Racial prejudice, homophobia, and sexism as a function of right-wing authoritarianism, religious values, religious pressures, and religious orientation

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RACIAL PREJUDICE, HOMOPHOBIA, AND SEXISM AS A FUNCTION OF RIGHT-WING AUTHORITARIANISM, RELIGIOUS VALUES, RELIGIOUS PRESSURES, AND RELIGIOUS ORIENTATION

by

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A Dissertation Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy

COLLEGE OF EDUCATION
LOUISIANA TECH UNIVERSITY

November 2011
September 16, 2011

We hereby recommend that the dissertation prepared under our supervision by Dixie Turner entitled Racial Prejudice, Homophobia, and Sexism as a Function of Right-Wing Authoritarianism, Religious Values, Religious Pressures, and Religious Orientation be accepted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy.

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ABSTRACT

Past literature is ambiguous regarding relationships among different religious variables and prejudice. The purpose of this study was to clarify complicated relationships among religious pressures, religious fundamentalism, Christian orthodoxy, intrinsic and extrinsic religious orientation, quest orientation, right-wing authoritarianism, and the outcome variables of racial prejudice, homophobia, and sexism. Two models, a developmental model and social learning model, were proposed in this study and were tested using structural-equation modeling. Participants were 310 self-identified Christian students. Several predicted paths were deleted in both models because they did not contribute to good fit. Three predictor variables: Christian orthodoxy, extrinsic religious orientation, and religious fundamentalism were deleted from the models due to high collinearity. The outcome variable of sexism was deleted because of low loading. Quest orientation was deleted due to opposing regression weights with intrinsic orientation. When goodness-of-fit statistics for both models were compared, the developmental model displayed slightly better fit than the social learning model. Overall, the social learning model displayed poor fit. These results indicated that individually neither religious pressures nor intrinsic religious orientation are individually sufficient to lead to prejudice. In fact, religious pressures led to racism and homophobia through intrinsic religious orientation and right-wing authoritarianism. In the social learning model right-wing authoritarianism was directly and indirectly related to homophobia and racism. The
results of this study contradict and parallel past studies. Many of the results could be explained by the current culture in the United States, which has been greatly polarized by social and political issues. Research in cognitive schemas may also prove to be valuable because templates have been suggested as a factor in prejudice. Future research should include further examination of relationships between religious, social, and personality variables in addition to possible neurological factors that might predispose one to develop certain religious orientations and personality dispositions.
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ACKNOWLEDGMENTS

There are many people who have contributed to the completion of this paper. First, I would like to thank Dr. Jerome Tobacyk for sparking my interest in this topic during his social psychology class. I would also like to thank Dr. Eric Deemer for helping me to begin this paper and for being so supportive for the rest of the process. If it had not been for his statistical expertise I am not sure that I would have attempted this type of project. I would also like to extend my gratitude to Dr. Alice Carter who has been so nurturing and patient for my five years of graduate school. She supported me in the conceptualization, data collection, and analysis of this paper. I am also very grateful to the other three members of my cohort: Tracy Harper, Adam Blancher, and Melissa Simundson. There are no other individuals with whom I would rather complete this journey. Finally, I would like to thank my partner, Ian Treme, who has been there for me for the last four years. He has been wonderfully supportive on my good days and bad days. I look forward to being able to return the favor when he returns to school very soon.
CHAPTER ONE

INTRODUCTION

Why is it that some individuals will support a religion that preaches loving thy neighbor and not judging others but are more prejudiced than individuals who are not traditionally religious? Are all religious individuals prejudiced? If not, what is it that makes one religious individual prejudiced and another one tolerant? For nearly 50 years researchers have been seeking the answers to these questions. Unfortunately, many of the findings concerning religious variables and prejudice have been confusing and contradictory leading to a large body of research that is inconclusive.

Prejudice

In his classic and still canonical book, *Theories of Prejudice*, Allport (1954) defined prejudice as hostile attitudes toward an individual because that person is a member of a specific group that has been allocated negative attributes. Allport emphasized that these negative attributions are not based on factual evidence about a group of people and are more than mere prejudgments. Prejudice can lead to a wide range of discriminatory behaviors including verbal abuse, avoidant behaviors, discrimination, stereotyping, and violence. At the highest level, prejudiced attitudes can also lead to the extermination of a group of individuals. There are various forms of prejudice including: sexism, heterosexism, ablism, racism, and sizism.
Homophobia

Herek (2000) defined sexual prejudice as “... the negative attitudes toward an individual because of his or her sexual orientation” and stated that “the term is used to characterize heterosexuals’ negative attitudes toward (a) homosexual behavior, (b) people with a homosexual or bisexual orientation, and (c) communities of gay, lesbian, and bisexual people” (p. 19). Herek preferred the term “sexual prejudice” because it can refer to prejudice toward an individual with any sexual orientation. Gay and lesbian individuals have been stereotyped and stigmatized for a long time; however, attitudes have been improving since the gay political movement of the 1960s with the greatest strides being made in the last 30 years. Herek reported that the gay rights approach was the dominant mindset in the 1970s and proposed that lesbians, gay men, bisexuals, and transgendered people are a special minority that is very similar to an ethnic group. In other words, attitudes toward these individuals are similar to the negative attitudes experienced by other racial and ethnic minority groups. On the other hand, the gay liberation movement of the 1960s and early 1970s had the goal of changing the nation’s views of sexuality and gender roles (Epstein, 1999). Herek’s sexual prejudice theory looked more inward than outward by emphasizing the individuals’ beliefs about their own sexuality and how they relate to attitudes toward the sexuality of others.

Herek (2000) proposed that there are multiple motivations for heterosexuals to discriminate against gay, lesbian, and bisexual individuals. For some people a negative interaction with a gay person can lead to overgeneralization to the whole group of gay individuals; however, this is most likely to occur when the person has had little other contact with a person from the gay community. The author also noted that prejudice can
be related to fears of one’s own sexual desires or pressure to conform to the majority. Others may be prejudiced toward the gay community because the heterosexual’s community, or in-group, is fearful and hostile toward gay, lesbian, and bisexual individuals. In other words, sexual prejudice may involve persons simply following the norms to fit in with their group. Finally, a person might become sexually prejudiced because he or she believes that his or her own personal or moral values are in conflict with those of the gay community.

*Racism*

Racism is defined as “a belief that race is the primary determinant of human traits and capacities and those racial differences produce an inherent superiority of a particular race” (Merriam-Webster, 2010). There are several theories of racial prejudice. For example, Greenwald, McGhee, and Schwartz (1998) studied automatic prejudice using an implicit attitudes test that measures response times of associating different ethnic faces with positive or negative words. Social dominance orientation has also been investigated and suggests that individuals often view people in terms of hierarchies and prefer to see their own group at the highest level of that hierarchy, and the persons in power will promote prejudiced behavior and laws that support maintaining their positions (Guimond, Dambrun, Michinov, & Duarte, 2003; Pratto, Sidanius, Stallworth, & Malle, 1994). Social inequalities theory suggests that individuals who have power and money will usually have an attitude about the people who do not, and these beliefs will lead to stereotypes about the “have nots” (e.g., being lazy, unintelligent, irresponsible). Discrimination is also a circular process in which the victim of discrimination leads to either self blame or anger which helps propagate continued racism and victim-blaming
(Vescio, Gervais, Snyder, & Hoover, 2005). Blascovich, Wyer, Swart, and Kibler (1997) suggested that it is the categorization of people and one’s association with an in-group that leads to prejudice. Having feelings that one’s group (e.g., race, sex, ability) is superior leads to a belief that others, the out-group, are inferior. A competing theory, the just-world phenomenon, suggests that negative attitudes toward others may be linked to thoughts that people get what they deserve, because good is rewarded and evil is punished (Sutton & Douglas, 2005). Finally, competition can also lead to prejudice. Realistic group conflict theory posits that prejudice is likely to occur when there is high group frustration and group members compete for limited resources (Esses, Jackson, & Armstrong, 1998).

Sexism

Glick and Fiske (1997) defined traditional sexism as emphasizing two different elements: hostility and endorsement of traditional gender roles (e.g., women remain in the home to maintain the house and take care of children, and men are the breadwinners of the family). In contradiction of this traditional view of sexism, the authors proposed the theory of ambivalent sexism which includes benevolence in addition to hostility toward women. The authors describe hostile sexism as seeking “to justify male power, traditional gender roles, and men’s exploitation of women as sexual objects through derogatory characterizations of women” (p. 121). The second component, benevolent sexism, is described as relying “on kinder and gentler justifications of male dominance and prescribed gender roles; it recognizes men’s dependence on women (i.e., women’s dyadic power) and embraces a romanticized view of sexual relationships with women” (p. 121). The authors note that the biggest threat with the benevolent side of sexism is
that subjectively it appears positive by emphasizing the protection and affectionate nature of relationships with women. Glick and Fiske stated that although the hostile and benevolent sexism may seem like two completely different constructs they both comprise the following three critical issues: power, gender differentiation, and sexuality.

Each of these three components also has subcomponents. Glick and Fiske (1997) explain that power differences materialize through paternalism, which has a dominative and protective side. Dominative paternalism is described as “the belief that women ought to be controlled by men,” and protective paternalism is characterized by the statement that “. . . because of their greater authority, power, and physical strength, men should serve as protectors and providers for women” (pp. 121-122). Gender differentiation is also comprised of two components: competitive gender differentiation and complementary gender differentiation. Competitive gender differentiation is defined as the process of men increasing feelings of their own superiority through support of negative stereotypes of women. In contrast, the same men can be proponents of traditional gender roles that seemingly have positive traits. The authors deem this as “the better half” (p. 122). Finally, heterosexuality can be either hostile or benevolent. Heterosexual hostility embraces the idea that women are simply sexual objects who use their sexuality to control men, and intimate heterosexuality romanticizes the ideas that women are sexual objects, and men need women to feel complete.

_Intrinsic and Extrinsic Religious Orientation_

In a classic work, Gordon Allport (1966) reported that a curvilinear relationship existed between religiosity and prejudice among churchgoers. Specifically, casual churchgoers have been found to have more prejudiced attitudes than both regular
churchgoers (attends 5 to 11 times per month) and nonchurchgoers. Allport proposed that regular and casual churchgoers might actually use religion in different ways. He labeled the religious orientation of these two groups as intrinsic (I) and extrinsic (E), respectively. For those individuals with an intrinsic religious orientation, church is an outlet to come together and express their faith. He stated "... the intrinsic form of the religious sentiment regards faith as a supreme value in its own right" (p. 455). In general, the intrinsic have a more mature form of religious orientation. On the other hand, extrinsically religious individuals do not feel the need to attend church regularly and are more attracted to the church environment for community and social support or a sense of social identity. At the end of his paper, Allport proposed that an increase in research in this area is necessary to further clarify this relationship. It is clear that his call for research was heard. Numerous papers and studies, including Allport's own (Allport & Ross, 1967) have been at the forefront of this important research area. Not only have intrinsic and extrinsic religious orientations been studied, but newer research has included quest orientation, which is defined as being more tolerant and open-minded (Altemeyer & Hunsberger, 1992). In addition, political affiliation, right-wing authoritarianism, Christian orthodoxy, quest orientation, and religious fundamentalism have been studied in relation to prejudice (e.g., Altemeyer & Hunsberger, 1992; Saucier & Cawman, 2004).

Allport and Ross' (1967) seminal study on religious orientation improved and broadened previous conceptualizations and measures that were used to investigate the relationship between prejudice and religiosity. Specifically, they constructed the Religious Orientation scale so that a reliable measure of intrinsic and extrinsic religious
orientation would exist. In addition to the measure of religious orientation, Allport and Ross employed several questionnaires measuring attitudes about social problems and prejudice. Their sample was comprised of 309 participants from six separate denominations of churchgoers: Roman Catholic, Lutheran, Nazarene, Presbyterian, Methodist, and Baptist. Participants were classified into three separate groups: intrinsic, extrinsic, and indiscriminately pro-religious. Results revealed that participants who were extrinsic were more prejudiced toward African Americans than those who held an intrinsic orientation. However, they also discovered that those individuals who were indiscriminately pro-religious were more prejudiced than any other group. However, Allport and Ross found that the individual denominational group results differed from their overall results, indicating that there was an interaction between religious orientation and prejudice. Presbyterians and Methodists who were extrinsic were actually found to be less prejudiced toward African Americans than those who were intrinsic. Also, Roman Catholics, Lutherans, and Nazarenes who were indiscriminately pro-religious were less prejudiced toward African Americans than those who were extrinsically oriented. The authors posited that the unexpected findings for Presbyterians and Methodists may have been influenced by racial issues that were occurring in the local area where the sample was taken. Nevertheless, these results suggest that specific religious denomination may be an important variable to consider.

