

DOGMATISM AND MORAL CONVICTION IN INDIVIDUALS:
INJUSTICE FOR ALL

A Dissertation by

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Masters of Arts, Wichita State University, 2007

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Submitted to the Department of Psychology
and the faculty of the Graduate School of
Wichita State University
in partial fulfillment of
the requirements for the degree of
Doctor of Psychology

December 2011

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DOGMATISM, AUTHORITATIANISM, SOCIAL DOMINANCE ORIENTATION IN
INDIVIDUALS AND UNJUST JUSTICE FOR ALL

The following faculty members have examined the final copy of this dissertation for form and content, and recommend that it be accepted in partial fulfillment of the requirement for the degree of Doctor of Philosophy with a major in Psychology.

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DEDICATION

This work is dedicated to my mom Fran, my dads Merlin and Terry, and my mentors Dr. Jay Nolan, Dr. Louis Medvene, and Dr. Greg Meissen.

...one nation, indivisible, with liberty and justice for all...

AKNOWLEDGEMENTS

I would like to thank my advisor Greg Meissen for his expert guidance over these past few years and also for keeping in touch with me and encouraging me to return to complete the program after I left in 2007. Thank you is due also to Louis Medvene for his steady mentorship over the years between my Bachelor and Master degrees, for placement in an interesting and experience-building practicum, and for important theoretical contributions to this dissertation. I am grateful also for research experience supervised by Jay Nolan, Charles Burdsal, and Jim Snyder which also contributed to my perspective and this current research.

I would like to extend my gratitude to members of my committee, Greg Meissen, Charles Burdsal, Keith Williamson, Rhonda Lewis-Moss, Diane Peltier, and Louis Medvene, for helpful comments at relevant stages of this project. Thanks also to Bob Altemeyer for making public and free for use his scale for measuring Dogmatism.

I have been blessed also with a wealth of friends who continually aided me throughout this process. I am so very grateful to a list of friends too lengthy to include for all the tangible and intangible support without which this project might never have reached completion. In particular, recurrent conversations with John Hathcoat, Tyson Satterfield, Astrid McDaniel, Roger Kirkwook, Horace Santry, and Keith Williamson helped to shape aspects of this dissertation.

ABSTRACT

Scientific study of dogmatism began over fifty years ago with the establishment of the first scale and its criterion related validity. Now measured by a more psychometrically sound scale dogmatism has been linked to intolerance, egocentrism, and an unwillingness or inability to understand opposing viewpoints. Moral conviction derives from a separate literature base, but like dogmatism, has been linked to intolerance. The combination of high-dogmatism and high-moral conviction could have a profound effect on decision making related to social justice, thereby impacting others.

An on-line survey measured whether participants would vote yes or no for gay marriage in Kansas and yes or no for the mandated teaching of creationism in public schools, and provided scales for moral conviction and dogmatism. It was hypothesized that dogmatism, moral conviction, and consideration of the opposition viewpoint would discriminate voting on both issues.

Support for both hypotheses was found in two significant discriminant functional analyses. For both issues participants scoring higher in measures of dogmatism and moral conviction also gave less consideration to the opposition view in deciding how to vote. Present research offered support for a relationship between dogmatism and religiosity and established correlations between moral conviction and dogmatism. If people who are particularly dogmatic and also think a given issue is moral are less likely to consider other viewpoints even in decisions that would impact those others, implications for justice are dire. Future research may aim at ensuring more tolerance in lawmaking through interventions aimed at educating around moral issues or reducing dogmatism among those highest in dogmatism.

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LIST OF ABBREVIATIONS / NOMENCLATURE

16PF	Sixteen Personality Factor Questionnaire, Form A (16 PF; Cattell & Eber, 1962)
CFI	Comparative Fit Index “the CFI reflects the degree of improvement of the researcher’s model over a null model”
DOG	Dogmatism Scale created by Bob Altemeyer (1996)
EPPS	Edwards Personal Preference Schedule (Edwards, 1959)
F-Scale	Authoritarian Personality Scale (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950) the original scale for the construct.
RF	Religious Fundamentalism (Altemeyer and Hunsberger, 1992)
RMSEA	Root Mean Square Error of Approximation. A measure of absolute model fit that accounts more stringently for parsimony
RWA	Right Wing Authoritarianism (Altemeyer, 1981)
SDO	Social Dominance Orientation
SRMR	Standardized Root Mean Square Residual. Conceptualized as a measure of absolute model-fit.
TSCS	Tennessee Self-Concept Scale (; Fitts, 1965)

CHAPTER I

INTRODUCTION

This research is aimed at exploring how a few personality traits at an individual level can potentially impact social justice on a community level. Specifically it was predicted that those scoring higher in dogmatism and domain-specific measures of moral conviction would give less consideration to opposition viewpoints when casting “the deciding vote in the KS legislature,” and in so doing would vote against social justice.

Merriam-Webster dictionary defines “justice” as:

1. *a* : the maintenance or administration of what is just especially by the impartial adjustment of conflicting claims or the assignment of merited rewards or punishments
2. *a* : the quality of being just, impartial, or fair *b* (*1*) : the principle or ideal of just dealing or right action
3. : conformity to truth, fact, or reason : correctness

Merriam-Webster dictionary defines “injustice” as:

1. : absence of justice : violation of right or of the rights of another : unfairness
2. : an unjust act : wrong

Merriam-Webster dictionary defines “dogmatism” as:

- 1: positiveness in assertion of opinion especially when unwarranted or arrogant
- 2: a viewpoint or system of ideas based on insufficiently examined premises

Moral conviction has been defined as “a strong and absolute belief that something is right or wrong, moral or immoral,” (Skitka and Mullen, 2002, p36).

If *justice* can be defined (Funk & Wagnalls, 1981) as “the principle or ideal of just dealing or right action,” and injustice can be defined as, “absence of justice,” then, when

this paper questions whether a dogmatism-moral conviction combination in individuals can predict “injustice” the question may be interpreted as asking whether characteristically being unreasonably attached to one’s own ideas and attaching moral significance to the issue at hand can lead to an altered and unfair principle by which right and wrong are defined at a community level. In short, do those individuals with strong moral convictions who are also dogmatic in their thinking affect the norms and laws others live by without consideration for impartiality?

Dogmatism

The concept of dogmatism has been studied for over 50 years. Conceptually similar to modern measures and definitions of dogmatism, Milton Rokeach’s (1954) original measure was created and adopted despite certain methodological flaws which were later addressed by Bob Altemeyer (1996). By isolating authoritarianism from dogmatism, Altemeyer produced a more precise measure of dogmatism, as “unjustified certainty” (Altemeyer, 1996, p201), and was further able to isolate traits grouping together to form what Rokeach conceptualized as dogmatism. Literature review revealed no specific link between dogmatism and justice. In the present study the relationship of a dogmatism-moral conviction combination to justice was studied.

Moral Conviction

Moral conviction is domain-specific, meaning that for any given issue a person may attach a lot of moral conviction or a little. That is, a person may report any given issue is a moral issue to them or that it is not (e.g. gay marriage, teaching creationism in

public schools). Since the methodology of the present study called on participants to believe that their responses would impact legislators' votes on real issues, moral conviction related to those issues was measured. The dogmatism-moral conviction combination was expected to be present and when related to level of considering the views of others to discriminate voting on gay marriage and teaching creationism. By only considering personal interpretations of social norms and voting to make these social norms into laws, individuals with this combination of moral conviction and dogmatism may negatively impact social justice. In short, the present study addresses two issues (legal gay marriage and mandated teaching of creationism) in order to investigate the link between a dogmatism-moral conviction combination and implications related to injustice.

CHAPTER II

LITERATURE REVIEW

Overview

In the early 1950s, during a fellowship at Michigan State College, Milton Rokeach wrote three articles relevant to *dogmatism*; one laid out a theoretical foundation for his ideas about the concept (Rokeach, 1954), a second distinguished dogmatism conceptually from “rigidity of thinking” (Rokeach, McGovney, and Denny, 1955), and a third reported preliminary scale-items and correlation coefficients of scale scores with theoretical correlates like personality scale items (Rokeach and Fruchter, 1956). Since that time Rokeach’s ideas have been supported with data and his Dogmatism Scale has been cross-referenced with relevant scales, validated, and shortened (Rokeach and Fruchter, 1956; Rokeach, 1960; Vacchiano, Strauss, and Hochman, 1969; Shulze, 1962; Troidahl & Powell, 1965). More recently dogmatism has been redefined and a new scale has been more rigorously constructed and validated (Altemeyer, 1996; Altemeyer, 2002; Crowson, DeBacker, and Davis, 2008).

Although a direct link has not been addressed, some studies of dogmatism have investigated ways dogmatism interacts with features of justice, for instance studying the dogmatism of juries. In some of these studies dogmatism has been shown to provide for justice quite well, and in others dogmatism seems to detract from justice. The present study aims to investigate the potential link between dogmatism and injustice. The following literature review will provide an overview of (1) dogmatism measures and their established corollaries, (2) literature connecting dogmatism and related constructs to

justice, (3) research related to moral conviction. Altogether this literature supports inquiry into processes through which dogmatism and moral conviction in individuals can lead to injustice at the community level.

Dogmatism

For Rokeach (1954) “dogmatism” referred to a cognitive network. Much like contemporary psychologists’ talk about “associative networks,” “cognitive domains,” or “schemas,” Rokeach conceptualized dogmatism as:

“(a) a relatively closed cognitive organization of beliefs and disbeliefs about reality, (b) organized around a central set of beliefs about absolute authority which, in turn, (c) provides a framework for patterns of intolerance and qualified tolerance toward others.” (Rokeach, 1954a, p195).

When Rokeach used the word “closed” he meant that a person’s “belief systems” and “disbelief systems,” into which Rokeach believed thoughts to be organized, were not apt to change. He also thought of authoritarianism as enmeshed in the more dominant domain of dogmatism. The combination of a closed-mind and an authoritarian viewpoint, he proposed, yields patterns of intolerant thought or behavior toward people. (Rokeach, 1954).

