-0-393-00831-9

Gallagher, C., Kumar, V. K., & Pekala, R. J. (1994). The Anomalous Experiences Inventory: Reliability and Validity. *The Journal of Parapsychology, 58*, 402-428.

Giddens, A. (1998). *The third way: The renewal of social democracy*. Cambridge, England: Polity Press.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48,* 26–34.

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality, 40*, 84-96. doi:10.1016/j.jrp.2005.08.007

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology, 96,* 1029-1046.

Greenberg, J., & Jones, E. (2003). Psychological Motives and Political Orientation-The

Left, the Right, and the Rigid: Comment on Jost et al. (2003). *Psychological

Bulletin, 129 (3),* 376-382.

Guth, J. L., Kellstedt, L. A., Smidt, C. E., & Green, J. C. (2006). Religious influences in

the 2004 Presidential election. *Presidential Studies Quarterly, 36*, 223-242.

Hall, R. J., Snell, A. F., & Singer Foust, M. (1999). Item parceling strategies in SEM:

Investigating the subtle effects of unmodeled secondary constructs.

Organizational Research Methods, 2, 233–256.

Nevitt, J. & Hancock, G. R. (2004). Evaluation small sample approaches for model test

statistics in structural equation modeling. *Multivariate Behavioral Research, 39*,

439-527.

Hayduk, L. A. (1988). *LISREL issues, debates, and strategies.* Baltimore, MD: Johns

Hopkins University Press.

Heaven, P. C. L., & Bucci, S. (2001). Right-wing authoritarianism, social dominance

orientation and personality: An analysis using the IPIP measure. *European

Journal of Personality, 15*, 49–56.

Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualisation and

measurement of religion and spirituality: Implications for physical and mental

health research. *American Psychologist, 58(1),* 64-74.

Hoge, D. R., Johnson, B., & Luidens, D. A. (1993). Determinants of church involvement of young adults who grew up in Presbyterian churches. *Journal for the Scientific Study of Religion, 32*, 242-255.

Hoyle, R. H. (1995). The structural equation modeling approach: Basic concepts and fundamental issues. In *Structural equation modeling: Concepts, issues, and applications*, R. H. Hoyle (editor). Thousand Oaks, CA: Sage Publications, Inc.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.

Iyengar, S., & Kinder, D. (1987). *News that matters*. Chicago: University of Chicago Press.

Jackson, D. L. (2007). The effect of the number of observations per parameter in misspecified confirmatory factor analytic models. *Structural Equation Modeling, 14*, 48-76.

Jakubowska, U., & Oniszszenko, W. (2010). The role of personality, cognitive, environmental and genetic factors as determinants of religious fundamentalism: A twin study in a polish sample. *Studia Psychologica, 52*, 253-263.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin, and O. P. John (Eds.), *Handbook of personality: Theory and research*. New York: Guilford Press, 102–138.

Joseph, S., Smith, D., & Diduca, D. (2002). Religious orientation and its association with personality, schizotypal traits and manic-depressive experiences. *Mental Health, Religion and Culture, 5(1)*, 73-81.

Jost, J. T. (2007). Coda: After "The end of the end of ideology" – Reply to Glassman and Karno (2007) and Unger (2007). *American Psychologist, 62*, 1077-1080.

Jost, J. T., Glasser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservation as motivated social cognition. *Psychological Bulletin, 129*, 339-375.

Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8: User's guide.* Chicago: Scientific Software.

Kellstedt, L., & Smidt, C. (1991). Measuring Fundamentalism: An analysis of different operational strategies. *Journal for the Scientific Study of Religion, 30(3),* 259-278.

King, M., Speck, P., & Thomas, A. (1995). The Royal Free interview for religious and spiritual beliefs: development and standardization. *Psychological Medicine, 25*, 1125 – 1134.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford.

Koenig. L. B., McGue, M., & Iacono, W. G. (2008). Stability and Change in Religiousness During Emerging Adulthood. *Development Psychology, 44(2)*, 532-543.

Kosek, R. B. (1999). Adaptation of the Big Five as a hermeneutic instrument for religious constructs. *Personality and Individual Differences, 27*, 229-237.

Kumar, V.K., Pekara, R.J., & Cummings, J (1993). Sensational Seeking, drug use and
reported paranormal beliefs and experiences. *Personality and Individual
Differences, 14*, 685-691. doi:10.1016/0191-8869(93)90116-K

Layman, G. C., & Carmines, E. G. (1997). Cultural conflict in American politics:
Religious traditionalism, postmaterialism, and U.S. political behavior. *Journal of
Politics, 59,* 751-777.