**Quest Orientation**

Although Allport (1966) suggested a two-dimensional model of religion consisting of both intrinsic and extrinsic religious orientations, other researchers have posited that an important piece of the puzzle may be missing. Batson (1976) suggested
that a third dimension might also exist, and he called this the “religion as quest” orientation. He stated that individuals who view religion as a quest “. . . view religion as an endless process of probing and questioning generated by the tensions, contradictions, and tragedies in their own lives and society. Not necessarily aligned with any formal religious institution or creed, they are continually raising ultimate ‘whys,’ both about the existing social structure and about the structure of life itself” (p. 32).

Christian Orthodoxy

Fullerton and Hunsberger (1982) defined Christian orthodoxy as “the acceptance of well-defined, central tenets of the Christian religion” (p. 318). They defined the tenets of Christian orthodoxy as those agreed upon by both Protestants and Catholics which are represented in the Apostles’ and Nicene Creeds. They also included three additional statements that were not included in the creeds. They organized these tenets into thirteen categories: existence of God, Trinity of the Father, Son, and Holy Ghost, God created all things, Jesus of Nazareth was Divine, the virgin birth of Jesus, Jesus’ mission was to save mankind, Jesus died but came back to life, Jesus has left the Earth but shall return, God will judge men after their deaths, there is life after death, the Divine inspiration of the Bible, miracles, and the efficacy of prayer. Christian orthodoxy has been studied in relationship to a variety of other religious variables such as religious fundamentalism, quest orientation, and intrinsic and extrinsic religious orientations (Jonathan, 2008; Rowatt & Franklin, 2004; Kirkpatrick, 1993). In addition to other religious variables Christian orthodoxy has also been studied in relation to belief in a just world (Lea & Hunsberger, 1990), racism (Rowatt & Franklin), right-wing authoritarianism (Rowatt & Franklin), environmentalism (Truelove & Joireman, 2009), and ethnicity (Randolph-
Seng, Nielson, Bottoms, & Filipas, 2008). Overall, Christian orthodoxy has been related to both positive and negative consequences in individuals. For example, Truelove and Joireman found that Christian orthodoxy is negatively related to proenvironmental attitudes, and Randolph-Seng et al. reported that African Americans who scored higher on Christian orthodoxy had fewer mental health problems than those individuals who scored lower.

**Religious Fundamentalism**

Religious fundamentalism is another important variable that has been studied in recent decades. Altemeyer and Hunsberger (1992) define 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 essential truth is fundamentally opposed by forces of evil which must be vigorously fought; 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). The authors note that this construct is meant to be inclusive of beliefs widely found in many religions other than Christianity. Altemeyer and Hunsberger created and refined a 20-item scale to measure religious fundamentalism in the early 1990s using students from a Canadian university and their parents. Other research has found relationships between religious fundamentalism and other variables including: quest orientation, Christian orthodoxy, church attendance, Christian denomination, right-wing authoritarianism, and different forms of prejudice (e.g., Altemeyer & Hunsberger, 1992; Laythe, Finkel, & Kirkpatrick, 2001; Gorsuch & Aleshire, 1974).
Right-Wing Authoritarianism

Altemeyer (1981) defines right-wing authoritarianism as a multidimensional construct comprised of the overall covariation of three different components: authoritarian submission, authoritarian aggression, and conventionalism. The first component, authoritarian submission, is described as the tendency to submit to authority figures despite appalling, unjust, and potentially illegal behavior by those authority figures. Altemeyer (1988) reported that individuals who scored high in right-wing authoritarianism were more likely to support Richard Nixon during the Watergate scandal despite copious evidence that he was committing illegal acts. These individuals were also more likely to support the arrest, torture, and execution of “radicals” such as homosexuals and communists. The second component, authoritarian aggression, is described as being highly penalizing and supportive of corporal punishment in the parenting of a child. Altemeyer (1981) reported that individuals high in authoritarian aggression were also more likely to impose longer, harsher sentences on convicted criminals. The final component, conventionalism, is described as the tendency to support stricter rules about appropriate behavior and have more traditional views about religion and morality (Altemeyer, 1988).

Altemeyer (1988) reported that participants who score high in right-wing authoritarianism are also likely to score high on certain variables. Altemeyer and Hunsberger (1992) found that those scoring higher on right-wing authoritarianism are more likely to follow the religious traditions they learned in childhood into adulthood. These behaviors include attending church and reading the Bible more frequently than
others. These individuals also expressed having little doubt about the validity of the traditions that they follow.

*Relationships Among Constructs*

Many researchers have investigated the relationship between religious affiliation and prejudice during tumultuous social times. Spoerl (1951) examined the relationships between religious affiliation and racial prejudice during the post World War II era of the 1950s. She compared racial attitudes among Jewish, Protestant, and Catholic students toward different racial groups after completing an educational course about diversity. Results indicated that there were no significant differences in prejudice among the groups. However, differences were found when individual attitudes toward specific minorities were compared. Both Protestants and Catholics showed negative attitudes toward minority groups; whereas, Jewish students had negative attitudes toward the majority groups. In 1969, a study revealed differences among prejudiced attitudes when comparing Protestants and Catholics as well (Burnham, Connors, & Leonard, 1969). The authors found that religious denomination affected the relationship between social status (measured by father’s education) and prejudice. Protestants were the most likely to be affected by social status, followed by the non-religious, and then by Catholics. A main effect was found for gender, showing that men were more likely to be prejudiced than women; however, the difference was smaller when social status was controlled in the analysis. Regarding differences in prejudice for individual groups, the non-religious group was the least likely to be prejudiced, and Catholics were the most likely to be prejudiced. The results of both of these studies were not surprising to the authors, but studies such as these marked the beginning of this body of research.
Prior to Batson’s (1976) publication an operational measure of quest orientation had not yet been created. The lack of an operational measure for quest orientation led Batson to formulate a two-step research study to investigate all three dimensions: quest, extrinsic, and intrinsic orientations. Allport’s Intrinsic and Extrinsic scales were used in addition to the newly designed Religious Life Inventory which measured external, internal, and interactional motives for being religious, and the Doctrinal Orthodoxy Scale, which measured agreement with traditional Christian doctrines. Batson hypothesized that these scales would merge to create the three dimensional model of religious orientation. The study was completed by 67 students at Princeton Theological Seminary.

Results from Batson’s (1976) study indicated that seminarians were less likely to be indiscriminately proreligious compared to the average churchgoers in Allport and Ross’ (1967) study. The relationships among the scales were as predicted with the exception of the External scale. The Intrinsic scale correlated positively with both the Doctrinal Orthodoxy scale and the Internal scale of the Religious Life Inventory. The Interactional scale stood alone. Contrary to Batson’s predictions, the External scale actually related positively to the Intrinsic, Interactional, and Doctrinal Orthodoxy scales. The author suggested that the External scale may have had poor validity, or both internal and external rewards were related to intrinsic religious orientation. In the first part of the study Batson explored the relationship between religious orientation and prejudice by investigating the relationships between intrinsic, extrinsic, and quest orientations and anti-Negro, anti-Jewish, anti-other, rejection of those with mental illness, and those with a “jungle” philosophy of life. Batson defined this philosophy as “suggesting generalized
suspicion and distrust of other people” (p. 36). Results of intercorrelations among prejudice variables indicated that anti-Negro was significantly positively related to anti-other, anti-other was also significantly related to anti-Jewish, and jungle philosophy was related to prejudiced toward the mentally ill. Correlations among religious orientation variables and prejudice were examined and failed to reveal any significance above and beyond chance.

Batson’s (1976) second study investigated the relationship between religious orientation and helping behavior among 40 participants at Princeton Theological Seminary. He created a situation in which there was a victim who appeared to be in great distress and needed help. Participants were then measured on whether they stopped to provide assistance. Forty percent of participants stopped to help. Results indicated that neither quest, intrinsic, or extrinsic religious orientations or other religious scales were related to helping behaviors; however, a relationship was found to exist between religious orientation and the type of assistance provided, either persistent or tentative. Batson found that the most persistent helpers scored lower on the Interactional scale and quest orientation. Persistent helpers were found to score higher on the Doctrinal Orthodoxy Scale than non-persistent helpers. Results indicated that the negative relationship between quest orientation and persistent helping and the positive relationship between the Religion as End Scale and persistent helping were highly significant.

So what do the relationships between religious variables and types of helping behavior mean? Batson (1976) suggests that perhaps highly Christian orthodox individuals feel that helping others is part of a larger plan and therefore cannot change their helping behavior despite the request to stop by the person being helped. This
response is contrary to the more tentative helpers who actually listened when the individual said he did not need help and would rather be left alone. These results were replicated in a follow-up study for generalization to university undergraduates with various Christian denominations. A different helping situation was also presented which involved referral recommendations which were made for confederates posing as clients. Batson concludes by stating that it appears that religious variables do not necessarily affect whether one helps but how one helps.

After Batson, Floyd, Meyer, and Winner’s (1999) study, which investigated the helping behavior of individuals with high intrinsic orientation, Batson, Eidelman, Higley, and Russell (2001) completed a follow-up study which explored the helping behavior of individuals with a quest orientation. Batson and colleagues (2001) questioned whether participants who scored high in quest would be as helpful to individuals who are intolerant of homosexuality as they are to gay and lesbian-identified individuals. They predicted that participants who scored high in quest orientation would be most likely to help non-intolerant individuals who needed money to visit their grandparents, followed by intolerant individuals who needed money to visit grandparents, and individuals who were intolerant and wanted money to attend an anti-gay rally. Sixty female Christian introductory psychology students participated in the study. Participants arrived individually to the study and were left a note which stated that he or she and another student (confederate) would be participating. The other participant, the discloser, had written a note about the adjustment to university life and his or her thoughts about the tasks that were to be given. The participant was then given a second note in which the same discloser wrote about intimate details about his or her adjustment to college. The
disclosure was either tolerant and benign or intolerant toward gay people and explained whether the help from the participant would promote intolerant behavior or not. Specifically, the participant was either told that the discloser was either intolerant or tolerant and whether or not they would use the help to attend an anti-gay rally or visit his or her grandparents.

Results of Batson and colleagues’ (2001) study supported the hypotheses. Participants who scored high in quest religious orientation did discriminate as evidenced by less willingness to help a discloser who wanted financial help to attend an anti-gay rally. Those who scored above the median in quest were significantly less willing to help an intolerant discloser than one who was not. Batson and associates followed up these results by asking the question “. . . were those high in quest religion showing antipathy toward the intolerant person or toward the intolerant activity?” (p. 48). Results suggested the second option because individuals scoring high on quest orientation did not actually help the intolerant discloser any less than a tolerant one when they were not using the help to engage in an intolerant activity.

Batson et al. (1999) further investigated the nature of intrinsic orientation with their study that explored the helping behavior of individuals who scored high on the Intrinsic Religious Orientation Scale. Specifically, comparisons were made between those who were high and low on intrinsic orientation and their willingness to help a gay individual who would either use the help to visit grandparents or attend a gay rally. Based on previous research from Allport (1966) and Batson, Schoenrade, and Ventis (1993) the authors hypothesized that people who scored high on intrinsic orientation would be most likely to help a heterosexual person, followed by a gay person who was
not promoting homosexuality and a gay person who was promoting homosexuality. Participants were 90 introductory psychology students at the University of Kansas who were randomly assigned to each of the three experimental conditions. They were told that they were going to receive a note from a discloser who would divulge personal information. The participant was then given two brief tasks that would either benefit the discloser or another student by giving them raffle tickets providing a chance to win a 30 dollar gift certificate. This first note would manipulate out-group membership with the student reporting that she or he was having difficulty adjusting to college and was gay or simply having adjustment problems. Participants were then given an impression questionnaire followed by a second note that stated the discloser’s intentions for the money: visiting grandparents or attending a gay rally.

Results of the study confirmed the hypotheses given by Batson and his colleagues (1999). Overall, participants were least likely to help gay disclosers than those who were not identified as gay. Participants were identified as either highly intrinsic or not by splitting at the median score. Highly intrinsic individuals were least likely to help the gay discloser who reported that she or he would use the money to promote homosexuality by attending a gay rally. The authors asserted that these results contradict Allport’s (1966) claim that individuals with an intrinsic religious orientation would exhibit universal compassion and help anyone in need. Batson and associates posited that their findings could have been due to a tribal, not a universal, compassion. They concluded that intrinsically oriented individuals disapprove of the sin and the sinner.

