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# The Role Of Reflective Judgment In The Relationship Between Religious Orientation And Prejudice

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THE ROLE OF REFLECTIVE JUDGMENT  
IN THE RELATIONSHIP BETWEEN RELIGIOUS ORIENTATION  
AND PREJUDICE

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A Dissertation

Presented to

the Faculty of the University of Denver and  
the Iliff School of Theology Joint PhD Program

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

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June 2011

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Title: The Role of Reflective Judgment in the Relationship Between Religious Orientation and Prejudice

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### **ABSTRACT**

Research in the psychology of religion over the past five decades has found that religious individuals tend to be more prejudiced than those who are not religious. In addition, research has identified various orientations to religion, each having a unique relationship to prejudice. The purpose of this study was to explore whether cognitive complexity, as defined by the Reflective Judgment Model (RJM), might emerge as a predictor both of religious orientation and of prejudice, thereby explaining the variability in the relationships between religious orientation and prejudice. While a relationship between cognitive complexity, religious orientation, and prejudice has been theorized (Hunsberger & Jackson, 2005), it had yet to be tested empirically using a standardized measure of cognitive complexity such as the RJM.

The sample used for this study was collected from four different undergraduate and graduate-level institutions, each representing a unique approach to religion. Overall, the results of this study were inconclusive with regard to the role of cognitive complexity in the relationship between religious orientation and prejudice. However, findings did support previous research in terms of the relationships between religious fundamentalism, Christian Orthodoxy, Quest and prejudice. Finally, school was found to be a significant predictor of both religious orientation and prejudice, suggesting that future research on the impact of educational environment on various forms of religious orientation is warranted.

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## CHAPTER ONE

### INTRODUCTION

*“That . . . man . . . says women can't have as much rights as man, cause Christ wasn't a woman. Where did your Christ come from? . . . From God and a woman. Man had nothing to do with him.” ~Sojourner Truth, speech at the Woman's Rights Convention in Akron, Ohio, 1851.*

*One should no more deplore homosexuality than left-handedness. ~ Towards a Quaker View of Sex, 1964*

*"We cannot be truly Christian people so long as we flaunt the central teachings of Jesus: brotherly love and the Golden Rule." ~ Martin Luther King, Jr., 1944*

Over a century ago, William James is said to have noted, “Many people think they are thinking when they are merely rearranging their prejudices” (Congressional Research Service, 1989). Fast forward to modernity, when American courts have granted women the right to vote, outlawed segregation, and are currently engaged in addressing civil discrimination against homosexuals. Recent polling of Americans suggests a general increase in tolerant attitudes toward homosexuals in the workplace, interracial dating, and women holding positions of power (Pew Research Center, 2010). This increase in tolerant attitudes is reflected in various religious groups and denominations, even as large differences still remain between specific religious denominations and also between people with strong religious affiliations and those who are not religious.

Yet a quick scan of recent events drives home the truth of James' astute observation: prejudicial attitudes are not dead, they simply emerge in new, often more subtle, ways. While the United States reached a monumental milestone in electing its

first African-American president, a recent Pew Poll suggests that roughly 1/3 of conservatives believe President Barack Obama to be a Muslim, despite his Christian background (Pew Research Center, 2010). Regarding homosexuality, several mainline protestant denominations have taken action to pave the way for full acceptance of practicing homosexuals, including the ordination of openly gay and lesbian clergy (Pew Research Center, 2009). Yet other data suggests that religious beliefs are the major underlying factor in opposition to legislation that would afford basic civil rights to homosexual individuals (Pew Research Center, 2010). Finally, recent research reveals that some of the very same Christian denominations that denounce severe restrictions placed on Muslim women, continue to restrict women from holding certain positions of leadership within their own governing bodies (Banks, 2010).

### Prejudice and its Relationship to Religion

In general, prejudice has been defined as “the prior negative judgment of the members of a race or religion or the occupants of any other significant social role, held in disregard of the facts that contradict it” (Jones, 1986, p. 280). Some prejudicial judgments are overt -- for example, some individuals or groups might believe that women are intellectually inferior to men. Other more nuanced forms of prejudice, sometimes called “subtle prejudice,” are less obvious. Subtle prejudice is “inconspicuous, indirect, and often unconscious” and often more difficult to detect. An example of subtle prejudice may be found on college campuses today, where young men may well perceive women as their intellectual equals, but continue to treat them primarily as sexual objects (see Chapter 5 of this study). Subtle prejudice is often fueled by stereotyping and

“cultural myths” regarding others and pervades American culture in increasingly complex ways (Anderson, 2010, p. 3).

Contemporary research on these more subtle forms of prejudice highlights the conflicted attitudes held by many American individuals. Research on subtle forms of racism has prompted some social psychologists to suggest “that many White Americans simultaneously hold anti-Black feelings and a sincere belief that people should be treated equally” (Dovidio & Gaertner, 1986; Devine, 2005, p. 330). With regard to homosexuality, many religious denominations hold a “love the sinner, hate the sin” approach, in which homosexual actions are condemned, while the value of the individual is upheld (Veenvliet, 2008; Mak & Tsang, 2008). And while dramatic increases in tolerant attitudes about women in positions of leadership have occurred over the last several decades, salary disparities and discriminatory hiring biases against women abound. In our contemporary climate, the gradations of prejudice have taken on new textures and tones, yet the reality of its impact remains.

Interestingly, religion plays a significant role in both the perpetuation and the exacerbation of both subtle and overt forms of prejudice. Each of the quotations at the beginning of this chapter was chosen to illustrate ways in which religious leaders and religious communities have harnessed religious values and ideals to motivate and fight for social equality. However, such examples notwithstanding, studies over the past five decades have found that religious individuals tend, in general, to be *more* prejudiced than those who are not religious (Hunsberger & Jackson, 2005; Pitt, 2010). Furthermore, polling suggests that religious beliefs have become increasingly aligned with political ideologies (Pew Research Form, 2010). Religious beliefs held by private individuals and

groups are likely to have an increasingly profound impact on the social-political landscape.

### Religion and Religious Orientations

Religion has been understood in a variety of ways – both theoretically and in terms of its operational possibilities. Theoretically, religion may incorporate a system of beliefs, rituals and traditions rooted in sacred texts and practiced in groups and communities. Religion may serve individuals and groups by providing behavioral norms, beliefs, and values by which to live (McIntosh, 1995; Hood et al., 2009). Religion may also be viewed as a “search for significance in ways related to the sacred” (Pargament, 2002, p. 169). Finally, religion may be viewed as a subset of “spirituality” which has to do with “the quest for understanding ourselves in relationship to our view of ultimate reality” (Hood et al., 2009, p. 10). In general, religion seems to provide a framework through which people find meaning – cognitively, affectively, and behaviorally (Hood et al., 2009).

Throughout decades of research, social psychologists have attempted to operationalize religion by describing it in terms of concrete, measurable variables. While analyzing the pragmatic aspects of religion may oversimplify the complexity of religious experiences and phenomena, such operational definitions are often used to assess empirically the benefits (or harmfulness) of religious practices on outcomes such as physical and mental health, or levels of tolerance and prejudice (Pargament, 2002). Operationally, a religious individual might be identified in terms of church membership, frequency of attendance at religious activities, theological beliefs, or participation in

religious practices, such as prayer (Hood et al., 2009). In addition, psychologists of religion have also focused on understanding the nature and quality of individual approaches to religion in terms of motivation, personality differences, and cognitive styles (Hunsberger & Jackson, 2005; Whitley, 2010).

Such individual approaches to religion have been studied extensively in the psychology of religion, and five key “orientations” to religion have been identified. For instance, individuals vary in their motivation for being religious, in the totality with which they incorporate religious viewpoints, and in the outcomes they desire from engaging religious practices. Initially, distinctions were made between *intrinsic* and *extrinsic* religious orientations – distinct from each other primarily in terms of motivation. Intrinsically religious individuals have embraced a particular religious creed out of a sincere and mature commitment to honor their religious ideals and to incorporate them into all aspects of their daily lives. Extrinsically religious individuals may embrace a religious creed, but are motivated out of a utilitarian desire to find security or a desire for social acceptance (Allport & Ross, 1967).

A third religious orientation, *quest*, was developed as an alternative to the intrinsic and extrinsic orientations and is characterized by an open-minded, flexible attitude toward one’s religious convictions (Batson et al., 1993). “Religion as quest” is an approach to religion that involves

honestly facing existential questions in their complexity, while at the same time resisting clear-cut pat answers. An individual who approaches religion in this way recognizes that he or she does not know, and probably never will know, the final truth about such matters. Still, the questions are deemed important, and however tentative and subject to change, answers are sought (Batson & Schoenrade, 1991a).

A quest approach is not necessarily related to a particular religion or set of beliefs. Rather, it describes an attitude about spiritual, “existential” matters in general that may or may not be practiced within a particular religious group or denomination. The currently popular designation, *spiritual but not religious*, may well be another name for a growing number of Americans who understand religion primarily as “quest.”

The opposite of quest, some have speculated, is a more close-minded disposition called *religious fundamentalism* characterized by certainty and a belief in absolute truth (Altemeyer & Hunsberger, 1992; Kirkpatrick, Hood, & Hartz, 1991). Researchers have defined 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 (Altemeyer & Hunsberger, 1992, p. 118).

Like the quest approach, a fundamentalist approach is not necessarily unique to one religious perspective, and could theoretically encompass a disposition or set of beliefs regarding a wide variety of religious, and non-religious topics (Altemeyer & Hunsberger, 2005).

Finally, a fifth construct, *Christian orthodoxy*, has been examined as it relates to the actual content of Christian religious beliefs. Christian orthodoxy has been conceptualized as “the acceptance of well-defined, central tenets of the Christian religion. In large measure these tenets are contained in the officially adopted ‘credos’ of the various denominations...Catholics and Protestants alike” (Fullerton & Hunsberger, 1982,

p. 318).<sup>1</sup> Such beliefs are rooted in the Apostles' and Nicene Creeds, and include, among other things, core beliefs in the existence of God, the Trinity, and the birth, death, and resurrection of Jesus Christ. Where fundamentalist and quest religious orientations seem to have to do with the overall approach an individual takes toward religion, Christian orthodoxy describes a specific set of religious beliefs that may theoretically be approached from a fundamentalist or a quest perspective.

### Religious Orientations and Prejudice

Each of these five religious orientations has been studied extensively and indeed differential relationships to prejudice have been found. In addition to the five orientations, social psychologists have identified a personality dimension, referred to as Right Wing Authoritarianism (RWA), which seems to have a strong link to prejudice. Individuals with right-wing authoritarian tendencies may be more inclined to demonstrate submissive attitudes toward authority, aggressive attitudes toward those who rebel against authority, and prefer to uphold conventions and traditional values (Altemeyer, 1996). Individuals who demonstrate right wing authoritarian tendencies tend to be more prejudiced than those who do not demonstrate these tendencies, and also tend to utilize a fundamentalist approach to religion (Altemeyer, 1996; Laythe, Finkel, & Kirkpatrick, 2001).

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<sup>1</sup> Most of the studies on religion and prejudice have taken place in North America, within predominantly Christian populations (Hunsberger & Jackson, 2005). Recently, more cross-cultural analyses are being conducted, sampling from a wider variety of religions; however since the participants for this study will be drawn from institutions at which the predominant religious background is Christianity, Christianity will be the primary scope for measures of orthodoxy in this study.

Recently, increasing evidence has suggested that RWA, religious fundamentalism, and quest may be related to unique cognitive styles (Billings, Guastello, & Rike, 1993; Laythe, Finkel, & Kirkpatrick, 2001, Hunsberger & Jackson, 2005). “Cognitive style” is a general term used by cognitive and educational psychologists to describe the unique ways individuals process information and apply thinking skills to intellectual activities such as problem solving and decision-making (Riding & Raynor, 2010). And while religion includes affective, behavioral, and existential components, “at one level religion can be viewed as cognitive in that every religious system includes a set of explicit and implicit propositions held to be true” (McIntosh, 1995, p. 2). As a “cognitive schema,” religious perspectives are forged via interactions with the environment, and in turn shape the ways in which religious individuals understand and interpret the world (McIntosh, 1995; Hunsberger & Jackson, 2005).

As such, religion functions as a sort of personal epistemology (Hunsberger & Jackson, 2005) – an all-encompassing approach to the nature of reality justified by particular claims about one’s ability to “know.” Some individuals believe their religious values and beliefs are revealed directly from God through a prophet and/or a sacred text or texts (Dale, 2005). Others arrive at religious conclusions based on scientific evidence, logical “wagers” (i.e. Pascal’s Wager), or subjective experiences. Regardless the methodology, individuals’ assumptions about *how* they know what they know may well be as important as *what* they claim to know.

The question of how people approach their religious beliefs and values cognitively (and more specifically, epistemologically) may be an important key to understanding the relationship between religion and prejudice. An individual’s



epistemological assumptions not only impact the religious beliefs and values that individual adopts, but also impact the ferocity with which that individual applies that value system to the greater world. Since religious questions usually deal with ultimate questions regarding life and death, right and wrong, meaning and purpose, and the role of the sacred (Silberman, 2005), the stakes regarding religious “truth” claims are high. One of the most well researched assessments of personal epistemology, the Reflective Judgment Model, has yet to be assessed as it relates specifically to various religious orientations (King & Kitchener, 2004).

### The Reflective Judgment Model

The Reflective Judgment Model (RJM) was designed to assess the development of epistemic cognition – that is, the ability to focus on the nature of knowledge itself and the underlying assumptions upon which a variety of truth claims are based. Based on John Dewey’s expositions of reflective thinking, the RJM measures cognitive complexity as it pertains to “ill-structured problems” with several possible solutions. There are two salient features to ill-structured problems: 1) “they cannot be defined with a high degree of completeness; and 2) they cannot be solved with a high degree of certainty” (King & Kitchener, 2004, p. 6). Examples of such problems are poverty, healthcare, and global warming. Arriving at conclusions about such problems requires much more complex cognitive processes than solving “well-structured problems” which have single, correct answers.<sup>2</sup> In fact, King and Kitchener argue that solving such ill-structured problems

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<sup>2</sup> Examples of a well-structured problem are mathematical formulas, puzzles, or logical algorithms. Such problems require intelligence and critical thinking, but do not necessarily require reflective thinking.

involves “epistemic cognition” or an ability to focus on the nature of knowledge itself and how it is acquired (King & Kitchener, 1994, 2004).

The RJM is comprised of 7 stages grouped in 3 levels -- *Pre-Reflective Thinking* (Stages 1, 2, and 3); *Quasi-Reflective Thinking* (Stages 4 and 5); and *Reflective Thinking* (Stages 6 and 7). Pre-Reflective Thinking is characterized by a view of knowledge that tends toward certainty and a lack of perception of alternative viewpoints. Quasi-Reflective Thinking is characterized by a view of knowledge that tends toward uncertainty and justifications of views based on idiosyncratic variables. Finally, Reflective Thinking is characterized by a view of knowledge that takes into account its constructed nature and therefore the need to investigate a wide body of evidence, including that from differing perspectives. Individuals who demonstrate reflective thinking are able to defend their beliefs probabilistically on the basis of a thorough investigation of available evidence, and remain open to the possibility of considering new evidence should it become available (King & Kitchener, 1994). (See Appendix A for a full description of each reflective judgment level).

Research has indicated that cognitive complexity, as conceptualized by the RJM, may indeed play a role in predicting prejudicial attitudes (Guthrie, King, & Palmer, 2000). Yet no study has assessed whether reflective judgment may also play a role in predicting an individual’s religious orientation. Furthermore, no study has assessed the possibility of a relationship between reflective judgment and RWA. If indeed there is a relationship between reflective judgment and prejudice, and if indeed there is a shared component of reflective judgment in specific religious orientations, and also with RWA,

then assessing reflective judgment may help to clarify cognitive complexity as a key underlying variable in the relationship between religion and prejudice.

### Thesis and Scope of the Dissertation

This dissertation explored whether cognitive complexity, as measured by the RJM and a strikingly different cognitive style, RWA, would be a more significant predictor of prejudice than religious orientation. This study hypothesized that reflective judgment would not only predict prejudice, but that it would also predict the religious orientation to which religious individuals would subscribe: pre-reflective thinkers would tend toward a fundamentalist religious orientation and also be more prejudiced; reflective thinkers would tend toward a quest religious orientation and also be less prejudiced. Orthodox individuals may utilize pre-reflective thinking or reflective thinking to arrive at their conclusions; and reflective judgment would account for the differences in the relationship between orthodoxy and prejudice. Finally, non-religious individuals--those who do not subscribe to any particular religious orientation--would be more or less prejudiced based on their capacity for reflective thinking.

While this theory provides an alternative explanation for the religion and prejudice link, the magnitude of research necessary to test it adequately is vast. There are a variety of ways to define and assess cognitive complexity, not to mention religious orientation and prejudice. In addition, many other variables, such as educational environment, nuances of religious and theological teachings, and demographics such as age, generation, gender, and sexual orientation, may also impact a religious individual's relationship to prejudice, confounding the role of cognitive complexity. Each of these

variables was considered; but the primary scope of this study was fourfold: 1) to investigate the relationship between reflective judgment and prejudice; 2) to investigate the relationship between reflective judgment and RWA; 3) to investigate the relationship between reflective judgment and religious orientations; and 4) to investigate whether reflective judgment explains a shared component between various religious orientations as they relate to prejudice.

In sum, the present study is a first step in placing the following theory under the lens of scientific scrutiny: it is not so much whether a person is religious that makes him or her prejudiced; rather it is a person's ability to engage his or her viewpoint with thoughtful reflection and an awareness of cognitive complexity that makes the difference between those who are prejudiced and those who are not.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

The following chapter will present research suggesting that increasing cognitive complexity could play a key role in reducing prejudice and in moving away from a fundamentalist religious orientation. In addition, research on the Reflective Judgment Model will be introduced in order to demonstrate its utility as one possible tool for assessing cognitive complexity for the purposes of this study. Research related to each of these areas will be summarized as follows: 1.) the social psychology of prejudice; 2.) the relationship between religion and prejudice; 3.) religion and the religious orientations; and 4.) the Reflective Judgment Model.

#### The Social Psychology of Prejudice

Social psychologists have identified cognition as a key component in prejudice from some of the earliest research on prejudice. In particular, research suggests that individuals tend to use cognitive strategies to create categorizations of belonging. For example, individuals might categorize their immediate family, their cultural heritage, their religious community, or their neighborhood as a group of people with whom they feel a sense of safety. Categorizations may be beneficial, in that they help individuals to feel that they are part of a community – sometimes called an “in-group” by social psychologists. At the same time, categorizations inevitably create an “out-group” – a

group of people who are not considered to be as important to an individual's sense of safety and belonging. The following section describes the ways in which the cognitive processes underlying categorization can lead to prejudice.

Gordon Allport (1954) provided one of the earliest and most comprehensive examinations of prejudice, laying the groundwork for much of the thinking and research on prejudice in social psychology for the past five decades. He defined prejudice in general terms as “an antipathy based on a faulty and inflexible generalization” (Allport, 1954, p. 9). Contemporary psychologist James W. Jones (1986) specifies that prejudice involves “an affective, categorical mode of mental functioning, involving rigid prejudgment and misjudgment of human groups” (p. 280). Prejudice is generally thought to have a cognitive component, an affective component, and a behavioral component (Dovidio & Gaertner, 1986). It is differentiated from discrimination, which primarily has to do with actions resulting from prejudice.

A key cognitive component of prejudice is stereotyping (Dovidio & Gaertner, 1986; Gaertner & Dovidio, 2005; Devine, 1989, 2005; Stangor, 2009). Stereotyping has been defined as “a set of beliefs that is incorrectly learned, overgeneralized, factually incorrect, or rigid” (Ashmore & Del Boca, 1981, p. 16). Stereotypes lead to a process of categorizations which influence the cognitive “schema”<sup>3</sup> through which an individual understands and interprets various aspects of his or her environment (Dovidio & Gaertner, 1986; McIntosh, 1995). In sum, a stereotype is a belief that is either in itself erroneous (e.g. that person is smart because she has brown eyes) or erroneously applied

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<sup>3</sup> McIntosh (1995) defines schema as a “cognitive structure or mental representation containing organized, prior knowledge about a particular domain....Schemas are built via encounters with the environment and can be modified by experience” (p. 2).

to a group of people (e.g. that person with brown eyes is smart, therefore all people with brown eyes are smart). As a result, all “brown-eyed” people are assumed to be smart, and the category for “brown-eyed people=smart” becomes a basic assumption through which all interactions with brown-eyed individuals are subsequently filtered.

Such categorizations often lead to intergroup bias: “the systematic tendency to evaluate one’s own membership group (the in-group) or its members more favorably than a non-membership group (the out-group) or its members” (Hewstone, Rubin, Willis, 2002, p. 576). In the aforementioned example, the categorization that “brown-eyed people are smart” might lead to the assumption that blue-eyed people are not smart. In other words, the erroneous stereotype not only categorizes a large group of people (in this instance people with brown eyes), but it sets up a negative stereotype toward an alternate group of people (for example, people with blue eyes.) As a result, two groups of people who are different in terms of one superficial variable (eye color) are now assumed to be different across a much more substantive variable (intelligence) about which value judgments can then be made.

The conceptual foundations for the study of intergroup bias were present in Allport’s earliest writings. He described the cognitive underpinnings of prejudice as fundamental to human development, insisting that stereotyping and social categorization are “necessary and normal” contributors to an important psychological sense of belonging: “The human mind must think with the aid of categories...Once formed, categories are the basis for normal prejudgment. We cannot possibly avoid this process. Orderly living depends upon it” (Allport, 1954, p. 20). While Allport maintains that

categorizations are fundamental to psychological development, he does not suggest that ensuing biases are equally fundamental:

Although we could not perceive our own in-groups excepting as they contrast to out-groups, still the in-groups are psychologically primary...Hostility toward out-groups helps strengthen our sense of belonging, *but it is not required*...The familiar is preferred. What is alien is regarded as somehow inferior, less “good,” but there is not necessarily hostility against it...Thus, while a certain amount of predilection is inevitable in all in-group memberships, the reciprocal attitude toward out-groups may range widely (Allport, 1954, p. 42, emphasis added).

Allport laid a theoretical foundation for the nuance required to examine prejudice effectively – some of the cognitive processes at the core of prejudice may also be at the core of some aspects of healthy psychological development.

Contemporary research in social psychology has upheld and expanded upon much of Allport’s thinking on the “normalcy” of social categorization and stereotyping. Social identity theory (Tajfel & Turner, 1979) built upon Allport’s notion that social categorization is a necessary part of human functioning claiming that it “creates or protects” in-group status, “providing a positive social identity for in-group members and satisfying the need for positive self-esteem” (Hewstone, Rubin & Willis, 2002, p. 580). Devine (1989, 2005) and Monteith (1993, 2002, 2009) built much of their work around the notion that “the tendency to categorize and stereotype people arises from the need to simplify one’s understanding of the complex social environment...” (Monteith et al., 1994, p. 326). Their work on “deategorization” presumes that categorization is in fact fundamental to psychological development. Similarly, Gaertner & Dovidio (2000, 2005, 2009) maintain that any efforts at ameliorating prejudice should be directed at refocusing categorizations, rather than eradicating them.



Social psychologists also maintain that such categorizations – even in the absence of overt hostility toward an out-group – form the basis for prejudice. Allport theorized that the “love-prejudice” that results from favoring members of the in-group is just as important a contributor to intergroup bias as the “hate-prejudice” involving more overtly discriminatory actions toward out-group members (Allport, 1954, p. 25). Indeed, research on subtle racism indicates that it has to do less with the presence of hostile or negative attitudes toward an out-group, and more to do with the lack of positive perceptions toward those groups (e.g., Dovidio & Gaertner, 1986; Pettigrew & Meertens, 1995; Stangor, Sullivan & Ford, 1991; Brewer, 1999). Brewer (1999) found that in-group identification is independent of negative attitudes toward members of a perceived out-group, and concluded that “much in-group bias and intergroup discrimination is motivated by preferential treatment of in-group members rather than direct hostility toward out-group members” (Brewer, 1999, p. 429).

Furthermore, a large body of research indicates that once a categorization is made people tend to reward members of the in-group more in terms of distribution of resources, work-place evaluations, empathetic pre-judgments, and positive attitudes in general (Hewstone, Rubin, & Willis, 2002; Gaertner & Dovidio, 2005). While in-group favoritism alone may not lead to hostility towards a perceived out-group, it can promote a more subtle form of prejudice and discrimination, placing a minority out-group at a disadvantage on a variety of fronts (Gaertner & Dovidio, 2005, 2009). Further, when a sense of scarcity ensues – such as limited physical resources or diminished political power – an out-group may be perceived as a real or symbolic threat (Esses et al., 1993, 1998; Stephan, Ybarra & Morrison, 2009). In such situations, an in-group may go on the

attack in order to defend and protect the rights, resources, and/or traditions of its members.

In addition to in-group favoritism, categorizations can lead to experiences of moral judgment and perceived threat that may contribute to overtly hostile attitudes and actions toward perceived out-group members (Brewer, 1999; Stephan & Stephan 2001; Stephan, Ybarra & Morrison, 2009). An in-group functions as a sort of social community providing the safety and familiarity of rules and order for its members. According to Brewer (1999), “When the moral order is seen as absolute rather than relative, moral superiority is incompatible with tolerance for difference” (p. 435). In other words, in-group bias is converted into moral superiority, inducing attitudes of contempt, disgust, and downright hostility toward other groups who may go about things differently.

In sum, the foundational categorizations that lead to prejudice are a double-edged sword. The sense of belonging that is achieved by identifying with an in-group can provide individuals with a sense of community, customs, and behavioral norms – all of which lead to a greater sense of security and self-esteem (Hewstone, Rubin, & Willis, 2002). On the other hand, such in-group identification can also lead to both subtle and overt forms of prejudice and discrimination toward those who are not perceived to belong to the “in-group” – biases often based on superficial dividers such as gender, race, and sexual identity. How, then, do social psychologists address this divide?

### Counteracting Prejudice

There are several categories of thought about the best way to address in-group bias as it pertains to prejudice. Building upon Allport’s notion of “inner conflict,”

Devine's (1989, 2005) model capitalizes on the conflict that arises between the "automaticity" of stereotyping and deeper-seeded values within an individual (Devine, 2005, p. 333). According to Devine (1989), recognizing and counteracting prejudice involves overcoming a lifetime of socialized responses. Research has indicated that low-prejudice individuals experience uncomfortable feelings, including guilt, about their "automatic" prejudiced tendencies, and that conscious awareness of such feelings motivates them to "control" or counteract them (Monteith, 1993; Monteith et al., 2002; Devine, 2005; Plant & Devine, 2009). In these "deategorization" models, low prejudice individuals actively and consciously engage the process of inhibiting stereotyped categorizations – a response which takes "time, attention, and effort" (Devine, 1989, p. 16).

However, one critique of Devine's model of deategorization is that it potentially deprives "individuals of valued social identities in smaller, less inclusive groups" (Hewstone, Rubin, & Willis, 2002, p. 590). Another trajectory builds on Allport's notion that intergroup contact can reduce prejudice, even as the functional aspects of categorizations are maintained. These social psychologists maintain the importance of intergroup distinctions, but seek to change the nature of the original perception of the out-group away from threat and toward cooperation (Hewstone & Brown, 1986; Kenworthy, Hewstone, Turner, & Voci, 2005; Pettigrew & Tropp, 2005; Dovidio & Gaertner, 2005). Dual-Identity or Common Ingroup Identity models aim to increase the complexity by which social categorizations are made, thereby retaining the benefits of a smaller/close-knit community, while increasing tolerance for difference (Gaertner et al., 1989; Gaertner & Dovidio, 2000, 2005). In particular, Gaertner & Dovidio's (2000) Common In-group

Identity Model “involves interventions to change people’s conceptions of distinct group memberships to either a single, more inclusive group, or to subgroups within a more inclusive superordinate group” (Gaertner & Dovidio, 2005, p. 77). Under this model, the “us” and “them” still exist, but within a larger umbrella that is “we.” Indeed extensive research has supported the idea that increasing the complexity by which social categorizations are made is effective in reducing prejudice (Hewstone, Rubin, & Willis, 2002; Gaertner & Dovidio, 2000, 2005).

Critics of such recategorization models suggest that majority group members favor a different style of integration than minority group members, resulting in continued forms of discrimination (Hewstone, Rubin, & Willis, 2002). However, while problems with this model exist, research indicates that the idea of creating a common group identity in general promotes cooperation and reduces intergroup bias. For example, recategorizations – a process of introducing former out-group members into a larger vision of an “in-group” reduces tendencies toward intergroup bias, and increase favorable benefits for newly recategorized group members (Gaertner & Dovidio, 2000). Both laboratory studies and field studies have suggested that when a common ingroup identity is formed out of multiple “in-groups” (for example ethnic groups rallying around a high school sports’ team, business mergers, and even in blended families) cooperation ensues, and intergroup bias is reduced (Gaertner & Dovidio, 2005). Such recategorizations require a form of cognitive complexity as individuals must assimilate different “circles of inclusion” previously unconsidered (Allport, 1954; Gaertner & Dovidio, 2005).

Further evidence for the importance of increasing complexity is found through sociological studies. In-group favoritism may be more inclined to become out-group

antagonism in societies where categorizations are simplistic and dichotomous (Brewer, 1999). For example, in the U.S. racial divisions have often been dichotomized as “white majority” vs. “minorities” or political division as “Republican vs. Democrat” – categories which over-simplify the diversity and even overlapping aspects of these groups.

However, in societies where diversity of ethnic, religious, and cultural traditions co-exist, individuals begin to develop the necessary skills to identify, often simultaneously, with a variety of different in-groups: “In a complex social structure characterized by cross-cutting category distinctions a single person may be attached to one in-group by virtue of ethnic heritage, to another by religion, to yet another based on occupation, or region of residence, and so forth” (Brewer, 1999, p. 439). Individuals in a complex social structure tend to simultaneously utilize categorization effectively to maintain a sense of belonging, while resisting the impulse to engage in biased attitudes toward others.

Anthropological political scientists and sociological research findings verify that in more complex, flexible social structures, “the multiple group affiliations of individuals makes them participate in various group conflicts so that their total personalities are not involved in any single one of them” (Brewer, 1999, p. 439).

In sum, social psychology research suggests that an effective way to reduce prejudice is to uphold the “normalcy” of in-group identification, while simultaneously helping individuals to both a.) control/inhibit automatic stereotyping toward members of a perceived out-group; and b.) increase the complexity with which they understand categorizations. In each of these instances, an increased level of cognitive complexity is required.