Layman, G. C. (2001). *The great divide: Religious and cultural conflict in American
party politics.* New York: Columbia University Press.

Laythe, B., Finkel, D. G., & Kirkpatrick, L. A. (2001). Predicting prejudice from
religious fundamentalism and right-wing authoritarianism: A multiple regression
approach. *Journal for the Scientific Study of Spirituality, 40*, 1-10.

Lockenhoff, C. E., Ironson, G. H., O'Cleirigh, C., & Costa Jr., P. (2009). Five-Factor
Model personality traits, spirituality/religiousness and mental health among
people living with HIV. NIH Public Access, 77(5), 1411-1436.
Doi:10.1111/j.1467-6494.2009.00587.x

Lewis, C. A., & Maltby, J. (1995). The reliability and validity of the Francis scale of
attitude towards Christianity among US adult. *Irish Journal of Psychology, 18*,
349-354.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling, 9*, 151–173.

MacDonald, D. A. (2000). Spirituality: Description, measurement, and relation to the five factor model of personality. *Journal of Personality, 68,* 153-197.

Malka, A., Lelkes, Y., Srivastava, S., Cohen, A., & Miller, D.T. (2012). The Association of Religiosity and Political Conservatism: The Role of Political Engagement. *Political Psychology, 33(2)*, 275-299. doi: 10.1111/j.1467-9221.2012.00875.x

Mannheim, K. (1986). *Conservatism: A contribution to the sociology of knowledge* (D. Kettler, V. Meja, and N. Stehr, Trans.). New York: Routledge and Kegan Paul. (Original work published 1927).

Marler, P. L. & Hadaway, C. K. (2002). 'Being Religious' or 'Being Spiritual' in America: A Zero-Sum Proposition?. *Journal for the Scientific Study of Religion, 41*, 289–300.

McCrae, R. R. (2002). The maturation of personality psychology: Adult personality development and psychological well-being. *Journal of Research in Personality, 36,* 307-317.

McCrae, R.R., & Costa, P.T. (1997). Personality trait structure as a human universal. *American Psychologist, 52*, 509-516.

McCrae, R. R., & Costa P. T. (2006). Cross-cultural perspectives on adult personality trait development. In D. Mroszek and T. Little (Ed), *Handbook of Personality Development.* Hillsdale, NJ: Erlbaum, 129-145.

McCullough, M. E., Tsang, J., & Brion, S. (2003). Personality traits in adolescence as predictors of religiousness in early adulthood: Findings from the Terman longitudinal study. *Personality and Social Psychology Bulletin, 29*, 980-991.

Mehrabian, A. (1996). Relations among political attitudes, personality, and psychopathology assessed with new measures of libertarianism and conservatism. *Basic and Applied Social Psychology, 18(4)*, 469-491.

Morris, W. (1976). *The American heritage dictionary of the English language.* Boston: Houghton Mifflin.

Neilson, W. A. (1958). *Webster's new international dictionary of the English language.* New York: Merriam.

Nunnally, J. C. (1978). *Psychometric theory (2nd ed.).* New York: McGraw-Hill.

Ozer, D. J., & Benet-Martines, V. (2005). Personality and the Prediction of Consequential Outcomes, *Annual Review of Psychology*, 57, 401-421.

Piedmont, R.L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality, 67(6),* 985-1013.

Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social Dominance Orientation: A Personality Variable Predicting Social and Political Attitudes. *Journal of Personality and Social Psychology, 67(4)*, 741-763.

Rigdon, E. E. (1998). Structural equation modeling. In *Modern methods for business research*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Robinson, T. N. (1990). Eysenck personality measures and religious orientation. *Personality and Individual Differences, 11*, 915-921.

Rossiter, C. (1968). Conservatism. In D. Sills (Ed.), *International encyclopedia of the social sciences*. New York: Macmillan and Free Press, 290–295.

Saucier, G. (2000). Isms and the structure of social attitudes. *Journal of Personality and Social Psychology*, *78*, 366-385.

Saucier, G., & Goldberg, L. R. (1998). What is beyond the Big Five? *Journal of Personality, 66,* 495–524.

Schumacker, R.E., Lomax, R.G. (2004). *A Beginner's Guide to Structural Equation Modeling (2nd ed.)*. Lawrence Erlbaum Associates, Inc., Mahwah, NJ.