Jackson and Hunsberger (1999) conducted two different studies to investigate whether membership in a religious group is a significant predictor of discrimination
toward non-religious individuals. In their first study they explored whether orthodox and fundamentalist Christians would have negative attitudes toward atheists and non-believers and positive attitudes toward other Christians and fellow believers. They used various measures in their studies: measures of religious fundamentalism, Christian orthodoxy, an evaluation thermometer measuring positive and negative attitudes toward the four groups (atheists, Christians, believers, and non-believers), and a measure of religious group identification. Jackson and Hunsberger computed Pearson correlations, which indicated that there were clear relationships among the religiosity constructs. They also found that both religious fundamentalism and Christian orthodoxy were positively correlated to attitudes toward Christians and believers and negatively correlated with attitudes toward atheists and non-believers. Analyses of Variance (ANOVAs) comparing the two groups revealed that more religious individuals reported significantly more positive attitudes toward Christians and believers and reported more negative attitudes toward atheists and non-believers. In their second study, both intrinsically and extrinsically motivated Christians and the act of affirming a belief in God were positively correlated with attitudes toward Christians and believers, and negatively correlated with attitudes toward atheists and non-believers. Analyses comparing the groups revealed that for the very religious, attitudes toward Christians and believers were positive and toward the atheist and non-believers were negative. In contrast, the less religious viewed all groups positively overall; however, non-believers viewed Christians and believers significantly more negatively than atheists and agnostics.

In similar research, Rowatt, Ottenbreit, Nesselroade, and Cunningham (2002) studied whether religious orientation was related to humility. Based on results from
Allport and Ross (1967), they hypothesized that individuals with higher extrinsic religiosity would have less humility, and those with higher intrinsic religiosity would have more humility. In other words, extrinsically religious people would suffer from the “holier-than-thou effect”, suggesting that they would consider themselves more dedicated to their religion than others, and intrinsically religious people would suffer from the “humbler-than-thee effect”, suggesting that they would view others as more dedicated to religion than themselves. They measured intrinsic and extrinsic religiosity, doctrinal orthodoxy, quest orientation, and desirable responding. Overall, results indicated that more religious participants were less likely to be humble than less religious participants. When looking at individual groups, the authors found that contrary to hypotheses, having an intrinsic orientation was negatively related to humility, and extrinsic orientation was not significantly related to humility. After replicating the study, they found similar results except that in their second study extrinsic orientation was positively related to humility. One can conclude from these results that individuals with an intrinsic religious orientation are actually biased against the out-group, that is, members of another group, believing that other people are not religious enough in comparison to themselves.

Other scholars have included the variable of spiritual experiences as they relate to religious orientation, quest orientation, and dogmatism. Reinert and Bloomingdale (2000) explored spiritual development which is comprised of two subfactors: spiritual support and spiritual openness. Spiritual support measures formal spiritual practices and is related to intrinsic religious orientation. Spiritual openness is related to less dogmatic beliefs and higher tolerance toward ambiguity. Results of Reinert and Bloomingdale’s study indicated that spiritual support was related to higher intrinsic religious orientation.
Spiritual openness was positively related to quest orientation, a more open spiritual orientation that emphasizes doubt and self-exploration. Spiritual openness was also inversely related to formal religious involvement in conservative Christians. In contrast, more dogmatic Christians rated high on intrinsic religiosity and more strongly on formal religious involvement (e.g., church attendance). These findings suggest that being more spiritually open is related to being open in other aspects of one’s life.

Recently, researchers have begun to study the relationship between religiosity and attitudes toward homosexuals. Vicario, Liddle, and Luzzo (2005) investigated how specific religious values are related to increased negative attitudes toward lesbians and gay men. Overall, the majority of participants reported negative attitudes toward homosexuals. Of the 36 different values measured, the authors found that six were significantly correlated with attitudes toward homosexuals. Specifically, salvation, obedience, and national security were related to negative attitudes toward homosexuals; whereas, endorsement of broad-mindedness, seeing the world as a beautiful place, and being more imaginative were related to positive attitudes. Endorsement of the terminal value of salvation and attendance of religious events in high frequency were the strongest correlates to negative attitudes about homosexuals. Correlations indicated that there was a positive relationship between endorsement of salvation and scores endorsing more negative attitudes toward gay men. In other words, greater endorsement of salvation was associated with more negative attitudes toward homosexuals. Greater endorsement of obedience and national security was positively related to right-wing authoritarianism and dogmatism. Vicario et al. suggested that broad-mindedness, viewing the world as beautiful, and creativity may be related to positive attitudes toward homosexuals because
those who are in the arts community tend to be more open and accepting of the gay or lesbian population and more open-minded in general. On the other hand, they also posited that more open individuals who are interested in aesthetics may be more attracted to the arts community than individuals who are not. The authors concluded by suggesting that because 15% of participants who rated salvation as one of their top core values did not have negative attitudes toward lesbians and gay men, it is possible to change one’s attitudes without having to change one’s core values. If this is in fact true, reducing negative attitudes may be more reasonably possible than previously thought.

Altemeyer and Hunsberger (1992) investigated the relationship between right-wing authoritarianism, religious fundamentalism, quest orientation, and prejudice. For this article, Altemeyer and Hunsberger described fundamentalists as “. . . mainly Baptists, but also Jehovah’s Witnesses, Salvation Army, Evangelical, and Pentecostal” (p. 124). The authors completed two separate studies at a Canadian university over a two-year period to answer the question of whether or not religious people are good people. Both university students and parents volunteered as participants. In their first study, correlations revealed that right-wing authoritarianism was highly related to both religious fundamentalism and quest orientation. Right-wing authoritarianism was positively related to religious fundamentalism and negatively related to quest orientation. Religious fundamentalism and Christian orthodoxy were also found to be negatively related to quest orientation. In addition, fundamentalists who were also non-questers were found to have negative attitudes against nearly all minority groups studied, including gay men, lesbians, and radicals. Negative attitudes included: support for the “arrest, torture, and execution of ‘radicals’” (p. 123), restricting opportunities for gay
individuals, and feeling that gay individuals deserve to be killed by AIDS. Results indicated that fundamentalists were the most prejudiced toward gay and lesbian individuals. The authors reported that these correlations were small (.20 range), but statistically significant. Fundamentalists reported significantly more negative attitudes toward these groups than non-fundamentalists. Altemeyer and Hunsberger also compared various religious denominations and found that participants who were Jewish or reported no affiliation scored low on the right-wing authoritarianism scale; whereas, both Mennonites and Christian fundamentalists scored the highest. The authors emphasized that results should not be over-generalized to all individuals because there were participants who were high on the Religious Fundamentalism scale and low on the Quest Orientation scale but were also non-prejudiced.

Other researchers have found that the components of one’s religious orientation may be what are most predictive of prejudiced behavior. Laythe et al. (2001) analyzed the relationships between religious fundamentalism, right-wing authoritarianism, homosexual prejudice, and racism. The authors measured these constructs using the Right-wing Authoritarianism Scale, Religious Fundamentalism Scale, Manitoba Prejudice Scale, and Attitudes Concerning Homosexuals Scale. Results from a multiple regression analysis indicated that both right-wing authoritarianism and religious fundamentalism were significant predictors of homosexual prejudice. Together, these two variables accounted for 28% of the variance. In contrast to these results, only right-wing authoritarianism was a significant predictor of racial prejudice. Religious fundamentalism, on the other hand, was a significant inverse predictor of this type of prejudice, indicating that those individuals higher in fundamentalism were less likely to
endorse racist attitudes than those who were lower. These two variables accounted for 12% of the variance in racism. This means that although both variables were significant positive predictors of homosexual prejudice, only right-wing authoritarianism was a significant positive predictor of racial prejudice. In fact, religious fundamentalism was negatively correlated with racial prejudice.

In an attempt to sort through the contradictions in previous research, Kirkpatrick (1993) completed a study to clarify the differences between the constructs of religious fundamentalism, Christian orthodoxy, and intrinsic religious orientation. Altemeyer and Hunsberger (1992) found that religious fundamentalism was related to prejudice directed toward several minority groups. However, similar results were not found for Christian orthodoxy. Other researchers used the terms together (e.g., Gorsuch & Aleshire, 1974; Herek, 1987). Kirkpatrick’s study used independent measures to study each construct in addition to measuring discriminatory attitudes. Paralleling research from Laythe et al. (2001), results from a multiple regression analysis indicated that both intrinsic religiosity and Christian orthodoxy were significant negative predictors of racial discrimination; whereas, religious fundamentalism was a positive predictor of racial discrimination. In fact, religious fundamentalism was a significant positive predictor of total discrimination as well as discrimination against women, communists, and homosexuals. The results of Kirkpatrick’s study suggest that Christian orthodoxy and religious fundamentalism are different constructs, despite being used interchangeably in some of the previous literature.

Wilkinson (2004b) took a multidimensional approach in his exploration of the relationships among religious variables and homophobia. He used the multidimensional
scale from LaMar and Kite (1998) to measure attitudes toward lesbians and gay men in addition to measuring right-wing authoritarianism, Christian orthodoxy, intrinsic and extrinsic religious orientations, and quest and immanence orientations. Results were consistent with some previous findings (Herek, 1987; Kirkpatrick, 1993), indicating that intrinsic religiosity was significantly and positively correlated to homophobic attitudes and beliefs compared to extrinsic religiosity. Homophobia was also found to be significantly positively correlated with Christian orthodoxy and right-wing authoritarianism. The author suggested that these results may not be due to fewer concerns with morality but actually may be due to less self-righteousness. These results contrast with previous results (Kirkpatrick, 1993), in which neither intrinsic religious orientation nor Christian orthodoxy was related to discriminatory attitudes toward homosexuals. However, these findings are consistent with those from Laythe et al. (2001) who concluded that findings may be a result of negative attitudes toward homosexuals being consistent with religious doctrine. Hunsberger and Jackson (2005) further this argument in stating “... religiosity may be associated with prejudice if religion justifies existing inequalities” (p. 817). They also posited that one’s religious orientation may be related to cognitive variables. The authors speculate that individuals who score high on religious fundamentalism may have less flexibility in thought, adhering strictly to rigid religious doctrine, and contrary to individuals with a quest orientation, they are less open to other ideas or new information. However, no empirical evidence has been found which investigated this hypothesis as of yet.

Political affiliation was also found to be related to attitudes toward homosexuals. Saucier and Cawman (2004) examined the relationships among political party affiliation,
religious fundamentalism, social dominance orientation, choice of gubernatorial candidate, and support for civil unions in Vermont. Social dominance orientation was defined as agreement with ideas that one group is superior to another. They also measured whether participants supported the Take Back Vermont campaign, which was created to abolish pro-gay rights civil union legislation in the state. Correlations revealed that social dominance, religious fundamentalism, negative attitudes toward homosexuals, and support for the Take Back Vermont campaign were all positively related. The authors found that participants who voted for a Republican candidate had significantly higher negative attitudes toward homosexuals and higher religious fundamentalism scores. They were also significantly more likely to support the Take Back Vermont campaign and oppose civil unions. A hierarchical multiple regression analysis suggested that support for civil unions could be predicted by democratic affiliation, more positive attitudes toward homosexuals in general, and opposition to the Take Back Vermont campaign. Religious fundamentalism and social dominance orientation were not significant predictors of support for civil unions. It is clear that more research is needed to further explore the relationship between political party affiliation and religious orientation.

Altemeyer (2003) sought to find whether religious fundamentalism would correlate with a new measure of religious ethnocentrism and racial and homosexual prejudices. Religious ethnocentrism is defined as believing one’s own religion is superior to another. Results indicated that religious fundamentalism and religious ethnocentrism are related to prejudice; however, when religious ethnocentrism was held constant, the statistical significance of the relationship between religious fundamentalism
and prejudice disappeared. In contrast, this was not the case when the reverse operation was performed, and the researchers partialed out religious fundamentalism. These results suggested that religious ethnocentrism accounts for the positive correlations between religious fundamentalism and homosexual and racial prejudices.

*International Studies*

A small body of research exists in which researchers investigated the relationships between religion and prejudice in other cultures. One study was performed with a population of Greek Americans (Petropoulos, 1979). The author measured attitudes toward Jewish individuals and African Americans in addition to Greek Orthodoxy (measured by belief in miracles and the belief in the divinity of Christ), parochial school attendance, church attendance, and frequency of godfatherhood. Membership in the Greek Orthodox Church was related to prejudiced attitudes, especially toward African Americans. Greek Protestants were found to be the most tolerant group. The author posits that this may be because they are considered a religious out-group because they are not affiliated with the traditional church. This, in turn, may lead to positive attitudes toward other out-groups leading to less prejudice overall.