Rokeach (1954) believed that these belief-system/disbelief-system pairs were defended vigorously; indeed, he predicted that dogmatic thinkers would more strongly resist counter-attitudinal information than nondogmatic thinkers. Rokeach (1954) also conceptually distanced dogmatism from any particular religion or political persuasion,

and even distinguished an entirely “non-institutional” form of dogmatism by providing the example of an academic who might become “dogmatic in his own idiosyncratic way, evolving a unique rather than institutionalized integration of ideas and beliefs about reality” (Rokeach, 1954, p195).

Rokeach’s (1960) conception of dogmatism was somewhat broad and loosely organized but it held certain features including: (1) dogmatism was thought to be a cognitive structure and not just rigid thinking, (2) this structure was related to authoritarianism, (3) dogmatic thinkers are intolerant, (4) dogmatic thinkers strongly resist counter-attitudinal views, and (5) dogmatic thinking is only tangentially related to religiosity and political persuasion.

Measuring Dogmatism

Using a pilot version of what would become the Dogmatism Scale (See Appendix A) Rokeach distinguished Dogmatism from “Rigidity of Thinking” in that rigid thinkers more often than nonrigid thinkers demonstrate trouble understanding an imaginary set of unfamiliar rules while dogmatic thinkers were not distinguished from nondogmatic thinkers along this continuum. Dogmatic thinkers could understand a new set of imaginary rules more quickly and better than rigid thinkers (Rokeach, McGovney, and Denny, 1955). Conversely, dogmatic thinkers demonstrated more trouble learning to apply those imaginary rules than nondogmatics, but rigid thinkers were not distinguished from nonrigid thinkers along this continuum. Ultimately this work demonstrated that rigidity of thinking is different from dogmatism (Rokeach McGovney and Denny, 1955). It would appear that rigid thinkers were over-practiced in any one particular way of thinking while dogmatic thinkers were unwilling or unpracticed in applying rules other

than their own. Relevant to the present study, this work established that dogmatics—who may or may not easily learn any new set of rules—characteristically have a harder time applying unfamiliar rules in problem solving.

Ehrlich and Lee (1969) provided empirical support for dogmatic thinkers being less able to learn new beliefs or change old beliefs, but suggested that openness or closedness of mind was not so much a cognitive domain as a domain-specific individual difference. For Ehrlich and Lee (1969) one might be dogmatic politically or religiously to varying degrees, and perhaps not dogmatic at all in other domains.

Using approximations of Myers-Briggs subscales, Ross, Francis, & Craig (2005) found those scoring higher on a 20-item shortened version of Rokeach's scale (Troidahl and Powell, 1965) also scored higher on judging rather than perceiving; extraversion, rather than introversion; and sensing, rather than feeling.

Vacchiano, Strauss, and Schiffman (1968) intended to promote dogmatism from an “attitude system” to a “personality pattern,” by correlating Dogmatism Scale scores with scores on personality scales and subscales from: (1) Edwards Personal Preference Schedule (EPPS; Edwards, 1959), (2) the Sixteen Personality Factor Questionnaire, Form A (16 PF; Cattell & Eber, 1962), and (3) the Tennessee Self-Concept Scale (TSCS; Fitts, 1965). These correlations convey two points: (1) inasmuch as personality scales measure things related to what Rokeach described as dogmatism, those scales generally correlated with the 1960 version of Rokeach's dogmatism scale in predicted directions; and (2) since these independent personality inventory items tended to cluster in predicted directions, a “dogmatic personality” was identified. Correlations were interpreted as validating Rokeach's assertions that dogmatic thinkers avoided change in behavior,

environment, or personally-held beliefs, and that dogmatics preferentially depend on others for encouragement and support, and were intolerant toward taking the point of view of others (Vacchiano, Strauss, and Schiffman, 1968).

Interestingly, in two articles (Vacchiano, Strauss, and Schiffman, 1968; Vacchiano, Strauss, and Hochman, 1969) these dogmatism researchers interpreted insignificant correlation coefficients as if they were significant and turned a blind-eye to data disagreeing with tenants of Rokeach's conception of dogmatism (Altemeyer, 1996).

If in general, Vacchiano, Strauss, and Hochman (1969, pg 262) followed the trend above, these researchers did cite one study which "found a relationship between dogmatism and membership in religious groups that are dependent on authority and tolerate little argument in adherence to basic beliefs," but not until Altemeyer (1996; 2002) were these relationships reliably established.

In sum, Milton Rokeach opened the door to the study of dogmatism by providing a theoretical framework for the construct and differentiating it from rigidity of thinking. Rokeach (1960) ; Rokeach, McGovney and Denny (1955) and Vacchiano, Strauss, and Schiffman (1968) saw dogmatism as a personal characteristic or trait, whereas Elrich and Lee (1969) argued for a domain-specific understanding of the concept where the same person may be dogmatic about some topics or domains and not others.

Rokeach's Dogmatism Scale

Rokeach (1954) published an initial list of 43 scale items he wrote to measure dogmatism as described above (See Appendix A). Six years later another list was published, this one dropping 6 of the original 43 and adding 29 for a total of 66 items

(Rokeach, 1960; See Appendix B). For validation, a 30-item subscale of Rokeach (1954) was compared to scales and subscales theoretically related to dogmatism including anxiety, authoritarianism, and ethnocentrism. These comparisons yielded correlations suggestive of relationships Rokeach had predicted (Rokeach and Fruchter, 1956) including attitudes of acceptance or rejection and motivational anxiety. A factor analysis (Rokeach and Fruchter, 1956) was interpreted to suggest that while dogmatism and rigidity of thinking were correlated with one another, only dogmatism is free from noteworthy correlations with political side-taking (either political left-leaning or right-leaning).

Restle, Andrews and Rokeach (1964) provided data supporting the notion that dogmatic thinkers defer to authority more readily than nondogmatic thinkers who tend instead to search for a rule or principle underlying reinforcement received from an authority. Vacchiano, Strauss, and Hochman (1969) note an array of studies substantiating the prediction that those scoring high on the Dogmatism Scale display a dependency on authority figures or perceived norms compared with those scoring low on the scale. In the same literature review these researchers (Vacchiano, Strauss, and Hochman, 1969) found corroborating evidence for dogmatic thinkers, compared with nondogmatic thinkers, becoming anxious and filtering-out information supporting disbelief-systems (counter attitudinal information). The reviewers continued by providing interpretations of studies attesting to test—retest validity in adults and high-school populations, and also for test—retest reliability remaining high regardless of omissions of scale-items or whether the scale completer ultimately scored high or low

TABLE 1

TROLD AHL & POWELL DOGMATISM 20-ITEM SHORT-FORM

Troldahl & Powell (1965) - 20 items

- 1 In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
- 2 My blood boils whenever a person stubbornly refuses to admit he's wrong.
- 3 There are two kinds of people in this world: those who are for the truth and those who are against the truth.
- 4 Most people just don't know what's good for them.
- 5 Of all the different philosophies which exist in this world there is probably only one which is correct.
- 6 The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
- 7 The main thing in life is for a person to want to do something important.
- 8 I'd like it if I could find someone who would tell me how to solve my personal problems.
- 9 Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
- 10 Man on his own is a helpless and miserable creature.
- 11 It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
- 12 Most people just don't give a "damn" for others.
- 13 To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
- 14 It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.
- 15 The present is all too often full of unhappiness. It is only the future that counts.
- 16 The United States and Russia have just about nothing in common.
- 17 In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.
- 18 While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.
- 19 Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
- 20 It is better to be a dead hero than to be a live coward.

(Vacchiano, Strauss, and Hochman, 1969). Vacchiano, Schiffman, and Strauss (1967) provided evidence of construct validity by interpreting a factor analysis on responses to the items as grouping together, in general, as intended by Rokeach such as a correlation

with general maladjustment (.31), with Edwards Personal Preference Schedule (EPPS; Edwards, 1959) measure of change (-.25) and with Tennessee Self-Concept Scale (TSCS; Fitts, 1965) measure of defensiveness (.30). Shortened forms of the scale also emerged to measure dogmatism more practically (Shultz, 1962; Troidahl & Powell, 1965, See Table 1), or to isolate and document features such as time-orientation (Cottle, 1971; See Appendix C). Cottle (1971) subjected responses to the 66 original items (Rokeach, 1960: See Appendix B) to a factor analysis, yielding four factors comprised of 21 items. Among researchers who still use the Rokeach scale, the most commonly used is Troidahl and Powell's (1965) 20-item Short-Form Dogmatism Scale (see Table 1) which was created by correlating item scores with overall score and selecting the 20 highest correlating items.

Altemeyer's Perspective

In 1996, Altemeyer challenged the internal consistency and construct validity of Rokeach's Dogmatism scale offering simultaneously a new scale which he named the "DOG Scale" to measure dogmatism as "unjustified certainty" (Altemeyer, 1996, p201). By this point, Altemeyer had been conducting authoritarianism research for several years. To understand what dogmatism means to Altemeyer it may be useful to distinguish among Authoritarianism, Religious Fundamentalism, and Dogmatism. Altemeyer has developed widely-used scales for each.

Authoritarianism. When Rokeach first proposed the Dogmatism scale, it was meant partially as an alternative to the F-Scale, a measure of Authoritarianism, which

Rokeach believed to be more a part of Dogmatism than a stand-alone individual difference (Rokeach, 1954). The Authoritarian Personality (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950) introduced the concept and proposed the F-Scale to measure it, but researchers have consistently criticized the F-Scale conceptually (Christie & Jahoda, 1954) as well as empirically (Altemeyer, 1981).