## Religion and Prejudice

The problem of the paradoxical relationship between religion and prejudice has been well documented by psychologists of religion (Allport & Ross, 1967; Wulff, 1997; Hunsberger & Jackson, 2005, Hood, Hill, & Spilka, 2009). Religion has been linked to intolerance of members of racial or ethnic minority groups, perceived nonconformists, socialists, women, gay and lesbian individuals, and religious out-groups or non-religious individuals (Batson et al., 1993; Wulff, 1997; Hunsberger & Jackson, 2005; Whitley, 2009). In more recent studies, distinctions between prejudice that is religiously proscribed (“forbidden”), such as racism, and prejudice that is nonproscribed (“not forbidden”) but tolerated and even encouraged, such as homophobia, shed light on more subtle forms of prejudice previously undetected (Rowatt & Franklin, 2004; Hunsberger & Jackson, 2005).

The literature on religion and prejudice has been reviewed a number of times over the past several decades (e.g., Batson & Burris, 1994; Batson, Schoenrade, & Ventis, 1993; Wulff, 1997; Hunsberger & Jackson, 2005; Hood, Hill, & Spilka, 2009).

Early reviews presented a picture for the most part damning of religion and its relationship to prejudice. In his comprehensive 1997 overview, Wulff found that

using a variety of measures of piety – religious affiliation, church attendance, doctrinal orthodoxy, rated importance of religion, and so on – researchers have consistently found positive correlations with ethnocentrism, authoritarianism, dogmatism, social distance, rigidity, intolerance of ambiguity, and specific forms of prejudice, especially against Jews and blacks (Wulff, 1997, p. 223).

Based on their 2005 overview of the literature, Hunsberger & Jackson concluded that “religion can both reduce and exacerbate prejudice” (p. 217). This more nuanced

understanding of the relationship between religion and prejudice arose as more sophisticated measures were developed to examine religious orientation.

Additionally, more sophisticated measures for prejudice have been incorporated into the literature on religion and prejudice. Recent studies have focused on prejudice that is proscribed and nonproscribed (Duck & Hunsberger, 1999; Hood et al., 2009, p. 413). Indeed, a recent meta-review indicates that the correlation between religious orientation (particularly extrinsic and fundamentalism) and racism has decreased over time as racist attitudes are increasingly proscribed by church communities (Hall, Matz, & Wood, 2010). Additionally, more positive attitudes toward women working outside of “traditional” gender roles have consistently developed in religious communities that do not prescribe specific limitations (Hood et al., 2009).

However, negative attitudes toward homosexuals – attitudes which are often nonproscribed in religious communities -- seem to have remained steady and even increased (Fulton, Gorsuch, & Maynard, 1999; Whitley, 2009). A new line of research questions whether certain religious individuals can differentiate between “sin” and “sinner” in church communities who explicitly teach a “love the sinner, hate the sin” model with regard to homosexuality. Early studies indicated that fundamentalists, and, in some cases, intrinsic religious individuals did not differentiate between “sin” and “sinner,” and tended to discriminate more against homosexuals regardless of their behavioral practices (Altemeyer & Hunsberger, 1993; Batson et al., 1999, 2001). Other studies have not replicated these findings (Hood et al., 2009). Two recent studies have suggested that positive attitudes toward gay and lesbian individuals increase when a “love the sinner, hate the sin” model is taught in church communities which believe

homosexual actions to be a sin (Mak & Tsang, 2008; Veenvliet, 2009). Conceptually, the reality of a “love the sinner, hate the sin” model stands on shaky grounds, and the research to date is inconclusive (Hood et al., 2009).

Finally, it is important to note the development of implicit measures of prejudice. While explicit measures ask individuals directly about their attitudes and beliefs, measures of “implicit” prejudice attempt to tap into attitudes which may be at work indirectly and even outside of conscious awareness (Gawronski et al., 2005). For example, implicit racism is typically measured via “priming,” wherein subjects may not be aware of racial “triggers” introduced into a study, or computer software programs that prompt categorizations of race, religion, gender, etc. and different adjectives with both positive and negative content (Fazio et al., 1995; Greenwald et al., 1998). Three basic assumptions underlie the use of implicit measures: 1.) “indirect measures provide access to unconscious, ‘implicit’ mental representations that are not accessible to introspection or self-report;” 2.) explicit measures “are often biased by self-presentation or social desirability” in ways that implicit measures are not; and 3.) implicit measures are thought to assess “highly stable, old representations that have their roots in long-term socialization experiences” (Gawronski, et al., 2005, p. 182). Several recent studies have found similar patterns of relationships between religion and measures of implicit prejudice as the relationships already established between religion and explicit measures of prejudice (Rowatt & Franklin, 2004; Rowatt, Tsang, Kelly, Lemartina, McCullers, & McKinley, 2006; Tsang & Rowatt, 2007).

Hence, whether using direct, explicit measures of prejudice, or more subtle, implicit measures of prejudice, religion seems to have a consistent relationship to



prejudice. At the same time, as previously noted, religion often extols love as the greatest virtue, and religious leaders have often been some of the greatest advocates for social justice. How then are we to understand the ways in which religion is functioning in its relationship to prejudice?

### Religion and Religious Orientations

A primary theoretical underpinning of this study is that cognitive complexity is a key component not only in ameliorating prejudice, but also in distinguishing between various religious orientations. Specifically, the quest and fundamentalist religious orientations, along with RWA, seem to have a strong cognitive component. The following section will examine research on religion and each religious orientation in order to highlight the importance of cognition in establishing religious attitudes, approaches, and belief systems.

Theoretically, religion has been conceptualized in a variety of ways. It can be viewed as a meaning making system influencing the personal beliefs and values of individuals (Geertz, 1973; Silberman, 2005). Such beliefs and values become particularly potent as they are connected with a concept of the Sacred or Divine:

When religion is incorporated into the meaning system of a person, conceptions of the sacred are connected to beliefs about the nature of people, of the self, of this world, and of whatever may lie beyond it...religious systems may include beliefs about humans as being sinful or pious, and of the world as being evil or holy (Silberman, 2005, p. 646).

As a result, religious values and beliefs may have a significant impact not only on how religious individuals view others, but the quality and intensity of those evaluations. For example, if an individual believes that God abhors homosexuality, and that participants in

homosexual activities will go to hell, there is an inherent “ultimacy” to the belief that may result in specific behaviors such as attempts to “convert” the imperiled individual, to stop the behaviors, and to fight to ensure that other members of society are not similarly drawn into what the believer sees as an ultimately destructive path.

Religions are also unique because they function collectively (Silberman, 2005).

In her overview of research on the role of religions as “collective meaning systems,”

Silberman (2005) concludes that

these collective meaning systems enable groups and group members to interpret their shared experiences including their historical and recent relations with other groups...however, once they are constructed collective meaning systems tend to be viewed within a given group as basic undisputable truths (p. 649).

The collective nature of religious systems reinforces the values and beliefs held by individuals within the group. Consequently, belonging to a religious group can provide a high degree of confidence, protection, and security for individual members, particularly immutable and insoluble since the core values of the group center on concepts of the sacred (Silberman, 2005). In other words, religious groups function as powerful “in-groups.”

Research has supported the idea that religions function as a unique and protective in-group, much like a political, ethnic, or cultural group (Altemeyer, 2003; Hall et al., 2010). In fact, religious rituals are often practiced “within-race,” and there is an increasing disparity among the political views of specifically Christian denominations. In other words, members of particular religious communities tend to group around ethnicity and political partisanship, in addition to religious perspectives (Hall et al., 2010.) Indeed, research suggests that membership in a religious in-group tends to predict prejudice

toward members of perceived out-groups – whether members of a different race, religious group, or political persuasion (Hunsberger & Jackson, 1999; Burris & Jackson, 2000; Hall et al., 2010).

If religions in general provide strong in-group security, it should come as no surprise, based on the crucial role intergroup bias plays in prejudice, that religions may foster both overt and subtle prejudice. The question, then, is why do some religious individuals use their in-group membership to fight against prejudice and discrimination? How and why do some religious individuals resist the inherent pitfalls of intergroup bias? In order to answer such questions social psychologists and psychologists of religion in particular, have focused on the individual nature of religion – the ways in which individual persons relate to their larger religious beliefs, communities, and experiences.

There are a variety of ways in which people connect to religious meaning systems as individuals. Individual orientations to religion – a concept initially formulated by Allport (1966, 1967) – have been studied extensively in the psychology of religion and have become the focus for much of the research on the relationship between religion and prejudice.

### *Intrinsic vs. Extrinsic Religious Orientations*

Allport (1966, 1967) initially hypothesized that individuals with an intrinsic orientation to religion would be less prejudiced than those with an extrinsic orientation. Subsequent research has demonstrated that extrinsic orientation correlates positively with racism, dogmatism, authoritarianism, and ethnocentrism (Wulff, 1997; Hall et al., 2010). Intrinsic orientation has been correlated negatively with prejudice and racism, as

well as dogmatism and authoritarianism, and has correlated positively with non-discrimination in helping behavior toward others (McFarland, 1989; Wulff, 1997; Mak & Tsang, 2009). Such findings suggest that individuals who subscribe to religious systems of meaning primarily for their benefits – i.e. in-group membership and social status and security -- are more inclined toward intergroup bias; whereas individuals who genuinely seek religion as an end in itself – i.e. as a way to uphold religious ideals and values -- resist intergroup bias and promote tolerance, peace, and good will.

However, as more sophisticated tools for measuring subtle forms of prejudice developed, a more positive relationship between intrinsic orientation and prejudice emerged (see, for example, Hunsberger & Jackson, 2005). Such research indicated that intrinsic individuals simply knew how to provide socially acceptable answers, without necessarily acting on them. Furthermore, ongoing issues with the Intrinsic/Extrinsic (I-E) scales' construct validity and reliability have discredited their use in recent years (Laythe, Finkel, & Kirkpatrick, 2001; Hood et al., 2009). The scales are theoretically distinct, but may confound religious orientation with social conformity and social desirability (Batson et al., 1993; Wulff, 1997; Hunsberger & Jackson; 2005, Hall et al., 2010). Such problems with the I-E scales have prompted researchers to think about other ways in which individuals might relate to religious systems of meaning.

### *Quest Orientation*

Batson et al. (1993) developed their “religion as quest” concept in an attempt to broaden the definition of religiosity to include a wider variety of persons who may or may not subscribe to particular religious beliefs. In their view, extrinsically oriented

individuals approached religion as a means to another end; and intrinsically oriented individuals approached religion as an end. But they argued there could be a third way – religion as “quest.” Persons who approach religion as quest are engaged in a process of genuine questioning and searching, even as they resist the temptation to arrive at simplistic, “clear-cut” answers (Batson et al., 1993, p. 166). Batson’s quest scale was developed specifically to measure “the degree to which an individual’s religion involves an open-ended, responsive dialogue with existential questions raised by the contradictions and tragedies of life” (p. 169). Such individuals may be actively engaged in understanding the same sorts of “ultimate” life questions about the sacred, values, and purpose and meaning as other religious individuals; however they do so without necessarily arriving at specific or formulated conclusions.

Quest orientation seems to describe an approach whereby individuals have a relationship to the sacred and/or to ideas about meaning and existence without necessarily becoming members of a religious “in-group.” Batson and his colleagues speculated that individuals with a quest approach to religious questions would be more tolerant of others, since they are by nature resistant to simplistic in-group categorizations. Indeed, they initially found evidence that individuals with a quest orientation were more open-minded and inclined toward “universal compassion” than those with extrinsic or intrinsic orientations (Batson & Schoenrade, 1991a, 1991b). Two subsequent studies showed that individuals with a quest orientation were more inclined to help gay individuals than those with an intrinsic orientation (Batson et al., 1999, 2001). In their 2005 review of sixteen studies conducted on religious orientation and prejudice, Hunsberger & Jackson found that there was either no relationship or a negative relationship between quest orientation

and prejudice toward racial/ethnic groups, homosexual individuals, women, communists, and members of religious out-groups. In addition 4 of these studies showed a negative relationship between quest and authoritarianism (Hunsberger & Jackson, 2005). In their meta-analysis of 55 studies on the relationship between religion and racism, Hall, Matz, & Wood (2010) found that quest orientation had a consistently negative correlation with racism. And in his 2009 meta-analysis of 61 studies examining the relationship between religion and attitudes toward homosexuality, Whitley found that quest orientation was in general related to positive attitudes toward gay and lesbian men and women.

All in all, while the “religiousness” of the quest construct has been challenged – it does not tend to correlate with other measures of religiosity (Altemeyer, 1996; Wulff, 1997) – it does seem to provide a space for more open-minded views about religion and spirituality. In fact, research has consistently demonstrated that Batson’s quest orientation correlates negatively with prejudice and positively with more tolerant, open-minded attitudes (see for example, Batson et al., 1993; Altemeyer & Hunsberger, 1992; Duck & Hunsberger, 1999).

### *Religious Fundamentalism*

As researchers honed in on the more tolerant prospect of religion as quest, a related construct known as fundamentalism was distinguished and operationalized. Questioning prior studies that seemed to confound theological beliefs (see, for example, McFarland, 1989), with a dogmatic, authoritarian approach to religion, Altemeyer & Hunsberger (1992) proposed a clearer definition of fundamentalism as a “close-minded, ethnocentric” attitude toward belief systems not specifically tied to one set of theological

beliefs. For example, with regard to Christianity, fundamentalism may be operative in some Orthodox individuals but not others (p. 117). They created an expanded scale for measuring fundamentalism, which strategically avoided explicitly Christian beliefs and instead targeted attitudes about belief systems that could be applied to a variety of religious (and non-religious) topics. Their initial 20-item scale was later replaced by a 12-item scale (Altemeyer & Hunsberger, 2004) which has demonstrated high internal consistency and excellent reliability (Altemeyer & Hunsberger, 2005).

Indeed, research has shown that a fundamentalist religious orientation correlates consistently positively with prejudice (Hunsberger & Jackson, 2005; Hood et al., 2009). In situations where I-E scales showed varying relationship with measures of discrimination, when fundamentalism was controlled for, the relationships between I-E and prejudice disappeared (Fulton, Gorsuch, & Maynard, 1999). Fulton et al. (1999) similarly found that when fundamentalism was controlled for, the relationship between intrinsic religious orientation and prejudice against homosexuals disappeared. In addition, fundamentalism has correlated positively with measures of racism (Altemeyer & Hunsberger, 2005); and several studies have found a strong correlation between fundamentalism and hostility toward homosexuals (Altemeyer & Hunsberger, 1992; Kirkpatrick, 1993; Altemeyer, 2003) suggesting that fundamentalism is a key component in the relationship between religion and prejudice.

In addition, fundamentalism tends to be a powerful predictor of a strong tendency toward “in-group” identification already implicated in the research on prejudice. Altemeyer (2003) found that religious fundamentalism correlated positively with ethnocentrism, particularly with regard to religious differences. Individuals who tended

toward a fundamentalist orientation suggested they would rather associate and work with other members of their own religious community rather than with people of alternative viewpoints. In addition, fundamentalism has been associated with a belief in proselytizing, belief in creation science, dogmatism (even in the face of opposing scientific evidence), an aversion to doubt, a need for closure, and zealous attitudes about personal beliefs (Altemeyer & Hunsberger, 2005; Brandt & Reyna, 2010).

In general, fundamentalism seems to involve a rigid, deeply engrained knowledge structure that provides its adherents with a sense of “coherency, control and a reduction of ambiguity” – a protective “in-group” which both provides and requires protection at all costs (Brandt & Reyna, 2010, p. 715). In contrast, quest orientation involves a more open-minded, flexible approach to knowledge, which allows for a variety of perspectives to emerge as potential outcomes. Both orientations deal directly with assumptions about knowledge and the ability to ascertain “truth claims” – fundamentalism correlates positively with prejudice, and quest does not.

### *Christian Orthodoxy*

Glock & Stark (1966) first conceptualized Christian orthodoxy as a measure of religiosity pertaining exclusively to core theological beliefs. Building on this foundation, Kirkpatrick, Hood, & Hartz (1991) distinguished between the *content* of Christian beliefs (orthodoxy) and the *structure* of religious fundamentalism, suggesting that “fundamentalism refers to a centralized belief system, whose ‘meta-beliefs’ may define the way in which orthodox beliefs are organized within that belief system” (p. 5). Social psychologists have continued to differentiate measures of Christian orthodoxy and assess



the impact of specific theological beliefs on prejudice as a construct distinct from religious fundamentalism (Hunsberger & Altemeyer, 1982; Kirkpatrick, Hood, & Hartz, 1991; Kirkpatrick, 1993).

While a mild correlation seems to exist between religious fundamentalism and orthodoxy (Altemeyer & Hunsberger, 2005), several studies indicate that the two constructs appear to correlate differentially with prejudice. Early studies noted that religious fundamentalism was a stronger predictor of prejudice than Christian orthodoxy was (Kirkpatrick & Hunsberger, 1990; Kirkpatrick, Hood, & Hartz, 1991). Kirkpatrick (1993) in particular, found a strong distinction between fundamentalism and Christian orthodoxy. Whereas fundamentalism correlated positively with prejudice toward ethnic minorities, women, homosexuals, and communists, Christian orthodoxy was either unrelated or positively related with tolerance toward each of these groups. More recently, Ford, Brignall, VanValey, & Macaluso (2009) found that Christian orthodoxy correlated with motivation toward inhibiting prejudicial responses to homosexuality.

While some studies suggest that Christian orthodoxy may not correlate with prejudice to the same degree that fundamentalism does, other studies have found that Christian orthodoxy is associated with increased levels of prejudice in some instances. Furthermore, Christian orthodoxy also correlates with other measures, including dogmatism, indicating a strong “in-group” tendency among those who are orthodox (Hunsberger & Jackson, 2005). McFarland (1989) found that Christian orthodoxy correlated positively with prejudice toward ethnic minorities, homosexuals, women, and communists, whereas quest correlated negatively with each dimension of discrimination.

Pancer et al. (1995) found that religiously orthodox individuals were “less complex in their thinking about religious issues” than non-religious thinkers (p. 213) and in a follow-up study (1996) found that orthodox individuals tended to be less inclined to disclose religious doubting, indicating a strong emphasis on the importance of maintaining “correct” beliefs (Hunsberger, Pratt, Alisat & Pancer, 1996). In general, the relationship between orthodox Christian beliefs, fundamentalism and prejudicial attitudes is ambiguous –it seems that belief in core theological claims may encourage prejudice, and may also discourage it, depending on whether an individual engages those beliefs from a more rigid, fundamentalist orientation, or a more flexible, quest orientation.

#### *Right-Wing Authoritarianism*

While RWA correlates positively with fundamentalism, conceptually these attitudes are different. Questions on the RWA scale seek to uncover the personality components of authoritarian aggression, submission, and conventionalism. References to God and “God’s law” on the RWA scale aim to assess the way in which a concept of God is incorporated into an authoritarian personality structure – a supreme “authority” – if you will – whose law requires ultimate submission (Altemeyer & Hunsberger, 2005). Individuals who score high on RWA tend to endorse established political leaders, trust law enforcement officials, uphold social conventions (such as gender roles), and value punishment for those who deviate from social norms. Religious fundamentalism tends to reinforce and even teach directly the core components of right-wing authoritarianism; however fundamentalism assesses the individual’s attitude specifically toward his or her religious beliefs (Altemeyer & Hunsberger, 2005). In general, RWA seems to be a

stronger predictor of prejudice; and fundamentalism may “be viewed as a religious manifestation of right-wing authoritarianism” (Altemeyer, 1996, p. 161).

Because of its consistently positive correlation with both prejudice and fundamentalism, the personality variable RWA has become a popular construct in understanding the relationship between religious orientation and prejudice. Studies suggest that when RWA is accounted for, the correlation between fundamentalism and prejudice drops to insignificant levels (Altemeyer & Hunsberger, 1992; Altemeyer 1996; Laythe, Finkel, & Kirkpatrick, 2001; Hunsberger & Jackson, 2005). Similarly, Christian orthodoxy was found to be negatively correlated with racial prejudice when controlling for the influence of RWA (Rowatt & Franklin, 2004). Such results suggest that RWA explains a shared component of fundamentalism and orthodoxy and may therefore provide an alternate explanation for the link between religious orientation and prejudice (Duck & Hunsberger, 1999).

RWA has been correlated with an “unquestioning” approach to knowledge, a lack of imagination, and an inability to look at problems from alternative viewpoints (Billings, Guastello, & Rike, 1993; Laythe, Finkel, & Kirkpatrick, 2001), indicating a strong cognitive component. Furthermore, quest and fundamentalism deal specifically with assumptions about knowledge and the nature of truth claims, indicating that they may represent unique styles of epistemic cognition (Hunsberger & Jackson, 2005). In addition, each of these constructs – RWA, fundamentalism, and quest – has a very strong relationship with prejudice, suggesting that cognitive style may be a key underlying variable in these relationships.

### *The Role of Cognitive Complexity*

Theoretically, the impact of cognitive style on religious orientation has been a popular concept. Both the quest and the fundamentalism scales were developed based on attitudes about knowledge, as opposed to the actual content of the beliefs themselves. The idea of religions as “personal epistemologies” has provided a basis for understanding individual approaches to religion for some time (Hunsberger & Jackson, 2005). Yet little empirical work has been done investigating the role that cognition, or more specifically, epistemology, plays in various religious orientations.

Studies have found that religious fundamentalists tend to use less cognitive complexity to think about existential issues (Batson & Raynor-Prince, 1983; Hunsberger, Alisat, Pancer, & Pratt, 1995), whereas quest thinkers are more likely to incorporate more sophisticated critical thinking skills to approach their religious beliefs (McFarland & Warren, 1992). Hunsberger (1995) found that religiously orthodox individuals tended to use less complex thinking, specifically about their religious beliefs, than those who were not orthodox. However, orthodox individuals and non-orthodox individuals did not differ on complexity of thinking when approaching non-religious issues.

Hunsberger, Alisat, Pancer, & Pratt (1996) established a correlation between fundamentalism and simplistic thinking, using a non-standardized measure of cognition. They concluded that fundamentalist individuals tend to take new information and converge it with their religious teachings, whereas low fundamentalist individuals respond to new information by adapting their religious beliefs, suggesting a more flexible cognitive style. As a result of these findings, the authors concluded that “the content of

people's doubts, and their interpretations of the doubt process, may differ depending on the religious orientation of those individuals" (p. 202).

In a provocative study, Wulff (1997) proposed that certain religious orientations could be located on opposite ends of a literal vs. symbolic dimension. In other words, individuals with a fundamentalist orientation would be more inclined toward literal interpretations of religious phenomena, while individuals with a quest orientation would be more inclined toward symbolic interpretations. Duriez (2004) assessed whether literal vs. symbolic interpretations would relate differently to racism. Results indicated that literal vs. symbolic distinctions were significant predictors of racism, even after RWA and empathy were accounted for (Duriez, 2004). Duriez concluded that

If religious contents are processed in a literal fashion, one is more likely to be intolerant against people of a different race and/or culture. In contrast, if religious contents are processed in a symbolic fashion, one is unlikely to hold racist attitudes...this implies that the danger of religious fundamentalism (RF) does not lie in religions as such but in the cognitive style that is applied when processing religious issues (Duriez, 2004, p. 187).

In summary, "what seems to be crucially important is not so much whether one is religious or not but whether one processes religious contents in a literal or in a symbolic way..." (p. 177).

In a recent study of 227 students, Hathcoat & Barnes (2010) found that a fundamentalist religious orientation predicted a specific "system of beliefs about knowledge and knowing" very similar to Hunsberger & Jackson's (2005) hypothesis that fundamentalism may in fact function as a personal epistemology. Furthermore, the system of beliefs correlated with authoritarian attitudes. Results of this study suggest that fundamentalism and RWA share a "belief in certain knowledge, simple knowledge, and

omniscient authority” (Hathcoat & Barnes, 2010, p.73). Findings from such studies reinforce the idea that cognitive style may be a key component in fundamentalism and RWA, and may even largely account for their consistent relationship to prejudice.

Religious fundamentalists simply may not readily access the cognitive complexity necessary to allow for nuance, uncertainty, and difference.<sup>4</sup> On the other hand, quest individuals may approach knowledge with a higher degree of cognitive complexity – allowing room for uncertainty and tolerance for ambiguity. These considerations indicate that cognitive complexity, and epistemic cognition specifically, may be an important component of the relationship between religion and prejudice; however, a direct comparison of religious orientations and RWA to a standardized measure of cognition, such as the RJM, has awaited empirical investigation.

### The Reflective Judgment Model

The Reflective Judgment Model (RJM) and the Reflective Judgment Interview, the initial tool used to assess Reflective Judgment, provide the most systematic approach and well-researched assessment of the epistemological component of cognitive development to date (Moshman, 1998; Hofer, 2002). An examination of 33 studies of more than 1700 individuals has provided good evidence for the validity of the Reflective Judgment Model (King & Kitchener, 2004.) While the RJM finds its roots in other cognitive and developmental models, its aim is to focus specifically on the development of “epistemic cognition” -- the ability to understand and interpret knowledge itself as it has been accumulated and constructed over time, in order to effectively determine “the

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<sup>4</sup> It is important to note that cognitive complexity is a very different construct from intelligence, a conceptual and empirical distinction that will be clarified in the next section.

limits of knowing, the certainty of knowledge, and the criteria for knowing” anything of real substance (King & Kitchener, 1994, p. 12). The RJM presupposes that in order to become an effective thinker, individuals must be able to address epistemic assumptions – the very nature of knowing in general.

Theoretically, the Reflective Judgment Model is rooted in John Dewey’s concept of reflective thinking as “active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends” (Dewey, 1933, p. 9). For Dewey, true reflective thinking is only initiated after acknowledgment that a real problem exists for which there is not one correct answer and which logic alone is not sufficient to solve. In Dewey’s words,

To be genuinely thoughtful, we must be willing to sustain and protract that state of doubt which is the stimulus to thorough inquiry, so as not to accept an idea or make positive assertion of a belief until justifying reasons have been found (Dewey, 1933, p. 16).

In other words, a good reflective thinker must be able to tolerate a certain amount of doubt and uncertainty in order to investigate a variety of possible solutions.

Beyond the initial recognition of a dilemma, reflective thinking requires that an individual define the issue by selecting the appropriate evidence and principles, weighing his or her own “assumptions and hypotheses against existing data and against other plausible interpretations of the data,” and arriving at conclusions (or judgments) based on “reasonable integrations or syntheses of opposing points of view” (King & Kitchener, 1994, p. 7). Reflective thought requires dialectical reflection, a cognitive skill considered to be the pinnacle level of cognitive development (King & Kitchener, 1994, Moshman, 1998).

As a measure of advanced cognition, the RJM is well suited to the study of religion and prejudice. First, the RJM focuses on ill-structured problems about which “reasonable people reasonably disagree” (King & Kitchener, 2004, p. 5). Most religious questions involve complex dilemmas for which there are no easily verifiable or simple solutions. Second, the RJM focuses on epistemological assumptions rather than content of belief. For example, a religious individual operating at pre-reflective levels of thought assumes his or her religious positions to be absolute, certain, and would not consider the possibility of alternative viewpoints. However, individuals who utilize reflective thinking – while perhaps arriving at a similar theological conclusion as someone at a pre-reflective level -- understand that knowledge claims are often uncertain, that evidence can be contradictory, and that beliefs are often “probabilistic,” or in terms of religious language, often taken on “faith,” rather than absolute certainty.

### Reflective Judgment as Developmental

As Erikson’s (1963) work on adult development became prominent, cognitive psychologists began similarly to expand their understanding of cognitive development beyond Piaget’s (1965) initial model. King and Kitchener (1994, 2004) shared Piaget’s (1965) underlying assumption that meaning is constructed, that individuals make meaning out of their experiences, and that development occurs as people interact with their environments. However, they rejected Piaget’s assumption that cognitive development is best measured by deductive reasoning and also rejected his assumption that formal operations (age 16) is the completion of cognitive development. In fact, according to the RJM, the achievement of abstract thinking does not begin until stages 4



& 5, and an individual is only able to relate 2 or more abstract concepts (e.g. knowledge and evidence) together in stage 6. In sum, King & Kitchener (2004) along with Fischer & Pruyne (2002) argue that the ability to think reflectively depends on the capacity for abstract thinking and is therefore almost exclusively tied to adult development.

As a cognitive-developmental model, the RJM assumes that development occurs in stages in which the frameworks used by individuals to interpret their environment become “more complex, integrated, and complete over time” (King & Kitchener, 2004, p. 9). Furthermore, the cognitive skills acquired at earlier stages provide the foundational scaffolding by which more advanced cognitive skills are developed (Kitchener, King, & DeLuca, 2006). Indeed, longitudinal research has established strong evidence for the developmental and sequential nature of reflective judgment, suggesting that it tends to develop steadily over time, especially as individuals participate in educational pursuits (King & Kitchener, 2004). However, while they observe “stage-like properties,” the RJM is not a lock-step, one step at a time approach – in fact, King & Kitchener grant that people do not often neatly fall into one stage, and may in fact provide answers characteristic of multiple stages based on the nature of the problem presented (King & Kitchener, 2004).

#### Reflective Judgment as a Unique Construct

Reflective Judgment is not the same thing as intelligence – an important qualification in relating it to religious orientation. Several studies have established reflective judgment as a unique construct from other cognitive styles or abilities, including critical thinking, verbal reasoning, scholastic aptitude, and intelligence. Research has suggested a low to moderate correlation between critical thinking and

reflective judgment (Mines, King, Hood, & Wood, 1990). However, while critical thinking is closely related to reflective judgment, critical thinking and reflective judgment are used to measure different aspects of problem solving (King & Kitchener, 1994). Measures of critical thinking typically involve well-structured problems (for example, the analytical section of the GRE); whereas reflective judgment assesses ill-structured problems typically having more than one possible solution. Wood (1997) and King & Kitchener (1994) made the distinction that critical thinking “may be necessary but not sufficient” for an individual to achieve higher levels of reflective judgment (p. 191). Finally, reflective judgment scores increase significantly over time and with educational attainment, whereas critical thinking skills do not (Brabeck, 1983). In sum, individuals who score high on reflective judgment will also probably score high on critical thinking; however individuals who score high on critical thinking may or may not score high on reflective judgment. Overall, the body of research suggests that reflective judgment and critical thinking have some relationship to each other, but are unique constructs.