Hunsberger, Owusu, and Duck (1999) investigated the relationship between religious fundamentalism, right-wing authoritarianism, and negative attitudes toward homosexuals and women with a population in Ghana. With only a few minor alterations to the scales, psychometric properties in Ghana were comparable to those measured with Canadian participants. The authors found that both religious fundamentalism and right-wing authoritarianism were related to more negative attitudes toward homosexuals and women. They questioned whether right-wing authoritarianism or religious
fundamentalism was a better predictor of prejudice. After performing partial correlations, religious fundamentalism remained a predictor of negative attitudes toward homosexuals; whereas, right-wing authoritarianism was no longer a predictor of negative attitudes toward homosexuals in this population. On the other hand, right-wing authoritarianism was a better predictor of sexist attitudes. The authors also investigated how differences between gender and type of school attended affected prejudiced attitudes against homosexuals. A 2 (men vs. women) x 2 (same-sex school vs. mixed-sex school) ANOVA was performed, and results from the analysis revealed a main effect for gender. Men were found to have more negative attitudes toward homosexuals. However, an interaction effect was also found, which suggested that men from same-sex schools were the most prejudiced of the four groups. Further analyses indicated that men attending same-sex schools were more likely to be fundamentalist, yet adjusted means indicated that men still displayed more homophobic attitudes than women. The authors posited that it may be that parents who are high in religious fundamentalism are more likely than low religious fundamentalism parents to send their children to same-sex schools.

Moghaddam and Vuksanovic (1990) investigated the relationships between right-wing authoritarianism, religiosity, and political ideology by studying how religiosity and right-wing authoritarianism were related to support for human rights in various countries. As predicted, the results indicated that support for human rights in the Soviet Union was the strongest, followed by third-world countries, and Canada. Specifically, there was an inverse relationship between right-wing authoritarianism and support for human rights, and religiosity and support for human rights indicating that individuals with more religious or authoritarian beliefs were less likely to support human rights in the Third
World and Canada. The only exception to this finding was support for human rights in the Soviet Union. Therefore, one can conclude that these individuals who scored high in religiosity and right-wing authoritarianism will support human rights in communist nations, but not in democratic countries like their own. These results are important because they suggest that individuals perceived a difference in their own group, the in-group, and the other. To summarize the Moghaddam and Vuksanovic findings, participants were willing to support change in other nations but not in their home countries.

Stones (2006) used a sample of Australian males to analyze the relationships among right-wing authoritarianism, social dominance orientation, and homophobia. Correlations revealed that positive relationships existed between right-wing authoritarianism and homophobia and social dominance orientation and homophobia. Next, Stones performed multiple regressions and found that his model was significant and predicted 13% of the overall variance of negative stereotypes toward gay men. Despite the correlations between social dominance orientation and homophobia, only right-wing authoritarianism was a significant predictor. These results parallel those from a previous study (e.g., Hunsberger, 1996).

Other studies conducted in the United States have also investigated the relationship between different variables, such as gender roles, right-wing authoritarianism, and sexism. Glick and Fiske (1997) differentiated between two different types of sexism: hostile and benevolent. Hostile sexism is what typically comes to mind when one thinks of sexist prejudice, such as unequal pay. On the other hand, benevolent sexism is more often labeled as chivalry. These chivalrous behaviors include
symbolically putting a woman “on a pedestal” by paying for meals and opening doors. The female is often viewed as angelic and pure. Christopher and Wojda (2008) found that right-wing authoritarianism was related to hostile sexism. Specifically, the authors discovered that the relationship between right-wing authoritarianism and traditional gender role preference was fully mediated by benevolent sexism; however, this relationship did not exist with regard to hostile sexism.

A study by Ekehammar, Akrami, Gylje, and Zakrisson (2004) investigated the relationships among social dominance orientation, right-wing authoritarianism, and prejudice. The authors defined social dominance orientation as “the basic individual difference variable in social dominance theory, can be seen as a general attitudinal orientation toward intergroup relations, reflecting whether one generally prefers such relations to be equal, versus hierarchical” (p. 465). The authors described social dominance orientation as a personality trait that is related to both personality and social psychology. Social dominance orientation and right-wing authoritarianism are differentiated from one another on five points. First, social dominance orientation focuses on intergroup dominance and right-wing authoritarianism focuses more on intragroup relations. Second, individuals scoring high in right-wing authoritarianism are also more likely to submit to authority than those who are high social dominance orientation. Third, those with high right-wing authoritarianism are more likely to be religious compared to those high on social dominance orientation. People who score high on social dominance orientation are less likely to need the structure, tradition, and conformity than those who are high on right-wing authoritarianism. Last, right-wing
authoritarianism has been found to be significantly positively related to security values; whereas, social dominance orientation has not.

Ekehammar et al. (2004) chose to perform a causal modeling analysis to investigate the strongest predictors of prejudice among the Big Five personality traits, right-wing authoritarianism, and social dominance orientation. They hypothesized that the Big Five personality factors would be first in the causal chain followed by social dominance orientation and right-wing authoritarianism. Social dominance orientation and right-wing authoritarianism would occur prior to prejudice, providing the link between personality and social variables. They also predicted that Conscientiousness, Extraversion, and Openness to Experience would be related to right-wing authoritarianism and Agreeableness, and Openness to Experience would be related to social dominance orientation. In addition, they predicted a causal relationship between social dominance orientation, right-wing authoritarianism, and prejudice. Finally, causal paths from Agreeableness and Openness to Experience to prejudice were predicted.

Ekehammar and colleagues recruited 183 non-psychology students at a university in Sweden to participate in this study. The Big Five personality traits, social dominance orientation, and right-wing authoritarianism were measured to assess personality constructs. Sexism, racism, and prejudice toward disabled persons, and heterosexism were measured to assess prejudice. Results of Ekehammar and colleagues’ (2004) study revealed that, as predicted, the prejudice scales were highly positively correlated and could be combined into a single factor. Openness to Experience and Agreeableness were significantly negatively related to prejudice. Contrary to the authors’ hypotheses, neuroticism had a small, positive, statistically significant relationship with prejudice.
Social desirability was significantly positively related to only one Big Five factor, Agreeableness. In this study, social dominance orientation was found to mediate the effects of personality on prejudice, specifically the factor of Agreeableness. On the other hand, Extraversion, Conscientiousness, and Openness to Experience affected prejudice through right-wing authoritarianism. Results also indicated that right-wing authoritarianism predicted social dominance orientation rather than the opposite. The authors posited that these results supported the proposal that right-wing authoritarianism and social dominance orientation are very different constructs. Social desirability scores further illustrated that social desirability was not an issue.

Another study investigated the link between authoritarian attitudes and the gender and gender roles of individuals. Rubinstein (1995) proposed that individuals with undifferentiated gender roles would have higher right-wing authoritarianism scores than those who were androgynous. The author asserted that having both masculine and feminine traits lead to positive emotional health, which would lead to lower right-wing authoritarianism scores. On the other hand, Rubinstein proposed that undifferentiated individuals who score low on both masculinity and femininity would be less self-sufficient which leads them to rely more on tradition and authority. This reliance on authority, therefore, would lead them to have higher right-wing authoritarianism scores. Lastly, Rubinstein hypothesized that men would have higher scores on the Right-wing Authoritarianism scale than women because men have higher status in the traditional belief system. The study was conducted with 365 Jewish undergraduate students to ensure cultural homogeneity in this population from Tel-Aviv University in Jerusalem. The measures that were used included: demographic questions, sexism, and right-wing
authoritarianism. Regression analysis, discriminant analysis, and analysis of variance were used to analyze data. Results indicated that men were more authoritarian than women. No statistically significant relationships were found in the male sample; however, cross-sexed women (women who scored high on masculinity and lower on femininity) were found to have significantly lower right-wing authoritarianism scores than either feminine or undifferentiated women. Overall, sex-typed participants scored the highest on right-wing authoritarianism, followed by androgynous, undifferentiated, and cross-sex-typed participants. Rubinstein also reported that cross-sex-typed women were most likely to be left-wing and defined as secular.

Religious Pressures

After reading through the previous research results from studies investigating the relationships between religion and prejudice one may wonder about the origin and development of prejudiced beliefs. Altemeyer (2003) suggested that, like most attitudes, negative attitudes toward others are most likely learned from family socialization starting at a very young age. He posited that at an early age religious children are socialized that they are part of a unique group of people. This in turn leads to an in-group identification or a feeling of being part of an “us”. Being a part of an in-group leads to comparisons with the out-group, “them”, who practice other religions or are nonbelievers. This early identification in an us-versus-them dynamic creates a mental template for other types of social comparisons and prejudiced attitudes later in life. To test this model, Altemeyer investigated whether parental emphasis on religion, race, and gender was related to religious ethnocentrism, religious fundamentalism, and racial prejudice. Results indicated that although parents of more fundamentalist participants did not directly
emphasize race or gender identity, they did emphasize religious identity. However, these same participants were also significantly more likely to be racially prejudiced. How is this so? Altemeyer hypothesized that these same social dynamics continue to be used with other groups later in life. An individual is taught to use social comparison in one area of life and continues to use that with other social groups including race and gender.

So what are the consequences of having intense religious pressure? Exline, Yali, and Sanderson (2000) emphasized that research has shown that religious beliefs can lead to both positive and negative consequences. Positive consequences included increased well-being and social support. However, the authors stated that religious beliefs can also lead to feelings of hopelessness and self-blame that might lead to negative thinking about the self and a higher likelihood that events will be interpreted negatively. It is noted that this thinking pattern is often circular. In other words, one’s negative thinking can also lead to religious strain or conflict. Exline and colleagues posited that religious strain would be related to both depression and suicidal thoughts. They proposed that the associations between these variables would be found and would not be dependent on level of religiosity or supportive aspects of one’s religion because some elements of strain are not likely related to religiosity. They also proposed that negative effects may be more influential than positive effects.

Exline et al. (2000) conducted two separate studies. The first used university undergraduate students and was used to create the religious measure of comforts and strain. The second study used a clinical sample of therapy clients. Their first study had 200 undergraduate participants and several variables were measured: religious comfort and strain, religiosity, religious participation, and depression. Religious comfort and
strain was measured with 20 items which included four subscales: Religious Comforts, Alienation from God, Fear and Guilt, and Religious Rifts. Religiosity, religious participation, and depression were also measured.

Results of Exline et al.'s (2000) first study indicated that there were no significant differences between religious affiliations on the religious strain measure. To the authors’ surprise, one result indicated that individuals who were not religiously affiliated at all were found to have higher strain, illustrated by having significantly more feelings of alienation from God and religious rifts than affiliated individuals. Results indicated that religious strain was significantly positively related to depression. This result continued to be significant even when level of religiosity and religious comforts, protective factors of religion, were held constant. Further analyses indicated that the subscales of Religious Rifts and Alienation from God were also uniquely associated with depression even when religiosity and religious comforts were held constant.

Because Exline and colleagues’ (2000) results from their first study were based solely on college undergraduates, a second study was completed to investigate the relationship between religious strain, religiosity, depression, and suicidality in a clinical sample. Other additional hypotheses were made for this clinical sample: Religiosity would be positively correlated with an interest in discussing religion in therapy, and religious strain would be related to this interest in discussing religious issues even when religiosity is held constant. Participants were 11 males and 43 females from an anxiety and depression clinic in the Bronx, New York. As in their first study described earlier, religious comfort and strain were assessed with the measure created by the authors. The helpfulness of addressing religious issues in treatment was measured with a 5-point
Likert-type scale. Religiosity was measured with a modified version Blaine and Crocker’s (1995) measure of religion and spirituality. Religious participation was measured by rating how often the person participated in certain religious activities. As in their first study, depression and suicidal ideation were also assessed.