Schooled in psychometrics, Altemeyer (1981) created the Right Wing Authoritarianism scale to more validly and reliably measure authoritarianism as it is found in our current culture. Ten of the 20 items were scored in a positive direction including, “Some of the worst people in our country nowadays are those who do not respect our flag, our leaders, and the normal way things are supposed to be done.” The remaining ten items were reverse scored, for example, “Students must be taught to challenge their parents’ ways, confront the authorities, and criticize the traditions of our society.” In general a high score on the Right Wing Authoritarian scale suggests that a person is obedient, is intolerant of other viewpoints, believes a traditional family structure is imperative, believes in “law and order” over “civil rights”, and condones government censorship. The scale has demonstrated reliability and validity surpassing the F-Scale (Altemeyer, 1981)

Altemeyer and Hunsberger (1992) established significant correlations between Right Wing Authoritarianism and Manitoba Prejudice Scale (.53), and between Right Wing Authoritarianism and Attitude (hostility) Toward Homosexuals (.64) among members of an assortment of Christian denominations. Hunsberger (1996) generalized these findings, reporting correlations between Right Wing Authoritarianism and hostility toward homosexuals among Hindi (.57), and Islamic (.74) samples comparable to those

previously reported (Altemeyer and Hunsberger, 1992) for Right Wing Authoritarian Christians (.68).

Religious Fundamentalism. Altemeyer and Hunsberger (1992) distinguished between Christian Orthodoxy and Religious Fundamentalism. As with other of Altemeyer's scales, in order to prevent response sets, items are worded both in the positive direction such as, "The basic cause of evil in this world is Satan, who is constantly and ferociously fighting against God," and in the negative direction such as, "Religion must admit all its past failings and adapt to modern life if it is to benefit humanity." The Religious Fundamentalism scale has demonstrated reliability and validity (Altemeyer and Hunsberger, 1992)

Altemeyer and Hunsberger (1992) established significant correlations between Religious Fundamentalism and Manitoba Prejudice Scale (.30), Religious Fundamentalism and hostility toward homosexuals (.41) among the membership of an assortment of Christian denominations. Hunsberger (1996) generalized these findings, reporting correlations between Religious Fundamentalism and hostility toward homosexuals among Hindi (.52), and Islamic (.65) samples greater than those previously reported (Altemeyer and Hunsberger, 1992) for Right Wing Authoritarian Christians (.42).

Altemeyer's Dogmatism

Having published on the topic of authoritarianism for ten years already, Altemeyer (1996; See Table 2) decisively separated dogmatism from authoritarianism,

boiling dogmatism down to one key element which he called “unjustified certainty” (p201), and Crowson, DeBacker, and Davis (2008, p17) described as an extreme “defiantness with which individuals hold their beliefs.” To measure this refined conception of dogmatism Altemeyer introduced the DOG scale (See Table 2) which has been summarily validated (Altemeyer, 2002; Crowson, DeBacker, and Davis, 2008; Crowson, 2009).

Religion and Dogmatism. Altemeyer not only separated Rokeach’s conceptualization of dogmatism from authoritarianism and its foundation in cognitive structure, but also from the idea of a noninstitutional dogmatism. Altemeyer (1996) demonstrated that Rokeach’s dogmatism had actually always correlated with right wing, conservative political views, even in Rokeach’s own data. Thus the separation between dogmatism and religiosity also fell away. Crowson, DeBacker, and Davis (2008) made a case for studying dogmatism and religion together since they appear so readily together in the world we know, just as do dogmatism and authoritarianism, a claim supported by meta-analysis of these related concepts (Eckhardt, 1991).

Reliability of DOG Scale. Altemeyer (1996) reported Cronbach’s α measure of internal consistency (.88 for a student sample and .89 for a parent sample) which is consistent with Cronbach’s α between .90 and .93 reported by Crowson, DeBacker, and Davis (2008), and compares favorably to a Cronbach’s α of .71 for Trohldal and Powell’s (1965) 20-item short form dogmatism scale. In terms of construct validity the DOG

TABLE 2
ALTEMEYER (1996) “DOG” SCALE

Altemeyer (1996)

Practice Items

- X. I may be wrong about some of the little things in life, but I am quite certain I am right about all the BIG issues.
- Y. Someday I will probably think that many of my present ideas were wrong.

Scale Items

1. Anyone who is honestly and truly seeking the truth will end up believing what I believe
- *2. There are so many things we have not discovered yet, nobody should be absolutely certain his beliefs are right
3. The things I believe in are so completely true, I could never doubt them
- *4. I have never discovered a system of beliefs that explains everything to my satisfaction
- *5. It is best to be open to all possibilities and ready to reevaluate all your beliefs
6. My opinions are right and will stand the test of time
- *7. Flexibility is a real virtue in thinking, since you may well be wrong
8. My opinions and beliefs fit together perfectly to make a crystal-clear “picture” of things
9. There are no discoveries or facts that could possibly make me change my mind about the things that matter most in life
- *10. I am a long way from reaching final conclusions about the central issues in life
- *11. The person who is absolutely certain she has the truth will probably never find it
12. I am absolutely certain that my ideas about the fundamental issues in life are correct
- *13. The people who disagree with me may well turn out to be right
14. I am so sure I am right about the important things in life, there is no evidence that could convince me otherwise
15. If you are “open-minded” about the most important things in life, you will probably reach the wrong conclusions
- *16. Twenty years from now, some of my opinions about the important things in life will probably have changed
17. “Flexibility in thinking” is another name for being “wishy-washy”
- *18. No one knows all the essential truths about the central issues in life
- *19. Someday I will probably realize my present ideas about the BIG issues are wrong.
20. People who disagree with me are just plain wrong and often evil as well

* Items are Reverse Scored

Scale has “demonstrated reasonable factorial, discriminant, convergent, and criterion-related validity,” (Crowson, DeBacker, and Davis 2008, p17).

Factorial Validity of DOG Scale. Crowson and associates (Crowson, DeBacker, and Davis, 2008; Crowson, 2009) established and clarified the factorial validity of the DOG Scale. While these researchers data did fit a 2 factor (nested) model where positively and negatively worded questions represented separate but correlated factors better than a one-factor model, both models met established criteria in terms of Standardized Root Mean Square Residual (SRMR) and Comparative Fit Index (CFI), but only the two factor model fell within the ideal range for Root Mean Square Error of Approximation (RMSEA). SRMR is conceptualized as a measure of absolute model-fit; “the CFI reflects the degree of improvement of the researcher’s model over a null model, which in CFA assumes that all indicator variables are uncorrelated” and RMSEA is a measure of absolute model fit that accounts more stringently for parsimony (Crowson, DeBacker, and Davis, 2008, p21). According to Crowson, DeBacker, and Davis, (2008, p21) accepted ranges for indices named above are as follows: “SRMR .08 or below, RMSEA .06 or below, and CFI .95 or greater.” With reference to the DOG Scale these researchers reported SRMR .07, RMSEA .11, and CFI .94 for the one factor model and SRMR .06, RMSEA .08, and CFI .96 for the two factor model (Crowson, DeBacker, and Davis, 2008). Although RMSEA scores for both the one-factor and two factor model fall outside of optimum ranges, since SRMR scores fall low enough call a “reasonable error of approximation,” (Crowson DeBacker, and Davis, 2008, p21; Kline, 2005, p139)

applies extending acceptable ranges for RMSEA to .10 so that the two factor model fits and the one-factor model fall short. “Although the two-factor model of the scale appeared to fit the data better than the one-factor model, this seems to be a function of the direction of item wording as opposed to the presence of a second conceptual factor being measured by the scale. Indeed, the positively- and negatively-worded halves of the scale correlated quite highly” at .77, which supports the assumption that, “the two halves are measuring largely the same construct,” (Crowson DeBacker, and Davis, 2008, p23). Crowson (2009) mirrored these results and provided further argument for the unidimensionality of the measure despite this wording effect.

Discriminant Validity of DOG Scale. To measure discriminant validity Crowson, DeBacker, and Davis (2008) predicted and found moderate correlations between dogmatism and less need for cognition, $r(415) = -.24, p < .01$; $r(254) = -.30, p < .01$, greater need to evaluate, $r(244) = .26, p < .01$, and less rational engagement $r(244) = -.30, p < .01$. The moderate nature of these correlations was thought to demonstrate the distinct nature of the DOG Scale relative to these measures (Crowson, DeBacker, and Davis, 2008). Crowson (2009) echoed these findings reporting correlations between the DOG Scale and Need for Cognition Scale, $r(51) = -.442, p = .001$; Personal Need for Structure Scales, $r(49) = .255, p = .034$ (one-tailed); and Need to Evaluate Scale, $r(49) = .349, p = .012$, all consistent with expectations.

Convergent Validity of DOG Scale. To measure convergent validity Crowson, DeBacker, and Davis (2008) compared scores on the DOG Scale to scores from Troidhal

and Powell's (1965) 20-item short form dogmatism scale and a belief in certain knowledge subscale (Schraw et al., 2002, as cited in Crowson, DeBacker, and Davis, 2008). Scores on the DOG Scale correlated significantly and in predicted directions with Troldhal and Powell's (1965) 20-item short form dogmatism scale, $r(254)=.45$, $p<.01$, and the certain knowledge subscale $r(254)=.63$, $p<.01$. Crowson (2009) replicated the correlation between belief in certain knowledge and dogmatism $r(85) = .566$, $p < .001$ in a community sample; however, the researcher found only a moderate correlation between the DOG Scale and Troldhal and Powell's (1965) 20-item short form dogmatism scale, $r(83) = .197$, $p = .035$. Correlations among these items were indicative of convergent validity.