Stephenson, M. T., Hoyle, R. H., Palmgreen, P., & Slater, M. D. (2003). Brief measures of sensation seeking for screening and large scale surveys. Drug and Alcohol Dependence, 72, 279–286. doi:10.1016/j.drugalcdep.2003.08.003

Tanaka, J.S. (1987). "How big is big enough?": Sample size and goodness of fit in

structural equation models with latent variables. *Child Development, 58*, 134-

146.

Van Hiel A., Mervielde, I, & DeFruyt, F. (2004). Openness to experience and boundaries

in the mind: relationships with cultural and economic conservative beliefs.

Journal of Personality, 72, 659-786.

Van Gyes, G., & De Witte, H. (1999). Conservatism and values: A confrontation of

Middendorp with Schwartz and Triandis. In H. De Witte and P. Scheepers (Eds.)

Ideology in the Low Countries. Trends, models and lacunae. Assen: Van Gorcum.

Wald, K. D., & Wilcox, C. (2006). Getting religion: Has political science rediscovered

the faith factor? American Political Science Review, 100(4), 523-529.

Willging, B. T., & Lester, D. (1997). Paranormal beliefs and personality scores of high

school students. *Perceptual and Motor Skills, 85*, 938.

doi:10.2466/pms.1997.85.3.938

Wilson, G. D. (Ed.) (1973). *The Psychology of Conservatism*, London: Academic Press.

Wilson, G. G., & Patterson, J. R. (1968). A new measure of conservatism. *British Journal

of Social and Clinical Psychology, 1*, 264-269.

Wulff, D. M. (1996). The psychology of religion: An overview. In E.P Shafranke (Ed.),

Religion and the clinical practice of psychology. Washington, D.C: American

Psychological Association.

APPENDICES

APPENDIX A: CONSENT FORM

Principal Investigator: Heechun Moon
Study Title: Relationship among Personality, Religiosity, and Political Orientation
Institution: MTSU

Name of participant: _____ Age: _____

The following information is provided to inform you about the research project and your participation in it. Please read this form carefully and feel free to ask any questions you may have about this study and the information given below. You will be given an opportunity to ask questions, and your questions will be answered. Also, you will be given a copy of this consent form.

Your participation in this research study is voluntary. You are also free to withdraw from this study at any time. In the event new information becomes available that may affect the risks or benefits associated with this research study or your willingness to participate in it, you will be notified so that you can make an informed decision whether or not to continue your participation in this study. For additional information about giving consent or your rights as a participant in this study, please feel free to contact the MTSU Office of Compliance at (615) 494-8918.

1. **Purpose of the study:**
   You are being asked to participate in a research study which aims to examine relation among personality, religiosity, and political orientation.

2. **Description of procedures to be followed and approximate duration of the study:**
   You will complete a 72-questions survey related to your personality as well as religious and political ideas. This survey should take approximately 30 minutes. This information will be analyzed and be used for a research of Middle Tennessee State University. The expected duration for this project is from 10/20/2012 to 7/30/2011.

3. **Expected costs**
   None

4. **Description of the discomforts, inconveniences, and/or risks that can be reasonably expected as a result of participation in this study:**
   None

5. **Compensation in case of study-related injury:**
   MTSU will not provide compensation in the case of study related injury.

6. **Anticipated benefits from this study:**
   None

7. **Alternative treatments available:**
    None

8. **Compensation for participation:**
    None

9. **Circumstances under which the Principal Investigator may withdraw you from study participation:**
    None

10. **What happens if you choose to withdraw from study participation:**
    None

11. **Contact Information.**   If you have any questions about this research study, please feel free to contact Heechun Moon at (615) 438-3469 or my Faculty Advisor, Dr. Kim Jwa, at (615) 904-8419.

12. **Confidentiality.** All efforts, within reason, will be made to keep the personal information in your research record private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, Department of Psychology at MTSU, if you or someone else is in danger or if we are required to do so by law.

13. **STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY**
    I have read this informed consent document and the material contained in it has been explained to me verbally. I understand each part of the document, all my questions have been answered, and I freely and voluntarily choose to participate in this study.

_____
Date   Signature of patient/volunteer

Consent obtained by:

___**10/18/2012**_____
Date   Signature

_____Heechun Moon_____
Printed Name and Title

APPENDIX B: IRB APPROVAL LETTER

October 29, 2012

Heechun Moon, Dr. Jwa Kim
Department of Psychology
hm3e@mtmail.mtsu.edu, jwa.kim@mtsu.edu

Protocol Title: "Relations among Personality, Religiosity, and Political Orientation"
Protocol Number: 13-114

Dear Investigator(s),

The exemption is pursuant to 45 CFR 46.101(b) (2). This is because the research being conducted involves the use of educational tests, survey procedures, interview procedures or public behavior.