Results of Exline and colleagues’ (2000) second study paralleled those from their first study. Religious strain was significantly positively correlated with depression, and this relationship continued to be significant when religious comfort and religiosity were held constant. A simultaneous multiple regression revealed that alienation from God was the major predictor of depression in this population. This relationship remained significant even when religious comfort and religiosity were held constant. Religious strain was also significantly positively correlated with suicidality and continued to be significant after religiosity and religious comforts were held constant. Results indicated that religiosity was significantly positively related with interest in discussing religious issues in psychotherapy, and religious strain was a predictor of wanting to address religious issues in treatment. Further analyses indicated that when religious comfort and religiosity were held constant, the role of religious strain in discussing religious issues was even clearer. The authors concluded by suggesting that the mere presence of religious strain in one’s life can overpower the positive aspects that religion also provides. Exline et al. also posited that distress, including suicidality, is more closely related to fear and guilt because of the fear that one has committed a sin that may be so bad that God cannot provide forgiveness. The authors ended by stating that for some individuals the benefits of religion, such as comfort and a sense of belonging, may outweigh the costs.
Kelly and De Graaf (1997) took a different approach and attempted to include the religious values of the nation in their research design. They hypothesized that there are two main variables: the level of orthodoxy of one's parents and the religiosity of the nation as a whole. The authors argued that people born in highly religious nations would be more orthodox than comparable individuals born into highly secular nations. They stated that:

... religious beliefs thus depend not only on parents’ religious beliefs, but also on the religious content of school curricula and the mass media, on the religious policies of the government and churches, on the general religious content of the nation’s culture and dominant values, and especially on the religious ‘environment’ that people live in—their friends, peer groups, schools, teachers, and marriage partners. (p. 640)

To a degree, one’s environment usually provides friends, colleagues, and romantic partners of a similar religious background. The authors stated that a person’s birthplace may be the ultimate predictor of religious beliefs.

Kelly and De Graaf (1997) provided two hypotheses for their study. They argued that people born in more highly religious countries would have more orthodox beliefs than those born in secular nations. In secular nations highly orthodox families would “insulate” their children from secular pressures, and in devout nations secular families would not insulate their children from outside religious pressures. Data were collected on 19,815 participants from 15 nations. Measurement of religious beliefs was based on religious orthodoxy scales in earlier research (Felling, Peters, & Schreuder, 1991; Van der Slik, 1994). Parents’ church attendance was used to measure the extent of religious
devotion of the father and mother. The religious beliefs scale ranged from 1 to 5 with lower scores indicating secularism and higher scores indicating higher devoutness. Other information was also collected including: gross national product (GNP), whether the nation had a recent history of communism, participant’s age, sex, education level, and whether the participant was Catholic or Protestant.

Results of Kelley and De Graaf’s (1997) study were supportive of their hypotheses. Overall, they concluded that parents have a great influence on the religious beliefs of their children; however, the religious context of the nation was often even more important. Participants from equally devout families were more likely to have devoutly religious beliefs if they were also from religious societies. An interaction between the religiosity of the nation and the religiosity of the family was also found. In secular countries the family has more impact than national context. However, context is more important in intermediately devout countries and the most important in highly devout societies. It is important to note that even in these countries family background was still significantly important. Other characteristics of a nation were also important. With the exception of the United States, the GNP of a country was negatively correlated with religious orthodoxy. Formerly communist countries were less likely to be orthodox. An analysis of individual differences among participants suggested that individuals with a Catholic background were less likely to be orthodox compared to Protestants. Orthodox beliefs increased with age, and men were less likely to be orthodox than women. Finally, well-educated individuals were slightly less orthodox than those with less education.

Howe (1994) argued that another source of religious pressure may be the child’s peer group. She stated that one’s friends, classmates, and teachers can often be more
influential than parents because children are impressionable and spend the majority of their day in the school environment. According to Howe, peer pressure can have more of an impact on behaviors than beliefs. In other words, even if the child does not believe in God, he or she may want to attend activities such as church or Vacation Bible School to fit in or feel like he or she belongs to their social group.

In a later study, Veenvliet (2008) investigated the interaction that intrinsic religious orientation and religious teaching had on attitudes about gay and lesbian individuals and homosexual behavior. The author hypothesized that an individual’s intrinsic religious beliefs would be moderated by the overt teaching of “love the sinner, hate the sin” by their religious group (p.56). He also hypothesized that an interaction would exist in which higher intrinsic beliefs and the religious teachings would interact and lead to more negative attitudes toward homosexual behavior and more positive attitudes toward gay and lesbian people. In addition, Veenvliet hypothesized that highly intrinsic individuals who were not explicitly taught to “love the sinner, hate the sin” would have more negative attitudes toward both homosexual behavior and gay and lesbian individuals. Attitudes toward homosexual behaviors and gay and lesbian individuals were highly positively related. A significant positive relationship between intrinsic religious orientation and religious teachings was also found. The hypothesized interaction among variables was also found to exist. The teaching of “love the sinner, hate the sin” significantly predicted a difference between attitudes toward homosexual behaviors and attitudes toward gay and lesbian individuals for highly intrinsically religious participants. Overall, most participants did not distinguish between individuals
and behaviors. However, individuals who were highly religious were significantly more likely to follow their religious teaching of “love the sinner, hate the sin.”

*Use of SEM in Study of Religion and Prejudice*

The use of structural equation modeling (SEM) in the study of religion and prejudice has been close to nonexistent. Leak and Finken (2011) believe their article was the first to use SEM in studying the relationship between religious variables and prejudice and stated “. . . research has failed to provide clear information about the relationships among religious and prejudice constructs . . . To our knowledge, no religion-prejudice studies have used SEM” (p. 49). The authors explain that the use of SEM allows more accurate and powerful estimation of the relationships among the constructs of religion and prejudice. In addition, these constructs can be measured with multiple indicators as opposed to a single scale. These techniques allow research to estimate the statistical uniqueness of the constructs. Leak and Finken recruited 529 participants, but only the data from individuals who self-identified as theists, non-Black, and heterosexual were analyzed. The remaining sample was composed of 429 participants. The latent variables were religious fundamentalism, religious openness (quest orientation and faith development), religious commitment (intrinsic religiosity), and Christian orthodoxy. Prejudice constructs were racial prejudice, sexual orientation prejudice, and Muslim prejudice.

Confirmatory factor analysis was the first step in Leak and Finken’s (2011) study. Indicators for Christian orthodoxy and Muslim prejudice were each split into two parcels. The model was then tested for goodness of fit using the comparative fit index (CFI), root mean square error of approximation (RMSEA), and chi-square statistic ($\chi^2$). Each of
these fit indices indicated that the model had good fit. Results indicated that religious fundamentalism was positively related to Muslim, racial, and sexual-orientation prejudice. Religious fundamentalism was most highly related to sexual-orientation prejudice. Christian orthodoxy and religious commitment/intrinsic religiosity had similar relationships to Muslim, racial, and sexual-orientation prejudice; however, these variables were only significantly related to sexual-orientation prejudice. Finally, religious openness was significantly negatively related to Muslim, racial, and sexual orientation prejudice but was most significantly related to sexual orientation prejudice.

A major contribution of this dissertation was to expand upon Leak and Finken’s research by employing SEM in studying the relationship between religious variables and prejudice.

**Hypotheses**

The objective of this study is to contribute to the current body of research by using SEM to further clarify the complicated relationships among right-wing authoritarianism, Christian orthodoxy, religious fundamentalism, religious pressures, intrinsic and extrinsic religious orientation, quest orientation, and the three outcome variables: racism, sexism, and heterosexism. Past literature is rather ambiguous regarding the relationships among these variables and has only fit together a few pieces of the puzzle at a time. Some studies have investigated the relationships between single variables such as right-wing authoritarianism or religious fundamentalism and prejudice (e.g., Moghaddam & Vuksanovic, 1990; Hunsberger, Owusu, & Duck, 1999). Others have studied religious denomination, religious orientation, and racism (e.g., Allport, 1966; Allport & Ross, 1967). Finally, researchers have also explored the role that
religious pressures have played in the formation of negative attitudes toward others (e.g., Veenvliet, 2008). Two SEM models, a developmental model and a social learning model, were constructed to account for the relationships among these variables. Then the two structural models were compared using the following standard goodness-of-fit indices: model chi-square, root mean square error of approximation, comparative fix index, standardized root mean square residual, and the Tucker-Lewis Index which has been identified as one of the most widely-used fit indices. The two models are described in detail below.

1. It was hypothesized that the developmental model (see Figure 1) would have better overall fit than the social learning model (see Figure 2).
Figure 1. Proposed Developmental Model

Key
Religious Pressures – Threat from God (GOD), Family, etc. (SOC),
Religious Values – Fundamentalism (FUN), Orthodoxy (ORT),
RWA – Aggression (AGG), Conventionalism (CON),
Submission (SUB), Religious Orientation – Quest (QUE),
Intrinsic (INT), Extrinsic (EXT), Prejudice – Homophobia (HOM),
Racism (RAC), Sexism (SEX)
Figure 2. Proposed Social Learning Model

Key:
- Religious Pressures — Threat from God (GOD), Family, etc. (SOC),
- Religious Values — Fundamentalism (FUN), Orthodoxy (ORT),
- RWA — Aggression (AGG), Conventionalism (CON),
- Submission (SUB), Religious Orientation — Quest (QUE),
- Intrinsic (INT), Extrinsic (EXT), Prejudice — Homophobia (HOM),
- Racism (RAC), Sexism (SEX)
**Model 1: Developmental Model**

The first model was a developmental model proposed by this researcher in which religious pressures and religious values were the proposed exogenous variables and right-wing authoritarianism and religious orientation were the proposed mediators, or endogenous variables. One’s religious beliefs and behavior would become more active over time, beginning with religious emphasis from the parents. Although there has been little research done using religious pressures as a variable, it was assumed that the pressures to maintain the family’s religious beliefs and practices are imposed from one’s family and friends and would begin prior to the development of political ideology, and religious orientation (Altemeyer, 2003). Prior research has also supported the assumption that religious values have both indirect and direct paths to prejudice (e.g., Hunsberger et al., 1999). Structural equation modeling was used to estimate the overall fit of the model. This model included religious pressures, religious values (Christian orthodoxy, religious fundamentalism), religious orientations (intrinsic, extrinsic, and quest), right-wing authoritarianism, and prejudice (sexism, racism, and homophobia).

2. It was further hypothesized that direct paths would exist between religious values and prejudice, right-wing authoritarianism and prejudice, and religious orientation and prejudice. Religious values, right-wing authoritarianism and extrinsic religious orientation would positively predict prejudice; whereas, intrinsic and quest orientations would negatively predict prejudice.

3. It was further hypothesized that religious pressures would be related to prejudice indirectly through right-wing authoritarianism and religious orientation. Religious pressures would be a positive predictor of prejudice through this path.
4. It was further hypothesized that religious values would be related to prejudice indirectly through right-wing authoritarianism and religious orientation. Religious values would be a positive predictor of prejudice through these variables.

*Model 2: Social Learning Model*

It is also possible that religious values and right-wing authoritarianism could precede religious orientation and religious pressures because these religious pressures and behaviors could be learned, as in a social learning model. Therefore, a social learning model was also tested for the same variables. For Model 2, the social learning model:

5. It was also hypothesized that direct paths would exist between right-wing authoritarianism and prejudice and religious orientation and prejudice. Both religious orientation and right-wing authoritarianism would positively predict prejudice.

6. It was also hypothesized that right-wing authoritarianism would be related to prejudice indirectly through religious pressures and religious values. Right-wing authoritarianism would be a positive predictor of prejudice through these paths.

7. It was further hypothesized that religious orientation would be related to prejudice indirectly through religious pressures and religious values. Religious orientation would be a positive predictor of prejudice through these variables.
CHAPTER TWO

METHOD

Participants

A total of 310 self-identified Christian participants enrolled in psychology courses voluntarily participated in this study. Most of the students received extra credit in exchange for their participation. Students in undergraduate and graduate psychology classes were offered extra credit by their professors. However, students from other departments were asked to participate without incentive. Results from eight participants were deleted because they did not self-identify as Christian. Ages ranged from 16 to 46 years with the average age being 21 years (SD=3.43). Most participants identified as female (62.9%), heterosexual (95.2%), and not partnered (83.9%). The majority of participants were Caucasian (77.1%) or African American (19.7%). Most participants identified as non-feminist (80.6%) and either Republican (59.4%), Democrat (19.7%), or Independent (14.8%). Participants were classified as follows: freshmen (31.6%), sophomores (27.1%), juniors (19.0%), seniors (18.1%), and graduate students (4.2%). Church attendance ranged from zero times to more than one time per week with the average frequency being approximately two times per month (SD=1.12). The five most frequent religious denominations were: Southern Baptist (41.6%), Roman Catholic (15.8%), Non-denominational (11.3%), Methodist (10.6%), and Church of Christ (4.8%).
Measures

Sexism. The Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996) is a 22-item scale with two 11-item subscales used to measure hostile and benevolent sexism. Participants were asked to rate each item on a 6-point Likert-type scale ranging from 0 (disagree strongly) to 5 (agree strongly). Total scores range from 0 to 110 with higher scores indicating higher levels of sexism. Two examples of items from this scale are: “A good woman should be set on a pedestal by her man” and “Once a woman gets a man to commit to her, she usually tries to put him on a tight leash” (pp. 134-135). The authors found the scale to have satisfactory predictive validity, with hostile sexism being significantly associated with negative evaluations and stereotypes of women and benevolent sexism being associated with positive evaluations and stereotypes. Internal consistencies were found to range from .8 to .9 for the full scale. Glick and Fiske (1996) reported satisfactory convergent validity by demonstrating that the ASI is related in theoretically expected ways to attitudes and stereotypes about women. The authors also noted good reliability as evidenced by total ASI Cronbach’s alphas ranging from .83 to .92 across six samples. Individual scales of Benevolent and Hostile sexism were also acceptable as evidenced by scores ranging from .73 to .85 and .80 to .92 respectively. Conn, Hanges, Sipe, and Salvaggio (1999) also reported Cronbach’s alphas of .88 for hostile sexism and .76 for benevolent sexism.