Criterion-Related Validity of DOG Scale. To measure criterion-related validity Crowson, DeBacker, and Davis (2008) correlated the DOG Scale with measures of ideological polarization, $r(253)=.15$, $p<.05$ right-wing authoritarianism, $r(253)=.64$, $p<.01$, and self-rated political conservatism, $r(253)=.37$, $p<.01$. These findings supported an earlier validation by Altemeyer (1996, p211) "DOG scores correlated over .50 with RWA, nearly .60 with Fundamentalism, and about .45 with Zealot scores." Crowson (2009, p265) contributed also "theoretically predictable relationships between the DOG scale and measures of religious fundamentalism, quest orientation, national identification, conservative ideology, dangerous world beliefs, and reactions to individuals and groups who hold worldview-incongruent beliefs and values." Specifically Crowson (2009) reported correlations between the DOG Scale and Altemeyer and Hunsberger's (1992; 2004) Religious Fundamentalism $r(120) = .611$, $p < .001$; Klaassen and McDonald's

(2002) Quest Orientation, $r(125) = -.441, p < .001$; nationalism—“a desire for one's country to dominate and be superior over others”— $r(119) = .396, p < .001$, but not patriotism—“a basic love and appreciation for one's country”— $r(118) = .133, p = .148$; internationalism—“a unified outlook on humanity and a willingness to cooperate in resolving its problems”— $r(119) = -.359, p < .001$; incompatible worldview seen as a threat $r(51) = .570, p < .001$; economic conservatism $r(85) = .219, p = .041$; cultural conservatism, $r(85) = .417, p < .001$ and $r(70) = .528, p < .001$; “perception that one's mission in life is to persuade others to adopt his or her worldview” $r(52) = .685, p < .001$; “generalized intolerance of persons holding worldview-incompatible beliefs and values” $r(51) = .766, p < .001$; self-report aggressiveness toward those with different worldviews, $r(51) = .653, p < .001$; dangerous world beliefs—“the belief that the social world is marked by chaos and social disorder”— $r(115) = .309, p = .001$; and $r(70) = .458, p < .001$; Right Wing Authoritarianism, $r(69) = .664, p < .001$; and Social Dominance Orientation, $r(69) = .433, p < .001$. These correlations were consistent in size and direction with the researcher's expectations suggesting strong criterion-related validity (Crowson, 2009).

If dogmatism is an unreasonable attachment to one's own ideas, then religious doubt is the construct's opposite regarding the specific topic of religion. Further criterion related validity came when Hunsberger, Alisat, Pancer, and Pratt (1996) found Religious Doubt negatively correlated to Dogmatism ($r = -.47$), Religious Fundamentalism ($r = -.80$), and Right Wing Authoritarianism ($r = -.74$), and found those higher in religious doubt to be more complex thinkers about religion.

Comparing Rokeach's and Altemeyer's Dogmatism

From a community psychologist perspective the context-informed view of the DOG Scale is appealing, but a powerful and generalizable feature of dogmatism is lost with the dismissal of a cognitive-structural context. Unfortunately not much of a case can be made that Rokeach's scale validly captured evidence of his published understanding of cognitive structures. Shaffer, Plummer, and Hammock (1986) made an effort to update this cognitive tradition for the times suggesting that those high in dogmatism (Troidahl and Powell 20-item Short-Form Dogmatism Scale; See Table 3) would be more prone to a dispositional explanation compared to a situational explanation for the same behavior; these researchers thus suggest that the dogmatics are more prone to the fundamental attribution error (Ross, 1977). Shaffer and associates suggest that this is most likely when dogmatism, or dogmatically-held beliefs are directly related to the behavior in question (Shaffer, Plummer, and Hammock, 1986). However their related prediction (Shaffer, Plummer, and Hammock, 1986, p1067) that dogmatics "may experience more difficulty than nondogmatics at ignoring testimony that is damaging to the defendant's credibility but subsequently ruled inadmissible," was not supported by direct inquiry (Shaffer and Wheatman, 2000). Indeed, dogmatics were so authoritarian that the opposite effect was noted; dogmatics so respected the authority of the judge that his order not to consider inadmissible evidence was honored despite conflict with personal beliefs (Shaffer and Wheatman, 2000). It remains unclear how dogmatics would behave in a voting situation where dogmatically held beliefs were challenged and no greater authority figure was available.

Altemeyer (1996) reported correlations of Dogmatism with scales measuring Right Wing Authoritarianism (.53), and Religious Fundamentalism (.71). Altemeyer (2002) established that students who responded to prompts by selecting both, “God chose every word of the Bible” and “The Bible is free of any errors, contradictions or inconsistencies” tended also, when compared with peers in the study (N=781 total), to score significantly higher on Dogmatism, Right Wing Authoritarianism, and Religious Fundamentalism scales, and were far more likely to attend church especially one that is Baptist, Alliance, Pentecostal, or Mennonite. When these participants were asked to read passages from the Gospel that openly contradicted one another they continued to strongly agree with both statements. (Altemeyer, 2002).

Among many valid criticisms Altemeyer levied against the Rokeach scales, he also disagreed that all questions should be worded in a positive direction. Rokeach had defended his decision to word only in the positive direction for fear that reversals would unnecessarily complicate the data (Rokeach and Fruchter, 1956). This fear may have been substantiated by the observation of Crowson, DeBacker, and Davis (2008) that Altemeyer’s scale-items, when subjected to a factor analysis fit a two-factor (nested) model better than a one-factor model, but that those two factors were essentially comprised of responses to positively worded questions and responses to negatively worded questions respectively.

Rokeach’s assertion that dogmatic thinkers are more intolerant of others was not addressed by Altemeyer (1996) who places that tendency within his conceptualization of authoritarianism, but Altemeyer did agree that dogmatism includes a tendency to strongly resist counter-attitudinal views.

Ultimately the DOG scale was selected for the present study because it narrowly defines dogmatism as unjustified certainty in personally held beliefs, and the scale has demonstrated validity and reliability (Altemeyer 1996; Altemeyer 2002; Crowson, DeBacker, and Davis, 2008; Crowson 2009).

Dogmatism and Justice

The unreasonable certainty reflected in a high dogmatism score is a valid variable of interest in the search for the antecedents of injustice. If, as Rokeach McGovney and Denny (1955) report, dogmatics can easily recognize and understand rule-systems other than their own, but have trouble applying those rules, still more serious questions emerge in the carrying out of justice.

Taken together several studies indicate that those high in Dogmatism are particularly ill-suited to contribute to justice. Rokeach (1954; 1960) and Altemeyer (1996; 2002; 2004) agree that a defining feature of dogmatism is an unreasonable attachment to one's own beliefs. Dogmatic thinkers are less likely than nondogmatic thinkers to challenge personally-held beliefs. Also, dogmatic thinkers have been shown to reject those who disagree with them (Palmer & Kaflin, 1985). Additionally, dogmatic thinkers were found by Nichols & Stults (1985) to score lower on Kohlberg's stages of moral reasoning as measured by a global score on Defining Issues Test (Rest, 1975). The section below chronicles the strengths and the inadequacies of highly dogmatic individuals in the carrying-out of unbiased justice.

Perspective Taking

If the administration of justice depends on an ability to weigh different perspectives, then dogmatic individuals may be coming from a disadvantage. Davies (1998) used Troidahl and Powell's 20-item Rokeach Dogmatism Short-Form to measure dogmatism, then tracked individual differences between dogmatics and nondogmatics in terms of generating explanations for believing one outcome or the other more likely given a scenario and two possible outcomes. Four vignettes based on well-known psychology experiments were described and participants were invited to choose the more likely outcome, rate their confidence, and describe reasons why each of the possible outcomes provided could be correct (Davies, 1998). Dogmatics were significantly more confident in their judgments ($M = 7.37$) than nondogmatics ($M = 6.19$), $F(1, 61) = 7.46$, $p < .01$. Davies (1998) found dogmatics provided significantly more reasons supporting the outcome selected $F(1, 61) = 3.47$, $p < .07$; and significantly fewer reasons supporting the outcome not selected $F(1, 61) = 3.07$, $p < .08$. Oreg (2003) found a significant correlation between resistance to change and Troidahl & Powell's short-form measure of dogmatism ($r = .28$, $p = .01$).

Social Traditionalism

If the administration of justice depends on an ability to be unbiased, then dogmatic individuals may be coming from a disadvantage, not only because they are tied to their beliefs, but because their beliefs are biased in a clear direction. Johnson and Tamney (2001) demonstrated a relationship between dogmatism (as measured by Troidahl and Powell's 20-item Rokeach Dogmatism Short-Form) and a construct known as "social traditionalism" which consists of a concern with "maintaining more discipline

in peoples' social and personal lives, especially related to the family (e.g., by tightening controls over abortion, homosexual behavior, and pornography; by making divorce more difficult),” (p 233).

Political Conservatism

Similarly, in a meta-analysis meant to set Political Conservatism within a Motivated Social Cognition context, Jost and associates (2003) note the correlation between political conservatism and dogmatism ($r = .34$) among 88 samples from 12 countries. They included that this is dangerous because, “The core ideology of conservatism stresses resistance to change and justification of inequality and is motivated by needs that vary situationally and dispositionally to manage uncertainty and threat,” (Jost, Glaser, Kruglanski & Sulloway, 2003, p 331) which runs contrary to justice.

Reporting Shoplifters

One way researchers have attempted to quantify dogmatic individuals' intolerance toward others in a justice domain is by studying the reporting of shoplifting by those high and low in dogmatism. Using the 20-item Rokeach Dogmatism Short-Form Steffensmeier (1975) investigated whether dogmatics were more likely to report “hippie” as opposed to “straight” shoplifters, but found instead that consumers generally report “hippie” shoplifters more than “straight” shoplifters regardless of level of dogmatism. Apparently an out-group effect emerged among shoppers toward “hippie” shoplifters regardless of dogmatism. Dogmatism was found to be related to perceived social distance, with dogmatics seeing themselves as more similar to “straight” shoplifters and more dissimilar to “hippie” shoplifters, but the distance and even disgust toward hippies

they reported did not translate into action different than that displayed by non-dogmatic store-shoppers (Steffensmeier, 1975). These findings are not surprising when we factor in the commonly evidenced gap between reported attitudes and displayed behaviors (LaPiere, 1934; Palluck, 2009) where emotion-laden attitudes lead people to report prejudice, but perceived social norms seem to predict their behavior better.