Additional studies have examined whether there is a relationship between reflective judgment, intelligence, and verbal ability as measured by the Wechsler Adult Intelligence Scale – Revised (WAIS-R) and the Wechsler Intelligence Scale for Children – Revised (WISC-R) as well as the SAT and ACT scholastic aptitude tests (Kitchener, Lynch, Fischer, & Wood, 1993). Correlations between reflective judgment and the verbal subtests of the WAIS-R and WISC-R were moderate; however, results from longitudinal studies demonstrated that verbal ability did not account for the development of reflective judgment (King & Kitchener, 1994), indicating they may be related but distinct constructs. In addition, correlations between reflective judgment and measures of

scholastic aptitude such as the ACT and SAT are low. In general the verbal ability sections of these intelligence and scholastic aptitude tests tend to measure well-structured problems for which there is one correct answer, further underscoring the unique type of cognitive complexity measured by reflective judgment.

Finally, studies have suggested a relationship between reflective judgment and specific disciplines of education. Social science and humanities graduate students score significantly higher on reflective judgment than those in natural science and math (Fischer & Pruyne, 2002). In general, the social sciences and humanities may equip students more specifically to solve “ill-structured” problems, whereas natural sciences and mathematics deal more with “well-structured” problems. So while individuals may score very high on assessments of intelligence, scholastic aptitude, and other measures of cognitive ability, their ability to approach complex situations for which there are no easily identifiable “correct” answers may not be as advanced.

#### Reflective Judgment, Ethnicity, Age, and Gender

Since the present study includes attitudes about race and gender, it is important to establish the RJM as an unbiased measure with regard to race and gender. Multiple cross-sectional studies have been examined to determine gender differences in reflective judgment scores. Eleven of those studies reported no statistically significant differences between men and women. Seven showed that men had slightly higher scores than women; and one showed that females scored higher than males (King & Kitchener, 2004). In four additional studies, two showed no differences, and two showed women having higher scores than men. In one longitudinal study (King & Kitchener, 1994),

there were no differences between genders in the first three phases; but slightly higher scores for men in the fourth testing phase. In general, women were found to have a larger stage of growth in reflective judgment in their late teens; whereas men developed at a faster rate post-college. When education level is factored in, the difference between genders is modified; therefore data on the RJM seems to suggest that there is not a separate epistemology utilized by women (King & Kitchener, 2002).

King & Kitchener (1994) rejected claims of cross-cultural universality. While few cross-cultural studies have been done, Reflective Judgment scores do seem to remain consistent across European-American, Hispanic, and African American populations within the United States. In particular, RCI scores are similar for college students regardless of ethnicity when controlling for scholastic aptitude (King & Kitchener, 2002). Finally, reflective judgment scores are consistent for age after controlling for education (Wood, 1997). In conclusion, a large body of research indicates that the RJM is not unduly biased against a particular gender or ethnic group, when specific variables such as education level are controlled (Kitchener et al., 2006).

### Reflective Judgment and Education

The RJM is strongly correlated with education. Neither Dewey nor current cognitive psychologists presumed that reflective thinking would develop automatically; rather, it is a skill which requires active, conscious effort (Kitchener, 1992, p. 11). The primary tool of its development appears to be education (Fischer & Pruyne, 2002).

Both longitudinal and cross-sectional research shows that individuals who engage in higher education steadily increase in reflective thinking: Reflective Judgment scores

increase as students progress educationally, particularly through college. High school students consistently demonstrate pre-reflective thinking (King & Kitchener, 2004), whereas optimal levels of reflective thinking (stages 6 & 7) typically emerge consistently only in populations of students at advanced levels of graduate education (Fischer & Pruyne, 2002). Wood (1997) reviewed 964 college students and found significant differences between the reflective judgment scores of freshman, sophomores, juniors, and seniors. Freshman and sophomores tended to score within level 3, whereas only seniors consistently reached level 4. Non-traditionally aged college students score similarly to traditionally aged college students, when controlling for education level (Fischer & Pruyne, 2002). Wood (1997) found that graduate students scored significantly higher than undergraduate students on Reflective Judgment. Beginning graduate students in Master's degree programs averaged 4.62, whereas advanced graduate students (those with 2 years of graduate education or more) averaged 5.27. Finally, in a comprehensive analysis of Reflective Judgment scores, it was found that only graduate students attained Reflective Judgment scores of 6.9 (7 is the highest) (King & Kitchener, 1994).

Significant to the present study, Dale (2005) studied the Reflective Judgment scores of seminarians enrolled in the Master of Divinity program at an evangelical Christian seminary emphasizing the "revealed" nature of knowledge (e.g. through Scripture or a prophet). Differences between entering and graduating students were not statistically significant, indicating that the seminary education did not significantly help them develop reflective judgment – a striking difference from those found in Wood's (1997) meta-analysis of trends in thought development. This may be related to the fact that the epistemology underlying stages 4 and 5 involves an assumption that knowledge

is constructed -- which may not correspond well with the emphasis on the authority of revealed knowledge at the seminary used in Dale's study.

Perhaps more to the point, however, research indicates that reflective judgment "emerges and develops most commonly in environments rich in intellectual stimulation involving multiple arguments and consideration of evidence, especially post-secondary educational institutions" (Fischer & Pruyne, 2002, p. 193). Furthermore,

The best support for achievement of competence in reflective thinking comes from institutions and programs that require students to consistently consider conflicting evidence and reason from evidence to feasible solutions to ill-structured problems (Fischer & Pruyne, 2002, p. 193).

Research suggest that "sectarian Christians" tend to "spend most of their lives in a segregated religious community, isolated from people of different races, ethnicities, and religious traditions," often including attendance at Christian schools and universities (Sherkat, 2007, p. 5). As such, it seems plausible that the emphasis on uniformity of thought present at some religious institutions may in fact undermine the development of cognitive complexity. In fact, Dale (2005) concluded that in order to encourage reflective thinking, seminary "professors should allow students to wrestle with the ill-structured issues that are present in every discipline, instead of announcing their own solutions...professors can explain how they reached their conclusions, thus modeling higher levels of thinking" (p. 62).

It is important to note that a respect for orthodoxy need not be sacrificed to obtain cognitive complexity. Changes in reasoning associated with the RJM "do not necessarily reflect a change in the content of a person's basic point of view about the issue"; rather, it is the "changes in the basis for holding that point of view and the person's assumptions

about how he or she could know and understand the topic” which really make the difference between those who exercise reflective judgment and those who do not (King & Kitchener, 1993, p. 41). By utilizing a pedagogy that promotes reflective judgment, belief content is not necessarily challenged, but rather the basis of knowledge supporting the beliefs is challenged. As alternative viewpoints are considered, the certainty with which such beliefs are held may loosen – paving the way for tolerance, respect and empathy for those with opposing viewpoints.

### Reflective Judgment and Tolerance

Theoretically, as summarized so far, the process of obtaining reflective judgment may well parallel the processes outlined by social psychologists needed to overcome prejudice (Guthrie, 1996). Researchers of prejudice have long noted the double-edge sword of “in-group” membership in both providing certain benefits, and simultaneously promoting forms of prejudice (Dovidio & Gaertner, 1986; Devine, 1989; Olson & Zanna, 1993; Gardner, 1994; Reiman & Peace, 2002; Devine & Sharp, 2009). The ability to inhibit automatic stereotyping responses, and to generate larger, more complex systems of categorizations has been well-supported as effective means of reducing prejudice (Hewstone, Rubin, Willis, 2002; Gaertner & Dovidio, 2005; Devine & Plant, 2009). Such actions seem to require specific cognitive skills that mirror the skills achieved in higher levels of reflective judgment.

First, cognitive complexity develops as alternative perspectives are evaluated. Cognitive theorists in adult development have noted substantial evidence for the importance of dialectical reflection as a key signifier of advanced levels of cognitive

development (Moshman, 1988). Dialectical reflection has been defined as “deliberate efforts to achieve coherence by reconstructing one’s rules, principles, intuitions, and/or conceptions of precedent.....dialectical reflection may be defined as a deliberate effort to make conceptual progress through active metacognition” (Moshman, 1988, p. 961).

When individuals encounter internal conflict over a particular dilemma and subsequent applications, they have to reconsider not only the content of what they know, but also the means by which they obtained that knowledge. In other words, advanced cognition includes not just an ability to commit to a set of beliefs, but beyond that, an ability to reflect actively on those beliefs while considering conflicting evidence supporting beliefs from an entirely different viewpoint.

More specifically, the ability to achieve advanced levels of cognitive complexity requires a specific cognitive skill -- “the ability to take the perspective of another person” (Stephan & Finlay, 1999, p. 730), also called cognitive empathy. In turn, cognitive empathy is a foundational element in reducing prejudice (Stephan & Finlay, 1999; Monroe & Martinez, 2009). Indeed, it seems likely that reflective thinking, which requires an individual to consider alternative perspectives, would breed cognitive empathy.

Empirically, several studies do indicate a correlation between reflective judgment and the development of moral judgment. Moral judgments relate to people’s conceptions of moral rights and responsibilities, and often involve attitudes and actions regarding the social welfare of others. In particular, a series of longitudinal studies tested the empirical relationship between the RJI and the DIT (Defining Issues Test – Rest, 1979) and found a moderate correlation at all four testings (King & Kitchener, 2002). Wood (1993) found



that reflective thinking was “necessary but not sufficient for moral reasoning,” suggesting that “developing reflective judgment will not necessarily lead to but is likely required for more principled moral thinking” (Kitchener et al., 2006, p. 91).

With regard to tolerance specifically, Guthrie (1996) found initial support for a relationship between reflective thinking and increased levels of tolerance. Guthrie, King, and Palmer (2000) found a significant negative relationship between reflective judgment and prejudice toward African Americans and homosexuals. Their findings suggested that individuals who utilized higher levels of reflective thinking were also in general, more tolerant. In another study, a relationship between reflective judgment and tolerance for stress was assessed. Findings suggested that individuals with higher levels of reflective judgment could “access their feelings in the process of decision making, but aren’t ruled by them” (King & Kitchener, 2002, p. 53), indicating a greater ability to approach differences with objectivity.

Research on the relationship between reflective judgment and character related issues such as tolerance is still sparse (King & Kitchener, 2004). However, the case for the role of cognitive complexity in reducing prejudice is theoretically compelling and has received initial support in the literature. The present study will provide further evidence as to whether reflective judgment may play a role in predicting prejudicial attitudes.

### Reflective Judgment and RCI

The studies reviewed so far on Reflective Judgment have primarily relied on the Reflective Judgment Interview (RJI) as the assessment tool. A new measure of Reflective Judgment was developed in 1996, the RCI, which is currently used by several

universities to assess efficacy in helping students to develop reflective thinking over the course of undergraduate education (Wood, Kitchener, & Jensen, 2002; King & Kitchener, 2006). In a study of the RCI of over 6000 undergraduate, post-graduate, and graduate students, Kitchener and colleagues (2002) found comparable results from the RCI to those found with the RJI. RCI scores differed significantly across education levels, exhibiting mean scores for freshman, sophomores, juniors, seniors, incoming graduate students, and outgoing graduate students in a similar pattern to the previously captured RJI scores. The main difference noted to date is that RCI scores tend to be approximately and consistently one level higher than the RJI scores. For example, in the current investigation, mean scores of freshman started at 4.83 (in contrast to 3.57) and continued upward accordingly. In the older RJI, individuals had to write their own statements in response to ill-structured problems, whereas in the RCI, individuals read several statements chosen for them and rate the ones that are most similar to their own style of thinking. Thus, Kitchener and colleagues attribute the higher RCI scores to the nature of the task involved in the RCI: statement recognition, as opposed to statement production.

#### Summary of Reflective Judgment

In conclusion, the Reflective Judgment Model is one of the most well researched models of epistemology (Hofer, 2002). Since its inception in the early 1980's, research has validated the Reflective Judgment Model as a unique construct (Wood, 1997; King & Kitchener, 1994, 2004, 2006). Longitudinal and cross-sectional research has investigated the group differences and similarities in Reflective Judgment scores as related to gender, ethnicity, age, and education level (King & Kitchener, 1994, 2002). Additional research

has investigated the relationship between reflective judgment and character development, including tolerance, and suggests a correlation between reflective judgment and increased levels of tolerance. Finally the RCI, currently used to assess reflective judgment, has proven to be a valid measure for this study. However, to date, no direct correlation has been established between reflective judgment and specific religious orientations, and few studies have established a correlation between reflective judgment and prejudice.

### Conclusions from the Literature Review

Cognitive psychologists view wisdom as a key component of mature adult thinking. Wisdom may be viewed as “expert knowledge involving good judgment and advice in the domain, fundamental pragmatics of life” (Kitchener et al., 2006, p. 95). In addition, wisdom includes

the recognition that knowledge is uncertain and that it is not possible to be absolutely certain at any given point in time. Furthermore, wisdom includes an ability to formulate clear and sound judgments in the face of uncertainty (Kitchener et al., 2006, p. 73).

At the very least, such wisdom seems likely to breed humility – a foundational starting point from which to consider differences of opinion, and a fundamental ingredient in empathic and respectful attitudes toward others.

In their research on empathy and prejudice, Monroe & Martinez (2009) describe the importance of experiencing “the other” in the development of empathy. It is interesting to note that even the most rigid attitudes seem to soften when individuals have a chance to interact with “the other” – whether it be a person who was previously considered part of an “out-group,” or an alternative ideological viewpoint. Religious

fundamentalists who had the opportunity to interact with homosexual individuals were more open to upholding individual civil rights such as protection in the work place and civil marriage, even if they still considered the behaviors to be wrong (Altemeyer 1996; Altemeyer 2001; Altemeyer & Hunsberger, 2005; Veenvliet, 2009). To put it simply – advanced cognition requires an individual to consider the perspective of another, a cognitive skill that seems to breed cognitive empathy and may reduce prejudicial responses.

## CHAPTER THREE

### METHODOLOGY

The purpose of this study was to assess the possibility of a relationship between cognitive complexity, as conceptualized by the RJM, and prejudice, along with relationships between cognitive complexity and religious orientations and RWA. This study positions itself in the empirical study of the psychology of religion, specifically within the existing body of literature on religion and prejudice, most of which has employed quantitative methods.<sup>5</sup> Linear regression was chosen in order to determine empirically whether there was a significant relationship between the RJM and RWA, and to demonstrate statistically whether reflective judgment accounted for any of the variability in the relationships between religious orientations and prejudice. In addition, some qualitative data was gathered in order to supplement the quantitative findings.

#### Research Questions and Hypotheses

*Preliminary Hypotheses: These hypotheses will establish expected relationships among the variables based on the literature review and lay the foundation for the primary hypotheses.*

1. Is there a relationship between reflective judgment and RWA?

Hypothesis 1) There will be a negative correlation between reflective judgment and RWA.

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<sup>5</sup> Hunsberger and Jackson (2005) reviewed 16 studies from 1990 to 2003 which examined 4 religious orientations and their relationships to prejudice. All of these studies used correlation designs.

2) Is there a relationship between reflective judgment and prejudice?  
Hypothesis 2) There will be a negative correlation between reflective judgment and prejudice.

3) Is there a relationship between reflective judgment and religious orientation?  
Hypothesis 4a) There will be a positive correlation between reflective judgment and quest; b) There will be a negative correlation between reflective judgment and fundamentalism.

4) Is there a relationship between RWA and prejudice?  
Hypothesis 3) There will be a positive correlation between RWA and prejudice.

5) Is there a relationship between RWA and religious orientation?  
Hypothesis 5a) There will be a positive correlation between RWA and fundamentalism; b) There will be a negative correlation between RWA and quest.

6) Is there a relationship between religious orientation and prejudice?  
Hypothesis 6a) There will be a positive correlation between fundamentalism and prejudice; b) There will be a positive correlation between orthodoxy and prejudice; c) There will be a negative correlation between quest and prejudice.

7) Does RWA account for any of the variability in the relationships between religious orientation and prejudice?  
Hypothesis 7a) When RWA is accounted for, the relationship between fundamentalism and prejudice will disappear; b) When RWA is accounted for, the relationship between orthodoxy and prejudice will disappear.

*Primary Hypotheses: These hypotheses will test the main thesis of this study that cognitive complexity, as conceptualized by the RJM and measured by the RCI, is a more important predictor of prejudice than religious orientation is.*

1) Does reflective judgment account for any of the variability in the relationships between religious orientation and prejudice?  
Hypothesis 1a) When reflective judgment is accounted for, the relationship between fundamentalism and prejudice will disappear; b) When reflective judgment is accounted for, the relationship between orthodoxy and prejudice will disappear; c) When reflective judgment is accounted for, the relationship between quest and prejudice will disappear.

2) Is there a relationship between reflective judgment and prejudice when controlling for religious orientation?  
Hypothesis 3) When controlling for religious orientation, there will continue to be a negative relationship between reflective judgment and prejudice.

## Procedures

Data collection was conducted during the month of October, 2010. The researcher visited classrooms at each of the target institutions and read an IRB approved script during which the project was introduced, informed consent was discussed, and participation was invited. Interested students approached the researcher after class, signed informed consent and were given a one - page instruction sheet. The instruction sheet provided the web links to both parts of the survey and the required password, along with an individualized subject identification code to preserve anonymity. The DU IRB approved each of these recruitment items (see Appendices B, C, and D for each of the IRB approved recruitment documents). In exchange for signing up to take the survey, students were given the option to provide their e-mail address in order to be submitted into a drawing for a \$50 gift card at Amazon.com. The e-mail addresses were kept separately from any identifying information and could not be linked to any individual's survey responses. Once data collection was complete, the researcher asked an uninvolved volunteer to select an e-mail address randomly from a shuffled pile. The winner of the raffle was notified and the gift card was submitted electronically via e-mail.

Classroom presentations were made to over 300 students, and over 180 students indicated their intent to participate in the study by signing and returning the informed consent document. There was no interaction between survey participants and the researcher once the classroom presentation was over and informed consent was obtained, with one exception.<sup>6</sup> Participation involved students logging into the RCI website and completing the RCI instrument which requested demographic information and responses

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<sup>6</sup> One student gave me feedback after completing the survey, which is noted in Chapter 5.

to three ill-structured dilemmas. The RCI portion of the survey took approximately twenty to thirty minutes for students to complete. At the conclusion of the RCI, students were directed to the surveymonkey.com website in order to complete Part Two of the survey. Once directed to the surveymonkey.com website, participants were asked to re-enter their subject identification code and to select a specific religious affiliation. They then responded to 84 statements using a four-point Likert Scale ranging from Strongly Agree to Strongly Disagree and responded to two optional open-ended questions (see Appendix E for Part One of the survey and Appendix F for Part Two of the survey).

### Sample

Strategic sampling was used to recruit students from a variety of educational levels and religious orientations. In order to obtain a wide-range of reflective judgment levels, undergraduate and graduate-level students were recruited. In order to obtain a wide-range of religious orientations, students were recruited from both progressive and conservative religious institutions, in addition to students from secular and Catholic universities. The undergraduate university sampled was a secular, private, four-year institution, drawing students from a variety of religious and non-religious backgrounds. In addition, students from a women's college within that university comprised of non-traditionally aged students was also included. The progressive institution was a progressive graduate school of theology affiliated with the United Methodist Church; and the conservative institution was an evangelical graduate school affiliated with the Conservative Baptist denomination. Each of these schools is located in the Rocky



Mountain West. The Catholic university was a private four-year institution located in New England.

Presentations were made to over 90 students in undergraduate classes in religious studies and business at the undergraduate university, and to over 40 students in undergraduate classes in social science and humanities in the women's program. Presentations were made to over 50 students in graduate-level classes at both the progressive seminary and the evangelical seminary. Finally, once it was noted that more undergraduate recruitment was necessary due to poor undergraduate response rate, a presentation was made to over 40 students at a Catholic college in New England. These students were involved in a leadership program within the college, comprised of all undergraduate levels and majors.

The highest rate of response follow-through was from students at the progressive seminary – 58 students agreed to participate in the study, and 27 students followed through (46.6%). 67 students from the evangelical seminary agreed to participate in the study, and 28 students followed through (31.6%). The lowest rate of response was from students at the undergraduate university – 66 students agreed to participate in the study, and 7 students followed through by completing the survey (10.6%).

A total of 119 students started the study; and 104 of those students completed the entire study (N=104). Of the 104 students who completed the study, 41.5% (44) were undergraduates and 58.5% (62) were graduate students (four of the graduate students were doctoral students). Initially, the goal was to recruit 30 students each from the undergraduate universities, the progressive seminary, and the evangelical seminary. Twenty-seven (n=27) students from the progressive seminary, twenty-eight (n=28)

students from the evangelical seminary, and sixteen (n=16) students from the women's program completed the survey. However, only seven (n=7) students from the undergraduate university completed the survey. Thus, in order to obtain the target sample of undergraduate students, additional recruiting efforts were made at a Catholic college, yielding twenty-six (n=26) students from that institution.

### Demographics of the Sample

Of the 104 participants, 70.2% (73) were female and 29.81% (31) were male. When the all-female data from the women's program was subtracted out, 64.8% (57) of remaining participants were female compared to 35.2% (31) male, suggesting a female response bias from those schools with both male and female enrollment. The average age of the sample was 34.6 years (range = 23 - 62) for the progressive seminary, 29.3 years (range = 23 - 41) for the evangelical seminary, 33.9 years (range = 20 - 57) for the women's program, 18.4 years (range = 18 - 21) for the Catholic college, and 20.8 years (range = 19 - 22) for the undergraduate university. While a diverse representation was sought, the majority of participants (92.3%) identified as white: only one student identified as Black, six students identified as Asian/Pacific Islander and one student identified as American Indian/Alaska Native. Eleven of the participants identified as Hispanic. Five of the participants identified as non-US citizens.

With regard to religious affiliation, 52 (50%) of the 104 participants selected Christian-Protestant, 18 (17.3%) selected Christian-Catholic, 7 (6.7%) selected Agnostic, 11 (10.6%) selected spiritual but not religious, 2 (1.9%) selected Buddhist, and 1 each (1.0%) selected Atheist and Jewish. Finally 12 students (11.5%) selected "Other." Of

the “Other” participants, the following affiliations were noted in the comments section: LDS (2), Unitarian-Universalist (2), Episcopalian (1), Lutheran (1), Taoist (1), Pagan (1), non-denominational relationship w/ Jesus (1), and one extremely honest response: “dunno, I’m only 18” (1). 0% of the participants identified as Muslim or Hindu.

When broken down by the religiously affiliated institutions, of the 27 progressive seminary students, 63% (17) identified as Christian - Protestant. Of the 28 evangelical seminary students, 100% (all 28) of the students identified as Christian-Protestant. Of the 26 Catholic college students, 53.8% (14) of the students identified as Christian-Catholic. The majority of participants from the undergraduate university, including the women’s program, broke down evenly between spiritual but not religious, Christian-Protestant, and Agnostic.

#### Justification of the Sample

Sampling students was beneficial to this study for several reasons. First, the RCI questionnaire is commonly used to measure cognitive development in college students and its psychometric properties have been researched most often with that population. Second, obtaining a diverse sample of undergraduate and graduate students allowed the researcher to test an additional hypothesis regarding the development of cognition via education and its potential relationship to a reduction of prejudice. The inclusion of a non-traditionally aged sub-sample allowed the researcher to control for age with regard to the influence of education on prejudice. Finally, by sampling from a secular university and a Catholic college, along with a seminary and a theological school with different approaches to religion, a diverse cross-section of individuals who approach religion from a variety of orientations was obtained.

Additionally, the five sub-samples allowed the researcher to assess group differences, in addition to individual differences. In fact, the psychometric properties of the RCI are strongest when comparing group differences. Thus, in addition to the hypotheses previously stated, the results of this study will allow an additional analysis of group differences between schools, not only in terms of the RCI, but in terms of each of the religious orientation and prejudice variables.

There are some issues with the sample. First, the analysis of the undergraduate university sample will pose some problems in terms of its significance level and power since the group is significantly smaller than the other groups ( $n=7$ ) and significantly smaller than the optimal sample size used to ensure RCI validity. The undergraduate university will be included in the study, but any results pertaining to this sample should be interpreted with caution. Second, the Catholic college sample is not readily comparable to the data obtained at the Rocky Mountain institutions since regional differences may impact the results of the sample in ways not accounted for in the study. Also, the Catholic college recruitment took place at a leadership program for which students were selected on the basis of proven academic success and demonstrated leadership skills. It is likely that data from this sample cannot be generalized to a larger population of college students.

### Instruments

#### Demographic Information

Demographic information was obtained in two parts. First, when participants logged into the RCI website they were asked to select their highest level of education

attained from a drop-down list which included the following options: *did not finish high school, graduated from high school/GED, attended college but did not complete a degree, completed an associate's degree, completed a bachelor's degree, completed a master's degree, and completed a doctoral degree.* Other demographic information collected was gender, birth date, race, ethnicity (Hispanic or Non-Hispanic), and citizenship (U.S. citizen or non-U.S. citizen.) In order to ensure that the data was properly de-identified, the birth dates of each individual were re-coded as age and all birth date data was discarded. Finally, when participants logged into Part Two of the survey, they were asked to select a specific religious affiliation from the following options: *Agnostic, Atheist, Buddhist, Christian – Catholic, Christian – Protestant, Hindu, Jewish, Muslim, Spiritual but not religious, and Other.*

#### RCI

The Reflective Judgment Model has been used for nearly twenty-five years effectively to assess cognitive approaches to complex problems and is well suited to the research being done on religion and prejudice. The model's focus on epistemological assumptions rather than content of belief makes it a good tool for isolating cognitive styles utilized to arrive at a variety of religious conclusions. The primary scale currently used to measure reflective judgment is the Reasoning about Current Issues questionnaire (RCI) (Wood, Kitchener, & Jensen, 2002). The RCI is a relatively new instrument that has replaced the older Reflective Judgment Interview (RJI). It is administered electronically through the RCI website, and is easier and less costly to administer than the RJI.

The RCI questionnaire consists of three ill-structured problems regarding immigration, alcoholism, and preparing students for the modern work force. Using a five-point scale, respondents are asked to rate statements about the problems based on how well they resemble their own thinking. The RCI is a recognition task – participants respond to statements representing different levels of reflective thought, choosing those which most closely match their own thinking. The statements used for each dilemma are based on prototypes common to each level of reflective thinking, developed from years of data obtained from the Reflective Judgment Interviews. After each dilemma, participants are asked to rank the top three statements that most closely correspond to their own thinking.

The RCI is scored by assigning a number from 2 to 7 to each of the three top ranked statements, which are then weighted .5 (for the top ranking) .3 (for the second ranking), and .2 (for the third ranking). These numbers are then averaged, resulting in a Reflective Judgment score for each of the 3 dilemmas. For example, a participant might receive a score of 3.9 for one dilemma:  $4(.5) + 3(.3) + 5(.2) = 3.9$ . The scores for each of the three dilemmas are then averaged in order to obtain the total Reflective Judgment score for that individual's RCI – the final score is a number between 2 and 7. Scores ranging from 2-3 represent pre-reflective thinking, scores ranging from 4-5 represent quasi-reflective thinking, and scores ranging from 6-7 represent reflective thinking.

As a relatively new instrument, the psychometric properties of the RCI are still being assessed; however, initial empirical support for the RCI is strong (Owen, 2005). In terms of reliability, the internal consistency of the RCI was initially found to be acceptable – with a Cronbach's alpha level of .65 (Wood et al., 2002; Owen, 2005).

Typically, alpha levels closer to .80 are considered desirable; therefore, the results of this study should be considered in light of the moderate consistency level of the test items. However, while the internal consistency is low in terms of studying individual differences, it is acceptable for drawing inferences between groups of individuals (Wood, et al., 2002). Group differences are the focus of the present study; therefore the moderate reliability is considered adequate for this study.

Convergent validity is used to establish how well the RCI correlates to the RJI – the better established measure for assessing reflective judgment. A strong positive relationship has been found between the RCI and the RJI. Furthermore, the RCI and the RJI differentiate similarly between education levels, though RCI scores are approximately 1 level higher (in terms of the Reflective Judgment Model) than their counterpart scores on the RJI. These findings suggest that the RCI measures a similar construct to the RJI. The higher RCI scores may be explained by the fact that the RCI is a recognition task – participants do not have to generate their own statements, but rather choose from several statements which are provided for them -- whereas the RJI, upon which most of the research has been based, is a production task – participants generate their own statements in response to ill-structured problems (Wood, et al., 2002). In addition, because the RCI is standardized, it does not have some of the problems with interrater reliability reported with the RJI, which was administered via person-to-person interviews scored by the interviewer.

## Religious Orientation and RWA Scales

Four scales were used to measure religious orientation. They were chosen from those frequently used in previous studies on religion and prejudice: a Christian Orthodoxy scale (Hunsberger, 1989), a Quest scale (Batson et al., 1993), a Religious Fundamentalism scale (Altemeyer & Hunsberger, 2004), and an I/E scale to measure extrinsic and intrinsic religiosity (Gorsuch & McPherson, 1989). In addition, a short version of the Right-Wing Authoritarianism (RWA) scale was used (Altemeyer & Hunsberger, 1992).

### *Christian Orthodoxy Scale*

The Christian Orthodoxy (CO) scale used was a 6-item revision of Fullerton & Hunsberger's (1982) 24-item version (Hunsberger, 1989). The original Orthodoxy scale was based on Glock and Stark's (1966) attempt to focus on the content of traditional doctrinal beliefs within Christianity. The CO scale is designed to measure the extent to which individuals subscribe to "well-defined, central tents of the Christian religion" common to Protestant and Catholic Christians (Fullerton & Hunsberger, 1982, p. 318). The short-version CO scale retained the strong psychometric properties of the original, including strong internal consistency with a Cronbach's alpha of .94, mean inter-correlations among item scores ranging from .69 to .78, and factor analysis indicating that it measures a single factor (Hunsberger, 1989).

Statements on the 6-item Christian Orthodoxy scale have been measured using a 6-point Likert scale ranging from -3 (strongly disagree) to +3 (strongly agree); however, for the purpose of this study it was modified to a 4-point Likert Scale ranging from 1 (strongly disagree) to 4 (strongly agree) for consistency with the other scales and ease of



administration. Higher scores on the Christian Orthodoxy Scale indicated higher levels of orthodox beliefs.