Racism. The revised Manitoba Prejudice Scale (Altemeyer & Hunsberger, 1992) is an 18-item scale adapted from the 20-item parent scale to measure racial prejudice. The original scale was used to measure racial prejudice in Canada. Therefore, given that data was collected in the United States, the term Canada was replaced with United
States. Participants were asked to rate each item on a 9-point Likert-type scale ranging from -4 (*strongly disagree*) to +4 (*strongly agree*). Total scores range from -80 to 80 with higher scores indicating higher levels of racism. For the purposes of this study, scores were recoded so that they ranged from 1 to 161. Two examples of items from this scale are “There is nothing wrong with intermarriage among the races” and “The people from other countries who have recently come to the United States have mainly brought disease, ignorance and crime with them” (p. 131). The authors found the full scale to have an acceptable internal consistency of .88.

**Attitudes toward homosexuals.** The Attitudes Toward Homosexuals Scale (Altemeyer & Hunsberger, 1992) is an 12-item scale designed to measure “condemning, vindictive, and punitive sentiments toward gays” (p. 121). Participants were asked to rate each item on a 9-point Likert-type scale ranging from -4 (*strongly disagree*) to +4 (*strongly agree*). Total scores range from -48 to 48 with higher scores indicating more negative attitudes toward homosexuals. For the purposes of this study, scores were recoded so that they ranged from 1 to 97. Examples of items from this scale are “Homosexuals should be forced to take whatever treatments science can come up with to make them normal” and “People should feel sympathetic and understanding of homosexuals, who are unfairly attacked in our society” (pp. 132-133). The authors reported the scale to have an acceptable Cronbach’s alpha of .89.

**Religious fundamentalism.** The Religious Fundamentalism Scale (Altemeyer & Hunsberger, 2004) is a 12-item self-report scale, which was designed to measure the belief that there is one set of religious teachings that contains the truth about God and the world. It is measured with Likert-type responses ranging from -4 (*strongly disagree with*
to +4 (strongly agree with the statement). Total scores range from -48 to 48 with higher scores indicating higher levels of religious fundamentalism. For the purposes of this study, scores were recoded so that they ranged from 1 to 97. Two examples of items from this scale are “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” and “It is more important to be a good person than to believe in God and the right religion” (pp. 130-131). The authors reported a Cronbach’s alpha of .92 and inter-item correlation of .91. Leak and Finken (2011) reported a Cronbach’s alpha of .91 for Altemeyer and Hunsberger’s (1992) 20-item Religious Fundamentalism Scale. Ward and Cook (2011) reported a Cronbach’s alpha of .95 for the 20-item scale.

Christian orthodoxy. The Short Christian Orthodoxy Scale (Hunsberger, 1989) is a 6-item self-report scale that measures traditional Christian beliefs. It has Likert-type responses ranging from -3 (strongly disagree with the statement) to +3 (strongly agree with the statement). Total scores range from -18 to 18 with higher scores indicating higher levels of Christian orthodox beliefs. For the purposes of this study, scores were recoded so that they ranged from 1 to 37. Two examples of items from this scale are: “Despite what many people believe, there is no such thing as a God who is aware of our actions” and “Through the life, death, and resurrection of Jesus; God provided a way for the forgiveness of people’s sins” (pp. 361-362). Hunsberger reported an inter-item correlation of .72 and Cronbach’s alpha of .94. The author also noted a Cronbach’s alpha of .93 in a second sample. Both samples revealed one large factor, which they called Christian orthodoxy. Wilkinson (2004a) also noted a Cronbach’s alpha of .90 in a recent study in which the scale was used. Leak and Finken (2011) also reported strong
internal consistencies after dividing the original Christian orthodoxy scale into two 12-item parcels. The authors reported alphas of .93 and .92. Both parcels were also highly correlated ($r = .86$).

*Right-wing authoritarianism.* The Right-wing Authoritarianism Scale (Altemeyer, 1996) is a 34-item self-report scale that was designed to measure authoritarian aggression, conventionalism, and submissiveness. It has Likert-type responses ranging from -4 (*strongly disagree with the statement*) to +4 (*strongly agree with the statement*). Total scores range from -136 to 136, with higher scores indicating higher right-wing authoritarian beliefs. For the purposes of this study, scores were recoded so that they ranged from 1 to 273. Example items from each subscale are: “Our country will be destroyed someday if we do not smash the perversions eating away at our moral fiber and traditional beliefs”, “People should pay *less* attention to the Bible and the other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral, and “Obedience is the most important virtue children should learn” (Altemeyer & Hunsberger, 1992, p. 129). Altemeyer (1996) reported Cronbach’s alphas ranging from .81 to .95. Altemeyer and Hunsberger (1992) also reported a Cronbach’s alpha of .91 for right-wing authoritarianism. The authors cited evidence of adequate convergent and divergent validity.

*Religious orientation.* The Religious Orientation Scale-Revised (Gorsuch & McPherson, 1989) is a revision of the Religious Orientation Scale from Allport and Ross (1967). The scale contains 8 intrinsic items and 6 extrinsic items with Cronbach’s alphas of .83 and .65 respectively. Ward and Cook (2011) also reported alphas of .86 and .78 for intrinsic and extrinsic religious orientations respectively. Participants have Likert-
type responses ranging from 1 (I strongly disagree) to 5 (I strongly agree). Two examples of items from this scale are: “It is important to me to spend time in private thought and prayer” and “What religion offers me most is comfort in times of trouble and sorrow” (p. 353).

**Quest orientation.** The Quest Scale (Batson & Schoenrade, 1991a; Batson & Schoenrade, 1991b) is a 12-item self-report scale that was designed to measure a more open and tolerant religious orientation. It has Likert-type responses ranging from 1 (strongly disagree) to 9 (strongly agree). Examples of items from this scale are: “God wasn’t very important to me until I began to ask questions about the meaning of my own life” and “I have been driven to ask religious questions out of the growing awareness of the tensions in my world and in relation to my world” (Batson & Schoenrade, 1991b, p. 436). Batson and Schoenrade (1991b) reported Cronbach’s alphas of .75 and .81 and acceptable validity in two different samples. In a recent study, Ward and Cook (2011) reported a Cronbach’s alpha of .77 for this variable.

**Religious pressures.** The Religious Pressures Scale (Altemeyer, 1988) is a 10-item self-report scale, which measures the pressure one is under or threat one feels to follow a religious path with Likert-type responses ranging from 0 (none at all) to 5 (a great deal). Two examples of items from this scale are “I would fear that without my religious beliefs I would become an evil person” and “It would threaten a romantic love relationship” (p. 208). Altemeyer reported Cronbach’s alphas ranging from .90 to .92.

**Procedure**

The survey length for this study lasted approximately 30 minutes. Data were collected online. An introduction page was used and consisted of an informed consent
form, which explained that all data was anonymous, voluntary, and could not be linked back to the participants. Email addresses were not required for participation. By clicking “next” to continue to the following page the participant indicated his or her informed consent. After completing the surveys, all participants were led to a debriefing page thanking them for participation and providing the researcher’s email address if they wished to request results after the completion of the study. Information regarding available psychological services on campus was also offered to participants.

**Design**

Confirmatory factor analyses (CFA) were used to investigate the structure of each of the variables using Anderson and Gerbing’s (1988) two-step procedure. A CFA was performed on the measurement model, and then a path analysis was used to analyze causal relationships among predictor variables and dependent variables. The maximum likelihood estimation method was used for the CFAs because it is the most widely employed method in the field to compare the models to the data; however, because of its sensitivities to asymptotic qualities in data it was crucial to have a minimum sample size of at least 120 participants (Blunch, 2008). The maximum likelihood method was used because it improved the likelihood that the model fit the population from which the sample came, indicating an overall greater fit. As is customary in structural equation modeling, several standard fit indices recommended by Kline (2005) were used: model chi-square, root mean square error of approximation (RMSEA; Steiger, 1990), comparative fix index (CFI; Bentler, 1990), and standardized root mean square residual (SRMR). Tucker-Lewis Index (TLI) was also used as it has been identified as one of the most widely used fit indices (Wu & West, 2010). According to Kline, the model chi-
square ($\chi^2$) actually tests how badly the data fit the model, therefore, the smaller the chi-square the better the fit. The root mean square error (RMSEA) of approximation includes a correction for model complexity; therefore, allowing the researcher to select the most parsimonious of two potential models. According to Kline (2005), RMSEA values less than .05 indicate good fit and values greater than .10 indicate poor fit. The standardized root mean square residual requires a value less than .10 for good fit, as it is a measure of the difference between predicted and observed correlations among variables. For each of these three indices a lower value indicates better fit. This rule is in contrast to the CFI and the TLI, in which a result of anything greater than .90 suggests good fit (Hu & Bentler, 1999).
CHAPTER THREE

RESULTS

Descriptive and Correlational Data

The data were first assessed for normality. Descriptive statistics indicated that all of the variables in the analyses were normally distributed with the exception of Christian Orthodoxy, which showed negative skew (-9.4). A square root reflection was performed and resulted in a more acceptable distribution of the variable (.11). Descriptive statistics and internal consistency estimates of each variable are presented in Table 1. Descriptive statistics of intrinsic items are shown in Table 2.
Table 1

*Descriptive Statistics of Variables*

<table>
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<tr>
<th>Variable</th>
<th># Items</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
<th>Alpha</th>
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<td>7.47 (.42)</td>
<td>34.00 (.97)</td>
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*Note.* N = 310. Values for transformed scale shown in parentheses.
RF = religious fundamentalism, CO = Christian orthodoxy, CON = right-wing authoritarianism-conventionalism, AGG = right-wing authoritarianism-aggression, SUB = right-wing authoritarianism-submission, RP = religious pressures, GOD = religious pressures – God subscale, PER = religious pressures – personal subscale.
Table 2

*Descriptive Statistics of Intrinsic Items*

<table>
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<td>4.00</td>
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*Note. N = 310*
Results of bivariate correlation analyses are displayed in Table 3. Nearly all variables were significantly correlated ($p < .01$) with the exception of sexism with religious pressures, religious orientation with personal religious pressures and with intrinsic religious orientation, and homophobia with personal religious pressures and with intrinsic religious orientation.
Table 3

*Correlations Among Variables*

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<th>ASI</th>
<th>SUB</th>
<th>CON</th>
<th>AGG</th>
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</table>

*Note.* N = 310. 1 = RF = religious fundamentalism, 2 = INT = intrinsic religious orientation, 3 = EXT = extrinsic religious orientation, 4 = QUE = quest orientation, 5 = ASI = Ambivalent Sexism Inventory, 6 = SUB = right-wing authoritarianism – submission, 7 = CON = right-wing authoritarianism – conventionalism, 8 = AGG = right-wing authoritarianism – aggression, 9 = CO = Christian orthodoxy, 10 = PER = religious pressures – personal, 11 = GOD = religious pressures – God, 12 = ATH = attitudes toward homosexuals, 13 = RAC = racism
Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was performed using the variables in the models. The CFA was used to investigate the structure of each of the variables using Anderson and Gerbing’s (1988) two-step approach. This procedure enables the researcher to perform a CFA (step one) to identify the relationships among observed and latent variables with the constructs being able to intercorrelate freely. Step two, the confirmatory structural model specifies the relationships of variables to one another based on a proposed theory. A CFA was performed on the measurement model, and then a path analysis was used to analyze causal relationships among predictor variables and outcome variables. CFAs indicated that there was poor fit to the data with the original variables, $\chi^2 (68, N = 310) = 384.68, p < .001$, CFI = .83, RMSEA = .12, TLI = .77, and SRMR = .10. Variances between religious orientation and religious values of 1.03 and religious orientation and right-wing authoritarianism of -1.001 were noted as Heywood cases, which are residual variances outside the normal range of -1.0 to 1.0 (Loehlin, 1992). This led to further examination of religious orientation. A very low factor loading of .04 for extrinsic religious orientation was found, which led to the deletion of this variable. To improve fit, religious values was deleted after the discovery that this variable was highly correlated, .93, with religious orientation. Results still indicated a poor fit: $\chi^2 (60, N = 310) = 414.00, p < .001$, CFI = .76, RMSEA = .14, TLI = .69, and SRMR = .10. Continued exploration of value estimates revealed that both benevolent and hostile sexism had low loadings of .25 and .36, respectively, and were therefore deleted. Quest orientation was also deleted from the model because the two indicator variables for religious orientation, quest and intrinsic religious orientation, had
opposing standardized regression weights, and quest had low loadings. Individual intrinsic items were used as indicator variables. Final model fit for the developmental model is as follows: $\chi^2 (85, N = 310) = 423.93, p < .001$, CFI = .84, RMSEA = .11, TLI = .80, and SRMR = .09.