Inadmissible Evidence

As mentioned above, in a preliminary study Shaffer and Wheatman (2000) found the opposite of what they expected. Indeed most of the “dogmatic juries,” defined by a majority of members scoring above the median on the Troidahl and Powell 20-item short-form dogmatism scale (See Table 3) were more likely than “nondogmatic juries” to respect the authority of judges even to the extent of not considering inadmissible evidence, if that was the instruction given by the judge (Shaffer and Wheatman, 2000).

Jury Decision Making

Some researchers have attempted to quantify dogmatic thinkers’ intolerance toward others in a justice domain by studying jury decision making. In an exhaustive meta-analysis of scientific inquiry into jury decision making, Devine and associates (2001) claim and support with data the notion that pretrial characteristics of jurors are not reliably predictive of conviction decisions. These researchers did point out that Shaffer and Case (1982) found juries comprised of more dogmatic jurors were more likely to convict a defendant invoking his 5th Amendment rights before taking the stand. Shaffer, Plummer, and Hammock (1986) also found dogmatics more likely to convict and suggest stiffer sentences. Taken together, and combined with the strong correlation between

dogmatism and authoritarianism, jury deliberations appear not to be the place to study the impact of individual-level dogmatism on community-level justice since obvious authority figures such as attorneys and judges are in charge of the proceedings.

Dogmatism and a Just World

In the book “Blaming the Victim” William Ryan (1971) illustrated the dangers of a Just-World orientation. In a study where 6-person mock-juries deliberated and reached verdicts in response to contrived court transcripts, Shaffer, Plummer, and Hammock (1986) found dogmatics to be more likely than non-dogmatics to suggest longer sentencing, especially if the accused endured crime-relevant pre-trial suffering. These researchers frame the results in a context of the “just world theory” where dogmatics are especially likely to deduce from the fact that the accused suffered a pre-trial crime-relevant injury that the accused is “in the wrong” and more deserving of a longer sentence. Additionally these researchers noted that mean scores on a scale assessing the character of the accused predicted suggested sentence duration for dogmatic, but not nondogmatics juries. Further, suggested sentence-duration was reliably predicted by a number of “just world” related comments made by jury members during deliberation. Despite the relationship between “just world” comments and sentence duration, dogmatics—who suggested harsher sentences than nondogmatics—reported a self-perception of being lenient in sentencing because the accused had suffered already (Shaffer, Plummer, and Hammock, 1986). That is to say that dogmatics suggested harsher sentencing than nondogmatics, but felt like they were being a little less harsh than they should be, because the accused suffered in relation to the crime (Shaffer, Plummer, and Hammock, 1986).

Summary

In summary, in terms of dogmatism and justice, dogmatism as it is scientifically measured correlates with social traditionalism; a greater sense of distance from, and dislike for dissimilar others; overconfidence in the rightness of personal beliefs; a strong resistance to change; lower stages of moral development; lower likelihood of challenging personally-held beliefs; and greater readiness to convict and suggest longer sentences in general. In short dogmatism may relate to the instituting of injustice.

Moral Conviction

If a person is placed in the position to institute or administer justice they may well operate from a personal sense of right and wrong. Conceptually similar to dogmatism as defined by Altemeyer (1996) is the construct *moral conviction* (Skitka, Bauman & Sargis, 2005) which is essentially how much a person feels a clear sense of right and wrong around a particular issue and how moral in nature the issue is perceived. No studies could be located establishing statistical relationships between moral conviction and dogmatism.

Skitka, Bauman & Sargis (2005, p895) found that “stronger moral conviction led to (a) greater preferred social and physical distance from attitudinally dissimilar others, (b) intolerance of attitudinally dissimilar others in both intimate (e.g., friend) and distant relationships (e.g., owner of a store one frequents), (c) lower levels of good will and cooperativeness in attitudinally heterogeneous groups, and (d) a greater inability to generate procedural solutions to resolve disagreements.” This indicates that those higher

in moral conviction are also more likely to self-segregate, contributing to greater incidence of what Ross, Greene, and House (1977) call the false-consensus effect, which, in turn may be related to the reported tendency of individuals with stronger moral convictions to act to formalize perceived-norms into law.

Physician Assisted Suicide

Moral conviction is separate from religiosity. Where religiosity may aid in the administration of justice, moral conviction has the potential to hinder it. Two recent studies used internet based surveys and methods comparable to those employed by U.S. Census to study the interactions of religiosity and moral conviction on beliefs about Physician Assisted Suicide. Wisneski, Lytle, and Skitka (2009, p1061) and Skitka, Bauman and Lytle (2009, p572) both operationally defined moral conviction based on responses to two items: (1) “To what extent are your feelings about physician-assisted suicide a reflection of your core moral values and convictions?” and, (2) “To what extent are your feelings about physician-assisted suicide deeply connected to your beliefs about ‘right’ and ‘wrong’” Response choices were on a 5-point Likert-type scale from “not at all” to “very much.” Likewise both research projects (Wisneski, Lytle, and Skitka, 2009, p1061; Skitka, Bauman and Lytle, 2009, p572) defined religiosity based on responses to three items: (1) “My religious faith is extremely important to me,” (2) “My religious faith impacts many of my decisions,” and (3) “I look to my faith for meaning and purpose in my life.” Response choices were on a 7-point Likert-type scale from “very much agree” to “very much disagree.” Consistent with predictions Wisneski, Lytle, and Skitka (2009) demonstrated through regression analysis different effects for those high in

moral conviction and those low in that individual difference measure. Specifically, those high in moral conviction relative to Physician Assisted Suicide distrusted the Supreme Court's ability to do the right thing $B = -.10$, $t(704) = -2.51$, $p < .01$, whereas those high in religiosity displayed an opposite effect $B = .11$, $t(704) = 2.97$, $p < .01$, deferring instead to the authority of law (Wisneski, Lytle, and Skitka, 2009). These researchers also determined that trust and distrust in authority were both visceral reactions more than meditative decisions (Wisneski, Lytle, and Skitka, 2009, 1062) where "(t)he religious viscerally trust authorities to get it right; the morally convicted do not." Skitka Bauman & Lytle (2009) carried these findings a step further by demonstrating that moral conviction did—and religiosity did not—predict strong "reactions to the perceived fairness and unfairness of the Supreme Court's decision and people's acceptance or rejection of that decision as the final word on the issue" (p574).

Political Engagement

In the context of the American democratic republic, moral conviction has been linked to voting behavior. Using similar methods and measures of moral conviction to those outlined above Skitka and Bauman (2008) studied the relationship between moral conviction and U.S. presidential elections in 2000 and 2004. Importantly, these researchers (Skitka and Bauman, 2008) first distinguished moral mandates from strong attitudes, agreeing with previous research stating that those attitudes for which we show a strong preference (such as musical taste, or sport team loyalties) are not necessarily moral mandates; moral mandates are attitudes that are both strong and moral in nature (such as infanticide, female circumcision, or the Patriot Act). This distinction is important to the

present study in that issues selected for study have a moral component and moral conviction connected to each issue is measured. (Skitka and Bauman, 2008).

Skitka and Bauman (2008) expected to find that moral conviction led to more voting by conservatives compared to liberals during U.S. presidential elections in 2000 and 2004. What they did find was that voters' perceptions that moral conviction was central to issues, and candidates, increased voting on both sides of the aisle in both elections (Skitka and Bauman, 2008). They concluded that the framing of George W. Bush and his positions as primarily moral in nature did not only increase the number of Republicans voting, but also increased the number of Democrats voting, both out of a sense of moral urgency. Skitka and Bauman (2008) performed a 2 x 2 between subjects ANOVA to measure whether moral conviction influenced the differences noted among scores of those who did or did not vote and preferred one candidate or the other. In election year 2000, "Bush supporters reported that their candidate preference was more strongly tied to moral conviction than Gore supporters, $F(1, 1849) = 10.95, p = .01$." Perhaps more notably, "participants who reported voting in the 2000 presidential election were higher in moral conviction than those who reported not voting in that election, $F(1, 1849) = 144.29, p = .001$," (Skitka & Bauman, 2008 p43). For the 2004 election, a pre-post analysis was carried out demonstrating again that "moral convictions about both candidates and issues predicted higher levels of political engagement in the form of both behavior and intentions," (Skitka & Bauman, 2008 p49 -50) and "stronger moral convictions were equally strong predictors of intention to vote in the 2004 presidential election for those on both the political right and left."

Moral conviction was selected as a variable of interest in the present study to pair with dogmatism because: (a) it is simple to measure requiring only two items per issue, (b) a clear link has been established between moral conviction and voting behavior (c) a dogmatism-moral conviction combination may be expected to combine in ways particularly relevant to voting behavior and other measures of justice.

Summary

Since Rokeach first proposed a scale to measure the construct of dogmatism many changes have come about in the way that dogmatism is thought of and measured. Whereas it began as a psychological construct not unlike a schema, it has been refined to be measured as unreasonable attachment to one's own ideas. The original scale was validated by researchers whose methodology for validation was questionable at best and all-too-often outright incorrect according to Altemeyer (1996) who proposed a new scale to measure the construct. This scale was selected for use in this study for its reliability and validity.