### *Quest Scale*

The Quest scale used was a 12-item revision of the original 16-item scale (Batson et al., 1993). The original scale was designed to measure “the degree to which an individual’s religion involves an open-ended, responsive dialogue with existential questions raised by the contradictions and tragedies of life” (Batson et al., 1993, p. 169). Specifically, the 12-item scale was designed to address “readiness to face existential questions without reducing their complexity (Items 4, 8, 9, and 11); self-criticism and perception of religious doubts as positive (Items 3, 5, 7, and 12); and openness to change (Items 1, 2, 6, and 10)” (Batson et al., 1993, p. 169).

The open-ended nature of the Quest scale’s approach to religiosity has prompted many concerns about the scale’s validity and whether it is really measuring a construct pertaining to “religion.” Batson et al. (1993) developed the Quest scale as an alternative approach to religious orientation from the I-E scale. Initially it had a very low correlation with the I-E scale (between .00 - .25) indicating it was measuring a different construct. In addition, seminarians tend to score significantly higher on the Quest scale than do their non-seminarian graduate counterparts; and members of various denominations which emphasize the “search” component of religion -- and who score high on other measures of religiosity -- also score high on quest, typically higher on quest than denominations which emphasize doctrinal conformity (Batson, et al., 1993).

In addition, the Quest scale has a very weak negative correlation with measures of Christian orthodoxy, leaving room for the possibility that high quest scorers can have

both strong orthodox beliefs and weak orthodox beliefs, causing the correlation to “average out” in the middle (Batson & Schoenrade, 1991). The Quest scale does correlate positively with measures of religious conflict; however the 2 scales (Quest and Religious Conflict) load onto different factors, indicating they are measuring related, but unique constructs. It is likely that those who are high in quest may also report more religious apprehension and religious questioning (Batson & Schoenrade, 1991; Wulff, 1997). In sum, in terms of construct validity, the Quest scale does seem to measure something “religious” and seems to provide a space for “the liberal religious outlook” (Wulff, 1997, p. 242).

Wulff (1997) reported that the revised 12-item scale has an internal consistency reliability close to .80, and a correlation with the original scale around .86 – indicating that the short version used in the current study measures a similar construct to the original but in a more reliable manner. The revised Quest scale appears to measure three factors: doubt, complexity, and tentativeness with regard to existential and spiritual issues. The Quest scale has been scored using a 7-point and a 9-point Likert scale; for the purposes of this study a 4-point scale was used for consistency with the other scoring and ease of administration. Higher scores indicated higher levels of quest orientation.

#### *Religious Fundamentalism Scale*

The Religious Fundamentalism scale used was a 12-item revision from the original 20-item scale (Altemeyer & Hunsberger, 2004). The original scale was designed to measure an overall approach to religious beliefs rather than the content of those

beliefs. Specifically, the scale attempts to measure a fundamentalist orientation to religion characterized by

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 (Altemeyer & Hunsberger, 2005, p. 379).

Theoretically, this scale could be used to assess an approach to a variety of religious belief systems and is not exclusive to Christianity.

In general, members of various Christian denominations are represented as high scorers on religious fundamentalism; however, there are three times as many high scorers from Baptist, evangelical, Pentecostal, and Jehovah's Witness churches as there are high scorers from other Christian denominations. Catholics and Lutherans have an evenly distributed range from low to high fundamentalism; whereas liberal protestant denominations (such as Unitarian, Methodist, and Episcopalians) tend to have relatively fewer high scorers. Jewish individuals tend to score low on religious fundamentalism, and Muslims tend to score high (Altemeyer & Hunsberger, 2005). In general, females tend to score higher on religious fundamentalism than males.

Like the 20-item original scale, the 12-item religious fundamentalism scale has good empirical validity and strong psychometric properties, including a mean inter-correlation of .37 and a reliability alpha of .92. In addition, the 12-item scale has stronger internal consistency than the 20-item original (Altemeyer & Hunsberger, 2004). The religious fundamentalism scale correlates with right-wing authoritarianism (.62-.82),

religious 'zealousness' (.44-.55), self-righteousness (.52 - .54) and dogmatism (.57 - .58) and also with scales of prejudice toward homosexuals (.42 - .61) and women (.23 - .40) (Altemeyer & Hunsberger, 2004). Factor analysis suggests that the religious fundamentalism scale is measuring one construct which has to do with an overall attitude about religious beliefs in general; it does not target any particular religious affiliation (Altemeyer & Hunsberger, 2005).

Statements on the original scale were assessed using an 8-point Likert Scale ranging from -4 (very strongly disagree) to +4 (very strongly agree); however, for the purpose of this study it was modified to a 4-point Likert Scale ranging from 1 (strongly disagree) to 4 (strongly agree) for consistency with the other scales and ease of administration. Higher scores indicated higher levels of fundamentalism.

#### *Intrinsic/Extrinsic (I/E) Scale*

Since the I/E orientations are more related to motivation than cognition, a relationship between them and reflective judgment was not anticipated. However, a short scale for each was included in order to be thorough. The most commonly used 14-item I/E scale was revised to yield the 3-item short form used in this study (Gorsuch & McPherson, 1989). The I/E scale is used to assess whether individuals approach religion for its intrinsic value or for the benefits that it may provide extrinsically. Gorsuch & McPherson's (1989) factor analysis yielded one single-item scale to assess intrinsic orientation -- *My whole approach to life is based upon my religion*. It also yielded a two-item scale to assess two sub-components of extrinsic orientation: the first statement relates to personal benefits -- *What religion offers me most is comfort in times of trouble*

*and sorrow* -- and the second relates to social relationships – *I go to church mainly because I enjoy seeing people I know there* (Gorsuch & McPherson, 1989, p. 352).

The revised single item I scale and 2-item E scale have demonstrated reliability equal to or better than the reliability of the original I-E scales, and were therefore used in this study. Gorsuch & McPherson (1989) found that their single-item intrinsic scale had a reliability alpha of .83, compared to the .82 reliability of the original scale. The 2-item extrinsic scale demonstrated reliability of .65, compared to the .66 of the original scale. A high score on each of these scales indicated high levels of intrinsic or extrinsic orientation.

#### *Right-Wing Authoritarianism Scale*

The original RWA scale included 30 questions (Altemeyer & Hunsberger, 1992) and has excellent psychometric properties, including Cronbach's alpha levels between .83 and .91 (Altemeyer, 2004). The RWA scale was included to be consistent with prior research indicating a strong relationship between RWA and prejudice, and the possibility that RWA may in fact mediate a relationship between religious orientations and prejudice. RWA correlates with fundamentalism, prejudice, and other measures of "anti-radicalism." It demonstrates good construct validity in terms of identifying a cluster of personality factors having to do with submission to authorities and an aggressive desire to uphold group norms and traditional viewpoints (Altemeyer & Hunsberger, 2005).

Since hypotheses related to RWA are secondary in this study, a shortened version was sought for efficiency of administration. Zakrisson (2005) developed a 15-item version of the RWA scale which demonstrated reliability close to .80 and identified key single factor items. Building upon this research, Rowatt, et al. (2009) identified a 3-item

measure of RWA with good psychometric properties, including high internal consistency with a Cronbach's alpha of .77 and empirical evidence for a single factor. The 3-item measure included the following statements, each of which was rated on a 4-point Likert Scale: *Obedience and respect are the most important things kids should learn*; *We must crack down on troublemakers to save our moral standards and keep law and order*; and *People should be made to show respect for America's traditions* (Rowatt, et al., 2009, p. 18). Higher scores indicated higher levels of RWA.

### Prejudice Scales

Several scales, chosen from those frequently used in previous studies of religion and prejudice, were used to assess prejudice. In order to assess subtle racism, questions were selected from the Symbolic Racism Scale (Henry & Sears, 2002); and in order to assess overt racism, questions were selected from the Manitoba prejudice scale (Altemeyer & Hunsberger, 1992). In order to assess attitudes toward women, a modified version of the Attitudes toward Women scale (Spence & Helmreich, 1978) was used. Finally, in order to assess Attitudes toward Homosexuality, Veenvliet's (2009) modified version of Altemeyer & Hunsberger's (1992) scale was used in order to assess both attitudes toward homosexual individuals and attitudes toward homosexual behaviors.

### *Racism Scale*

In recent years, social psychologists have reframed their understanding of racism in America. Despite the fact that many "overt" forms of discrimination are no longer legal and many racist attitudes are no longer socially acceptable, racism is still a problem

on many levels and impacts the quality of life of many minority Americans. Recent data indicates that Americans of African and Latin descent earn 61% and 71% (respectively) of what white Americans earn (Zarate, 2009). With regard to education a significantly higher percentage of white Americans graduate from high school than their black and Hispanic counterparts. In the work place, studies have shown that Black Americans are given less attention and consideration than White applicants (Zarate, 2009). Finally, changing demographics have changed the landscape of racial prejudice. Hispanic and Latino Americans now comprise the largest ethnic minority in the U.S. – prompting increasingly heated public debate on such issues as bi-lingual education, immigration policy, and voting rights. In sum, the nuances of racial prejudice have grown increasingly complex, and there continues to be very real challenges in terms of many quality of life variables for ethnic minorities (Henry & Sears, 2002; McConahay, 1986).

Such nuanced forms of racism are more difficult to identify and measure, particularly when assessing individuals. Modern individuals are well educated in terms of refraining from making statements or observations that may sound “racist,” yet racial prejudices may still be operative. Social psychologists have several labels for these more subtle forms of racism including “aversive racism” (Dovidio & Gaertner, 2009), “modern racism” (McConahay, 1986), and “symbolic racism” (Tarman & Sears, 2005), each of which has its own method of assessment.

For this study, symbolic racism was used as the theoretical framework for assessing subtle racism (Henry & Sears, 2002). Symbolic racism, like other theories of subtle racism rests on the “underlying assumption that, among whites, new forms of prejudice embody negative feelings toward blacks as a group combined with a sense that

blacks violate cherished American values” (Henry & Sears, 2002, p. 254.) In particular symbolic racism embodies four specific tenets:

1.) racial discrimination is no longer a serious obstacle to blacks’ prospects for a good life, so that 2.) blacks’ continuing disadvantages are largely due to their unwillingness to work hard enough. As a result both their 3.) continuing demands and 4.) increased advantages are unwarranted (Tarman & Sears, 2005).

Symbolic racism is different than older more overt forms of racism in that it assumes that “racism is bad” (McConahay, 1986, p. 93) and that these beliefs do not constitute racism because these beliefs are empirical facts. In other words, individuals who endorse tenets of modern forms of racism “do not define their own beliefs and attitudes as racist” (McConahay, 1986, 93).

The Symbolic Racism Scale 2000 Scale (SR2K) (Henry & Sears, 2002) was designed to address reliability and validity concerns with McConahay’s (1986) widely used Modern Racism scale. The SR2K uses the eight most statistically valid items from the 16-item Modern Racism Scale. For the present study, seven of these items were used (only one of the two open-ended questions was used.) Specifically, the SR2K included only items directly related to the four themes noted above. The principal axis method was used to assess construct validity by assessing how symbolic racism differentiates from measures of conservative ideology, political party, and more traditional forms of racism. Results suggested that symbolic racism is a unique construct that may help explain the link between traditional racism and political propensity. Exploratory factor analyses indicated the scale measures a single factor, and has a reliability alpha of .79. Finally, with regard to predictive validity, symbolic racism was found to be a strong predictor of



racial policy preferences – moreso than either political propensity or traditional racism (Henry & Sears, 2002).

In addition to questions from the SR2K, four statements from the Manitoba prejudice scale (Altemeyer & Hunsberger, 1992) were included in order to assess overt forms of racism. Items from this scale were used in order to maintain consistency with prior studies on religion and prejudice – many of which include the Manitoba scale. The original 20-item scale was designed to measure beliefs specifically about immigrants and ethnic minorities. The original scale demonstrated good internal consistency, with Cronbach's alpha above .88. Because the scale was originally administered in Canada, substitutions to address American participants have been made; the changes have had little impact on internal consistency and reliability properties. In order to keep the length of the prejudice scale manageable, four statements from the Manitoba scale were chosen based on the averages reported by Altemeyer & Hunsberger (1992). The four questions with the highest averages -- indicating they evoked the highest levels of prejudice -- were chosen.

The racism scales used have been scored with 7-point and 9-point Likert scales. In this study, the scales were converted to one 4-point Likert scale for standardization with the other scales. Higher scores indicated high levels of racism. The open-ended question was included at the end of the survey; and the answers provided were used to supplement and provide additional insight into the analysis of the quantitative portion of the racism scale.

### *Attitudes Toward Women Scale*

Gender roles continue to be an undercurrent in American political, social and cultural dialogue. Over the past several decades, the key components underlying attitudes toward gender and gender roles have become increasingly complex. These underlying components about gender and gender roles may be summarized in terms of the following:

Stereotypes (beliefs about the characteristics of women and men); gender schemas (knowledge structures that incorporate beliefs about the nature of women and men); assessments of the self in terms of gender-related characteristics (e.g. ratings of self in terms of femininity, masculinity, and androgyny); attitudes about feminist beliefs and feminism; and gender-role attitudes (beliefs about the appropriate role activities for women and men) (McHugh & Frieze, 1997, p. 4).

Several scales have been developed in order to assess attitudes toward women and attitudes toward gender roles in particular. One of the most commonly used scales used in the religious orientation and prejudice literature is the Spence & Helmreich (1978) Attitudes toward Women (ATW) scale – a scale that assesses attitudes toward gender-role activities specifically.

The Spence & Helmreich (1978) scale was used in the present study for two key reasons. First, it is the most widely researched scale of gender-role activities available and is the scale most often used in the religion and prejudice research. Second, the scale focuses specifically on the roles, rights, and responsibilities of women – areas of contention in certain fundamentalist religious orientations and important in Right-Wing Authoritarian conceptions of upholding traditional values and norms. As gender role beliefs “constitute socially shared stereotypes within a society” (Wood & Eagly, 2010, p. 631), it was hypothesized that the scale, though dated, might detect prejudicial responses

from those religious individuals concerned with maintaining established societal norms and roles.

The short version of the scale most commonly used is comprised of 15 items (Spence, Helmreich, & Stapp, 1973). Four of those items were omitted in the current study due to out-of-date wording (i.e. *It is ridiculous for a woman to run a locomotive and for a man to darn socks*). The 15-item ATW scale has strong internal consistency (alpha = .91), has shown good construct validity and seems to measure one factor pertaining to gender roles (Jones & McNamara, 1991). In addition, McFarland (1989) found an internal consistency (alpha = .87) for a shortened 10-item scale similar to the one used in this study. The scale was converted into a 4-point Likert scale for consistency with the other scales used in this study. High scores indicated a prejudicial attitude toward women.

In general, longitudinal research on the scale indicates increasingly egalitarian attitudes, and that women are more consistently egalitarian in their views than men (McHugh & Frieze, 1997). While attitudes toward women have indeed changed, it has been hypothesized that the ATW scale is simply out-of-date and not suitable to detect more nuanced prejudicial attitudes toward women (Spence & Hahn, 1997).

#### *Attitudes Toward Homosexuality Scale*

Recent studies suggest that the relationship between religion and prejudice may be more extreme and complex with regard to homosexuality than with regard to racism and attitudes toward women (Whitley, 2009). In many instances, subtle forms of prejudice are encouraged toward homosexuality, based on a perceived violation of “the

religion's value system," often including a "permitted" prejudice toward homosexual men and women (Whitley 2009, p. 23). Research has indicated that prejudicial attitudes toward homosexual individuals do not necessarily correlate with, and are often reversed when applied to, racial prejudice. Prejudice toward homosexual men and women is particularly striking among practitioners of several of the world religions in which homosexuality is overtly condemned (Whitley, 2009).

Empirical evidence to date indicates that conservative religious viewpoints toward same-gender sexuality are highly correlated with several forms of prejudice. Recent research has identified the growing tendency in particular religious groups to emphasize a "love the sinner hate the sin" viewpoint toward homosexuality (Veenliet, 2009). As a result, a body of research developed to assess whether such religious individuals could make a distinction between "sin" and "sinner" -- in other words, could an individual be against same-sex behaviors but not demonstrate prejudice toward homosexual individuals. Results of Veenliet's (2009) study indicated that religious teachings mediated the relationship, and that religious individuals who were taught the "love the sinner" message were slightly more positive toward gay and lesbian individuals than those from conservative religious groups who were silent on the topic.

A modified version of Veenliet's (2009) scale was used for the present study. For his study, Veenliet (2009) created 2 sub-scales based on Altemeyer & Hunsberger's (1992) Attitudes Toward Homosexuals (ATH) scale and the Attitudes Toward Same-Gender Sexual Behavior (ATSSB) Scale (Veenliet, 2009). The first sub-scale included statements that addressed same-gender sexual behavior – for example, *Homosexual acts are wrong*; and *Same-gender sexual behavior is a perfectly acceptable form of sexuality*.

The second sub-scale included statements that referred to gay and lesbian individuals and their civil rights – for example, *Sexual orientation should not be a cause for job discrimination*; and *If I discovered a new friend was a homosexual, it would not affect my relationship with that person*.

Veenvliet's (2009) modified scale was used in this study for two reasons. In particular, the 12-item Attitudes Toward Homosexuals scale includes overtly discriminatory statements such as *In many way, the AIDS disease currently killing homosexuals is just what they deserve* (Altemeyer & Hunsberger, 1992, p. 121). The researcher hypothesized that the Christian students who would participate in the current study were mostly educated in a "love the sinner, hate the sin" model which has taught them to refrain from making such overt statements of discrimination. Second, borrowing from the theoretical foundation underlying "subtle racism," the researcher hypothesized that many of the conservative Christians assessed have been educated against overt attitudes about homophobia and truly do not believe they are prejudiced or homophobic. Such individuals may even uphold the civil rights (i.e. the right to marry and the right to fight job discrimination) of homosexual individuals. At the same time, such religious individuals continue to hold beliefs about the immorality of homosexual actions – beliefs which may be considered a form of prejudice. Veenvliet's (2009) scale would allow the current study to capture the subtle forms of prejudice present even in the absence of more overt prejudicial attitudes.

The psychometric properties of Veenvliet's (2009) modified scale were strong. The ATSSB scale demonstrated a Cronbach's alpha of .88 and the ATH scale was .82. The two scales showed a strong positive correlation (.75). Factor analysis demonstrated

that the 2 subscales measured one major factor (51.22% of the variance) and one minor factor (8.33% of the variance). It appears that the two subscales are measuring distinct but related constructs. Results indicated that while most people do not distinguish between individual and behavior, a small percentage of participants did make a distinction (Veenvliet, 2009). The nine items used in the present study were scored on a 4-point Likert scale. Higher scores were indicative of low prejudice. In addition, one of the items was rephrased as an open-ended question -- the answers to which were used to provide additional insight into the quantitative analysis regarding attitudes toward homosexuality.

#### Social Desirability Scale

Finally, a short version of the Balanced Inventory of Desirable Responding (BIDR-6) social desirability scale was used in order to measure the extent to which study participants presented themselves in a socially desirable way (Paulhus, 1991). Allport's original I/E religious orientation conceptualization fell under scrutiny in large part because of an apparent correlation between intrinsic religious orientation and social desirability. Early research indicated that intrinsically oriented individuals tended to present themselves in a positive light – therefore, the negative relationship between intrinsic orientation and prejudice may have in fact been mediated by social desirability (Wulff, 1997). Recent meta-reviews have supported the idea that socially desirable responding may be related to many forms of religiosity, particularly intrinsic religious orientation (Trimble, 1997; Sedikides & Gebauer, 2010). On the other hand, quest religious orientation seems to have a negative relationship with socially desirable

responding (Spilka et al., 1985; Sedikides & Gebauer, 2010). In light of the strong role socially desirable responding seems to play in religious orientation, a social desirability assessment was included in the current study.

The items for the BIDR-6 were developed in order to assess the level at which individuals embellish their own positive attributes and demonstrate an exaggerated confidence in their own judgments (Paulhus, 1991). The assessment measures 2 sub-constructs: self-deceptive enhancement (SDE) - “the tendency to give self-reports that are honest but positively biased” and impression management (IM) – “deliberate self-presentation to an audience” (Paulhus, 1991, p. 37). The SDE subscale focuses specifically on the actual content of the beliefs – in other words, individual who score high on the SDE subscale genuinely believe they are representing themselves accurately, even though their positive representation is exaggerated (Paulhus, 1991). Research suggests that the SDE subscale correlates strongly with measures of high self-esteem, but also with the K-scale of the MMPI which attempts to identify individuals who achieve normal MMPI scores, but who are in fact deviant (Paulhus, 1991). In the interest of time and ease of survey administration, only the SDE subscale of the BIDR-6 was included in the present study.

The BIDR-6 was chosen over other measures of social desirability for several reasons. First, it is a social desirability scale often used in other studies of the relationship between religious orientation and prejudice. Second, some of the other social desirability scales (e.g. Marlowe-Crowne) include questions with religiously related content, creating a situation in which social desirability may be confounded with religious piety (Pauls & Stemmler, 2003). The BIDR-6 includes items that are not

specifically related to religious themes; and research suggests it does not correlate with other standard measures of religiosity (Paulhus, 1991; Trimble, 1997). Finally, psychometric properties for the BIDR-6 have been strong – when all 40 items are used to assess socially desirable responding, the internal consistency coefficient is over .80 (Paulhus, 1991.) When only the SDE statements are used the alpha is between .68 and .80. The SDE and IM subscales have a relatively low correlation to each other (.05 - .40) indicating they are measuring different constructs.

The original BIDR (1984, 1988, 1991) included 40 statements, each of which was rated on a seven-point scale. Extreme responses (6 or 7) are typically given an additional point upon scoring so that participants who give highly exaggerated responses are easily detected. For the purpose of the present study, only the 17 questions pertaining to the SDE scale were included; and the scoring was modified to a 4-point Likert in order to achieve consistency with the rest of the scales in the survey. Any item that was scored a “4” was considered an extreme response and was given 1 extra point. Individuals with high scores on the BIDR-6 were considered to have responded in a positively skewed manner. The scale was included as the last set of questions on Part Two of the survey.

### Summary of Scales

Part One of the scale consisted of RCI, including three ill-structured problems. Part Two of the scale consisted of 86 questions. The scales were ordered as follows: Religious Fundamentalism (questions 1-12), Christian Orthodoxy (questions 13-18), Quest (questions 19-30), Intrinsic (question 31), Extrinsic (questions 32-33), RWA (question 34-36), Attitudes Toward Homosexuality (questions 37-45), Attitudes Toward



Women (questions 46-56), attitudes toward race (questions 57-67), and Socially Desirable Responding (questions 68-84). The final two questions of the survey were the 2 open-ended questions on race and homosexuality. Students were given until November 15 to complete the survey. The data obtained via the RCI website was collected and analyzed by Dr. Sheila Thompson, the site administrator, who then provided it to me in Excel format. The data obtained via the SurveyMonkey website was downloaded from the website in Excel format. The two data sets were then merged into one Excel spreadsheet in order to conduct the final analysis.

## **CHAPTER FOUR**

### **RESULTS**

Data was collected for this study in order to assess whether there was a relationship between reflective judgment, as measured by the RCI, RWA, religious orientation, and prejudice. Of the 119 participants who started the study, 15 were excluded. Five of the excluded participants completed Part One of the survey but did not proceed to Part Two. Six of the excluded participants started Part Two of the survey, but stopped before completing the measures related to the outcome variables (prejudice). Four of the excluded participants did not use the correct subject identification codes, making it difficult to match their data from Part One of the survey with their data from Part Two of the survey. The 104 remaining participants met criteria for inclusion in the study. In general, the use of averages preserved the overall integrity of the participants' scores on each of the assessments, even in those data sets where a small percentage of questions was skipped.

#### Scoring

Part One of the survey was a standard measure of cognitive complexity, RCI, and was administered via the RCI website and scored objectively by Dr. Sheila Thompson, RCI site administrator. Part Two was a set of questions taken from well-researched surveys on religious orientations, RWA, and prejudicial attitudes. The averages for each participant's answers to each of the religious orientation surveys (RF, CO, Q, I, and E),

the prejudice surveys (ATH, ATW, and ATR), and RWA were obtained. As averages increased, the level of the particular variable in question increased. In other words, as averaged scores on RF, CO, Q, or I, increased, that individual's propensity toward having characteristics that particular religious orientation increased. As averaged scores increased on ATH, ATW, and ATR increased, that individual's propensity toward prejudicial attitudes increased.

The final analysis included results related to the six predictor variables (RCI, RWA, RF, CO, Q, and I) and four outcome variables (ATHB, ATHI, ATW, and ATR). The ATH scale was broken down into two sub-scores based on two sub-sets of questions – those related to behaviors (ATHB) and those related to individuals (ATHI). E (extrinsic religious orientation) did not correlate significantly with any predictor or outcome variable, so it was not included in the main portion of the analysis. In addition, the Socially Desirable Responding (SDR) scale did not correlate with any of the predictor or outcome variables and was therefore not included in the analysis. Demographic variables that impacted study results included gender, age, and education level, and each of these variables will be included when appropriate to the specific analysis.

In an unexpected twist, institutional differences played a bigger role in predicting the relationship between religious orientation and prejudice than did reflective judgment. This chapter will first present findings related to institutional differences, as well as to the RCI, since these findings were unexpected and impacted the subsequent analyses. Second, the correlation coefficients for each of the preliminary hypotheses will be presented. Third, the results of the linear regression will be presented for the primary hypotheses of the study. Finally, the qualitative responses obtained in answer to the two

open-ended questions will be presented at the end of the chapter. The qualitative data will be broken down by institution and categorized thematically.

### Institutional Differences

In order to assess for the possibility of institutional differences, the integrity of the institutional subgroups was maintained through the use of coding. Participants from the progressive seminary were coded as PS (n = 27). Participants from the evangelical seminary were coded as ES (n = 28). Participants from the Catholic college were coded as CC (n = 26). Since the university undergraduate (UU) subgroup was so small (n = 7), a regression analysis was performed in order to determine whether it had any significant differences from the women's school affiliated with it (WC) subgroup (n = 16). No significant difference between the UU and WC subgroups was found on any of the predictor or outcome variables except for ATW. Thus, the UU and WC subgroups were combined for each portion of the analysis, except for the ATW analysis; and the combined group was coded WC (n = 23).

As a precautionary measure, a regression analysis was performed in order to determine whether there were significant differences among the institutional subgroups on each of the outcome variables (ATHB, ATHI, ATW, and ATR) and each of the predictor variables (RCI, RWA, RF, CO, Q, I, and E). CC was randomly selected to be the reference group. Indeed, significant differences among institutions were found on each of the outcome and predictor variables, *except* RCI.

In general, each of the institutions had a unique relationship – whether positive or negative – with at least one of the prejudice variables, when compared to the other

schools. The evangelical seminary predicted increased scores in terms of prejudicial attitudes toward homosexuality when compared to each of the other institutional subgroups. The progressive seminary predicted decreased scores in terms of prejudicial attitudes towards women and race when compared to the other institutional subgroups. In addition, the women's school also predicted decreased scores in terms of prejudicial attitudes toward women when compared to the other institutional subgroups (see Table 1).

Table 1. Standard Multiple Regressions of School and Prejudice

ATHB + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	1.308	0.183	-7.135	<.0001***
PS	-0.192	0.185	1.040	0.301
WC	0.308	0.193	-1.597	0.113
r2	0.448			
ar2	0.432			

ATHI + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.582	0.115	-5.051	<.0001***
PS	-0.106	0.116	0.908	0.366
WC	0.091	0.121	-0.754	0.453
r2	0.299			
ar2	0.278			

ATW + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.105	0.092	1.142	0.256
PS	-0.521	0.093	-5.619	<.0001***
WC	-0.299	0.097	-3.097	<.001**
r2	0.366			
ar2	0.347			

ATR + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.057	0.116	0.490	0.625
PS	-0.337	0.117	-2.878	<.001**
WC	0.089	0.122	0.729	0.468
r2	0.144			
ar2	0.118			

Similarly, each of the schools had a unique relationship with at least one of the predictor variables. The progressive seminary predicted decreased scores on the RWA scale when compared to the other institutions. The evangelical seminary predicted increased scores on religious fundamentalism and Christian orthodoxy when compared to the other institutions. The evangelical seminary and the women's school both predicted decreased scores on quest when compared to the progressive seminary and the catholic college. Each of the graduate schools – the evangelical seminary and the progressive seminary – predicted increased scores on intrinsic religious orientations when compared to the undergraduate schools. Finally, there were no significant differences among the schools in terms of extrinsic religious orientation (see Table 2).

Table 2. Standard Multiple Regressions of School and Predictor variables

RWA + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	-0.063	0.148	-0.428	0.670
PS	-0.613	0.149	-4.116	<.0001***
WC	0.152	0.155	0.977	0.331
r2	0.228			
ar2	0.205			

RF + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	1.311	0.146	8.959	<.0001***
PS	-0.110	0.148	-0.744	0.458
WC	0.236	0.154	1.533	0.128
r2	0.548	0.548		
ar2	0.534	0.534		

CO + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.866	0.178	4.871	<.0001***
PS	-0.131	0.179	-0.732	0.466
WC	-0.059	0.187	-0.318	0.751
r2	0.296			
ar2	0.275			

Q + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	-0.261	0.110	-2.370	<.01*
PS	0.065	0.111	0.583	0.561
WC	-0.310	0.116	-2.684	<.001**
r2	0.141			
ar2	0.115			

I + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	1.147	0.229	5.020	<.0001***
PS	0.474	0.231	2.058	<.01*
WC	-0.105	0.240	-0.439	0.662
r2	0.268			
ar2	0.246			

E + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.082	0.138	0.595	0.553
PS	0.033	0.140	0.240	0.811
WC	0.165	0.146	1.132	0.260
r2	0.014			
ar2	-0.015			

In sum, the differences among institutions were not surprising in light of the strategic sampling method used. Specific schools were targeted in order to evoke a wide variety of religious orientations, and indeed the different schools sampled did tend to predict increased (or decreased) levels of specific religious orientations and also increased (or decreased) levels of specific prejudicial attitudes. School was therefore included as a controlling variable in the analyses of each of the study hypotheses in order to assess its influence on the relationships between each of the predictor and outcome variables. (See Appendix G for a bar graph representation of the means and standard errors of each religious orientation and prejudice variable by school).

## RCI

### Institutional Differences and the RCI

Unfortunately, results indicated there was no significant difference among the institutions in terms of the RCI (see Table 3). Strategic sampling efforts targeted both undergraduate and graduate level students in order to obtain a wide range of reflective thinking levels. Based on prior research, a significant difference was expected between the undergraduate and graduate school samples in terms of their RCI scores.<sup>7</sup> Indeed, the fact that the progressive and evangelical seminaries – both graduate schools -- did not differ significantly from the undergraduate groups, suggested that the RCI scores obtained in this study were unusual and did not follow the patterns predicted by prior research. Furthermore, results indicated that the scores for each institution – both graduate-level and undergraduate – clustered around the Quasi-reflective level, indicating a limited range (see Table 4). This limited range may have impacted the ability to produce a meaningful analysis of the possible relationships between reflective judgment levels and each of the other variables.