Model 1: Developmental Model

The revised developmental model based on the CFA is displayed in Figure 3. The structural equation model (SEM) indicated a poor fit for this initial model: $\chi^2 (86, N = 310) = 426.05, p < .001$, CFI = .84, RMSEA = .11, TLI = .80, and SRMR = .09. Conventionalism was excessively collinear with racial prejudice and therefore was removed from the model. Homophobia and racism were measured as observed variables because of the strong relationship ($r = .96$) between right-wing authoritarianism and prejudice. The path from right-wing authoritarianism to religious pressures had a low loading (.30) and therefore was removed.
Figure 3. Developmental Model Following CFA
The final developmental model showed an improved fit $\chi^2 (76, N = 310) =$ 373.28, $p < .001$, CFI = .84, RMSEA = .11, TLI = .81, and SRMR = .11. The relative chi-square ($\chi^2/df = 4.91$) indicated a “reasonable” fit, as defined by Wheaton, Muthén, Alwin, and Summers (1977), because it was less than 5.0. In a later article, Schumacker and Lomax (2004) also noted that relative chi-squares less than 1 indicate “poor” model fit and those greater than 5 indicate a “need for improvement” (p. 82). However, all other fit indices were outside the acceptable range for “good” fit. The final model is illustrated in Figure 4.
Figure 4. Social Learning Model
Model 2: Social Learning Model

The reduced social learning model based on the CFA is displayed in Figure 5. The SEM indicated a poor fit for this model: $\chi^2 (85, N = 310) = 520.19, p < .001$, CFI = .80, RMSEA = .13, TLI = .75, and SPRMR = .20. Because of the strong relationship ($r = .96$) between right-wing authoritarianism and prejudice, the latent variable of prejudice was removed, and its indicators were specified to load onto right-wing authoritarianism. The final social learning model showed an improved fit: $\chi^2 (84, N = 310) = 496.70, p < .001$, CFI = .81, RMSEA = .13, TLI = .76, and SPRMR = .20.
Figure 5. Standardized path for the Developmental Model of the relationships of right-wing authoritarianism (RWA), religious pressures, religious orientation. Note. *p < .05, **p < .01, ***p < .001.
The relative chi-square ($\chi^2/df = 5.91$) indicated a “poor” fit, as defined by Wheaton et al. (1977) and Schumacker and Lomax (2004), since it was greater than 5.0. All other fit indices indicated poor fit for model 2. The final social learning model is illustrated in Figure 6.
Figure 6. Standardized path for the Social Learning Model of the relationships of right-wing authoritarianism (RWA), religious pressure, and religious orientation. Note. *p < .05, **p < .01, ***p < .001.
CHAPTER FOUR
DISCUSSION

The purpose of this study was to clarify the conflicting results of previous studies that examined the relationships between religious variables and different forms of prejudice. Both developmental and social learning models were analyzed. Although neither model yielded good fit, the developmental model had slightly better overall fit than the social learning model as indicated by reasonable fit on the relative chi-square test. All other fit indices indicated poor fit for both models. Results from the SEM of the developmental model indicated that religious pressures were significantly related to homophobic and racist beliefs when mediated through intrinsic religious orientation and right-wing authoritarianism. These results indicated that on their own neither religious pressures nor intrinsic religious orientation are sufficient to lead to homophobia and racism.

The alternative, social learning model produced similar results; a path was found to exist from right-wing authoritarianism mediated through intrinsic religious orientation to homophobia and racism. The second significant path led from right-wing authoritarianism to religious pressures and then to homophobia. This path was an indirect path to homophobic beliefs. For the social learning model, other direct paths were found to exist from right-wing authoritarianism directly to both homophobia and
racism indicating that right-wing authoritarianism was a good predictor of prejudice both mediated through religious variables and independently.

Unfortunately, while some of the individual paths parallel past studies, other individual paths also contradict those reported in other studies. Although the theory behind each model remains, several pathways were dropped due to low loadings and other methodological issues. The variables of religious fundamentalism, Christian orthodoxy, and extrinsic religious orientation were dropped from both models because their addition led to poorer fit of the model. The primary outcome variable of sexism was also dropped from both models due to a low loading. However, the importance of specific pathways that led to homophobia and racism were supported. For the developmental model, there were no direct paths between either religious pressures or intrinsic religious orientation to homophobia and racism; however, when mediated through right-wing authoritarianism the pathways were highly significant. Overall, it appears that right-wing authoritarianism is largely responsible for the positive correlation between religious variables and prejudice. It is likely that there is some overlap among these variables as indicated by high correlations and the need to drop conventionalism from the model. These issues are further discussed in the methodological limitations section. The individual paths between variables and possibilities for future research will also be discussed.

Religious Pressure

Religious pressure was a significant variable in both the social learning theory and developmental models. Results of this study parallel those from Altemeyer (2003), indicating that negative attitudes toward others can begin with an emphasis on religious
identification at home. As exhibited in the social learning model it can also be a result of both right-wing authoritarianism and intrinsic religious orientation. The results of both models suggest that the formation of a cognitive representation for religious ethnocentrism can be the starting point for other types of prejudice. It is likely that religious ethnocentrism creates an in-group and an out-group and can be transferred to other identity groups. It is probable that at a very young age children observe their parents participating in church activities with a very homogenous group of individuals that can later develop into an in-group or social clique. At many churches, the congregation is populated with people who are similar not only in faith but also racially and in socioeconomic status. It is probable that it is not just the religious beliefs that can lead to prejudice but also the process of attending church due to the largely automatic process of constructing personal identity in relation to the in-group and out-group. The participants in this study may have learned to be prejudiced both vicariously and directly from their parents.

**Right-Wing Authoritarianism**

Despite the contradictions and confusion with other variables in the study as they relate to previous studies, the one finding that remains consistent across studies concerns the relationship between right-wing authoritarianism and both homophobia and racism. Paralleling results from past research, right-wing authoritarianism continues to be a good predictor of these two forms of prejudice. Previous studies found that right-wing authoritarianism in combination with religious fundamentalism have accounted for a significant proportion of racial prejudice, with right-wing authoritarianism also significantly contributing to homophobia (Laythe et al., 2001). Altemeyer and
Hunsberger (1992), Vicario et al. (2005), and Altemeyer (1988) also reported similar relationships between right-wing authoritarianism and homophobia both directly and indirectly. One reason why both religious values (Christian orthodoxy and religious fundamentalism) were so highly collinear may be due to little conceptual differences between these variables and other religious variables, such as intrinsic religious orientation, that were included in the study. It is possible that the extreme interpretations that religious fundamentalists have of the Bible are also orthodox and intrinsic, and vice versa. In other words, it is likely that intrinsic religious orientation may be both fundamentalist and orthodox in nature.

*Religious Orientation*

Contradicting several previous studies (i.e., Allport & Ross, 1967; Donahue, 1985), the path between extrinsic religious orientation and prejudice had a low loading and had to be removed from the structural equation model to improve goodness of fit. On the other hand, in the developmental model intrinsic religious orientation was found to be positively related to racism and homophobia indirectly through right-wing authoritarianism. This result suggests that religious beliefs may be complementary to the development of personality characteristics, such as authoritarianism, that in turn support racism and homophobia.

Results of this study are also similar to those of Rowatt et al. (2002). Basing their hypotheses on the results of Allport and Ross (1967), the authors assumed that individuals who were extrinsically religious would have less humility compared to those who were intrinsically oriented. However, Rowatt et al. found exactly the opposite. Individuals who were intrinsic in their religious orientation were actually found to be
less humble, termed the holier-than-thou effect, and extrinsic religious orientation was not related to humility at all. The findings of this dissertation complement the findings of Rowatt et al. It appears that intrinsic religiosity may have not only positive effects, but also negative effects such as greater endorsement of homophobic and racist beliefs. It is possible that the core of beliefs of Christianity could lead to certain types of prejudice such as homophobia. For example, it states in the Bible “If a man lies with a man as one lies with a woman, both of them have done what is detestable. They must be put to death; their blood will be on their own heads” (Leviticus 20:13, New International Version). In the New Testament, it states:

Because of this, God gave them over to shameful lusts. Even their women exchanged natural relations for unnatural ones. In the same way, men also abandoned natural relations with women and were inflamed with lust for one another. Men committed indecent acts with other men, and received in themselves the due penalty for their perversion. (Romans 1:26-27, New International Version)

One can see how clearly the Bible indicates that homosexuality is a sin not to be tolerated.

Racism

In this study right-wing authoritarianism and intrinsic religious orientation were related to racism in both models both directly and indirectly. In the developmental model right-wing authoritarianism and intrinsic religious orientation were the mediating variables which related religious pressures to racism. Right-wing authoritarianism was also the exogenous variable that was related to racism directly and indirectly through
religious pressures and intrinsic religious orientation in the social learning model. These results contradict those from Allport and Ross’ (1967) seminal study on religious orientation and prejudice which found that extrinsically religious participants were more prejudiced toward African Americans than intrinsic individuals. It may seem surprising that people still endorse racist beliefs in the 21st century; however, Altemeyer (2003) suggested that being a part of one in-group, such as a religious group, can lead to creating other in-groups and out-groups in other areas like race or even the neighborhood in which one lives. Although racial prejudice often may not manifest in the same way as it did 50 years ago, it seems likely that the relationship between intrinsic-extrinsic religious belief and racism may have changed. Because it is not legal or politically correct in many social groups to overtly discriminate or make racist comments, it is likely more common for individuals to express their attitudes more covertly with subtle comments and behaviors or to only express these attitudes in groups where it is safe because all members have similar beliefs.

**Sexism**

Although many past studies have supported the finding that religiosity and right-wing authoritarianism are positively related to sexism (e.g., Christopher & Wojda, 2008; Hunsberger et al., 1999), this result was not found in this study. Unfortunately, in this dissertation the Ambivalent Sexism Inventory measure of sexism had to be dropped from both models because of low factor loadings. Thus, the relationships between the predictor variables and sexism could not be tested. Although the results appear counterintuitive to Southern tradition, it is possible that the lack of findings was related to the methods used to assess sexism. For example, it is likely that a participant would
endorse an item that states that men should open doors for women; however, many of the items that assessed benevolent sexism questioned beliefs about the moral character of women and the financial sacrifice of men. These types of traditional beliefs may be less common or acceptable in today’s culture and therefore may not be expressed.

**Homophobia**

Results of this study indicated that religious pressures, intrinsic religious orientation, and right-wing authoritarianism were related to homophobic beliefs. These results both parallel and contradict previous studies. Kirkpatrick (1993) found that neither intrinsic nor extrinsic religious orientation was related to homophobia, which is contrary to current results that found intrinsic religious orientation to be related to homophobia. Christian orthodoxy was highly collinear with intrinsic orientation in my study and had to be dropped to improve fit; however, right-wing authoritarianism was found to be related to negative attitudes toward homosexuals. This makes sense because individuals who are more right-wing politically typically support traditional gender roles and are not supportive of issues related to the gay, lesbian, and bisexual population such as marriage rights.

**Limitations**

There are several limitations to this study. First, an investigation of a less homogenous sample of Christians is needed. The current sample consisted primarily of Baptist-identified and Catholic-identified individuals. With more inter-denominational diversity more subtle differences might be found. In addition, regional homogeneity is thought to be a limitation. Although this university in the Deep South provided an excellent opportunity to study a unique population of Christians, it is clear that similarly
identified individuals from different regions of the United States will likely provide a variety in viewpoints. It should be noted that the use of a convenience sample of college students is nearly always a limitation, especially as generational differences in religious beliefs are likely to exist as the American culture evolves.