Since American justice depends on the ability of citizens to weigh and balance alternatives, dogmatism, which is unreasonable certainty, is a valid variable of interest in inquiry into injustice. Specifically, with dogmatics less equipped to perform moral reasoning, take the perspective of another or challenge their own views, dogmatics may present a threat to justice. Religious doubt is negatively correlated with dogmatism and positively correlated with complexity of thinking in the religious domain. Dogmatics are confident in their ideas and give little attention to ideas opposite their own. Dogmatics tend to be more politically conservative and socially traditional (Rokeach and Fruchter, 1956; Rokeach, 1960; Vacchiano, Strauss, and Hochman, 1969; Shultz, 1962; Troidahl &

Powell, 1965; Altemeyer, 1996; Jost, Glaser, Kruglanski & Sulloway, 2003), but were not any more likely than nondogmatics to preferentially turn-in hippie shoplifters (Steffensmeier, 1975). Attached to their ideas as they are, dogmatics tend also to be so authoritarian that a judge's order to not consider inadmissible but damning evidence trumps their intolerance. If, in general, pre-trial characteristics do not tend to relate to ultimate jury decisions in a reliable way, dogmatics do tend to be more likely to convict and to suggest stiffer sentences, especially when the just world theory is activated by pre-trial suffering on the part of the accused. In sum dogmatism and justice are at odds.

Moral conviction is linked to intolerant behaviors. High moral conviction relates to mistrust in the Supreme Court's ability to do the right thing, and a failure to accept an unfavorable ruling as the final word on the matter. Moral conviction was reliably related to voting behavior in the 2000 and 2004 presidential elections. For these reasons moral conviction was selected as a variable of interest.

Purpose

The purpose of this study is to demonstrate that dogmatism and moral conviction in individuals can and does manifest in the form of injustice for the greater citizenry. Addressed in this study is one avenue through which this change is manifested. Namely, those participants with strong moral convictions who are also high in dogmatism can be expected to vote in line with their intolerant and ego-centric views, for example voting against bills or laws providing equal rights to homosexual citizens, and for laws or bills that would require creationism be taught in public schools, each time without consideration for opposing viewpoints.

Based on previous research and in keeping with present methodology, two hypotheses were tested.

Hypothesis 1: Dogmatism, Moral Conviction and Consideration of Opposition Viewpoint will discriminate voting on the issue of gay marriage.

Hypothesis 2: Dogmatism, Moral Conviction and Consideration of Opposition Viewpoint will discriminate voting on the issue of teaching creationism in public schools.

CHAPTER III

METHODS

Participants

The population sampled was voting-age students at Wichita State University. Participants (N=200; male= 53, female= 147) were recruited through announcements in classrooms during courses in Psychology. When visiting a classroom the researcher handed around a sign-up sheet requesting email address; the link to the online survey was then emailed to those who agreed to take part. It is a requirement that all students in General Psychology courses at Wichita State University participate in research (or a comparable alternative assignment). These students are directed to an on-line system called SONA, which acts as a clearinghouse for the research going on in the Psychology Department. Students sign-in to SONA and are then able to sign-up for available time-slots to take part in research. In the case of the present research the SONA system acted as a recruiting tool by directing participants directly to the on-line survey. This system not only aids participants in connecting with research, but also keeps separate track of identifying information and data, in effect providing anonymous data to researchers.

Measures

Dogmatism

To measure Dogmatism the 20-item DOG Scale (Altemeyer, 1996) was included in its entirety (See Table 2). DOG Scale measures dogmatism as “unjustified certainty”

through responses on a 5-point Likert-Type scale (“Strongly Agree,” “Agree,” “Neither/Nor” “Disagree,” “Strongly Disagree”) to positively scored items such as, “People who disagree with me are just plain wrong and often evil as well,” and negatively scored items such as, “I am a long way from reaching final conclusions about the central issues in life.” Altemeyer’s DOG scale has been used extensively (see pages 13-18) and is accepted to be psychometrically sound. In the final analysis a sum-term variable represented a global level of dogmatism (see pages 34-35).

Moral Conviction

To measure moral conviction related to each issue, questions were adapted from Skitka and associates’ (Wisneski, Lytle, and Skitka, 2009; Skitka Bauman & Lytle, 2009) moral conviction scales. Skitka and associates have primarily focused on the issue of physician assisted suicide. To increase realism and engagement two issues expected to be more polarizing and more relevant to college students in Kansas were selected: legalized gay marriage, and mandatory teaching of creationism in public school. Moral conviction related to gay marriage and the mandated teaching of creationism was measured using scale items modeled-after those used by Skitka and associates (2009). Two items were adapted to measure moral conviction related to gay marriage, namely “My feelings about gay marriage are a reflection of my core moral values;” and “My feelings about gay marriage are deeply connected to my beliefs about ‘right’ and ‘wrong’” Two items were adapted to measure moral conviction related to teaching of creationism, namely “My feelings about mandating the teaching of Creationism are a reflection of my core moral values;”; and “My feelings about mandating the teaching of

Creationism are deeply connected to my beliefs about ‘right’ and ‘wrong’.” Each of these items was measured on a 5 point scale from “Strongly Agree” to “Strongly Disagree”. In the final analysis the two items for each issue were collapsed into one variable representing a moral conviction for that issue.

Consideration of Opposition Viewpoint

To measure consideration of opposition viewpoints, injustice proneness related to each issue, two items were created:

“When deciding how to vote on the issue of gay marriage, I considered the reasoning of those who do not agree with me.”

“When deciding how to vote on the issue of teaching creationism in public schools, I considered the reasoning of those who do not agree with me.”

Each item was presented on a 5-point scale (“Strongly Agree,” “Agree,” “Neither/Nor” “Disagree,” “Strongly Disagree”). In the final analysis one item for each issue represented a domain-specific tendency to consider or not to consider opposing viewpoints when making decisions about each issue.

Voting For Laws

Participants’ responses to two questions measured willingness to cast a deciding vote for or against legislation making gay marriage legal or legislation mandating the teaching of creationism as measured in the questions: “If mine was the deciding vote in the KS legislature, I would vote to make gay marriage legal,” and “If mine was the

deciding vote in the KS legislature, I would vote to make creationism be taught in public schools.” Participants selected either “Vote Yes” or “Vote No,” for each question.

Procedures

An on-line survey was created using IBM SPSS Data Collection Web Interviews. Respondents were recruited through in-class solicitation, general appeals through university instructors, and through the SONA system as described above. In order to increase generalizability and to more fully engage the participants they read the following cover story before completing the survey.

As a result of elections in 2010 new legislators were seated in the Kansas Legislature resulting in the greatest change in membership in decades. While last year was productive legislatively, this year is expected to be one of the most active in years with several new bills coming before legislators. This survey is designed to inform important decisions so it will ask your opinions related to critical issues for the state.

Participants complete the survey by progressing through a series of screens constructed using computerized data collection measures (See Appendix D). The first screen introduced the study using the cover story above, the second and third screens presented the dependent variables (voting questions). At a pace of one item per-screen each of the consideration of opposition viewpoint questions was presented, followed by each of the moral conviction questions. The DOG Scale was presented in order, four-items per screen, and the survey concluded with a few demographics questions (i.e. gender, ethnicity, religious affiliation).

Based on previous research and in keeping with present methodology, two hypotheses were tested.

Hypothesis 1: Dogmatism, moral conviction and consideration of opposition viewpoint will discriminate voting on the issue of gay marriage.

Hypothesis 2: Dogmatism, moral conviction and consideration of opposition viewpoint will discriminate voting on the issue of teaching creationism in public schools.

To measure Hypotheses 1 and 2, a discriminant analysis was completed for each using the IBM SPSS Statistic 19 software. Hypothesis 1 was tested by performing a discriminant function analysis where voting behavior (vote to make gay marriage legal) was the dependent variable, and membership into the two groups (vote yes, vote no) was predicted by three independent variables (dogmatism, moral conviction, and consideration of the opposition viewpoint). Dogmatism was figured by reverse-scoring the positively worded scale items, then totaling those items and adding the scores on the negatively worded questions. Because of the direction of the response sets (1=strongly agree to 5=strongly disagree) adding the total for negatively worded questions and the total for reverse-scored positively worded questions results in a number that represents overall dogmatism (between 20 and 100), where the greater the number the greater the dogmatism reflected in responses to scale items. Moral Conviction was represented in the equation by a variable built by first reverse-scoring (so that Strongly Agree = 5 and Strongly Disagree = 1) then adding-together the responses to “My feelings about gay marriage are a reflection of my core moral values;” and “My feelings about gay marriage

are deeply connected to my beliefs about ‘right’ and ‘wrong’” Consideration of opposition viewpoint was represented in the equation by reverse-scoring the item, “When deciding how to vote on the issue of gay marriage, I considered the reasoning of those who do not agree with me,” so that “strongly agree” was equal to 5 and “strongly disagree” was equal to 1.

Hypothesis 2 was tested by performing a nearly identical discriminant function analysis where voting behavior (vote to mandate the teaching of creationism in public school) was the dependent variable, and membership into the two groups (vote yes, vote no) was predicted by three independent variables (dogmatism, moral conviction, and consideration of opposition viewpoint). Dogmatism was figured for this equation exactly as it was for Hypothesis 1. Moral Conviction was represented in the equation by a variable built by first reverse-scoring (so that Strongly Agree = 5 and Strongly Disagree = 1) then adding-together the responses to “My feelings about teaching creationism in public schools are a reflection of my core moral values;” and “My feelings about teaching creationism in public schools are deeply connected to my beliefs about ‘right’ and ‘wrong’” Consideration of opposition viewpoint was represented in the equation by reverse-scoring the item, “When deciding how to vote on the issue of teaching creationism in public schools, I considered the reasoning of those who do not agree with me.” so that “strongly agree” was equal to 5 and “strongly disagree” was equal to 1.