Table 3. Standard Multiple Regression of School and RCI

RCI + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.351	0.220	1.597	0.113
PS	0.312	0.222	1.405	0.163
WC	0.175	0.231	0.759	0.450
r <sup>2</sup>	0.030			
ar <sup>2</sup>	0.001			

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<sup>7</sup> Research on reflective judgment suggests a correlation with education level: graduate students tend to score significantly higher than undergraduate students (King & Kitchener, 1994; Wood, 1997; Fischer & Pruyne, 2002).



Table 4. Average RCI score by Institution

School	Average RCI Score	Standard Deviation
CC	4.94	0.58
ES	5.29	0.94
PS	5.25	0.85
WC	5.11	0.79

To further clarify the results regarding RCI, a regression was performed to determine if there was a relationship between RCI and education level – a relationship well substantiated by prior research. Participants were coded as (1) if they were first and second year undergraduates, (2) if they were third and fourth year undergraduates, (3) if they were graduate-level students, and (4) if they were graduate level students who had obtained a Master’s degree and were working on a second Master’s degree or a doctoral degree. Education level was then treated as a continuous variable in the regression analysis. Results indicated that as education level increased, there was a significant positive increase in RCI – a finding that was consistent with prior research. However, when age was added as a controlling factor, the relationship between RCI and education level disappeared, and the adjusted R squared increased from 0.038 to 0.056, suggesting that the model including both age and education level was the best model for understanding the relationships. These results suggested that age was a stronger predictor of RCI than education level, a finding that was contrary to prior research on reflective judgment (see Tables 5a and 5b).

Descriptive statistics suggested that the average age of the WC undergraduate subgroup ( $M = 30.39$ ,  $SD = 11.56$ ) was much higher than the traditionally aged sample of undergraduate students from CC ( $M = 20.15$ ,  $SD = 5.1$ ). Furthermore, descriptive

statistics suggested that the average RCI score for WC students was comparable to the graduate level students, as was their age, even though they were studying at an undergraduate level. These results suggested that the overall RCI scores obtained from the women's college sample were unusually high for their education level, and may help to explain why age was a more significant factor than education level in predicting RCI score in the overall sample.

Table 5a. Standard Multiple Regression of RCI and Education level

RCI + ED	beta coefficient	Std. Error	t value	Pr(> t )
ED	0.165	0.073	2.260	<.01*
r <sup>2</sup>	0.048	0.048	0.048	0.048
ar <sup>2</sup>	0.038	0.038	0.038	0.038

Table 5b. Standard Multiple Regression of RCI, Age, and Education level

RCI + ED + AGE	beta coefficient	Std. Error	t value	Pr(> t )
ED	0.098	0.082	1.188	0.238
Age	0.013	0.008	1.712	<.05+
r <sup>2</sup>	0.075			
ar <sup>2</sup>	0.056			

Table 5c. Average RCI and Age by Institution

School	Average RCI Score	Average Age
Catholic College (CC)	4.94	20.15
Evangelical Seminary (ES)	5.29	29.32
Progressive Seminary (PS)	5.25	34.85
Women's College (WC)	5.11	30.39

### Assessing the Three Ill-Structured Problems

The RCI is comprised of three ill-structured problems related to each of the following areas: work force (RCIWF), alcoholism (RCIA) and immigration (RCII). Each of the 104 participants received one score for each of the three ill-structured problems, along with an overall RCI score, which is the average of the three sub-scores.

Correlations were run in order to determine whether there were any significant differences among the 3 RCI sub-scores on any of the predictor or outcome variables. Pearson product moment correlation coefficients were generated using a two-sided test to allow for both positive and negative correlations.

Results of the analysis suggested that each of the 3 ill-structured problems had a strong positive correlation with each other, as expected. Results also indicated there was a mild positive relationship between RCIA and ATHB (see Table 6a). An additional regression was performed in order to determine whether school was influencing the relationship between RCIA and ATHB. Indeed, when accounting for school, the relationship between RCIA and ATHB disappeared (see Table 6b.) These results suggested that the evangelical seminary sample accounted for the positive relationship between RCIA and ATHB. It's possible that there was a mild confounding relationship between the way students from the evangelical seminary sub sample thought about alcoholism and how they thought about homosexuality. This issue will be addressed more specifically in the analyses of the primary hypotheses.

Table 6a. Pearsons' Correlation Coefficients between each of the RCI sub scales, RWA, and each of the Religious Orientation and Prejudice variables

	RCIWF	RCIA	RCII	RCI
RCIWF	1.000			
RCIA	0.351***	1.000		
RCII	0.320***	0.279**	1.000	
RCI	0.776***	0.725***	0.711***	1.000
RF	-0.014	0.114	-0.080	0.009
CO	-0.061	-0.029	-0.062	-0.068
Q	-0.047	-0.051	-0.007	-0.047
I	0.086	0.104	0.039	0.105
E	-0.101	0.132	-0.075	-0.023
RWA	-0.083	-0.076	0.004	-0.071
ATHB	0.165	0.213*	0.029	0.185
ATHI	0.119	0.191	0.027	0.129
ATW	-0.037	0.042	-0.007	-0.004
ATR	0.020	0.057	-0.087	-0.004

p-value < .0001\*\*\*    p-value < .001\*\*    p-value < .01\*

Table 6b. Standard Multiple Regression of RCIA, School, and ATHB

RCIA+ATHB+School	beta coefficient	Std. Error	t value	Pr(>  t )
RCIA	0.091	0.065	-1.402	0.164
ES	1.239	0.189	-6.563	<.0001***
PS	-0.242	0.187	1.290	0.200
WC	0.271	0.194	-1.399	0.165
r <sup>2</sup>	0.459			
ar <sup>2</sup>	0.437			

### Research Questions

#### Preliminary Hypotheses

The findings in terms of each of the preliminary research questions will now be presented (see Appendix H for a summary of the findings for each preliminary hypothesis). These hypotheses were analyzed using Pearson product moment correlation coefficients with a two-sided test to allow for both positive and negative correlations. Results will be grouped based on the predictor variables (reflective judgment, religious

orientation, and RWA), since these groups provided the basis for the preliminary hypotheses (see Table 7 for each of the correlation coefficients).

#### *Reflective Judgment*

Unfortunately, the limited distribution of RCI scores precluded a meaningful analysis of its relationship to religious orientation, RWA, and prejudice. In terms of the overall group (N=104), no significant relationship was found between RCI and RWA, no significant relationship was found between RCI and RF, CO, Q, I, or E, and no significant relationship was found between RCI and ATHB, ATHI, ATW, or ATR. These findings should be interpreted cautiously in light of the unusual trends in terms of the RCI scores obtained in this sample previously addressed.

#### *RWA*

As predicted, a significant positive relationship was found between RWA and each of the prejudice variables – ATHB, ATHI, ATW, and ATR. In addition, a significant positive relationship was found between RWA and RF. However, no significant relationship was found between RWA and CO or RWA and Q. In addition, no significant relationship was found between RWA and I, though a mild positive correlation was found between RWA and E.

#### *Religious Orientation*

As predicted, a significant positive relationship was found between RF and each of the prejudice variables -- ATHB, ATHI, ATW, and ATR. Furthermore, as predicted, a

significant positive relationship was found between CO and ATHB, ATHI, and ATW. However, there was not a significant relationship between CO and ATR. Finally, as predicted, a significant negative relationship was found between Q and ATHB and ATHI. However, there was not a significant relationship between Q and ATW and ATR.

Table 7. Pearsons' Correlation Coefficients for RWA, RCI, RF, CO, Q, I, E, ATHB, ATHI, ATW, and ATR

	RCI	RWA	RF	CO	Q	I	E
RCI	1.000		0.009	-0.068	-0.047	0.105	-0.023
RWA	-0.071	1.000	0.317**	0.182	-0.097	0.130	0.276*
ATHB	0.185	0.328***	0.761***	0.508***	-0.377***	0.458***	0.023
ATHI	0.129	0.314**	0.627***	0.391***	-0.339***	0.296**	0.018
ATW	-0.004	0.455***	0.442***	0.320***	-0.104	0.141	0.011
ATR	-0.004	0.527***	0.236*	0.185	-0.154	-0.009	0.106

p-value < .0001\*\*\*    p-value < .001\*\*    p-value < .01\*

### Primary Hypotheses

Linear regression was used to perform the analyses for each of the remaining hypotheses. Linear regression allows the researcher to build on an analysis between two variables by adding additional variables and assessing the differences. Because school was found to be a controlling factor, school was included as a variable in each of these analyses, even though it was not a part of the original hypotheses. For each of the following analyses, a series of regressions was performed, each including the addition of a new variable into a prior existing relationship. For example, the models for each prejudice variable were run in the following sequence:

- 1.) ATHB ~ School
- 2.) ATHB ~ RF + School
- 3.) ATHB ~ RF + School + RWA

$$4.) \text{ATHB} \sim \text{RF} + \text{School} + \text{RCI}$$

$$5.) \text{ATHB} \sim \text{RF} + \text{School} + \text{RWA} + \text{RCI}$$

The model with the largest adjusted R squared was reported, as this model was considered the best fit for the analysis of the relationships between the variables on that particular outcome. In each instance, the model including school, the particular religious orientation variable, and RWA was the strongest model. The only model in which RCI played a significant role was on the analysis between religious fundamentalism and ATHB; this model will be addressed in the final section.

The results for each of these analyses will be categorized and presented in light of each of the remaining research questions and hypotheses. First the results of the findings on each of the religious orientation variables, RWA, and their relationships to the ATHB and ATHI outcome variables will be presented. Then, the key findings related to the ATW and ATR outcome variables will be presented. Finally, results related to the RCI will be addressed (see Appendix I for a summary of the findings for each primary hypothesis).

*ATHB: The Impact of School, RF, CO and RWA*

Contrary to the hypothesis of this study, the role of RWA was muted in terms of its impact on ATHB in this study. When controlling for RWA, both religious fundamentalism and Christian orthodoxy continued to have a strong positive relationship with ATHB. In addition, the evangelical seminary remained a strong predictor of increased scores on ATHB, even when accounting for the religious fundamentalism and orthodox Christian components of the sub sample, and also for RWA.

In terms of religious fundamentalism, multiple regression was used to assess whether there was a relationship between RF and ATHB when accounting for RWA and school. When both school and RF were included in the regression, the strong positive relationship between RF and ATHB remained, and school remained a significant predictor. Next, when controlling for RWA, RF and school remained strong predictors of ATHB. This analysis suggested that both RF and ES were strong predictors of ATHB, even when accounting for RWA. However, the relationship between school and ATHB, while still significant, decreased when RF was included into the regression (see Table 8a).

In terms of Christian orthodoxy, multiple regression was used to assess whether there was a relationship between CO and ATHB when accounting for RWA and school. When both school and CO were added into the regression, both school and CO remained predictors of ATHB. When RWA was added into the regression, the role of CO decreased, but remained significant, while the role of ES remained strong (see Table 8b).

In sum, these findings suggested that students with a greater tendency toward religious fundamentalism – across the institutional subgroups -- tended to have increased scores on ATHB. Furthermore, students with a greater tendency toward Christian orthodoxy – across institutional subgroups – also tended to have increased scores on ATHB. In addition, the evangelical seminary continued to be a strong predictor of ATHB, even when holding the religious fundamentalism, Christian orthodoxy, and RWA scores constant. In other words, within the evangelical seminary subgroup, even those scores that were lower on religious fundamentalism, Christian orthodoxy, or RWA



tended to predict significantly higher scores on ATHB, when compared to lower scores on religious fundamentalism, Christian orthodoxy, and RWA at other schools.

Table 8a. Standard Multiple Regression on ATHB in terms of RF, School, and RWA

RF + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
RF	0.613	0.112	-5.465	<.0001***
ES	0.515	0.215	-2.394	<.001*
PS	-0.022	0.169	0.128	0.899
WC	0.138	0.165	-0.836	0.405
RWA	0.169	0.111	-1.518	0.132
r <sup>2</sup>	0.615			
ar <sup>2</sup>	0.595			

Table 8b. Standard Multiple Regression on ATHB in terms of CO, School, and RWA

CO + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
CO	0.215	0.098	-2.189	<.01*
ES	1.142	0.193	-5.919	<.0001***
PS	0.039	0.188	-0.206	0.837
WC	0.270	0.182	-1.482	0.142
RWA	0.331	0.118	-2.797	<.001**
r <sup>2</sup>	0.521			
ar <sup>2</sup>	0.497			

*ATHI: The Impact of School, RF, CO, and RWA*

While RWA did not account for any of the variability in the relationship between religious fundamentalism and ATHI, it did account for variability in the relationship between CO and ATHI. In addition, the role of school was muted when accounting for religious fundamentalism, but remained strong when accounting for Christian orthodoxy.

Multiple regression was used to assess whether there was a relationship between RF and ATHI when accounting for school. When RF was added into the regression, the relationship between school and ATHI disappeared, while the relationship between RF

and ATHI strengthened. When RWA was added into the regression, there were no significant changes (see Table 9a).

Multiple regression was then used to determine whether there was a relationship between CO and ATHI when accounting for both RWA and school. Initially, when both CO and school were added into the model, they each continued to have a strong positive relationship to ATHI. However, in this instance, when RWA was added into the model, the relationship between CO and ATHI disappeared, while the relationship between ES and ATHI remained strong (see Table 9b).

In sum, these findings suggested that in general, religious fundamentalism was a stronger predictor of ATHI than school or RWA. The evangelical seminary predicted higher scores on the ATHI scale than each of the other schools. However, when religious fundamentalism was accounted for, the role of school in predicting prejudicial attitudes toward homosexual individuals disappeared. It seems likely that the relationship between school and ATHI was mediated by religious fundamentalism. That is, the higher scores on religious fundamentalism within the evangelical seminary subgroup accounted for its relationship to ATHI. When these scores were held constant, there was no difference between the evangelical seminary sample and the other schools in terms of its relationship to ATHI.

On the other hand, RWA and school were stronger predictors of ATHI than CO. While initially there was a significant positive relationship between CO and ATHI, the relationship between CO and ATHI disappeared, as predicted, when RWA was included in the model. This analysis suggested that school and RWA mediated the relationship between CO and ATHI. In other words, within each of the school sub samples, when

RWA was held constant, the relationship between CO and ATHI disappeared. At the same time, even when holding RWA and CO constant, the evangelical seminary continued to have a strong positive relationship with ATHI.

Table 9a. Standard Multiple Regression on ATHI in terms of RF, School, and RWA

RF + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
RF	0.267	0.076	-3.499	<.0001***
ES	0.241	0.146	-1.645	0.103
PS	0.006	0.115	-0.054	0.957
WC	0.008	0.112	-0.071	0.943
RWA	0.134	0.076	-1.778	<.05+
r <sup>2</sup>	0.428			
ar <sup>2</sup>	0.399			

Table 9b. Standard Multiple Regression on ATHI in terms of CO, School, and RWA

CO + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
CO	0.064	0.063	-1.015	0.313
ES	0.540	0.124	-4.347	<.0001***
PS	0.032	0.121	-0.264	0.792
WC	0.063	0.117	-0.538	0.592
RWA	0.211	0.076	-2.766	<.001**
r <sup>2</sup>	0.363			
ar <sup>2</sup>	0.331			

*ATHB and ATHI: The Impact of School and Q*

Quest was a significant predictor of both ATHB and ATHI, even when accounting for school and RWA. Results suggested that as quest scores increased, scores on the ATHB and ATHI scales decreased significantly. However, even when accounting for quest, the evangelical seminary remained a strong predictor of increased scores on both ATHB and ATHI, suggesting that quest did not have as much of an impact on decreased scores on ATHB and ATHI at the evangelical seminary as it did at the other schools (see Tables 10a and 10b).

A look within the ES subgroup (n=29) suggested that there was a significant negative correlation between Q and ATHB ( $r = -0.320, p < .001$ ) and between Q and ATHI ( $r = -0.595, p < 0001$ ). Why then was ES still a predictor of a positive increase in ATHI and ATHB, even when controlling for Q? A second analysis was run in order to determine whether RF was a confounding variable in this dynamic. Indeed, when RF and Q were both accounted for, the relationships between ES and ATHB and ATHI disappeared. However the adjusted R squared values decreased significantly, suggesting the Q/RWA only model was the best fit for this analysis (see Tables 10c and 10d).

In sum, it seems likely that the average scores on the prejudice scales at the evangelical seminary were high enough to warrant a significantly different result than the other institutions, even when accounting for the impact of quest. In other words, even though higher quest scores tended to produce decreased ATHB/ATHI scores within the evangelical seminary subgroup, those decreased ATHB/ATHI scores were still higher than the average scores produced at the other schools.

Table 10a. Standard Multiple Regression on ATHB in terms of Q, School, and RWA

Q + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
Q	-0.481	0.153	3.135	<.001**
ES	1.207	0.173	-6.969	<.0001***
PS	0.075	0.184	-0.409	0.684
WC	0.100	0.184	-0.543	0.588
RWA	0.386	0.114	-3.379	<.001**
r <sup>2</sup>	0.543			
ar <sup>2</sup>	0.520			

Table 10b. Standard Multiple Regression on ATHI in terms of Q, School, and RWA

Q + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
Q	-0.275	0.098	2.813	<.001**
ES	0.525	0.110	-4.757	<.0001***
PS	0.054	0.117	-0.458	0.648
WC	-0.029	0.117	0.247	0.806
RWA	0.231	0.073	-3.173	<.001**
r2	0.405			
ar2	0.374			

Table 10c. Standard Multiple Regression on ATHB in terms of Q, RF, School, and RWA

Q+RF+School+RWA	beta coefficient	Std. Error	t value	Pr(> t )
Q	-0.309	0.141	2.190	<.01*
RF	0.628	0.106	-5.914	<.0001***
ES	0.404	0.205	-1.967	0.052
PS	-0.103	0.155	0.668	0.506
WC	0.064	0.167	-0.381	0.704
RWA	-0.624	0.624	0.624	0.624
r2	0.605			
ar2	0.309			

Table 10d. Standard Multiple Regression on ATHI in terms of Q, RF, School, and RWA

Q+RF+School+RWA	beta coefficient	Std. Error	t value	Pr(> t )
Q	-0.194	0.097	2.001	<.01*
RF	0.286	0.073	-3.928	<.0001***
ES	0.157	0.141	-1.112	0.269
PS	-0.062	0.106	0.581	0.563
WC	-0.036	0.115	0.316	0.753
RWA	-0.433	0.433	0.433	0.433
r2	0.404			
ar2	0.194			

*ATHB and ATHI: The Impact of School and I*

Finally, results of the preliminary analyses indicated there was a significant positive relationship between I and ATHB and I and ATHI. In addition, students at the progressive seminary and the evangelical seminary were more inclined to have high I

scores than their undergraduate counterparts – a finding that is not surprising, considering that these schools are both graduate-level seminaries which attract students very interested in incorporating their religious values systems more globally into their lives. However, the fact that I was correlated to more prejudicial attitudes was surprising, particularly since PS and ES had no similarities across any of the other prejudice measures.

A multiple regression was run to determine the role of school in the relationship between I and ATHB and I and ATHI. When controlling for school, the relationship between I and ATHB decreased, but remained significant. The relationship between ES and ATHB strengthened (see Table 11a). These findings suggested that the evangelical seminary accounted for a large portion of the variability in the relationship between I and ATHB; but that in general, high I scores continued to predict increased ATHB scores, even when controlling for school.

However, in terms of ATHI, when school was added into the regression, the relationship between I and ATHI disappeared. These findings suggested that the relationship between I and ATHI was mediated by school – when the high scores on intrinsic religious orientation within the evangelical seminary were taken into account, the relationship between intrinsic religious orientation and high ATHI scores disappeared. See Table 11b).

Table 11a. Standard Multiple Regression on ATHB in terms of I and School

I + School	beta coefficient	Std. Error	t value	Pr(> t )
I	0.251	0.077	-3.277	<.001**
ES	1.020	0.196	-5.210	<.0001***
PS	-0.311	0.180	1.728	0.087
WC	0.334	0.184	-1.815	0.073
r2	0.502			
ar2	0.482			

Table 11b. Standard Multiple Regression on ATHI in terms of I and School

I + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
I	0.055	0.050	-1.096	0.276
ES	0.519	0.129	-4.027	<.0001***
PS	-0.132	0.119	1.111	0.269
WC	0.097	0.121	-0.802	0.425
r2	0.308			
ar2	0.280			

*ATW: The Impact of RWA, School, RF, and CO*

In order to determine the role of RWA in the relationships between RF, CO and ATW, the UU students were first removed from the WC sample. Next, a regression was performed in order to determine whether gender should be included as a controlling factor, in addition to school. Results indicated that both gender and school were strong predictors of ATW. PS and WC students tended toward decreased scores on ATW, while ES students and male students tended toward increased scores on ATW (see Table 12a). RWA was then included in the regression, in addition to gender and school. When RWA was accounted for, school and gender remained significant predictors of ATW, while RWA also emerged as a significant predictor of ATW (see Table 12b). Finally, since RF and CO were initially found to have significant positive correlations with ATW, they

were each included in the model. When controlling for RWA, school, and gender, the relationship between RF and ATW disappeared, along with the relationship between ES and ATW (see Table 12c). Similarly, when controlling for RWA, school, and gender, the relationship between CO and ATW disappeared, along with the relationship between ES and ATW (see Table 12d).

In sum, results indicated that attendance at WC and PS predicted decreased scores on ATW, while being male tended to predict increased scores on ATW. These results suggested that PS, WC, RWA, and gender were the strongest predictors of ATW. Students from PS and WC tended to be less prejudicial toward women than students from ES or CC, even when accounting for RWA and gender. In addition, men tended to be more prejudicial toward women, even when accounting for school and RWA.

Table 12a. Standard Multiple Regression on ATW in terms of Gender and School

Gender + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.148	0.088	1.690	<.05+
PS	-0.499	0.088	-5.672	<.0001***
WC	-0.237	0.093	-2.547	<.01*
Gender – (Male)	0.250	0.070	3.583	<.0001***
r2	0.439			
ar2	0.416			

Table 12b. Standard Multiple Regression on ATW in terms of Gender, School, and RWA

Gender + School	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.165	0.080	2.049	<.01*
PS	-0.349	0.087	-4.014	<.0001***
WC	-0.273	0.085	-3.194	<.001**
Gender – (Male)	0.255	0.064	3.994	<.0001***
RWA	0.244	0.054	4.532	<.0001***
r2	0.536			
ar2	0.512			



Table 12c. Standard Multiple Regression on ATW in terms of RF, RWA, Gender and School

RF + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
RF	0.066	0.058	1.151	0.253
ES	0.075	0.111	0.677	0.500
PS	-0.355	0.087	-4.087	<.0001***
WC	-0.286	0.086	-3.326	<.001**
RWA	0.222	0.057	3.891	<.0001***
Gender (Male)	0.250	0.064	3.921	<.0001***
r <sup>2</sup>	0.542			
ar <sup>2</sup>	0.514			

Table 12d. Standard Multiple Regression on ATW in terms of CO, RWA, Gender and School

CO + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
CO	0.028	0.045	0.608	0.544
ES	0.140	0.090	1.563	0.121
PS	-0.348	0.087	-3.995	<.0001***
WC	-0.270	0.086	-3.151	<.001**
RWA	0.239	0.055	4.367	<.0001***
Gender (Male)	0.255	0.064	3.988	<.0001***
r <sup>2</sup>	0.538			
ar <sup>2</sup>	0.509			

*ATR: The Impact of RWA, School, and RF*

Results of the multiple regression suggested that in this study, RWA was the strongest predictor of prejudicial attitudes toward race. Prior analyses suggested that RF, PS and RWA were the only predictor variables with a significant relationship to ATR (see Table 7). However, when controlling for RWA, the relationship between PS and ATR disappeared (see Table 13a). When RF was added into the regression, its relationship to ATR also disappeared (see Table 13b).

Table 13a. Standard Multiple Regression on ATR in terms of RWA, and School

ATR + School + RWA	beta coefficient	Std. Error	t value	Pr(> t )
ES	0.078	0.105	0.743	0.459
PS	-0.129	0.115	-1.124	0.264
WC	0.037	0.111	0.337	0.737
RWA	0.339	0.071	4.758	<.0001***
r2	0.303			
ar2	0.275			

Table 13b. Standard Multiple Regression on ATR in terms of RF, RWA, and School

ATR+RF+School+RWA	beta coefficient	Std. Error	t value	Pr(> t )
RF	-0.009	0.077	-0.117	0.907
ES	0.090	0.147	0.613	0.541
PS	-0.128	0.116	-1.109	0.270
WC	0.039	0.113	0.347	0.729
RWA	0.342	0.076	4.502	<.0001***
r2	0.303			
ar2	0.268			

### *RCI*

Since RCI did not correlate significantly with RWA, the religious orientation variables, or the prejudice variables, it was not expected to account for the variability in the relationships among them. A series of regression analyses were performed in order to determine whether RCI had any influence on the outcome variables (ATHB, ATHI, ATW, and ATR) when each of the predictor variables (RWA, RF, CO, Q, I, and school) was included.

RCI was not a significant predictor of any of the outcome variables, except in terms of the relationship between RF and ATHB, when also controlling for school and RWA. When controlling for RCI, RWA, and RF, the relationship between school and ATHB disappeared, and the adjusted R squared increased significantly. Results

suggested that when RCI was added into the model, RF was still a strong predictor of ATHB across the board, but that RCI was mediating the relationship between ES and ATHB. In fact, contrary to the primary hypotheses of this study, results suggested that as RCI scores increased, scores on ATHB increased (see Table 14).

However, as noted previously, there was a relationship between the RCI sub question on alcoholism (RCIA) that was mediated by school. There may have been a confounding issue with the way students from ES thought about alcoholism and how they thought about homosexual behaviors that exaggerated the role of RCI in this analysis. In other words, there may have been a correlation between RCIA and ATHB driving this relationship that is not necessarily related to cognitive complexity. Therefore, it is difficult to assess the value of this finding.

Table 14. Standard Multiple Regression on ATHB in terms of RCI, RF, RWA, and school

ATHB+RCI+RF+RWA+school	beta coefficient	Std. Error	t value	Pr(> t )
RF	0.638	0.109	-5.857	<.0001***
RWA	0.171	0.108	-1.588	0.116
RCI	0.189	0.068	-2.765	<.001***
ES	0.416	0.211	-1.970	0.052
PS	-0.076	0.165	0.464	0.644
WC	0.098	0.160	-0.614	0.540
r <sup>2</sup>	0.643			
ar <sup>2</sup>	0.621			

### Qualitative Analysis

Each participant was given the opportunity to answer two different open-ended questions. The first question pertained to homosexuality: “How do you feel about homosexual individuals and/or homosexual behaviors?” The second question pertained to race: “How much discrimination against blacks do you feel there is in the United

States today, limiting their chances to get ahead?" A sampling of the responses given by each institutional subgroup will be provided.

#### Progressive Seminary - ATH

The progressive seminary student responses were generally unequivocally supportive toward homosexual behaviors and individuals. Most of the supportive responses from the progressive seminary subgroup suggested that the participant considered homosexual and heterosexual categories to be arbitrary or that an individual has no choice regarding his or her sexuality, whether sexual preference is determined biologically or otherwise:

*Sex is a gift and any variety of sexual behaviors is perfectly acceptable, laudable even, as long as only consenting adults are involved. Consenting adults should be able to engage in any sexual act that brings them pleasure.*

*I think the division of people into "heterosexual" and "homosexual" is problematic, because there are as many expressions of sexuality as there are individuals. People need to get over their desire to control other people and dictate the boundaries of "normal."*

*Well I am queer and I feel good about myself and my long-term relationship with my partner! I think that same-sex attraction and behavior - when enacted within general ethically-based behaviors - is a natural and healthy party of human sexuality.*

*I think it's great. I think people should be able to live the way they want to live, and be loved, accepted, and embraced because of it. I think homosexuality is just as beautiful if not more beautiful than heterosexuality.*

*There is no difference between homosexuals or heterosexuals.*

*I feel that homosexuality is biological. They should be given the same rights as heterosexuals. I have just as much respect and love for homosexuals as I do heterosexuals.*

*I believe our sexuality is genetically based, and not a choice. I'm sad that homosexuals have been treated so poorly, and I'm glad that public opinion is changing. I look forward to the day when homosexuality will be as accepted as heterosexuality.*

*I think homosexuality is genetic and they should not be discriminated against. However, I do admit to still gawking at men kissing because it's so unusual. If same sex couples were more "out" it would become normal and no one would pay attention.*

Some of the supportive answers from progressive seminary subgroup were justified from an empathic relational standpoint:

*I think it is fine. I only feel bad for those who really want to have their own genetic children with their partner. I think homosexual relationships were originally shunned because of the lack of off spring and the emphasis faiths put on having kids.*

*Love whoever you love, man. If someone is crazy enough to love you back, you've struck gold. Don't squander that.*

*While not my way, I respect and embrace my GLBT brothers and sisters.*

*I think we all have the right to decide on how we live our sexuality. I have a very good friend who is homosexual and he had taught me a lot about life. They are normal people, and like straight people there are "good" and "bad" people.*

Two of the supportive answers from the progressive seminary subgroup emphasized a political dimension:

*It is unacceptable that the government is attempting to monitor who is allowed to get married, hold certain jobs, or adopt children. It is no place of the government to attempt to sanction certain types of love and deny other types. Our society needs to be radically reformed to include views of alternate sexuality to be acceptable; the recent suicides as a result of bullying are proof of this.*

*I believe homosexuals should have the same rights, privileges and responsibilities as heterosexuals. Homosexual behaviors are just as romantic and intimate as the behaviors of heterosexuals.*

Two of the responses from the progressive seminary subgroup demonstrated an equivocal or conflicted stance with regard to homosexuality:

*It is complex. I guess I think there is an anima/animus ideal of heterosexuality, but nor do I think that homosexuality is a deviant behavior. It is what it is -- not right or wrong, just a fact and a biological reality.*

*I am uncomfortable witnessing active homosexual sexuality, but I value the friendship of a number of gay people and think some of them are quite wonderful. I admire all of them for their courage in the face of pressures against being fully themselves.*

Finally, two of the progressive seminary responses demonstrated a non-supportive attitude toward homosexual behaviors. Interestingly, the non-supportive responses were the only instances in which participants from the progressive seminary subgroup used religious language:

*The Bible is clear it is a sin. The culture in the United States is for making it acceptable (a legitimate choice). I am for not denying homosexuals any civil right or opportunity - free country.*

*I feel that such practices should be kept private and not be legalized. All individuals are children of God, but my moral compass says their acts are wrong.*

#### Progressive Seminary – ATR

The progressive seminary students generally provided sophisticated, nuanced answers to the question on race, suggesting they had put a good deal of thought into the topic prior to participation in this study. A majority of the responses explicitly referenced structural discrimination and/or subtle forms of racism.