Christian denomination is another direction that will be important for future research. As was noted earlier, the differences between denominations have been critical in different historical periods in the United States. Although racism may be more subtle now than it was in the 1960s, it is clear from current events that it is not a thing of the past. Spoerl (1951) found that Catholics and Protestants were more likely to be prejudiced toward minority groups than Jewish individuals and in 1967, Allport and Ross reported that extrinsically religious Presbyterians and Methodists were less racially prejudiced than other denominations. Similar to what was determined in the 1950s and 1960s, it is expected that specific religious denominations will be more likely to be prejudiced than other groups in the 21st century.

There were also several methodological limitations in this study. Several variables had to be removed from the final model. Religious values, conventionalism, extrinsic orientation, quest orientation, and the latent variable of prejudice were all deleted. High collinearity was found among intrinsic orientation and religious values, suggesting that they may be similar constructs that overlapped and provided little unique contribution to the model. Heywood cases were also identified and further examination led to the deletion of religious values. A high correlation of .93 between religious orientation and religious values suggested that high communality of the religious variables is a possible cause. High collinearity was also found to exist with right-wing
authoritarianism and overall prejudice. Low loadings of extrinsic orientation and sexism led to the deletion of these variables and adjusting all paths to lead to homophobia and racism. Finally quest orientation was deleted due to opposing regression weights between it and other indicators of religious orientation. As one can see, poor fit and high correlations among variables led to drastic changes in the proposed model. It is likely that several indicators were in fact measuring the same construct as indicated by excessive collinearity. Perhaps a component of right-wing authoritarianism is prejudice, leading to the overlap among the variables.

Future Directions

Many variables were included in the models for this study; however, religious ethnocentrism was not included. Previous studies have found that religious ethnocentrism may be a useful construct to include as it will enable the researcher to further investigate in-groups that begin early in life. Jackson and Hunsberger (1999) found that Christians were significantly more likely to have negative thoughts about atheists and nonbelievers than nonbelievers and atheists had about Christians. Rowatt et al. (2002) found that counter to their hypotheses intrinsically oriented religious individuals were more likely to be self-righteous and biased against the out-group of non-religious individuals. Other research has suggested that religious ethnocentrism may be the “template” from which other prejudices are based. Altemeyer (2003) found that children were taught at an early age that they were part of a special group of people. This lesson could lead to the development of a feeling that one is part of an in-group, the “us”, and others are part of an out-group or “them”. The study investigated the relationships between religious fundamentalism, prejudice, and religious ethnocentrism,
and results indicated that when ethnocentrism was held constant, the significant relationship between religious fundamentalism and prejudice disappeared. Hunsberger and Jackson (2005) also posited that religious beliefs may be related to prejudice if those individuals who believe can justify inequality in the world. The authors suspected that a person’s religious orientation may relate to cognitive flexibility, and one who strictly adheres to religious doctrine may not be open to adapting to new culture and changing traditional thought. With new research in cognitive psychology it may be possible to examine if prejudice toward one group can create a mental schema or template that sets the stage for future prejudices. More research in this area may give insight into whether the in-group and out-group cognitions begin at home with religious preference and can actually be indicated by measures of brain functioning.

Political party affiliation is another variable that may be useful to integrate into the current models. There are both policy and social aspects of political party integrated into the formation of right-wing authoritarianism, which were found to be positive predictors of both sexism and negative attitudes toward homosexuals (Rubinstein, 1995). These relationships indicate that it may also be useful to utilize political party as a unique construct. Saucier and Cawman (2004) analyzed relationships between political party affiliation, religious fundamentalism, social dominance orientation, and support for gubernatorial candidate and support of the Take Back Vermont Campaign. Results indicated that support for civil unions and opposition for the Take Back Vermont Campaign were significantly predicted by Democratic affiliation. In fact, party affiliation explained more variance than religious fundamentalism and social dominance
orientation. Continued research in the area of political party affiliation is likely to remain important and evolve as the social beliefs of Americans also evolve.

Future Directions of International Research

Although there was some diversity in this study it is important to remember that all participants attended a medium-sized university in the Deep South and the majority of participants were also born and raised in the Deep South. Previous studies reported different results when individuals from other areas of the United States and other countries were studied. As mentioned earlier, Hunsberger et al. (1999) examined the relationships between religious fundamentalism, right-wing authoritarianism, homophobia, and sexism in a population of individuals from Ghana. Results suggested that religious fundamentalism and right-wing authoritarianism were related to more homophobic and sexist attitudes. Additional analyses revealed that religious fundamentalism continued to be a significant predictor of prejudice toward homosexuals; whereas, right-wing authoritarianism was found to be a significant predictor of sexist beliefs compared to religious fundamentalism. With further analysis, the authors also found that overall men were more likely to have homophobic attitudes than women. An interaction effect was found to exist and indicated that men who attended same-sex schools were the most prejudiced. The authors posited that perhaps it was because men attending same-sex schools were more likely to be fundamentalist. Further research in this area in the United States is recommended because the majority of same-sex schools are religiously-affiliated. Also, children are likely to experience more religious pressure in this type of educational environment.
The primary goal of this research was to further clarify the relationships among religious variables, right-wing authoritarianism, and prejudice. Although the final developmental model was quite different than the proposed model there were many insights gained and more questions left to be answered. This dissertation showed that many of these variables, such as Christian orthodoxy and religious fundamentalism, may have different verbal labels which were empirically redundant, and could be deleted. Research in prejudice continues to be very important because of the political, sociological, and psychological consequences of prejudice. Two illustrations of recent studies that illustrate the deleterious effects of prejudice follow. In one study, results indicated that women’s motivation to attain employment decreased when they were told that the evaluator was prejudiced toward women (Eccleston & Major, 2010). After the 2008 presidential election, researchers investigated the effect that racism had on voting decisions and discovered that implicit racial prejudice decreased the likelihood that participants would vote for Barack Obama even when they did not choose to vote for the opposing candidate. Results indicated that racism can influence government because some voters would rather not vote at all than vote a person of color into office (Payne et al., 2010). This dissertation helped further the knowledge about the relationships among religion, personality, and prejudice during the 21st century with a unique sample of students from the Deep South. Finally, work in this area will continue to be needed as it provides information that can lead to further scientific discoveries that may contribute to the eradication of prejudice.
A.1 Human Use IRB Approval Letter

TO: Ms. Dixie Turner and Dr. Alice Carter
FROM: Barbara Talbot, University Research
SUBJECT: HUMAN USE COMMITTEE REVIEW
DATE: January 8, 2010

In order to facilitate your project, an EXPEDITED REVIEW has been done for your proposed study entitled:

"Religion and Prejudice"

# HUC-718

The proposed study’s revised procedures were found to provide reasonable and adequate safeguards against possible risks involving human subjects. The information to be collected may be personal in nature or implication. Therefore, diligent care needs to be taken to protect the privacy of the participants and to assure that the data are kept confidential. Informed consent is a critical part of the research process. The subjects must be informed that their participation is voluntary. It is important that consent materials be presented in a language understandable to every participant. If you have participants in your study whose first language is not English, be sure that informed consent materials are adequately explained or translated. Since your reviewed project appears to do no damage to the participants, the Human Use Committee grants approval of the involvement of human subjects as outlined.

Projects should be renewed annually. This approval was finalized on January 8, 2010 and this project will need to receive a continuation review by the IRB if the project, including data analysis, continues beyond January 8, 2011. Any discrepancies in procedure or changes that have been made including approved changes should be noted in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

If you have any questions, please contact Dr. Mary Livingston at 257-4315.
Do you plan to publish this study?  XYES  □NO
Will this study be published by a national organization? XYES  □NO

COMMENTS:

STUDY/PROJECT INFORMATION FOR HUMAN SUBJECTS COMMITTEE

Describe your study/project in detail for the Human Subjects Committee. Please include the following information.

TITLE: Religion and Prejudice

PROJECT DIRECTOR(S): Dixie Turner, M.A.; Alice Carter, Ph.D.

EMAIL:  dlt020@latech.edu  alice@latech.edu
PHONE:  (318) 548-3269  (318) 257-4073

DEPARTMENT(S): Psychology and Behavioral Sciences

PURPOSE OF STUDY/PROJECT: To investigate the relationship between religious variables (values, orientation, and pressures) and prejudice (sexism, racism, and homophobia).

SUBJECTS: Approximately 300 Christian undergraduate students will be recruited from psychology classes in exchange for extra credit.

PROCEDURE: Approximately 300 Christian participants enrolled in psychology courses will volunteer for this study. Students will receive extra credit in exchange for their participation. Students who choose not to participate will be offered an equivalent alternative extra credit activity by their instructor. The following demographic information will be collected: age, sex, race/ethnicity, year in school, political party affiliation, religious denomination, feminist identification, sexual orientation. Participants will be recruited from a moderate sized university in the southern United States. It is expected that the demographics will be representative of the university, mostly Caucasian, approximately fifty percent male, and the majority will be between 18 and 24 years of age.

INSTRUMENTS AND MEASURES TO INSURE PROTECTION OF CONFIDENTIALITY, ANONYMITY:
Participants will be given a link to a Louisiana Tech website in which they can enter their name and print a certificate of participation to turn in for extra credit.
The names will not be stored. From this page a link will be provided that will direct participants to a survey on surveymonkey.com

**RISKS/ALTERNATIVE TREATMENTS:** As this study will be completed by using online surveys, no risks are assumed to be present.

**BENEFITS/COMPENSATION:**
Participants will have the opportunity to complete this online study in exchange for extra credit in the psychology course.

**SAFEGUARDS OF PHYSICAL AND EMOTIONAL WELL-BEING:**
Contact information for the Louisiana Tech Counseling Services will be presented on the final “Thank You” page of the study website.

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**Note:** Use the Human Subjects Consent form to briefly summarize Information about the study/project to participants and obtain their permission to participate.
A.2 HUMAN SUBJECTS CONSENT FORM

The following is a brief summary of the project in which you are asked to participate. Please read this information before signing the statement below.

TITLE OF PROJECT: Prejudice as a Function of Religious Values, Religious Orientation, and Religious Pressures

PURPOSE OF STUDY/PROJECT: To investigate the relationship between religious variables (values, orientation, and pressures) and prejudice (sexism, racism, and homophobia).

PROCEDURE: Participants will be asked to complete demographic questions in addition to several instruments assessing religiosity and prejudice via an online questionnaire. All data will remain anonymous. Although you can choose to exit the survey at any time please keep in mind that every question provides valuable information and your answers are very important to the completion of the study.

INSTRUMENTS:

1. The Ambivalent Sexism Inventory
2. The Revised Manitoba Prejudice Scale
3. The Attitudes Toward Homosexuals Scale
4. The Religious Fundamentalism Scale
5. The Christian Orthodoxy Scale
6. The Right-Wing Authoritarianism Scale
7. The Religious Orientation Scale
8. The Quest Scale
9. The Religious Pressure Scale

RISKS/ALTERNATIVE TREATMENTS: The participant understands that Louisiana Tech is not able to offer financial compensation nor to absorb the costs of medical treatment should you be injured as a result of participating in this research.

As this study will be completed by using an online survey, no risks are assumed to be present.

The following disclosure applies to all participants using online survey tools: This server may collect information and your IP address indirectly and automatically via “cookies”.

BENEFITS/COMPENSATION:

Participants will have the opportunity to complete this online study in exchange for extra credit in the psychology course.
I, ____________________, attest with my signature that I have read and understood the following description of the study, "Religion and Prejudice," and its purposes and methods. I understand that my participation in this research is strictly voluntary and my participation or refusal to participate in this study will not affect my relationship with Louisiana Tech University. Further, I understand that I may withdraw at any time or refuse to answer any questions without penalty. Upon completion of the study, I understand that the results will be freely available to me upon request. I understand that the results of my survey will be confidential, accessible only to the principal investigators, myself, or a legally appointed representative. I have not been requested to waive nor do I waive any of my rights related to participating in this study.

Signature of Participant or Guardian Date

CONTACT INFORMATION: The principal experimenters listed below may be reached to answer questions about the research, subjects' rights, or related matters.

Dixie Turner
Dlt020@latech.edu
Office – (318) 257 - 4315

Members of the Human Use Committee of Louisiana Tech University may also be contacted if a problem cannot be discussed with the experimenters:
Dr. Les Guice (257-3056)
Dr. Mary M. Livingston (257-2292 or 257-4315)
REFERENCES