CHAPTER IV

RESULTS

Demographics and Variables of Interest

Demographics

Data on four demographics questions (age, gender, ethnicity, and religious affiliation) was collected. Participants ranged in age from 18 to 58 ($M=22.5$, $SD=6.5$) and the sample was populated with more females ($n=147$) than males ($n=53$). In the sample Caucasian ($n=154$, 76.9%) were most represented, followed by Asian ($n=17$, 8.5%), African American ($n=11$, 5.5%), Hispanic ($n=10$, 5%), and Other / Write-in (8, 4%). One participant left the ethnicity item blank. The sample, if predominately Christian ($n=100$, 50%) was otherwise diverse in terms of religious affiliation. The Catholic faith was represented ($n=36$, 18%), as was Buddhism ($n=12$, 6%) and the Muslim / Islam faith ($n=6$, 3%). “None or Atheist” was selected by 30 participants (15%) and 16 participants (8%) selected “Other,” or wrote-in their religious affiliation. One participant left the religion item blank. (See Table 3)

TABLE 3

RELIGIOUS AFFILIATION BY ETHNICITY

	Caucasian	Asian	African American	Hispanic	Write-in (Ethnicity)
N	154	17	11	10	8
% Christian	54.5	11.8	54.5	40.0	37.5
% Catholic	17.5	17.6	9.1	40.0	12.5
% None or Atheist	17.5	5.9	0.0	10.0	25.0
% Write-In (Religion)	7.8	5.9	9.1	10.0	12.5
% Buddhist	1.3	47.1	9.1	0.0	12.5
% Muslim / Islam	1.3	11.8	18.2	0.0	0.0

Variables of Interest

Dogmatism was measured globally, while consideration of the views of others, moral conviction and voting “yes” or “no” were measured by-issue. Dogmatism was scored so as to have a possible range of 20 to 100 where a greater number indicates greater dogmatism within the individual. In this sample DOG scores ranged from 23 to 90 ($M=50.66$, $SD=14.3$). Consideration of opposition viewpoint was calculated so as to have a possible range of 1 to 5 where a greater number indicates greater consideration of the views of others in voting decisions. Consideration of opposition viewpoint ranged from 1 to 5 for both issues, gay marriage ($M=3.8$, $SD=1.05$) and teaching creationism ($M=3.69$, $SD=1.07$). Moral conviction was calculated so as to have a possible range of 2 to 10 where a greater number indicated a greater degree of moral conviction around the issue at hand. In this sample moral conviction ranged from 2 to 10 for both issues, gay marriage ($M=7.58$, $SD=2.2$) and teaching creationism ($M=6.96$, $SD=2.1$). When asked how they would cast the deciding vote, 126 (63%) reported that they would vote to make gay marriage legal, leaving 74 (37%) who would not. When asked how they would cast the deciding vote, 120 (60%) participants reported that they would vote to make public schools teach creationism, leaving 80 (40%) who would not. (See Table 4 and Table 5).

TABLE 4
 VOTING DECISIONS BY RELIGIOUS AFFILIATION, GENDER,
 AND ETHNICITY

	N	Percent Voting YES on Gay Marriage	Percent Voting YES on Teaching Creationism
<i>Religious Affiliation</i>			
Christian	100	52	66
Catholic	36	58.3	69.4
Catholic	36	58.3	69.4
None or Atheist	30	93.3	26.7
Other / Write-in	16	81.3	50.0
Buddhist	12	100.0	75.0
Muslim / Islam	6	16.7	66.7
<i>Gender</i>			
Female	147	66.0	62.6
Male	53	56.6	52.8
<i>Ethnicity</i>			
White Caucasian	154	61.7	59.1
Asian	17	76.5	70.6
African American	11	45.5	63.6
Hispanic	10	80.0	70.0
Other / Write-in	8	75.0	37.5
<i>Overall</i>			
Total N (n)	200	63	60

TABLE 5

DOGMATISMS, MORAL CONVICTION, AND CONSIDERATION OF OPPOSITION VIEWPOINT, BY RELIGIOUS AFFILIATION, GENDER AND ETHNICITY

	Average DOG Score	Average Moral Conviction	Average Other View	Average Moral Conviction	Average Other View
	Gay Marriage			Creationism	
<i>Religious Affiliation</i>					
Christian	54.8	7.8	3.7	7.4	3.6
Catholic	49.3	7.8	3.8	6.9	3.7
None or Atheist	40.1	7.3	4	6.1	3.8
Other / Write-in	42.3	7.3	3.9	6.2	3.8
Buddhist	50.2	6.2	4.1	6	4.2
Muslim / Islam	59.8	9.2	3.4	8.6	2.6
<i>Gender</i>					
Male	51.1	7.5	3.8	6.8	3.7
Female	50.4	7.6	3.8	7	3.7
<i>Ethnicity</i>					
Caucasian	50	7.8	3.8	7	3.7
Asian	53.4	6.6	3.9	6.5	3.6
African American	55.7	7.2	3.7	7.8	3.4
Hispanic	54	7.5	3.7	7.2	3.8
Other / Write-in	44.9	6.4	4	5.8	3.9
<i>Overall</i>					
Mean Scores	50.7	7.58	3.8	6.96	3.69

Correlations among variables of interest were reported in Table 6. In general correlations were significant but only moderate in effect size; but notably, dogmatism and moral conviction correlated for gay marriage $r(200) = .35$, $p < .01$ and for teaching creationism $r(200) = .53$, $p < .01$. Also dogmatism scores negatively correlated with consideration of opposition viewpoints for gay marriage $r(200) = -.27$, $p < .01$ and for teaching creationism $r(200) = -.30$, $p < .01$.

TABLE 6
CORRELATIONS AMONG VARIABLES OF INTEREST

		DOG Score	Moral Conviction	Considered the Opposition View ?	Moral Conviction	Considered the Opposition View ?
		Gay Marriage			Creationism	
Gay Marriage	DOG Score		**0.35	**-.027	**0.53	**-.030
	Moral Conviction			*-.017	**0.52	**-.019
Creationism	Considered the Opposition View ?				**-.012	**0.63
	Moral Conviction Considered the Opposition View ?					*-.018

** p<.01, *p<.05, N for all correlations equals 200

Statistical Analyses

Hypothesis 1

Hypothesis 1 was that Dogmatism, Moral Conviction and Consideration of Others would discriminate voting behavior on the issue of gay marriage. This hypothesis was tested by performing a discriminant function analysis. One function was generated and was significant, $\lambda = .594$, $\chi^2 (3, N=200)=102.39$, $p<.001$. These results indicate that the function of predictors significantly differentiated between voting yes or no on the issue of legal gay marriage, and this function was found to account for 100% of function variance. A Wilks Lamda of .594 is strong for social research and indicates separation of groups. Standardized function coefficients (Table 7) revealed that the dogmatism variable was most associated with the factor, and moral conviction was less associated while consideration of others was even less related to the factor. In terms of functions at

group centroids, those voting "yes" had a mean of 1.085 while those voting "no" produced a mean of -.624 (Table 8). Cases with scores near to a centroid are predicted as belonging to that group. Post Hoc analysis revealed that this factor correctly predicted group membership for 78% of the cases. In other words, the variables dogmatism, moral conviction, and consideration of others did group together in a way that could discriminate which direction a person would vote on the issue of gay marriage. Specifically those higher in dogmatism, higher in moral conviction, and lower in consideration of others were more likely to vote against gay marriage in KS.

TABLE 7

CORRELATION COEFFICIENTS AND STANDARDIZED FUNCTION COEFFICIENTS FOR HYPOTHESIS 1: GAY MARRIAGE

	Standardized Canonical Discriminant Function Coefficients	Correlation Coefficients with Discriminant Function
DOG Score	0.800	.927
Moral Conviction (Gay Marriage)	0.435	.659
Consideration of Others	-0.156	-.393

TABLE 8

FUNCTIONS AT GROUP CENTRIODS FOR HYPOTHESIS 1: GAY MARRIAGE

	Function 1
Vote "Yes" or "No"	
Vote Yes	-.624
Vote No	1.085

Hypothesis 2

Hypothesis 2 was that Dogmatism, Moral Conviction and Consideration of Others would predict voting behavior on the issue of teaching creationism. This hypothesis was tested by performing a discriminant function analysis as described above. One function was generated and was significant, $\lambda = .873$, $x^2 (3, N=200)=19.56$, $p<.001$. Although the Wilks' Lambda is weak, these results indicate that the function of predictors significantly differentiated between voting yes or no on the issue of mandating the teaching of creationism in public school, and this function was found to account for 100% of function variance. Standardized function coefficients (Table 9) revealed that moral conviction was most associated with the factor, with consideration of others and dogmatism slightly less so. In terms of functions at group centroids, those voting "yes" had a mean of $-.463$ while those voting "no" produced a mean of $.309$ (Table 10). Cases with scores near to a centroid are predicted as belonging to that group. Post Hoc analysis revealed that this factor correctly predicted group membership for 62% of the cases. In other words, the variables dogmatism, moral conviction, and consideration of others did group together in a way that could discriminate which direction a person would vote on the issue of mandated teaching of creationism. Specifically those higher in dogmatism, higher in moral conviction, and lower in consideration of others are more likely to vote to mandate the teaching of creationism in Kansas public schools.

TABLE 9
CORRELATION COEFFICIENTS AND STANDARDIZED FUNCTION
COEFFICIENTS FOR HYPOTHESIS 2: CREATIONISM

	Standardized Canonical Discriminant Function Coefficients	Correlation Coefficients with Discriminant Function
DOG Score	0.507	0.66
Moral Conviction (Teaching Creationism)	0.655	0.80
Consideration of Others	0.597	0.30

TABLE 10
FUNCTIONS AT GROUP CENTRIODS
FOR HYPOTHESIS 2: CREATIONISM

	Function 1
Vote "Yes" or "No"	
Vote Yes	-.624
Vote No	1.085

Hypotheses 1 and 2 were tested again in subsamples of population. Namely, both Hypothesis 1 and Hypothesis 2 were supported by Discriminant Functional Analyses when the analysis included only male participant data, and when the analysis included only female participant data (See Table 11). This data analysis suggests that although a gender difference does exist between men and women in terms of voting on these two issues, for both males and females the three variables dogmatism, moral conviction and consideration of opposition views discriminates between voting yes and voting no for each issue. Whatever gender difference might be responsible for males and females voting differently on these issues, they do not undermine the tendency of dogmatism, moral conviction, and consideration of the views of others to discriminate voting on gay marriage and teaching creationism.