*I believe that the legacy of systemic and institutional racism is so deeply engrained in the fabric of this country that it is discrimination is operative at almost every level, even if not overt.*

*I think the racism is primarily a systemic problem, not an individual problem. Individual people with prejudices can't cause as much damage as an impersonal system that is built on racism. In other words, discrimination isn't the problem; history and a shortage of opportunity create circumstances in which discrimination takes place.*

*The structures and systems within society inherently advantage the white culture. So if overt racism has lessened, which I don't think it necessarily has, society as a whole is made to promote white culture.*

*I believe discrimination is systemic and structural - it is significant.*

*I think we live in a societal system that systematically oppresses blacks on every social level. So, I really don't think there is a whole lot of chance to get a head.*

*The entire basis of our economic situation, starting with slavery, has kept the African American community steeped in limitations and poverty. While it's better than it was in the 1700's or even in the 1960's, it's still got a long way to go.*

*I believe there is still a system of oppression which maintains the hierarchy of the dominant class and keeps the other marginalized. Blacks, Latinos, Muslims and other marginalized people are not given the same opportunities as Whites.*

*There is still substantial discrimination in the U.S. today. Some of it may be subtle or indirect, but it still exists.*

*I believe that America is essentially a white supremacist society. Systemic and aversive racism are a present reality for all persons of color. Everything from housing to employment and significant relationships are under the constant surveillance of the white supremacist culture we live in.*

Many of the responses specified ongoing issues of overt forms of racism, but less in tune with more subtle forms of racism:

*It seems "we" (rich, educated, white, Americans) always have a race/religion/lifestyle that we judge and hold back. It has been moving away from black people towards homosexuals/people from the middle east/obese people.*

*It's more difficult for blacks to get jobs, and to be promoted in jobs. They can get into colleges, they can get scholarships, but earning the equivalent of a white peer is still a struggle for them.*

*While racism is definitely lessening, serious obstacles remain limiting people of color. Discrimination definitely exists and affects persons of color psychologically in addition to limiting jobs and opportunities for promotion.*

*There is significant racial discrimination against all dark skinned peoples in the US. It may be getting better, but it is an everyday occurrence in their lives.*

*I think it would be hard to talk about the USA as a country, there are states when things are different than others, but just last year I saw a Chicago police officer give a ticket to a black driver who happened to be parked in a prohibited way. There were two other cars with white drives, and they did not get a ticket.*

Four of the responses indicated a more equivocal or conflicted stance regarding ongoing issues with discrimination:

*I think discrimination still occurs in the South, but elsewhere it's not as much of a problem.*

*I don't think about this much but I would imagine that there is a lot of discrimination against blacks although I don't do it myself.*

*A tremendous amount, especially in the South.*

*I don't feel that there is much discrimination against blacks today.*

#### Evangelical Seminary - ATH

In response to the open-ended question regarding homosexuality, most of the responses from the evangelical seminary participants reflected the “love the sinner, hate the sin” approach:

*I believe homosexual behaviors are a sin however I don't believe that the person is a bad person or will not befriend them because of it.*

*I would experience some discomfort with being friends with someone who is homosexual, however I would strive to see beyond the action and befriend the person. The tension would come from how to love the person and hate the behavior. As far as the action, I believe it is wrong and should not be accepted as normal.*

*I am working on being accepting toward homosexual individuals and appreciate them for who they are as people. However, I believe that homosexual acts are wrong and inappropriate and should not be condoned.*



*I feel that homosexual individuals are made in the image of God and as such have dignity and value. I feel that homosexual behaviors are contrary to His design for humanity and displeasing to Him.*

*Love the sinner, hate the sin. I believe homosexual behaviors are wrong, however I try to treat a homosexual individual no differently from a fellow Christian who struggles with sinful decisions.*

*I have great empathy for homosexual individuals but I abhor the homosexual behaviors.*

*people ok. behaviors - just another sin.*

*I don't think someone's sexual identity defines them as a person, but I do think homosexuality is wrong and I am against gay marriage. However, I don't hate homosexuals and don't think it's "worse" than any other sin.*

*I do not choose homosexuality as a lifestyle for myself, but I think that if someone wants to live that lifestyle, they will eventually answer for that to God, not me.*

*I don't think that we were created to live and relate to others in that way, but I also don't condemn that particular area of sin as any worse than my own.*

*I feel that they are God's children. Their sin is on the outside therefore they get more sever punishment from Christians. They deserve grace just like anyone else.*

Three of the responses from the evangelical seminary subgroup reflected delineation between a theological viewpoint and civil rights. These responses tended to uphold homosexual behaviors as “sinful” but did not see that as a reason for civil discrimination:

*I feel that these individuals have gotten the short end of the stick and have been singled out by the Christian church. Though I view what they are doing as sin, I have much sin in my life that also needs to be vigorously addressed. I would not want anyone to limit my rights based on the sin I have, nor should it happen to them. We are all equal. God will view straight and gay equally on judgment day. In the end it will not matter, but will be who loves the lord. That is what we should be focusing on. Who in this community loves the Lord. God will do the transforming in his own time.*

*Homosexuals are treated unfairly by nearly all Christians. Christians have proven throughout history that straight people can be wildly sexually immoral so I don't understand the preoccupation with homosexuality as an "abomination". Also, hetero-*

*Christians have been really good at not being committed to their spouses in America, so I don't get why they care if homosexuals get married when they are pretty shitty at it themselves. (I'm making these statements as a white-protestant-married-male).*

*I believe it is absolutely wrong, along with a lot of other rampant behavior exhibited by straight people as well - which is why I don't believe it should infringe on their rights.*

Finally, three students demonstrated conflicted or uncertain viewpoints:

*Tough question. Viscerally very opposed, but cognitively more egalitarian. Feel that in some cases may be the optimal orientation for an individual, but not in all.*

*I am undecided on the issue. I love my friends who are homosexual. I love them as whole people. their sexual orientation is just part of it.*

*personally, a little uncomfortable principally, but I have no argument.*

#### Evangelical Seminary – ATR

Most of the responses from the evangelical seminary subgroup indicated an understanding that discrimination is an ongoing problem, particularly focusing on overt forms of discrimination:

*A little less than how it was in the 1960s... I really do not think it has changed or gotten better.*

*I think there is still a lot of discrimination against blacks in the United States.*

*Sadly, I believe there is quite a bit of discrimination going on today.*

*I think most minorities are discriminated against in the US and sometimes it is in small ways and in other ways it is in larger proportion.*

*I don't know how to quantify it but I would say there is still a considerable amount.*

*I think there is a lot more discrimination against blacks (and other minorities) than most people realize or accept.*

*an incredible amount. racism is alive and rampant.*

*It is much more pervasive than whites would like to admit. I think there is still an interpersonal aspect to the discrimination that is socialized and learned in one's family of origin.*

*They still make less, are in jail more, and get killed off in movies faster.*

Seven of the responses indicated a more equivocal or conflicted stance regarding ongoing issues with discrimination:

*I feel that there is some discrimination, but much less than many make it out to be.*

*I do believe there is still some discrimination, even though sometimes people are unaware of their own prejudices. Those discriminations make it somewhat more difficult for minorities to get ahead, but do not limit their chances.*

*Still some, but worse is their own discrimination against themselves.*

*At least minimal generally, but more in such areas as the South.*

*Some, especially in certain parts of the country, but not as much as many claim that there is.*

*Not as much as they think there is.*

*I haven't witnessed any, but I have heard examples from my black friends so I'm only aware that it exists, but not qualified to give a quantified answer.*

Five of the responses indicated a nuanced understanding of structural or subtle forms of prejudice.

*I think there is still some discrimination, but the main problem is lingering poverty from times when discrimination was more common.*

*A significant amount, though in more subtle and insidious ways than before.*

*I feel that there are definite barriers to the societal advancement of African-Americans, some historical and some cultural.*

*Much. The problem is that now a lot of it is unconscious and ingrained into our system that it is hard to find it and address it properly. But it is completely unfair to ask these people to succeed when the system is sometimes built against them.*

*There is significant subtle racism that exists in "micro-aggressive" acts toward black Americans, such as coaches showing favor to athletes for the assumption that because they are black they will therefore be athletically gifted.*

#### Catholic College - ATH

In response to the open-ended question regarding homosexuality, most of the students from the Catholic college demonstrated unequivocal support for homosexuality and its behavioral expressions:

*I believe that homosexuality is not a choice, and that homosexuals should be free to marry and make their own sexual decisions according to the law. They are just like everyone else.*

*I think that they deserve equal rights in every aspect. Love is love no matter how one may try to define it.*

*I love them.*

*They should have equal rights. No questions asked.*

*I support fully their ability to make their own decisions. If that is God's plan for them, then I won't question it ever. I'm not uncomfortable with them either.*

*Why is that a question? They are like everyone else, but I prefer people of the same gender romantically.*

*I am fine with homosexual individuals and homosexual behaviors, because it is not their choice to be a homosexual and they are simply trying to live their lives.*

*I have no problem with homosexual individuals and behaviors. I am a very religious person and believe that there is nothing wrong at all with homosexual individuals and behaviors.*

*Deserve equality in every way. Shameful that it is still regarded as deviant.*

*Whatever floats your boat. I have no problem with it. They should not be forced to live a lie.*

*I feel that anyone has the right to love whoever they choose and the issue of homosexuality is much more complex than most people give it credit for.*

Two of the Catholic college students demonstrated conflicted viewpoints in their responses:

*I struggle a lot with this issue. I think all people are called to be chaste, whether hetero- or homosexual. I think there is something that is wrong about homosexual behavior. It is condemned in the Bible and it just does not seem natural. But I know many homosexual couples in committed relationships and I somehow think that if they are loving toward each other and committed to each other, that there has to be something right about their love.*

*I am in the processing of coming to terms with my feelings on this issue. I have nothing against homosexual individuals, some of my best friends identify as homosexuals. My gut instinct also tells me that there is nothing wrong with homosexual behavior, though I am having difficulty reconciling this with what my religion tells me is right. I am beginning to think that my religion is wrong on their beliefs concerning homosexuality and leaning towards my gut instinct.*

Three of the Catholic college students expressed unsupportive or apathetic attitudes toward homosexual behaviors:

*I had a number of homosexuals who I was friends with. I don't approve of homosexuality in general, but that does not make them bad people.*

*I accept homosexual individuals for who they are, but cannot stand seeing homosexual behaviors in front of my eyes. I also do not support homosexual marriage.*

*I don't care.*

#### Catholic College – ATR

Eight of the responses from the Catholic college sample indicated an understanding that discrimination is an ongoing problem:

*Although discrimination against blacks in America is less, I think it does still exist. I don't really know how to answer the question "how much", but I think that most black adults have experienced discrimination in some form at least once in their lifetime.*

*I think it's a very complex cyclical issue, but I do believe there is discrimination against blacks, particularly those from low-income households, that limit their chances to get ahead.*

*I think that there is a lot of discrimination against blacks, but the American public likes to con itself into believing that it is peaceful.*

*I feel that it is still an issue today.*

*Definitely not as much as there used to be; I still feel that more of a focus should be put on the root of the disadvantage: education.*

*There is less discrimination than decades ago, but discrimination is still present due to lingering biases in society.*

*Blacks have had to deal with stereotypes for many centuries and I feel like it creates a self-fulfilling prophesy in some ways. I think that a black child has a much more difficult time than I had growing up because they are constantly dealing with stereotypes of the past.*

*I think there is still a considerable amount of discrimination because people still perceive blacks as lazy.*

However, the majority of the responses from the Catholic college subgroup were equivocal:

*I feel that there is enough discrimination against blacks to limit a good amount of their chances for getting ahead. I don't feel as though that it is a problem that has gone away but I also think that some take advantage of it.*

*There is less discrimination than it was in the past, but definitely still some. However, society is making progress because Blacks are more involved in public affairs now.*

*I feel there is not as much discrimination as in the past, but there is some stereotyping. Not a lot where I live, maybe in other places of the country but I would not know about that.*

*I believe that there is an internal bias that is related to blacks, but generally that it is a result of their separate culture and mannerisms. However programs like affirmative action compensate for any inherent bias.*

*There are a lot of discriminatory undertones, and this shouldn't limit their chances to get ahead, but it might in some cases just based on the situation they are in and the people involved.*

*I believe there is still some, but in the workplace, it is now very open and accommodating to blacks, although some personal prejudices still exist.*

*There is still quite a bit, but I oppose things like Affirmative Action in college admissions, the workplace, etc.*

*Coming from a region that is extremely lacking in diversity, I have typically been exposed to the opposite discrimination, where black people tend to get promotions and advantages before white people. However, from things that I hear from other regions, I believe that there is still a lot of discrimination against the black population and prejudice that keeps them from getting further ahead in life.*

*Some entrenched prejudices limit blacks, not necessarily legislation/systematic discrimination.*

*Alot. and it's all self-created. They put it upon themselves.*

*I grew up with my best friend and neighbor both being black. I did not experience a lot of discrimination with them.*

Only one student addressed systematic discrimination explicitly:

*I feel there is systemic discrimination against blacks, which limits their chances of getting ahead. I think we have a long way to go before we rid the United States of such discrimination.*

#### Women's College/Undergraduate University - ATH

In response to the open-ended question regarding homosexuality, the WC/UU responses were pretty evenly divided between unequivocal support for homosexuality and prejudicial attitudes toward homosexual behaviors. The following responses demonstrated supportive responses toward homosexual individuals and behaviors:

*I have no problem with them, I try not to let that be a factor in a friendship, and I support gay marriage*

*It doesn't bother me. It is their life and homosexual individuals should be able live it in the way they want.*

*I really and truly do not care. It's never once made me uncomfortable, several friends of mine are gay. They're humans first, friends second, sexual orientation last.*

*They are equals to others.*

*Accepting*

*Doesn't bother me.*

*I don't feel uncomfortable with homosexuals.*

The following responses demonstrated equivocal or conflicted attitudes toward homosexual behaviors:

*I love the sinner NOT the sin!*

*I don't mind homosexual individuals. I am not comfortable with homosexual behaviors because they are unfamiliar to me.*

*I don't think it's an established natural order.*

*One of my very closest friends is a homosexual. I can talk to him about anything, including my opinion of homosexual behavior. I believe homosexual acts are wrong, but I also believe to be kind and loving to everyone regardless of their beliefs. I can't ask someone to be respectful of my beliefs if I can't be respectful of their beliefs.*

*As long as I am not seeing it, I am fine with whatever they do in privacy*

*I still struggle with this issue! There's a basic part of me that believes it is wrong. I also believe that the accepting of gays has been crammed down our throats by an extremely liberal (& slightly gay) media. I'm okay with most of their rights but it's still uncomfortable for me to watch them kiss and I don't believe in them getting married, but more because of clogged courts with divorces!!!! I do think they should be allowed to adopt, teach, work, fight, etc. with everyone else. I guess I just don't quite know yet where I stand. It's a struggle for me. My teenage kids are totally accepting and I tend to think it's a generational thing....*

Finally, three of the responses demonstrated apathetic viewpoints:

*I don't know I am not homosexual.*

*I am unconcerned.*



*That's their own business. Whatever I say or do probably won't affect them in any regard.*

### Women's College/Undergraduate University - ATR

Six responses from the WC/UU subgroup suggested an understanding that discrimination is an ongoing problem for African Americans today:

*It happens all the time.*

*It's hard to say how much but I do believe discrimination against blacks still occurs in today's society.*

*I still think there is still discrimination not as much as before but there still is some.*

*On the forms regarding race, it still shows the black category instead of African American.*

*I feel some discrimination still exists, but that it has improved in my life time. I think it will still continue to improve as the next generations grow up.*

*While things are getting better, there are still some areas in the US where blacks are getting discriminated against. I would say we are at about 85% of the way to equality.*

The majority of the students gave equivocal answers or ones which denied ongoing discrimination:

*I don't think there is discrimination against blacks; because the blacks I know are not facing discrimination.*

*It strongly depends on socialization & location*

*Not really sure, I would like to read more about that.*

*There will be discrimination no matter what race/ethnicity a person is. Some have it easier than most, but most people get discriminated regardless of gender, race, ethnicity or religious beliefs.*

*Overall I think that blacks have the same advantages as others. I believe that about all races, although I'm fully aware some have more struggles. But fundamentally I believe*

*that everyone can pull themselves up and do better. I know we all come from a different place, but it's possible and I don't think being black is an excuse not to make yourself better.*

*I don't know it's hard for me to answer this question since I am not African American.*

*I don't really know. I see it as a problem in the media, but I don't really ever see first hand.*

*I feel there is very little discrimination. Blacks are often given more opportunities to improve at universities with scholarships and so forth and in obtaining interviews so a company can meet some quota that gives them an unfair advantage over white males. still some, but not as much as 30-50 years ago.*

*A fair amount, really haven't heard much of either side though.*

*I think there is now reverse discrimination.*

One student addressed issues related to subtle and/or structural discrimination:

*I think conscious discrimination does occur, but not nearly to the level that it has in the past. I would hesitate to say it exists more so than any other ethnicity, and if it did, it does not by too large an amount. Discrimination is wrong in general, but no ethnicity and/or race has monopolized it. I would note that there is still a fair amount of unconscious discrimination (a child in a poor family has less opportunity than in a rich, an uneducated less than an educated, and so on). I feel this is more due to history and culture than conscious discrimination, as it affects every race and ethnicity; but minorities tend to experience this worse.*

### Summary of Results

Overall, the results of this study were inconclusive with regard to the role of cognitive complexity in the relationship between religious orientation and prejudice.

There simply was not enough range within the RCI data to determine whether it was a factor. However, the results of this study did support previous research in terms of the relationships between religious fundamentalism, Christian orthodoxy, quest and prejudice. Indeed, as with other studies, a strong, positive relationship was found between

religious fundamentalism and prejudice and a negative relationship was found between quest and prejudice. In addition, a positive relationship was found between Christian orthodoxy and prejudice. In a surprising twist, a positive relationship was also found between intrinsic religious orientation and prejudice, while no relationship was found between extrinsic religious orientation and prejudice.

While reflective judgment did not account for any of the variability in this study, school did account for some of the variability. The relationship between Christian orthodoxy and prejudice toward homosexual individuals disappeared when school was accounted for. Participants in this study who identified with orthodox Christian beliefs did not all address issues related to homosexuality in the same manner, and the environment in which they were studying impacted their attitudes. Finally, it was noteworthy that the qualitative responses from the undergraduate subgroups seemed to be more prejudicial than the quantitative analysis indicated.

## **CHAPTER FIVE**

### **DISCUSSION**

The purpose of this study was to explore whether cognitive complexity, as operationalized by the Reflective Judgment Model (RJM), and measured by RCI, might help to explain any of the variability in the relationships between religious orientation and prejudice. While a relationship between cognitive complexity, religious orientation, and prejudice has been theorized (Hunsberger & Jackson, 2005), it had yet to be tested using a standardized measure of cognitive complexity such as the Reflective Judgment Model. This study tested empirically whether there would be significant relationships between reflective judgment and religious orientations, reflective judgment and RWA, and reflective judgment and prejudice, and whether reflective judgment would help to explain the variability in the relationships between religious orientation and prejudice.

Overall, the results of this study were inconclusive with regard to the role of reflective judgment in the relationship between religious orientation and prejudice. However, results did support previous findings in the psychology of religion establishing a significant positive relationship between religious fundamentalism and prejudice toward a variety of subgroups. In addition, results of the current study supported previous research indicating that Right-Wing Authoritarianism (RWA) has a significant positive relationship with prejudice – and in the case of the present study, particularly racial prejudice. Results of the current study also supported previous findings suggesting

a negative relationship between quest orientation and various forms of prejudice. Finally, the inclusion of school as a predictor in the current study, helped to clarify the role of educational environment in the relationship between Christian orthodoxy and prejudice, particularly with regard to gay and lesbian individuals (Altemeyer & Hunsberger, 2004, 2005; Veenvliet, 2009; Whitley, 2009; Hall, Matz, & Wood, 2010).

The following chapter will present a discussion of the findings including the following areas: 1.) RCI scores; 2.) the key findings from the quantitative analysis of the study, including insights provided by the qualitative portion of the study; 3.) the findings with regard to RWA, attitudes toward women and racial prejudices; 4.) implications for future research; and 5.) limitations of the current study.

### RCI Scores

Building on a large body of social psychology research indicating a strong cognitive component in prejudice, this study sought to assess whether cognitive complexity might be a predictor of prejudice, and also a predictor of religious orientation, thereby explaining the variability in the relationship between religious orientation and prejudice. In order to test this hypothesis, a wide-range of religious orientations and reflective judgment levels was sought. Strategic sampling was used in order to recruit participants from first and second year undergraduate students, as well as upper-level undergraduate students. Participants were also recruited from graduate level programs – both Master’s degree and doctoral level students. Finally, participants were recruited from a non-sectarian institution, a Catholic institution, a conservative seminary, and a progressive school of theology.

RJM research suggests a strong correlation between reflective judgment and education level. Longitudinal and cross-sectional research has shown that individuals increase in reflective thinking with each year of formal education: high school students are expected to demonstrate pre-reflective thinking (stages 2 and 3), while graduate students often demonstrate optimal levels of reflective thinking (stages 6 and 7) (Kitchener, 2002). While RCI scores tend to be higher, on average, than the RJI scores used in much of this research, they tend to follow the same incremental pattern: as education level increases, so do RCI scores. As such, the sample for this study – comprised of 44 undergraduates ranging from first to fourth year, and 62 graduate students including some doctoral level students – was expected to generate a wide range of reflective judgment scores from stages 3 – 7.

However, no statistically significant differences were found among the institutions sampled for this study on RCI score – a finding that was completely unexpected. Indeed, there should have been a difference between the undergraduate and graduate institutional subgroups in terms of RCI scores. In general, the undergraduate sample in this study obtained higher RCI scores than expected. The WC group, comprised mostly of non-traditionally aged female students, had an average RCI score of 5.13 – well above the average RCI score expected for undergraduate students in their first years of college. The average RCI score for the Catholic college subgroup was 4.94, also higher than expected for undergraduate students in their first years of college.

While the RCI scores did have a mild correlation with education level, that relationship disappeared when controlling for age. The WC sample was obtained from a non-traditionally aged population of female undergraduates. It seems that when the non-

traditionally aged WC students were accounted for, the relationship between RCI and education level disappeared, indicating that age was a more important predictor of RCI than education level was. It is possible that the greater breadth of life experiences of non-traditionally aged working women impacted their RCI scores, regardless of their educational level. However, prior research on reflective judgment has indicated that non-traditionally aged undergraduate students do not have significantly higher scores than their traditionally aged counterparts (Fischer & Pruyne, 2002); therefore, age difference was not expected to make a difference in the scores obtained between the two undergraduate subgroups.

The high percentage of female respondents should also be addressed. In general, research suggests there is no significant difference in terms of gender with regard to reflective judgment (King & Kitchener, 2002). If anything, females may score slightly lower than their male counterparts, which would suggest that the female response bias would have skewed the WC RCI averages *lower* than expected, not higher. In addition, the female response bias was distributed throughout each of the institutional subgroups: 67.2% of the progressive seminary respondents were female; 78.6% of the evangelical seminary respondents were female; 79.2% of the UU/WC respondents were female; and 57.8% of the Catholic college respondents were female. Therefore, it seems unlikely that a female response bias contributed unduly to the higher than expected RCI average for the WC subgroup.

The CC sample was obtained from a very competitive undergraduate institution that admits students with only the highest SAT scores. Research has suggested a mild correlation between reflective judgment and performance on standardized aptitude tests

such as the SAT (King & Kitchener, 1994). Furthermore, the students recruited from Catholic college were recruited from a selective leadership program within the school. It is possible that the CC students sampled developed higher than average cognitive complexity skills through taking advantage of a variety of educational and leadership training opportunities.

All in all, the high RCI scores in the undergraduate population are a positive finding for the educators at the two undergraduate institutions represented. In particular, the average RCI score for the WC group was slightly higher than the average for the CC group; and the WC group had a higher percentage of students in the stage 6 reflective thinking category. One of the most effective uses of the RCI is to compare group averages (King & Kitchener, 2002); and in this instance the non-traditionally aged sample from WC performed very well in terms of cognitive complexity in comparison to the traditionally-aged sample of Catholic college leadership students and to graduate level seminarians. The majority of WC students sampled are already utilizing quasi-reflective thinking; and faculty would do well to recognize the aptitude for cognitive complexity and help them progress into reflective thinking levels as they continue through their undergraduate studies.

In terms of the graduate samples, in general, the students performed as expected though more individual scores in the reflective thinking level were anticipated from each of the graduate institutions. King & Kitchener (2002) found that entering graduate students tend to fall into the Quasi-reflective level, while advanced graduate students cluster between stages 5 and 6. In addition, research has indicated that students who specialize in the social sciences and humanities tend to do better in terms of reflective



thinking than those in science and math (Fischer & Pruyne, 2002). While a small percentage of the graduate students did fall into the highest level of reflective thinking, there were not as many students scoring in the reflective thinking (levels 6-7) range as anticipated.

It is possible that the graduate schools sampled are not doing as well as they could to help students move into advanced levels of reflective thinking. Indeed Dale (2005) found that graduate students at a specific evangelical seminary did not improve in their reflective thinking skills over the course of their seminary education. Dale (2005) hypothesized that the epistemology of revealed knowledge emphasized at the evangelical school she studied may have precluded students from advancing to the reflective thinking level.<sup>8</sup> A slightly higher percentage of the progressive seminary students were categorized as reflective thinkers (18.5%) than the students at the evangelical seminary used for this study (14.2%). However, in general results from the current study suggested no significant differences between the RCI scores of students attending the progressive seminary and those attending the evangelical seminary.

In sum, while encouraging for the undergraduate institutions involved, the fact that this sample did not generate a wide range of RCI scores is unfortunate for the analysis needed in the current study. The cluster of RCI scores in the Quasi-reflective range precluded a meaningful analysis of the relationship between reflective judgment and RWA or reflective judgment and prejudice. Furthermore, there was no significant relationship between RCI and religious orientation – a finding that will be analyzed more thoroughly in the sections on quantitative and qualitative analysis.

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<sup>8</sup> Reflective Thinking is characterized by a view of knowledge that takes into account its constructed nature (King & Kitchener, 1994).

### Key Findings

In terms of its primary hypotheses, the results of this study were largely inconclusive due to the limited range of RCI scores obtained. However, the results do suggest that cognitive complexity may not play as big a role in predicting religious orientation as hypothesized. In addition, this study provides some important insight into the ongoing positive relationship between religious fundamentalism and prejudice, the ambiguous relationship between Christian orthodoxy and prejudice, and the negative relationship between quest orientation and prejudice. In particular, the results suggest that educational institution may account for some of the variability in the relationship between Christian orthodoxy and prejudice. Also, this study provides some insight into the nature of the relationship between intrinsic religious orientation and prejudice, particularly among graduate students studying religion and theology.

The discussion of the results will be presented in terms of four key findings. Qualitative data will be used to aid in the interpretation of each of the key findings.

#### **Key Finding #1: Reflective Judgment did not have a significant relationship with religious orientation, prejudice, or RWA**

The lack of a significant relationship between reflective judgment and religious orientation, RWA, and prejudice was in direct conflict with the primary hypotheses of this study. The following section will focus on the non-significant relationship between RCI and religious orientation. Though the limited distribution of RCI scores makes this finding somewhat inconclusive, this study suggests that reflective judgment may not predict religious orientation as originally hypothesized.

First, the results of the data analysis do not support the hypothesis of this study that as reflective thinking scores increased, quest orientation scores would increase and fundamentalism scores would decrease. The average score on religious fundamentalism for students from the evangelical seminary was 3.16 (SD = 0.42), while the average score on religious fundamentalism for students from the progressive seminary was 1.73 (SD = 0.55). In addition, the average score on quest for students from the progressive seminary was 3.04 (SD = 0.35), while the average score on quest for students from the evangelical seminary was 2.71 (SD = 0.37). Yet, the range and average RCI scores for each of these schools were nearly identical. RCI was simply not a significant predictor of the religious orientation utilized by these individuals.

Second, the results of this study undermined one of the key theoretical underpinnings of the hypothesis regarding cognitive complexity: that quest and religious fundamentalism represent opposite ends of a similar construct related to cognitive style (as suggested by Hunsberger & Jackson, 2005).<sup>9</sup> While there was a significant negative correlation between religious fundamentalism and quest ( $r = -0.303$ ,  $p < 0.001$ ), the relationship disappeared when controlling for school. Indeed, data from the evangelical seminary sample suggested that an individual could have a high average score on religious fundamentalism and a high average score on quest at the same time, providing at least some evidence that the two religious orientations are not mutually exclusive. In other words, this sample suggested that one individual could use a more “absolute”

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<sup>9</sup> Studies have found that religious fundamentalists tend to use less cognitive complexity to think about existential issues (Hunsberger, Alisat, Pancer, & Pratt, 1995, 1996), whereas quest thinkers are more likely to incorporate more sophisticated critical thinking skills to approach their religious beliefs (McFarland & Warren, 1992).

approach to religious truth claims AND still be open to doubt, uncertainty, and to question certain aspects of religiosity.