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Complete research means that you have finished collecting data and you are ready to submit your thesis and/or publish your findings. Should you not finish your research within the three (3) year period, you must submit a Progress Report and request a continuation prior to the expiration date. Please allow time for review and requested revisions. Your study expires on October 29, 2015.

Any change to the protocol must be submitted to the IRB before implementing this change. According to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. **If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance before they begin to work on the project.** Once your research is completed, please send us a copy of the final report questionnaire to the Office of Compliance. This form can be located at www.mtsu.edu/irb on the forms page.

Also, all research materials must be retained by the PI or **faculty advisor (if the PI is a student)** for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,
Andrew W. Jones
Graduate Assistant to:
Emily Born
Compliance Officer
615-494-8918
Emily.Born@mtsu.edu

APPENDIX C: SURVEY ITEMS

Demographics

1. What is your gender?

   1) Female ( )

   2) Male ( )

2. What is your Age ?

   1) 10 – 20 years old ( )

   2) 21 – 30 years old ( )

   3) 31 – 40 years old ( )

   4) 41 – 50 years old ( )

   5) 51- 60 years old ( )

   6) 61 – years old ( )

3. What is your racial identification?

   1) American Indian or other Native American ( )

   2) African American, Non-Hispanic ( )

   3) Asian, Asian American or Pacific Islander ( )

   4) Hispanic, Latino, or Spanish ( )

   5) White, Non-Hispanic ( )

   6) Others ( )

4. What is your religion?

   1) No religion (Atheist) ( )

   2) Catholicism /Orthodox Church ( )

   3) Protestant ( )

   4) Buddhism / Hinduism ( )

   5) Islam ( )

6) Judaism   (   )

7) Others   (   )

5. What is the highest level of your education?

1) Not a high school graduate   (   )

2) High school diploma or GED   (   )

3) Some college, did not complete degree   (   )

4) Associate / Bachelor's degree   (   )

5) Master / Doctoral degree   (   )

Personality

Carefully read and respond to each item with five scales.

(1) Strongly disagree   (2) disagree   (3) neutral   (4) agree   (5) Strongly agree

Agreeableness
1. I am interested in people.
2. I sympathize with others' feelings.
3. I have a soft heart.
4. I take time out for others.
5. I feel others' emotions.
6. I make people feel at ease.
7. I am not really interested in others.*
8. I often insult people.*
9. I am not interested in other people's problems*
10. I feel other's emotion.*

Conscientiousness
1. I am always prepared.
2. I pay attention to details.
3. I get chores done right away.
4. I like order.
5. I follow a schedule.
6. I am exacting in my work.
7. I leave my belonging around.*
8. I make a mess of things.*
9. I often forget to put things back in their proper place.*
10. I shirk my duties.*

Openness

1. I believe in the importance of art.
2. I have a vivid imagination.
3. I carry the conversation to a higher level.
4. I enjoy hearing new ideas.
5. I am not interested in abstract ideas.*
6. I do not like art.*
7. I avoid philosophical discussions.*
8. I do not enjoy going to art museums.*
9. I rarely look for a deeper meaning in things

*. Reversed Items

Political Orientation

Carefully read and respond to each item with five scales.

(1) Strongly disagree   (2) disagree   (3) neutral   (4) agree   (5) Strongly agree

Conservatism

1. I tend to vote for conservative political candidates.

2. I believe in one true religion.

3. I believe God's laws about abortion must be strictly followed before it is too late.

4. I believe laws should be strictly enforced.

5. I believe socialism has many advantage over capitalism.*

6. I believe that criminals should receive help rather than punishment.*

7. I like to stand during the national anthem.

8. I believe that there is no absolute right and wrong.*

9. I believe gay marriage should be allowed by law.*

10. The major national media are too left-wing for my taste

*. Reversed Items

Religious Orientation

Religious Fundamentalism

Carefully read and respond to each item with five scales.

(1) Strongly disagree   (2) disagree   (3) neutral   (4) agree   (5) Strongly agree

1. God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed.

2. The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against life.

3. When you get right down to it, there are basically only two kinds of people in the world: the Righteous, who will be rewarded by God; and the rest, who will not.

4. It is more important to be a good person than to believe in God and the right religion.

5. Bible should be considered completely, literally true from beginning to end.

6. To lead the best, most meaningful life, one must belong to the one, fundamentally true religion.

*. Reversed Items