Individuals high in religious fundamentalism tend to focus on concrete foundational absolutes as their epistemological starting point (e.g. Question #1 from the RF scale: “God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed”). The absolute of the truth claim precedes the methodology for investigating it; and any method for ascertaining that truth is secondary to the primacy of the truth itself. In fact, the point of religious truth claims, to many religious individuals, is that they are taken on faith (e.g. Biblical references such as “We walk by faith, not by sight,” 2 Corinthians 5:7 or “In the beginning was the Word, and the Word was with God, and the Word was God,” John 1:1). Furthermore, religious truth claims are often thought to come directly from God – knowledge is “revealed” from above, not ascertained from below. For individuals high in religious fundamentalism, this epistemology of revealed truth is the foundational starting point upon which subsequent investigations are based, functioning as the contextual or subjective lens through which all other data is subsequently filtered (Dale, 2005).<sup>10</sup>

At the same time, it seems quite possible that high RF individuals, particularly those who are invested in examining their religious beliefs through higher education, find themselves in a cognitive conundrum. Regardless the absolute nature of the original truth claim or claims, there are simply many details of “God’s plan” that are not easily

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<sup>10</sup> This kind of thinking is congruent with stage 5 quasi-reflective thinking. Quasi-Reflective thinkers tend to interpret evidence subjectively and contextually – in other words, a quasi-reflective thinker’s beliefs tend to precede the evidence used to justify those beliefs (King & Kitchener, 2004).

ascertained. Such individuals may believe in abstract absolutes such as heaven and hell, good and evil, and being “for” or “against” God, but have very real questions about how these abstract principles are applied in concrete realities. In other words, they may be absolute about the fact that religious “fundamentals” exist, but very uncertain about how those fundamentals play themselves out in every day life.

In sum, an in-depth look at the data from the evangelical seminary sample may help explain why there was no significant relationship between reflective judgment and religious orientation. The data suggests that religious fundamentalism and quest are not necessarily mutually exclusive orientations, and may be operative simultaneously in one individual. This does not mean that these religious orientations aren’t linked to a cognitive style; however it does suggest that individuals are more complex regarding their cognitive approach to religious viewpoints than originally hypothesized. Indeed, it seems likely, based on this evidence, that a religious thinker could have a variety of approaches to his or her religious viewpoints, including the ability to access different orientations at the same time.

**Key Finding #2: School accounts for some of the variability in the relationship between Christian orthodoxy and prejudice toward homosexuality**

This study suggested that there is a relationship between Christian orthodoxy and prejudice, but contributes new evidence that institution may be a mediating factor. The Christian orthodoxy score ( $M = 3.23$ ,  $SD = 0.76$ ) was the highest average of any of the religious orientation scores in the sample as a whole, and was the highest religious orientation score for each of the institutional subgroups except the progressive seminary,

where the quest average was just slightly higher. While Christian orthodoxy did have a significant positive relationship to prejudicial attitudes, when school was controlled for, the relationship between Christian orthodoxy and prejudicial attitudes toward homosexual individuals disappeared. Indeed, the evangelical seminary seemed to account for much of the variability in the relationship between Christian orthodoxy and prejudicial attitudes toward homosexual individuals.

The lack of prejudicial attitudes toward homosexuality in the CC subgroup was particularly noteworthy, considering it had a higher average score on Christian orthodoxy ( $\underline{M} = 3.04$ ,  $\underline{SD} = 0.74$ ) than either the progressive seminary ( $\underline{M} = 2.91$ ,  $\underline{SD} = 0.78$ ) or WC ( $\underline{M} = 2.99$ ,  $\underline{SD} = 0.74$ ). The qualitative responses from the CC subgroup regarding homosexuality were almost universally accepting and supportive. In addition, several responses were from individuals who identified as gay and lesbian themselves. The quantitative and qualitative data from this subgroup suggested a very pervasive “ethos” of support for and acceptance of homosexual individuals and behaviors – as if they were not even sure why the question was being asked. CC had the youngest average age in the sample by far. One interpretation of this finding is that there is a generational difference in how older students who subscribe to orthodox Christian beliefs approach homosexual behaviors as compared to their younger counterparts. Simply put, younger students may just be more sensitized.

In addition, schools such as CC, WC and the progressive seminary promote accepting attitudes toward gay and lesbian individuals within the larger educational context. Indeed, the qualitative data suggested that personal relationships with homosexual individuals may have had a significant impact on students from these schools

who struggled with prejudicial attitudes toward homosexual individuals for religious reasons. Students from CC and WC wrote:

I struggle a lot with this issue. I think all people are called to be chaste, whether hetero- or homosexual. I think there is something that is wrong about homosexual behavior. It is condemned in the Bible and it just does not seem natural. But I know many homosexual couples in committed relationships and I somehow think that if they are loving toward each other and committed to each other, that there has to be something right about their love.

I am in the processing of coming to terms with my feelings on this issue. I have nothing against homosexual individuals, some of my best friends identify as homosexuals. My gut instinct also tells me that there is nothing wrong with homosexual behavior, though I am having difficulty reconciling this with what my religion tells me is right. I am beginning to think that my religion is wrong on their beliefs concerning homosexuality and leaning towards my gut instinct.

I am uncomfortable witnessing active homosexual sexuality, but I value the friendship of a number of gay people and think some of them are quite wonderful. I admire all of them for their courage in the face of pressures against being fully themselves.

I am undecided on the issue. I love my friends who are homosexual. I love them as whole people. Their sexual orientation is just part of it.

Each of these responses indicated that proximity to homosexual friends or homosexual relationships had challenged thinking on homosexuality. If these individuals were at institutions wherein proximity to homosexual individuals was unlikely, and acceptance of homosexuality was not encouraged, their viewpoints might not be challenged.

Conversely, at schools like the evangelical seminary, where gay and lesbian individuals are less likely to attend, students are struggling with the issue of homosexuality in the abstract, theoretical realm. Indeed, the qualitative responses from these students were almost entirely void of references to personal relationships with homosexual individuals. The answers included nuanced theological viewpoints, but few

references to personal experiences. In fact, two of the statements referenced discomfort with engaging in friendships or relationships with homosexual individuals:

I would experience some discomfort with being friends with someone who is homosexual, however I would strive to see beyond the action and befriend the person. The tension would come from how to love the person and hate the behavior. As far as the action, I believe it is wrong and should not be accepted as normal.

I am working on being accepting toward homosexual individuals and appreciate them for who they are as people. However, I believe that homosexual acts are wrong and inappropriate and should not be condoned.

It seems likely that the lack of proximity to gay and lesbian individuals might preclude theoretical ideals from being challenged by real life encounters and experiences.

Finally, it is possible that orthodox Christian individuals simply choose institutions which reflect their pre-existing values and attitudes. In other words, orthodox Christians who hold strong convictions regarding the morality or immorality of homosexual lifestyles may simply choose to attend institutions which clearly reflect their values.

In sum, school seems to play a role in mediating the relationship between Christian orthodoxy and prejudicial attitudes toward homosexual individuals. Qualitative data suggested that schools which foster proximity to and friendships with gay and lesbian individuals may have helped to challenge theoretical biases against homosexual individuals in those students who held orthodox Christian viewpoints. On the other hand, those schools that do not foster such proximity may keep conversations about homosexuality at a theoretical, abstract level. Finally, it is uncertain to what degree orthodox Christian individuals simply choose schools that reinforce their pre-existing values.



Key Finding #3: Results provided evidence for the impact of a  
“love the sinner hate the sin” approach to homosexuality

Results suggested that students at the evangelical seminary were not any more prejudiced toward homosexual individuals, when controlling for RWA and religious fundamentalism, than students at the other schools, while they continued to be more prejudiced toward homosexual behaviors. Indeed, the differing averages within the evangelical seminary sample on the question regarding homosexual behaviors ( $\underline{M} = 3.12$ ,  $\underline{SD} = 0.54$ ) and those regarding individuals ( $\underline{M} = 1.98$ ,  $\underline{SD} = 0.48$ ) suggested that students distinguished between behaviors and individuals.

Overwhelming evidence from the qualitative data suggested that these students were heavily influenced by a “love the sinner, hate the sin” approach to homosexuality (Veenvliet, 2009). In fact, the majority of the qualitative responses to the question on homosexuality from the evangelical seminary subgroup referenced a “love the sinner, hate the sin” approach explicitly:

I believe homosexual behaviors are a sin however I don't believe that the person is a bad person or will not befriend them because of it.

I feel that homosexual individuals are made in the image of God and as such have dignity and value. I feel that homosexual behaviors are contrary to His design for humanity and displeasing to Him.

Love the sinner, hate the sin. I believe homosexual behaviors are wrong, however I try to treat a homosexual individual no differently from a fellow Christian who struggles with sinful decisions.

I have great empathy for homosexual individuals but I abhor the homosexual behaviors.

People ok. behaviors - just another sin.

Study participants were able to distinguish between support for homosexual individuals (in terms of civil rights, support, friendship, etc.) and condemnation of homosexual behaviors.

Furthermore, the evangelical seminary students who volunteered for this study were all enrolled in the counseling program. Counselors, regardless of whether they are religious or not, are intensively trained to approach individuals with positive regard, even when individual behaviors are considered problematic. The students sampled from evangelical seminary represented a group of highly orthodox Christians training in psychotherapy – counselors who may approach foundational beliefs with fundamentalist tendencies, but who are simultaneously trained to help individuals with unconditional regard. In fact, the unique qualities required to be a counselor, particularly in a very conservative religious setting, may well explain the high RF/high Q constellation found in many of these participants in the evangelical seminary subgroup.<sup>11</sup>

In sum, results of this study are consistent with more recent findings suggesting that the “love the sinner hate the sin” approach to homosexuality does have at least some impact on how students view homosexual individuals (Veenvliet, 2009; Whitley, 2009). Such students were able to support civil rights for gay and lesbian individuals in terms of marriage and discriminatory practices in the work place, even when they believed homosexual behaviors to be sinful. This finding is consistent with social psychology research suggesting that an effective way to reduce prejudice is to maintain the in-group identification (e.g. evangelical students do not tend to support homosexual lifestyles), while helping individuals to increase the complexity with which they understand a

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<sup>11</sup> It would be interesting to see if students enrolled in Biblical studies or theology programs would have had a similar high RF/high Q constellation.

perceived out-group (e.g. separate “sin” from “sinner,” thereby creating a larger in-group of “sinners” of which everyone is a part) (Brewer, 1999; Gaertner & Dovidio, 2005).

Key Finding #4: There was a significant correlation  
between intrinsically oriented individuals and prejudice

Originally, Allport theorized that individuals who were intrinsically motivated to be religious would be less prejudiced than those who were motivated extrinsically (Allport & Ross, 1967). He suggested that intrinsically oriented individuals would be more likely to internalize religious messages of love, respect, and concern for others. On the other hand, he suggested that individuals who were religious for extrinsic reasons – perhaps for potential social benefits – would be less inclined to internalize religious themes of love and good will, and would thereby be more prejudiced. Initially Allport’s theory was supported and intrinsically religious people were found to be less prejudiced. However, more recently, a more positive relationship between intrinsic religious orientation and prejudice has been found as more subtle measures of prejudice have been developed (Hunsberger & Jackson, 2005).

Indeed, the current study provides support for the recent trend in research on intrinsic religious orientation -- a significant, positive relationship was found between intrinsically oriented individuals and prejudice toward homosexuality, while no significant relationship was found between extrinsically oriented individuals and prejudice of any kind. Perhaps not surprisingly, there was a correlation between education level and intrinsic religious orientation in the overall sample. Presumably students who voluntarily enroll in graduate-level religious and theological studies would

take their religious beliefs seriously and would be more likely to internalize religious themes and ideals, incorporating them into everyday life.

When controlling for school and RWA, the relationship between intrinsically oriented individuals and prejudicial attitudes toward homosexual behaviors decreased, and the relationship between intrinsically oriented individuals and prejudicial attitudes toward homosexual individuals disappeared. The evangelical seminary accounted for much of the variability in these relationships, indicated that students high in intrinsic religious orientation at the evangelical seminary were accounting for a large portion of the prejudicial responses.

Qualitative responses from the evangelical seminary students to the open-ended question on homosexuality shed further light on how an intrinsically oriented individual might still retain prejudicial attitudes. Several responses reflected nuanced views that took into account an understanding of unconditional love and also reflected aspects of the theology of *imago Dei*<sup>12</sup>:

I feel that they are God's children. Their sin is on the outside therefore they get more severe punishment from Christians. They deserve grace just like anyone else.

I feel that homosexual individuals are made in the image of God and as such have dignity and value. I feel that homosexual behaviors are contrary to His design for humanity and displeasing to Him.

I am undecided on the issue. I love my friends who are homosexual. I love them as whole people. their sexual orientation is just part of it.

I feel that these individuals have gotten the short end of the stick and have been singled out by the Christian church. Though I view what they are doing as sin, I have much sin in my life that also needs to be vigorously

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<sup>12</sup>Larry Graham (1997) states that “the *imago Dei* is to reflect God’s intention for humanity; it is to be whole, or in the process of becoming whole, rather than to be fundamentally flawed.” (p. 147).

addressed. I would not want anyone to limit my rights based on the sin I have, nor should it happen to them. We are all equal. God will view straight and gay equally on judgment day. In the end it will not matter, but will be who loves the lord. That is what we should be focusing on. Who in this community loves the Lord. God will do the transforming in his own time.

Each of these responses demonstrates an internalized theological ideal that individuals have inherent worth because they are children of God or equal before God. The ability to regard individual worth regardless of individual behavior seems to be congruent with many religious teachings. While the attitudes toward homosexual behaviors were still prejudicial, the qualitative responses suggested that that a designation of “prejudiced” is not as unilateral or one-dimensional as the quantitative results would suggest.

#### RWA and prejudice

Prior research has suggested a consistently significant positive relationship between RWA and many forms of prejudice, as well as RWA and religious fundamentalism (Altemeyer & Hunsberger, 2005). Indeed, prior research has suggested that RWA accounts for much of the variability between religious orientation and prejudice. Results from the current study supported prior research in that there was a significant relationship between RWA and religious fundamentalism and also with each of the prejudice measures. However, when controlling for school and religious orientation, the role of RWA was muted, except with regard to racism. In most cases, the role of school and religious orientation remained strong predictors, or even strengthened as predictors of prejudice, even when accounting for RWA.

The limited impact of RWA in this study is noteworthy. First, the mean for RWA in the sample was low ( $\underline{M} = 2.07$ ,  $\underline{SD} = 0.46$ ). In contrast, the mean for RF in the sample was low, but yielded a wider range of scores ( $\underline{M} = 2.22$ ,  $\underline{SD} = 0.79$ ). Religious fundamentalism tended to be a stronger predictor of prejudice in this study than RWA. It simply may be that the range of the RWA data was too limited to enable a meaningful analysis.

In fact, a closer look at the qualitative data suggested a more complex picture than what was assessed quantitatively. Both of the undergraduate institutions had RWA scores comparable to the evangelical seminary, yet only the evangelical seminary tended to have consistently significant positive relationships to prejudice toward homosexuality when controlling for RWA. Yet, several of the qualitative responses in the undergraduate sub samples used language very consistent with Right-Wing Authoritarian attitudes to justify subtle forms of prejudice not detected by the quantitative scales:

I don't mind homosexual individuals. I am not comfortable with homosexual behaviors because they are unfamiliar to me.

I don't think it's an established natural order.

As long as I am not seeing it, I am fine with whatever they do in privacy

I still struggle with this issue! There's a basic part of me that believes it is wrong. I also believe that the accepting of gays has been crammed down our throats by an extremely liberal (& slightly gay) media. I'm okay with most of their rights but it's still uncomfortable for me to watch them kiss and I don't believe in them getting married, but more because of clogged courts with divorces!!!! I do think they should be allowed to adopt, teach, work, fight, etc. with everyone else. I guess I just don't quite know yet where I stand. It's a struggle for me. My teenage kids are totally accepting and I tend to think it's a generational thing....

The first statement is characterized by fear of the unknown; the second statement is characterized by an understanding of a “natural” or conventional order; the third statement is characterized by a desire to keep unwanted or uncomfortable behaviors private; and the fourth statement addresses a perceived liberal agenda. These kinds of approaches to social issues are strongly reminiscent of Right-Wing Authoritarian attitudes, and indeed manifest subtle forms of prejudice. Yet, in the quantitative analysis, students from these schools tended to have lower prejudice scores.

It may be that the low averages on prejudice toward homosexuality in the undergraduate samples – even in the presence of increased RWA – had to do with targeted educational efforts. At many schools such as the undergraduate schools used in this study, students are being taught differently about homosexuality from the start. In fact, many of the WC students sampled were taking a class on prejudice and discrimination; and the CC students sampled were required to complete intensive training on topics of discrimination, including those related to gay and lesbian individuals. While these students may have latent “automatic” prejudicial biases, including RWA tendencies, they were perhaps more adept at inhibiting their biases -- when given contrasting options -- as a result of the targeted education they have received than those students at the evangelical seminary (Devine, 1989, 2005).

As a final note, it would be interesting to investigate the level at which targeted educational efforts impact motivation to reduce prejudice. The qualitative data from this study would suggest that the undergraduate students were not necessarily less prejudiced than those at the evangelical seminary, but were perhaps more adept at inhibiting latent or subconscious prejudicial responses. Plant and Devine (1998) developed a scale to

distinguish between internal motivations for inhibiting prejudice, and external motivations for inhibiting prejudice. Recent studies have suggested that internally motivated individuals carry out their non-prejudicial values in much different ways than externally motivated individuals (Plant & Devine, 2008, 2009). A follow-up study to determine the motivations of study participants might help to shed light on the discrepancy between the quantitative and qualitative response sets in the undergraduate samples.

#### Attitudes Toward Women and Attitudes Toward Racism Scales

The average scores on the scales used to assess attitudes toward women ( $\underline{M} = 1.66$ ,  $\underline{SD} = 0.41$ ) and attitudes toward race ( $\underline{M} = 1.71$ ,  $\underline{SD} = 0.45$ ) were extremely low in this sample. As a result, any conclusions about relative levels of prejudice will be interpreted with caution. Instead, a critique of the scales used will be offered.

In terms of attitudes toward women, religious orientation was not a significant predictor of attitudes toward women when controlling for school. The students sampled from WC and the PS tended to be less prejudiced toward women than the students sampled from CC and ES. Gender played a large role in mediating this relationship, particularly with regard to the WC sample, which was comprised exclusively of women. However, with such a low average and range of scores, it does not seem warranted to draw meaningful conclusions about the relative levels of prejudice toward women from students in the CC ( $\underline{M} = 1.83$ ,  $\underline{SD} = 0.4$ ) and ES ( $\underline{M} = 1.94$ ,  $\underline{SD} = 0.33$ ) sub samples. In general, the scores indicated a relatively low amount of prejudice toward women across the board.



This could be interpreted as wonderful news! However, it is likely that the Attitudes Toward Women scale used was simply not sophisticated enough to detect subtle forms of prejudice. The best evidence for this assessment came from an impromptu interview with one of the students who completed the survey. This undergraduate student saw me in the hallway while I was giving classroom presentations and approached me to talk about the survey. He mentioned that the questions about gender were “way old fashioned.” I asked the student whether he thought there were still prejudicial attitudes toward women among his fellow students. His unequivocal answer was “yes!” He then said, “guys have no problem with the fact that women are smart and career-oriented – that’s way old-fashioned...but they still see them as bitches and hoes and that is as present as it ever was!” In other words, it is most likely that the scale used in this study simply did not have the nuance to capture subtle attitudes of prejudice toward women that emerge in much different ways on college campuses today than they did decades ago.

With regard to attitudes toward race, RWA was the most prominent predictor of prejudicial attitudes. When accounting for RWA, the relationship between religious fundamentalism and prejudicial attitudes toward race disappeared, as well as the relationship between the progressive seminary and non-prejudicial attitudes toward race. In terms of the qualitative data, the answers to the open-ended question on race from the progressive seminary sample were extremely nuanced and showed evidence of deeply thought out beliefs about structural discrimination not present in the other samples. These answers supported the quantitative finding that students from the progressive seminary were significantly different from students at the other institutions in their ability to articulate non-prejudicial attitudes toward race.

In contrast, many of the answers, particularly from the undergraduate samples, indicated very little understanding of the nuances of subtle forms of racism:

I feel there is very little discrimination. Blacks are often given more opportunities to improve at universities with scholarships and so forth and in obtaining interviews so a company can meet some quota that gives them an unfair advantage over white males.

Overall I think that blacks have the same advantages as others. I believe that about all races, although I'm fully aware some have more struggles. But fundamentally I believe that everyone can pull themselves up and do better. I know we all come from a different place, but it's possible and I don't think being black is an excuse not to make yourself better.

I don't think there is discrimination against blacks; because the blacks I know are not facing discrimination.

I think discrimination still occurs in the South, but elsewhere it's not as much of a problem.

Several of these responses meet at least two of the criteria for subtle or symbolic racism as explained by Tarman & Sears (2005, p. 733): “1.) racial discrimination is no longer a serious obstacle to blacks’ prospects for a good life, so that 2.) blacks’ continuing disadvantages are largely due to their unwillingness to work hard enough.” Thus, even though the overall average scores on the racism scale were low, qualitative data suggested there was still a considerable amount of subtle racism, particularly in the undergraduate samples.

The scale used to assess racism may explain the disparity between the quantitative and qualitative results. The scale used combined questions from the Symbolic Racism Scale 2000 (Henry & Sears, 2002) -- used primarily to assess subtle racism -- and the Manitoba prejudice scale (Altemeyer & Hunsberger, 1992) -- used primarily to assess overt forms of racism. It is possible that the modified scale simply did not pick up on

more nuanced prejudicial views held by study participants. Perhaps some participants simply knew how to check the right box in terms of discriminatory comments, but when offered a chance to speak freely revealed more of the subtle prejudicial attitudes identified by social psychologist researchers such as Henry & Sears (2002), Dovidio & Gaertner, (2009), and Tarman & Sears (2005).

In fact, the results of this study suggest that the current trend toward assessing implicit prejudice – e.g. Farnham’s (1998) Implicit Association Test (IAT) – may be increasingly important. While explicit measures, such as the one used in this study, ask individuals directly about their attitudes and beliefs, measures of “implicit” prejudice attempt to tap into attitudes which may be at work indirectly and even outside of conscious awareness (Gawronski, et al., 2005). The priming tactics used in implicit testing may have helped to pick up on the more nuanced forms of prejudice that were evident in the qualitative responses of the study participants, but not reflected in the quantitative averages.

### Limitations

One limitation of this study was the sampling method. 119 students started the study, and 15 of those students dropped out without completing the entire study. It is possible that the length of the study, and the fact that it was divided into two parts, discouraged some students from completing the full study. Indeed, the majority of the study participants who did not complete the survey were from the UU subgroup, an important group to the study in terms of obtaining a wider range of reflective judgment scores. Future studies would need to obtain a larger, more diverse sample from each of

the institutions in order to ensure a greater distribution across reflective judgment levels. Finally, the small sample size precluded analysis of more subtle distinctions on each of the relationships assessed.

Furthermore, recruitment efforts may have led to sampling bias. Students were originally targeted to obtain a wide range of students from the undergraduate university – from first year undergraduates to upper level graduate students. However, very few of the UU undergraduates (except the WC students) followed through with completing the survey. Of the 66 UU undergraduate students who agreed to participate, only 7 followed through (9.5%). In contrast, close to 30% of the WC and Catholic college students who agreed to participate in the study followed through. It may be that recruitment efforts were biased toward the CC and WC subgroups. For example, the WC group was recruited from a class on research methodology for which students were designing their own studies – these students had strong incentive to participate. Other WC students were recruited from a class on race and society – a topic which dovetailed nicely with some of the topics touched on in this study. Finally, the CC students were given some class time to begin the study, providing greater incentive to finish it to completion. As a result, sampling bias may have impacted the final results – evoking a sample already biased in terms in many of the study variables.

Another limitation of the study was the scales used. First, a shortened version of the RWA scale – consisting of only three questions – was used in order to reduce the time required to take the already lengthy survey. It is possible that using such a modified version of the scale precluded more nuanced findings regarding the presence of Right-Wing Authoritarian tendencies at the four institutions. Second, score averages on the

Racism scale and the Attitudes Toward Women scale were extremely low with limited range. While it would be exciting to conclude that prejudice toward women and race simply did not exist in these samples, that is unlikely. Instead, it seems likely that more nuanced assessments of subtle or implicit prejudice were needed. Finally, the RCI scale was also problematic in terms of its construct validity. It is a relatively new scale, and much less researched than the RJI. The RCI includes statement recognition tasks in order to assess cognitive complexity, rather than statement production. It seems likely that participants could detect the “right” answer on the RCI scale, without necessarily utilizing cognitive complexity.

Finally, the results of this study would be difficult to generalize. The schools chosen represent very unique institutions with very unique institutional characteristics. Further, the samples from each of the schools represent even more unique sub-sets of students from within each those institutions – for example, from the evangelical seminary the sample was taken entirely from students enrolled in the counseling program and the Catholic college sample was taken entirely from students selected to participate in an exclusive leadership program. It would be extremely difficult to generalize the findings of the sample as a whole or any of the individual sub samples beyond the confines of the institutions in this study.

#### Implications for Future Research

While no significant relationship was found between reflective judgment and religious orientation, RWA, or prejudice, there was an interesting finding in terms of the impact of school on religious orientation and prejudice. While each of the schools had a high percentage of participants high in Christian orthodoxy, only one of the schools had a

high percentage of students high in prejudice toward homosexuality. Future research is needed to focus on the ways in which educational environment may impact religiously orthodox individuals and their views toward homosexual individuals. Specifically, further evidence is needed to determine the role of proximity to homosexual individuals and its impact on prejudicial belief systems.

Secondly, more research is needed to assess whether reflective judgment has an impact on religious orientation or prejudice. The results of this study suggest that it does not; however, a larger study with a more diverse range of reflective judgment scores is needed in order to be more conclusive. The unusually high RCI scores from the two undergraduate institutions, combined with the slightly lower than anticipated RCI scores from the graduate level institutions suggest that the data obtained from this study is not reflective of the larger population of undergraduate and graduate students. Further research utilizing a more evenly distributed sample of RCI scores may reveal different results. In addition, different tools for assessing cognitive complexity should be considered.

Finally, a more in-depth look is needed in order to determine whether quest and religious fundamentalism are measuring opposite ends of a similar construct. Indeed, the possibility that an individual can simultaneously access both fundamentalist and quest tendencies with regard to religious belief systems suggests that religious individuals are more complex than initially thought. Future research would do well to focus on high RF/high quest individuals in order to determine the ways in which these two orientations work together, and how that constellation may be targeted in order to understand the complexity of prejudicial belief systems.

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## Appendix A.

### STAGES OF REFLECTIVE JUDGMENT

#### **Pre-Reflective Thinking - Stage 1**

##### *Belief System:*

- A concrete, single-category belief system.
- No separation of the self from what is true or known.

##### *View of Knowledge:*

- Knowledge assumed to exist absolutely and concretely; not understood as an abstraction
- Knowledge obtained with certainty by direct observation.

##### *Concept of Justification:*

- Beliefs need no justification because belief corresponds absolutely to truth.
- No differentiation between individual belief and what authorities say is true.

#### **Pre-Reflective Thinking - Stage 2**

##### *Belief System:*

- Believes that there is a true reality that can be known with certainty but is not known by everyone.
- One's own view and the views of "good" authorities are seen as right, while others' views are seen as wrong, ignorant, misled, uninformed, maliciously motivated, and so on.
- Some separation of the self from what is true or known.
- Beliefs differentiated into right beliefs and wrong beliefs.

##### *View of Knowledge:*

- Knowledge is assumed to be absolutely certain or certain but not immediately available.
- Knowledge comes directly through the senses (as in direct observation) or via authority figures.

##### *Concept of Justification:*

- Beliefs are either unexamined and unjustified, or justified by their correspondence with the beliefs of an authority figure.
- Most issues are assumed to have a right answer; differences between views can be resolved simply.

#### **Pre-Reflective Thinking - Stage 3**

##### *Belief System:*

- Believes that in some areas even authorities may not currently have the truth.
- The understanding of truth, knowledge, and evidence remains concrete and situation bound.

##### *View of Knowledge:*

- Knowledge is assumed to be absolutely certain or temporarily uncertain.
- In areas of temporary uncertainty, only personal beliefs can be known until

absolute knowledge is obtained.

- In areas of absolute certainty, knowledge is obtained from authorities.

*Concept of Justification:*

- In areas in which certain answers do not exist, defends beliefs as personal opinion because the link between evidence and beliefs is unclear.

#### **Quasi-Reflective Thinking - Stage 4**

*Belief System:*

- Believes that one cannot know with certainty.
- Emergence of knowledge understood as involving abstraction, not limited to concrete instances.
- Begins to understand the need to relate evidence to belief and distinguish beliefs from evidence for those beliefs.

*View of Knowledge:*

- Knowledge is uncertain.
- Knowledge claims are idiosyncratic to the individual since situational variables dictate that knowing always involves an element of ambiguity.

*Concept of Justification:*

- Beliefs are justified by giving reasons and using evidence, but the arguments and choice of evidence are idiosyncratic.
- Does not acknowledge qualitative differences between experts' opinions and thinker's own opinions or between different experts' opinions.

#### **Quasi-Reflective Thinking - Stage 5**

*Belief System:*

- Believes that while people may not know directly or with certainty, they may know within a context based on subjective interpretations of evidence (relativism).
- Able to differentiate and integrate knowing and justification, unconsidered claims and considered evaluation, and opinions of authorities and opinions of self.
- Unable to weigh evidence for competing views beyond the perspective each allows or to otherwise integrate perspectives (claims in physics v. claims in sociology).

*View of Knowledge:*

- Knowledge is contextual and subjective because it is filtered through a person's perceptions and criteria for judgment.
- Only interpretations of evidence, events, or issues may be known.
- May prefer offering balanced views of differing perspectives and avoid choosing one as better or right.

*Concept of Justification:*

- Beliefs are justified within a particular context by the rules of inquiry for that context and by context-specific interpretations of evidence.
- Acceptance of knowledge as contextual leads to identifying ways of knowing that allow for interpretations.

## **Reflective Thinking - Stage 6**

### *Belief System:*

- Believes that knowing is a process that requires action on the part of the knower.
- Initial recognition that ill- structured problems require solutions that must be constructed.
- Abstracts common elements from different perspectives.
- Looks for ways to integrate conflicting elements in a more inclusive framework; able to draw cross-domain comparisons and conclusions.

### *View of Knowledge:*

- Knowledge is constructed into individual conclusion about ill structured problems on the basis of information from a variety of sources.
- Can make interpretations based on evaluations of evidence across contexts and on the evaluated opinions of reputable sources.

### *Concept of Justification:*

- Beliefs are justified by comparing evidence and opinion from different perspectives on an issue or across different contexts.
- Constructs solutions that are evaluated by criteria such as the weight of the evidence, the utility of the solution, and the pragmatic need for action.

## **Reflective Thinking - Stage 7**

### *Belief System:*

- Believes that while reality is never a given, interpretations of evidence and opinion can be synthesized into epistemically justifiable conjectures about the nature of the problem under consideration.

### *View of Knowledge:*

- Knowledge is the outcome of a process of reasonable inquiry that constructs solutions to ill-structured problems are constructed.
- Solutions are evaluated in terms of what is most reasonable or probable on the basis of the current evidence.
- Solutions are reevaluated when relevant new evidence, perspectives, or tools of inquiry become available.

### *Concept of Justification:*

- Beliefs are justified probabilistically on the basis of a variety of interpretative considerations, such as the weight of the evidence, the explanatory value of the interpretations, the risk of erroneous conclusions, the consequences of alternative judgments, and the interrelationships of these factors.
- Defends conclusions as representing the most complete, plausible, or compelling understanding of an issue on the basis of the available evidence.

Excerpted from Patricia M. King and Karen Strohm Kitchener, *Developing Reflective Judgment: Understanding and Promoting Intellectual Growth and Critical Thinking in Adolescents and Adults* (San Francisco: Jossey-Bass, 1994), p. 14-16.

## **Appendix B.**

### **INFORMED CONSENT FORM**

#### **DISSERTATION RESEARCH**

#### **The Role of Reflective Judgment in the Relationship Between Religious Orientation and Prejudice**

You are invited to participate in a study that will investigate the relationship between cognitive style, religious orientation, and prejudice. In addition, this study is being conducted to fulfill the requirements of a doctoral dissertation. The study is conducted by Alison Cook. The results of the study will be used to complete the doctoral dissertation and might be published in a journal. Alison Cook can be reached at [alcook@du.edu](mailto:alcook@du.edu). This project is supervised by the dissertation committee chair, Dr. Sandra Dixon, Department of Religious Studies, University of Denver, Denver, CO 80208, [sdixon@du.edu](mailto:sdixon@du.edu).

Participation in this study should take about 30 minutes of your time. Participation will involve selecting multiple choice options in response to statements about your views on religion, prejudice, and cognitive dilemmas. There are also 4 open-ended questions you may choose to complete. Participation in this project is strictly voluntary. The risks associated with this project are minimal. If, however, you experience discomfort you may discontinue the survey at any time. We respect your right to choose not to answer any questions that may make you feel uncomfortable. Refusal to participate or withdrawal from participation will involve no penalty or loss of benefits to which you are otherwise entitled.

Your responses will be identified by code number only and will be kept separate from information that could identify you. This is done to protect the confidentiality of your responses. Only the researcher will have access to your individual data and any reports generated as a result of this study will use only group averages and paraphrased wording. However, should any information contained in this study be the subject of a court order or lawful subpoena, the University of Denver might not be able to avoid compliance with the order or subpoena. Although no questions in this interview address it, we are required by law to tell you that if information is revealed concerning suicide, homicide, or child abuse and neglect, it is required by law that this be reported to the proper authorities.

If you have any concerns or complaints about how you were treated during the interview, please contact Susan Sadler, Chair, Institutional Review Board for the Protection of Human Subjects, at 303-871-3454, or Sylk Sotto-Santiago, Office of Research and Sponsored Programs at 303-871-4052 or write to either at the University of Denver, Office of Research and Sponsored Programs, 2199 S. University Blvd., Denver, CO 80208-2121.

You may keep this page for your records. Please sign the next page if you understand and agree to the above. If you do not understand any part of the above statement, please ask the researcher any questions you have.

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I have read and understood the foregoing descriptions of the study called The Role of Reflective Judgment in the Relationship Between Religious Orientation and Prejudice

I have asked for and received a satisfactory explanation of any language that I did not fully understand. I agree to participate in this study, and I understand that I may withdraw my consent at any time. I have received a copy of this consent form.

Signature \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_ I would like the following e-mail address to be entered into a drawing for a \$50.00 gift card at Amazon.com (the winner will be notified via e-mail): \_\_\_\_\_

\_\_\_\_\_ I would like a summary of the results of this study to be sent to me at the following e-mail address: \_\_\_\_\_

## Appendix C.

### Student Recruitment Script (IRB Approved)

-My name is Alison, and I am a doctoral student at DU, conducting research for my dissertation in the psychology of religion.

-I am collecting data on the attitudes and beliefs of undergraduate and graduate level students from several different schools. The survey asks questions about your personal beliefs and values including your spiritual and religious perspectives and your attitudes about others.

-While I am interested in your individual perspective, I am also interested in group differences between the different schools and institutions. So your participation is crucial to ensuring that \_\_\_\_\_'s perspective is well-represented.

-Participation in this study will provide you with an opportunity to reflect on your values and beliefs about some really significant cultural issues. I would be happy to provide you with a copy of the results so that you can see how others around you are thinking about these issues as well.

- Your responses will be entirely confidential and anonymous – none of the information you provide will be connected to you as an individual. There are no right or wrong answers – so please be as honest as you can.

-The survey should take about 20-30 minutes to complete. There are 2 parts. The first will ask you to respond to 3 questions about contemporary issues. The second part will ask you to respond to multiple choice questions about your personal beliefs and attitudes.

#### HAND OUT INFORMED CONSENT

-Please review this Informed Consent document. If you are interested in participating in the study, please sign and date the second page and return to me at the end of class. *Your participation in this study is strictly voluntary and participants may skip any questions they do not wish to answer.* If you choose to participate, please sign the second page of the informed consent document and return to me along with your e-mail address. You will then receive a randomly assigned Subject ID code, along with the necessary instructions to complete the on-line survey. Your subject ID code will in no way be linked to your name or e-mail address.

-By returning the signed informed consent document, along with your e-mail address, you will automatically be entered into the drawing for a \$50.00 gift card at Amazon.com. The winner will be contacted by e-mail.



**Appendix D.**  
**SURVEY INSTRUCTIONS**

Subject ID: \_\_\_\_\_

1. Go to [www.reflectivejudgment.org](http://www.reflectivejudgment.org)
2. Select “Univ of Denver research project” from the dropdown menu in the Login box.
3. Enter the following password: **p1oneers**
4. Enter the Subject ID provided for you at the top of this page.
5. Complete the Demographic Information and the 3 “Current Issue” sections.
6. Click on the link at the end of the RCI to go to Part II of the survey.
7. Enter the same Subject ID provided for you at the top of this page.
8. Complete the rest of the survey.

## Appendix E.

### Reasoning About Current Issues Questionnaire

Transcribed from [www.reflectivejudgment.org](http://www.reflectivejudgment.org)

Copyright Kitchener, Wood, King and Jensen, 2000

#### Purpose

One of the major goals of a college education is to promote the ability to think critically about current issues. This questionnaire is designed to assess how you think about a few current issues; it is not a test of your factual knowledge about these topics, your individual abilities, or your mastery of content of particular classes you may have taken. It is designed to help educators better understand how students think and reason about current issues.

#### Instructions

Because this questionnaire is aimed at understanding how people like you think about various current issues, it asks not only what you think but why you hold the opinions you do.

#### The Task

You will be shown three short descriptions of some current issues. These issues are similar because people sometimes disagree about the best answer.

**For each issue, you will be asked to consider four general questions:**

#### Question 1:

In Question 1, you will be asked for your personal opinion about the issue. Please indicate it in the space provided.

#### Question 2:

For some issues you will be asked:

Why experts disagree.

For other issues you will be asked:

Why you believe the way you do.

Take a moment to consider your opinion about the question. Write down your response to the question in a few sentences in the space provided. (Do not, for example, write down “I think experts disagree.” Or “I think that food additives are safe.”

Instead indicate in a few sentences *why* experts disagree or why you believe the way you do.

Please give the best answer you have to each question.

#### Question 3:

You will be shown statements taken from interviews with people like yourself. Please indicate which statements are most similar to your own views by selecting the

appropriate radio button ( ). For example, if you read sentence A below and decided that it was similar to your views, you would select the radio button labeled Similar as follows:

A. Researchers who are honest will not disagree about whether a particular artificial sweetener is harmful.

Very Similar ( )      Similar ( )      Dissimilar ( )      Very Dissimilar ( )      Meaningless ( )

It may be that your views on a topic do not exactly match the ones presented here. Please indicate a few statements for each issue which are at least somewhat similar.

A check on Reading: Because we have found that some people do not read the statements carefully, we have included some statements that should not make sense to you. When you encounter such statements, mark them as “Meaningless” by selecting that radio button.

Question 4:

You will be asked to indicate your first, second and third choices for which statements are like how you think. Try to rank the top three statements for each issue, even if the statements do not exactly match your views. If only one or two statements are similar to your views, select the “none of these” radio button in the appropriate rankings.

Please select only one statement per ranking.

Ready to proceed with the RCI Questionnaire?

Yes, I've read the instructions, please continue

---

### **Required Demographic information**

Subject ID \_\_\_\_\_

Highest education attained:

- Did not finish high school
- Graduated from high school/GED
- Attended college but did not complete degree
- Completed an associate's degree (AA, AS, etc.)
- Completed a bachelor's degree (BA, BS, etc.)
- Completed a master's degree (MA, MS, MBA, etc.)
- Completed a doctoral degree (PhD, PsyD, JD, etc.)

Gender

- Male
- Female

Birthdate (yyyy-mm-dd)

Race

- American Indian or Alaskan Native
- Asian or Pacific Islander
- Black
- White

Ethnicity

- Hispanic origin
- Not of Hispanic origin

Citizenship

- U.S. citizen (including dual citizenship)
- Non-U.S. citizen

Submit Demographic Information

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### 1. Preparing the Work Force for the 21<sup>st</sup> Century

Educators, civic leaders and members of the business community disagree about how to best prepare the work force of the 21<sup>st</sup> century. Some claim that colleges should emphasize basic subjects such as math, English, or history. If these courses are well-taught, they argue, students will have the general skills necessary for the future. Others argue that the rapid rate of change in the 21<sup>st</sup> century requires specific training in skills that are adaptable to many situations, such as critical thinking or problem-solving. They argue that colleges should emphasize such general skills in order to better prepare people for learning after they leave college.

1. Please indicate your personal opinion on the issue: I think that colleges should do more to:

**Emphasize basic subjects**

**I do not know/  
cannot decide**

**Specifically teach  
critical thinking/  
problem solving**

2. People give different explanations for their opinions about what colleges should emphasize. What is the basis for your point of view about this question? (Please write your answer on the lines provided.)

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3. Many people disagree about this and give different reasons for their own beliefs. How similar is each of the following reasons to the basis for your beliefs about what colleges should emphasize.

VS = Very Similar, S = Similar, D = Dissimilar, VD = Very Dissimilar, M = Meaningless

A. There isn't much proof on either side of the issue about what colleges should emphasize so I believe what I want to believe. My point of view just makes sense to me.

B. The facts aren't very clear because there is so much information involved in deciding what to emphasize in college. So I just believe what seems right to me based on my own background.

C. When I hear people I respect say what they believe about how to best prepare for the work force in the 21<sup>st</sup> century, then I know what to believe.

D. My beliefs are based on what I have been taught about how people should be educated by those who really understand what will be needed in the 21<sup>st</sup> century.

E. I look at the ocular opinions and the assumptions I can draw from its collusiveness. Generally, the facts of this issue must be probabilistic migrated from that which is proven that which is unproven.

F. My point of view is based on an evaluation of the evidence and its fit with related arguments and assumptions. As a result of that evaluation, I am confident about the reasonableness of my conclusion.

G. I believe what I want to believe because there are no correct answers right now. We won't know the right opinion about what colleges should emphasize until some time in the future.

H. The issue of what colleges should emphasize is a very complex one. I try to move beyond quick and easy solutions and draw a conclusion after evaluating and weighting the evidence on both sides.

I. After comparing the interpretations on both sides of the issue, my point of view seems more reasonable to me because the evidence is stronger and the assumptions on which this view is based seem more valid.

J. There are several valid ways of looking at this issue. People's conclusions are related to their assumptions about the nature of the 21<sup>st</sup> century as well as their values and their understanding of the evidence. People's assumptions determine how they interpret evidence.

4. Please rank the statements above (A,B,C, etc.) that are most similar to your thinking. Please check only one statement per line. If no statement beyond one or two is at all like your thinking, check the box labeled "None of These" on the appropriate line(s).

Statement A B C D E F G H I J: is most like how I think.

Statement A B C D E F G H I J None of these: is second most like how I think.

Statement A B C D E F G H I J None of these: is third most like how I think.

---

## 2. Causes of Alcoholism

Some researchers contend that alcoholism is due, at least in part, to genetic factors. They often refer to a number of family and twin studies to support this contention. Other researchers, however, do not think that alcoholism is in any way inherited. They claim that alcoholism is psychologically determined. They also claim that the reason that several members of the same family often suffer from alcoholism is due to the fact that they share common family experiences, socio-economic status, or employment.

1. Please indicate your personal opinion on this issue: With respect to alcoholism, I think that genetic factors:

**Contribute at least partially**

**I do not know/cannot decide**

**Do not contribute**

2. People give different explanations for their point of view about this issue. What is the basis for your point of view about this question? (Please write your answer on the lines provided.)

---

---

---

3. Many people disagree about this and give different reasons for their own beliefs. How similar is each of the following reasons to the basis for your beliefs about what colleges should emphasize.

**VS = Very Similar, S = Similar, D = Dissimilar, VD = Very Dissimilar, M = Meaningless**

A. When I hear a scientist say whether alcoholism is genetically determined or not then I know what to believe.

B. My beliefs are based on what I have been taught about alcoholism by people who really know the right information.

C. There isn't much proof on either side of the issue about the determinants of alcoholism, so I believe what I want to believe. My point of view just makes sense to me.

D. After comparing the interpretations on both sides of the issue, my point of view seems more reasonable to me because evidence appears stronger and the assumptions on which this view is based seem more valid.

E. My point of view is based on my analysis of where the weight of the evidence lies. It is more probable because it best accounts for the evidence and other things I know about related topics, such as other addiction, personality, and genetics.

F. I look at the quality and density of the proof-claim of this issue and align my assumptions intrinsically. The facts of this issue must be probabilistically migrated from what is unproven to proven.

G. I believe what I want to believe about whether alcoholism is genetically determined because there's no right answer right now and there may never be one.

H. There are several valid ways of looking at this issue. People interpret evidence using different criteria; further, their conclusions are related to their assumptions about how scientists do research and draw conclusions.

I. The issue of the causes of alcoholism is a very complex one. I try to move beyond stereotypes and draw a conclusion after evaluating and weighing the evidence on both sides.

J. The facts aren't very clear because there are so many variables involved in assessing the origins of alcoholism. So I just believe what seems right to me about the causes.

4. Please rank the statements above (A,B,C, etc.) that are most similar to your thinking. Please check only one statement per line. If no statement beyond one or two is at all like your thinking, check the box labeled "None of These" on the appropriate line(s).

Statement A B C D E F G H I J: is most like how I think.

Statement A B C D E F G H I J None of these: is second most like how I think.

Statement A B C D E F G H I J None of these: is third most like how I think.

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### 3. Immigration Policy

Some economic experts claim that a less restrictive immigration policy adds to the overall economic prosperity of the United States. Admission of new immigrants, they argue, expands the tax base and economic competitiveness of American products and services. Other economic experts suggest that such policies result in a drain on the medical, financial and educational resources of the United States. These experts argue that a less restrictive immigration policy harms the economic well-being of the country.

1. Please indicate your personal opinion on this issue: I think that a less restrictive immigration policy would generally:

**Harm the economic prosperity of the US**

**I do not know/cannot decide**

**Add to the economic prosperity of the US**

2. How is it possible that different economic experts can disagree or arrive at different conclusions about the effect of immigration policy on economic prosperity? (Please write your answer on the lines provided.)

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3. Many people have heard about disagreements among experts about this, and they suggest different reasons why that might happen. How similar is each of the following reasons to your own understanding of why experts can disagree?

**VS = Very Similar, S = Similar, D = Dissimilar, VD = Very Dissimilar, M = Meaningless**

A. Experts disagree because they approach the issue with different opinions already in mind and then find evidence to support their own opinion.

B. Experts who are honest will not disagree about whether a less restrictive immigration policy improves or reduces the overall prosperity of the United States.

C. Experts disagree about the issue because, like everyone else, they are confused about the role that immigration policy plays in economic prosperity. So what they conclude is just their opinion.

D. Experts disagree about whether enough research has been done to show that a less restrictive immigration policy contributes to or reduces the prosperity of the United States.



E. Experts disagree because of the different ways they were brought up and/or the different schools they attended.

F. Experts might say that one view about the contribution of immigrants to economic prosperity was better, but they would also say that this viewpoint was relative to a particular of understanding this issue.

G. Experts disagree because the rule for allusiveness offers a solidified basis for choosing whether immigrants contribute to economic prosperity or reduce it.

H. Experts arrive at different conclusions because the evidence itself is complex and they examine it from several perspectives. They arrive at a decision based on synthesizing their knowledge, experience and other expert opinions.

I. Experts disagree because they are really interested in different facets of the issue and the ways to more clearly understand one facet of the issue are different than the ways to more clearly understand other facets.

J. Experts disagree because their evaluation of the evidence leads them to defend different conclusions. Some experts' conclusions are more reasonable, however, and reflect a more comprehensive synthesis of the available information.

4. Please rank the statements above (A,B,C, etc.) that are most similar to your thinking. Please check only one statement per line. If no statement beyond one or two is at all like your thinking, check the box labeled "None of These" on the appropriate line(s).

Statement A B C D E F G H I J: is most like how I think.

Statement A B C D E F G H I J None of these: is second most like how I think.

Statement A B C D E F G H I J None of these: is third most like how I think.

## Appendix F.

### RELIGION AND PREJUDICE QUESTIONNAIRE

1. Please enter your 6 or 7 digit Subject ID code here (begins with “ac”):
  2. Please select the choice that best represents your current religious affiliation:  
Agnostic                      Hindu  
Atheist                         Jewish  
Buddhist                        Muslim  
Christian-Catholic          Spiritual but not religious  
Christian-Protestant  
Other (please specify)
- 

The following choices were provided after each of the following questions:

Rate your answer: Strongly Agree    Agree                      Disagree                  Strongly Disagree

1. God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed.
2. No single book of religious teachings contains all the intrinsic, fundamental truths about life.
3. The basic cause of evil in the world is Satan, who is still constantly and ferociously fighting against God.
4. It is more important to be a good person than to believe in God and the right religion.
5. There is a particular set of religious teachings in this world that are so true, you can't go any “deeper” because they are the basic, bedrock message that God has given humanity.
6. 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.
7. Scriptures may contain general truths, but they should NOT be considered completely, literally true from beginning to end.
8. To lead the best, most meaningful life, one must belong to the one, fundamentally true religion.
9. “Satan” is just the name people give to their own bad impulses. There really is no such thing as a diabolical “Prince of Darkness” who tempts us.

10. Whenever science and sacred scripture conflict, science is probably right.
11. The fundamentals of God's religion should never be tampered with, or compromised with others' beliefs.
12. All of the religions in the world have flaws and wrong techniques. There is no perfectly true, right religion.
13. Jesus Christ was the divine Son of God.
14. The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in human history.
15. The concept of God is an old superstition that is no longer needed to explain things in the modern era.
16. Through the life, death, and resurrection of Jesus Christ, God provided a way for the forgiveness of people's sins.
17. Despite what many people believe, there is no such thing as a God who is aware of our actions.
18. Jesus was crucified, died, and was buried but on the third day He arose from the
19. It might be said that I value my religious doubts and uncertainties.
20. I was not very interested in religion until I began to ask questions about the meaning and purpose of my life.
21. As I grow and change, I expect my religion also to grow and change.
22. I am constantly questioning my religious beliefs.
23. I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to the world.
24. For me, doubting is an important part of what it means to be religious.
25. My life experiences have led me to rethink my religious convictions.
26. I find religious doubts upsetting.
27. I do not expect my religious convictions to change in the next few years.

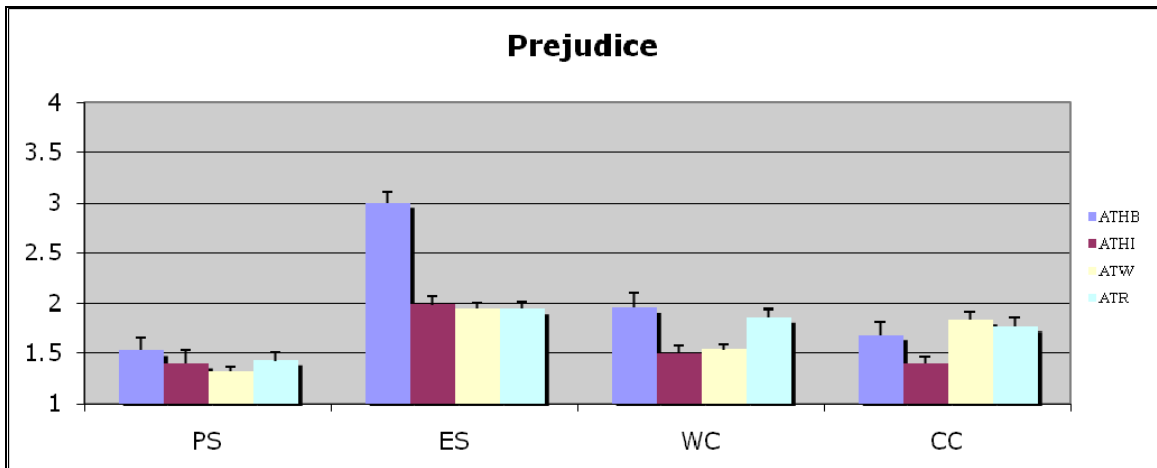
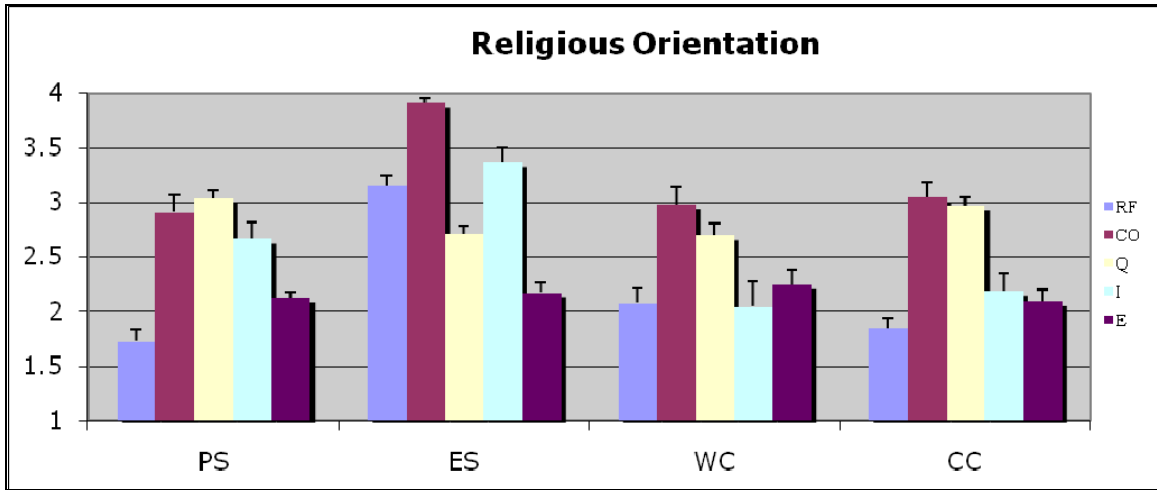
28. God wasn't very important to me until I began to ask questions about the meaning of my own life.
29. There are many religious issues on which my views are still changing.
30. Questions are far more central to my religious experience than are answers.
31. My whole approach to life is based on my religion.
32. What religion offers me most is comfort in times of trouble and sorrow.
33. I go to church mainly because I enjoy seeing people I know there.
34. We have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.
35. Obedience and respect are the most important things kids should learn.
36. People should be made to show respect for America's traditions.
37. Sexual orientation should not be a cause for job discrimination.
38. The sight of two men kissing does not particularly bother me.
39. Homosexual acts are wrong.
40. If two homosexuals want to get married, the law should let them.
41. I won't associate with known homosexuals if I can help it.
42. A sexual relationship between two men can be just as intimate as a sexual relationship between a man and a woman.
43. If I discovered a new friend was a homosexual, it would not affect my relationship with that person.
44. Same-gender sexual behavior is a perfectly acceptable form of sexuality.
45. Homosexuals should not be allowed to teach in elementary schools.
46. Swearing and obscenity are more repulsive in the speech of a woman than a man.
47. Under modern economic conditions with women being active outside the home, men should share in household tasks such as washing dishes and doing the laundry.

48. It is insulting to women to have the “obey” clause remain in the marriage service.
49. A woman should be as free as a man to propose marriage.
50. Women should worry less about their rights and more about becoming good wives and mothers.
51. Women should assume their rightful place in business and all the professions along with men.
52. The intellectual leadership of a community should be largely in the hands of men.
53. Women earning as much as their dates should bear equally the expense when they go out together.
54. Sons in a family should be given more encouragement to go to college than daughters.
55. In general, the father should have greater authority than the mother in the bringing up of the children.
56. There are many jobs in which men should be given preference over women in being hired or promoted.
57. It’s really a matter of some people not trying hard enough; if blacks would only try harder they could be just as well off as whites.
58. Irish, Italian, Jewish, and many other minorities overcame prejudice and worked their way up. Blacks should do the same.
59. Blacks work just as hard to get ahead as most other Americans.
60. Arabs are too emotional and hateful and they don’t fit well in our country.
61. Blacks are demanding too much from the rest of society.
62. There is nothing wrong with intermarriage among the races.
63. Generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class.
64. Discrimination against blacks is no longer a problem in the United States.
65. In general, Indians have gotten less than they deserve from our social and anti-poverty programs.

66. Many minorities are spoiled: if they really wanted to improve their lives, they would get jobs and get off welfare.
67. Over the past few years, blacks have gotten more economically than they deserve.
68. My first impressions of people usually turn out to be right.
69. I don't care to know what other people really think of me.
70. Once I've made up my mind, other people can seldom change my opinion.
71. I never regret my decisions.
72. I sometimes lose out on things because I can't make up my mind soon enough.
73. I am very confident of my judgments.
74. I have sometimes doubted my ability as a lover.
75. It's all right with me if some people happen to dislike me.
76. There have been occasions when I have taken advantage of someone.
77. I always obey laws, even if I'm unlikely to get caught.
78. I have received too much change from a salesperson without telling him or her.
79. I always declare everything at customs.
80. I have done things that I don't tell other people about.
81. I never take things that don't belong to me.
82. I have taken sick leave from work or school even though I wasn't really sick.
83. I have some pretty awful habits.
84. I don't gossip about other people's business.
85. How much discrimination against blacks do you feel there is in the United States today, limiting their chances to get ahead? \_\_\_\_\_
86. How do you feel about homosexual individuals and/or homosexual behaviors?  
\_\_\_\_\_

**Appendix G.**

**MEANS AND STANDARD ERRORS FOR  
RELIGIOUS ORIENTATION AND PREJUDICE BY INSTITUTION**



## Appendix H.

### SUMMARY OF FINDINGS:

#### PRELIMINARY HYPOTHESES

<i>Hypothesis #1: Is there a relationship between reflective judgment and RWA?</i>	
RCI and RWA	no
<i>Hypothesis #2: Is there a relationship between reflective judgment and prejudice?</i>	
RCI and ATHB	no
RCI and ATHI	no
RCI and ATW	no
RCI and ATR	no
<i>Hypothesis #3: Is there a relationship between reflective judgment and religious orientation?</i>	
RCI and RF	no
RCI and CO	no
RCI and Q	no
RCI and I	no
<i>Hypothesis #4: Is there a relationship between RWA and prejudice?</i>	
RWA and ATHB	yes at $r = .328$
RWA and ATHI	yes at $r = .314$
RWA and ATW	yes at $r = .455$
RWA and ATR	yes at $r = .527$

<i>Hypothesis #5: Is there a relationship between RWA and religious orientation?</i>	
RWA and RF	yes at $r = .317$
RWA and CO	no
RWA and Q	no
RWA and I	no
<i>Hypothesis #6: Is there a relationship between religious orientation and prejudice?</i>	
RF and ATHB	yes at $r = .761$
RF and ATHI	yes at $r = .627$
RF and ATW	yes at $r = .442$
RF and ATR	yes at $r = .236$
CO and ATHB	yes at $r = .508$
CO and ATHI	yes at $r = .391$
CO and ATW	yes at $r = .320$
CO and ATR	no
Q and ATHB	yes at $r = -0.377$
Q and ATHI	yes at $r = -0.339$
Q and ATW	no
Q and ATR	no
I and ATHB	yes at $r = .317$
I and ATHI	yes at $r = .317$
I and ATW	no
I and ATR	no



## Appendix I.

### SUMMARY OF FINDINGS:

#### PRIMARY HYPOTHESES

Information established from preliminary hypotheses		Hypothesis #7: Is there a relationship between religious orientation and prejudice when accounting for RWA?	Primary Hypothesis #1: Is there a relationship between religious orientation and prejudice when accounting for RCI?	Additional Hypothesis: Is there a relationship between religious orientation and prejudice when accounting for school?
RF and ATHB	yes at $r = .761$	yes at $b = .828$	yes at $b = .861$	yes at $b = .667$
RF and ATHI	yes at $r = .627$	yes at $b = .371$	yes at $b = .396$	yes at $b = .312$
RF and ATW	yes at $r = .442$	yes at $b = .176$	yes at $b = .234$	yes at $b = .152$
RF and ATR	yes at $r = .236$	no	yes at $b = .136$	no
CO and ATHB	yes at $r = .508$	yes at $b = .540$	yes at $b = .609$	yes at $b = .258$
CO and ATHI	yes at $r = .391$	yes at $b = .224$	yes at $b = .261$	no
CO and ATW	yes at $r = .320$	yes at $b = .134$	yes at $b = .175$	no
CO and ATR	no	no	no	no
Q and ATHB	yes at $r = -0.377$	yes at $b = -0.724$	yes at $b = -0.767$	yes at $b = -0.460$
Q and ATHI	yes at $r = -0.339$	yes at $b = -0.361$	yes at $b = -0.387$	yes at $b = -0.262$
Q and ATW	no	no	no	no
Q and ATR	no	no	no	no
I and ATHB	yes at $r = .317$	yes at $b = .391$	yes at $b = .410$	yes at $b = .251$
I and ATHI	yes at $r = .317$	yes at $b = .134$	yes at $b = .147$	no
I and ATW	no	no	no	no
I and ATR	no	no	no	no

Changes as a result of the multiple regression analysis are highlighted in yellow.