TABLE 11

DISCRIMINANT ANALYSIS, WILKS LAMBDA, CHI SQUARE, AND
P-VALUES BY GENDER

	N	degrees of freedom	DA Wilks Lambda	DA Chi Square	DA p- value
<i>Gay Marriage</i>					
Female	147	3	0.569	80.92	0.000
Male	53	3	0.538	30.72	0.000
<i>Teaching Creationism</i>					
Female	147	3	0.873	19.56	0.000
Male	53	3	0.797	11.22	0.011

CHAPTER V

DISCUSSION

Dogmatism has been formally studied by psychologists for more than half a century. The present research studied dogmatism especially as it relates to social justice. Literature around a newer construct, moral conviction, was reviewed and related to justice and dogmatism. Also addressed was a tendency to take or not to take the point of view of those who believe differently. This tendency was suggested to be a quality similar to justice. Discriminant analyses were performed to determine if dogmatism, moral conviction, and consideration of others' views would discriminate voting on the issues of legalizing gay marriage and mandated teaching of creationism. Data supported both hypotheses. In the case of gay marriage and teaching creationism three variables (dogmatism, moral conviction, and consideration of opposition views) discriminated how participants would vote on these issues.

Results from a discriminant factor analysis supported the hypothesis that dogmatism, moral conviction and consideration of opposition views would discriminate voting behavior on the issue of gay marriage. Dogmatism, moral conviction and consideration of opposition views did discriminate those voting yes from those voting no on the issue of gay marriage. Of the three variables, dogmatism was most related to the factor. The factor was less impacted by consideration of opposition viewpoints which was related in a negative direction. Those scoring higher in dogmatism, higher in moral conviction, and lower in consideration of the opposition view tended to vote against legalization of gay marriage. Those scoring lower in dogmatism, lower in moral

conviction and higher in consideration of the opposition viewpoint tended to vote for legalization of gay marriage.

Results from a discriminant factor analysis supported a second hypothesis that dogmatism, moral conviction and consideration of the opposition view would discriminate voting behavior on the issue of teaching creationism. Dogmatism, moral conviction and consideration of the opposition view did discriminate those voting yes from those voting no on the issue of teaching creationism. Of the three variables, moral conviction was most related to the factor. Those scoring higher in dogmatism, higher in moral conviction and higher in consideration of the views of others tended to vote in the direction of mandating the teaching of creationism in public schools. Those scoring lower in dogmatism, lower in moral conviction and lower in consideration of the views of others tended to vote against the mandated teaching of creationism in public schools.

Dogmatism

Resisting Counter-Attitudinal Views

Rokeach (1954) claimed and Altemeyer (1996) agreed that dogmatism was associated with resisting counter-attitudinal views, which was supported in the present research. Dogmatism was a significant variable discriminating on votes related to gay marriage and teaching creationism. Although the effect size is weak, accounting for only six to nine percent of the variance dogmatism scores correlated in the negative direction with consideration of the views of others for both gay marriage (-.26, $p < .01$) and teaching creationism (-.30, $p < .01$), but. In other words, participants scoring higher in dogmatism

tended to take the opposition view into account to a lesser extent (compared to participants scoring lower in dogmatism) when deciding how to cast the deciding vote at the state level on these two issue.

Vacchiano, Strauss, and Hochman (1969) found support for dogmatic thinkers, compared with nondogmatic thinkers, becoming anxious and filtering-out information supporting disbelief-systems (counter attitudinal information). Davies (1998) provided participants with two possible outcomes to a scenario and asked participants to select one and provide explanations for each. Dogmatic thinkers provided significantly more reasons supporting the outcome selected and significantly fewer reasons supporting the outcome not selected. Consistent with these previous studies, in present research dogmatic thinkers, when compared to those scoring lower on the dogmatism scale, assigned less weight to opposition arguments regarding state-level legislative decision making.

Dogmatism and EPPS Change Scale

Vacchiano, Schiffman, and Strauss (1967) noted a negative relationship between dogmatism and the acceptance of change subscale of the Edwards Personal Preference Schedule (EPPS; Edwards, 1959). While the EPPS change subscale was not administered, participants scoring high in dogmatism demonstrated a resistance to change (legal gay marriage) but also embraced change (mandating the teaching of creationism). Perhaps those high in dogmatism are not so opposed to change when it is in the direction of dogmatically held beliefs. It is also possible that changes in gay marriage laws and/or laws affecting policies in high schools would not represent actual change in the life of the

participant, and would therefore be theoretically unrelated to the EPPS measure of change.

Dogmatism and Religious Affiliation

Rokeach (1954, 1960) and Altemeyer (1996, 2000, 2004) do not agree about the way religion interacts with dogmatism. Rokeach (1954, 1960) reported that dogmatism was unrelated to religion, whereas Altemeyer (1996, 2000, 2004) conceptualizes dogmatism as being engendered largely through a context of religion, with more fundamentalist churches engendering more dogmatism. Differences in dogmatism scores for each religion (see Table 5) seem to support Altemeyer's understanding of the interaction of dogmatism and religion more than that of Rokeach. For example Muslims had the highest dogmatism scores (59.8), whereas those writing-in a response to religious affiliation (42.3) and Atheists (40.1) were much lower compared with the overall average (50.7) DOG score. These scores are in keeping with Vacchiano, Strauss, and Hochman's (1962, pg262) view that dogmatism is usually higher among followers of "religious groups that are dependent on authority and tolerate little argument in adherence to basic beliefs," such as Muslim/Islam and lower among atheists and followers of less fundamentalist faiths.

Dogmatism and Intolerance

Within Rokeach's (1954) definition of dogmatism was the belief that dogmatism relates to intolerant behavior. Altemeyer (1996) did not weigh in on the issue, but Crowson (2009) reported positive correlations between the DOG Scale and "generalized

intolerance of persons holding worldview-incompatible beliefs and values” (.77), as well as positive correlations between dogmatism and a self-report measure of aggressiveness toward those with different worldviews (.65). Vacchiano, Strauss, and Schiffman (1968) demonstrated dogmatic thinkers to be intolerant toward others who believe differently. In the present research, higher dogmatism scores were associated with voting against gay marriage, and for teaching creationism in public schools. Within the context of dogmatism a case could be made for each of these positions being intolerant. Voting against the right of other people to get married because these others do not conform to personally-held standards is intolerant. It is perhaps less obvious how mandating that the Yahweh creation story be singled out for inclusion in public school curriculum may also be seen as intolerant. Where prejudice appears in favor of the dominant in-group, members of that in-group tend to be unresponsive to viewing it as inequality. It is postulated that if one was to insist that the Christian creation story be included in public school curriculum but not also demand with equal vigor inclusion of Native American and/or other World-Religion creation stories in that curriculum, in so doing that person would demonstrate intolerance.

Dogmatism and Politics

Positive correlations between the DOG Scale and political conservatism, cultural conservatism (.42), Right Wing Authoritarianism (.66), and Social Dominance Orientation (.43) have been reported (Jost et al, 2003; Crowson, 2009). Also Crowson (2009) reported positive correlations between the DOG Scale and “incompatible worldview seen as a threat” (.57), as well as “perception that one's mission in life is to

persuade others to adopt his or her worldview” (.69). In the present research those scoring higher on the dogmatism scale tended to vote in right wing directions on issues which impacted citizens state-wide without consideration of opposition views. This behavior is consistent with political and cultural conservatism, Right Wing Authoritarianism and Social Dominance Orientation.

Johnson and Tamney (2001) demonstrated a relationship between dogmatism and a construct known as “social traditionalism” which consists of a concern with “maintaining more discipline in peoples' social and personal lives, especially related to the family (e.g., by tightening controls over abortion, homosexual behavior, and pornography; by making divorce more difficult),” (p 233). The present research may be interpreted to support a relationship between dogmatism and social traditionalism in that casting the deciding vote to mandate the teaching of creationism in public schools or to make gay marriage illegal both qualify as a concern with “maintaining more discipline in peoples' social and personal lives.”

Dogmatism and Justice

Shaffer and associates (Shaffer, Plummer, and Hammock, 1986, p1067) predicted that dogmatic thinkers “may experience more difficulty than nondogmatics at ignoring testimony that is damaging to the defendant’s credibility but subsequently ruled inadmissible,” but through direct inquiry these researchers failed to find support for the prediction (Shaffer and Wheatman, 2000). In that study dogmatic thinkers were so authoritarian that the opposite effect was noted. The judge’s order to not consider inadmissible evidence was honored despite conflict with personal beliefs (Shaffer and

Wheatman, 2000). In the present research those scoring high in dogmatism, when acting as an unchecked authority by “casting the deciding vote in the Kansas legislature,” tended to vote in the direction of personal preferences without regard for the proper procedure of weighing both sides of the issue of gay marriage, or teaching creationism.

Moral Conviction

Moral Conviction and Dogmatism

Moral Conviction is conceptually similar to dogmatism but has not been compared to dogmatism in previous research. Correlations indicate a relationship between dogmatism and moral conviction for both gay marriage ($r=.35$, $p<.01$) and teaching creationism ($r=.53$, $p<.01$) accounting for 12% and 28% of the variance respectively. In other words, those scoring higher in dogmatism also tended to report believing that the teaching of creationism was an issue moral in nature and deeply related to the participant’s sense of right and wrong. To a lesser extent those scoring higher in dogmatism also tended to report believing that legal gay marriage is an issue moral in nature deeply connected to the participant’s sense of right and wrong. Moral conviction for both legal gay marriage and mandated teaching of creationism appear to be related to dogmatism to varying degrees, indicating that moral conviction and dogmatism are related but different constructs.

Moral Conviction, Religious Affiliation, Gender, and Ethnicity

Skitka and Bauman (2008) established that both Republicans and Democrats can boast some membership high in moral conviction. In the present research moral conviction scores were reported for males and females, as well as each religious affiliation and ethnicity. No notable gender differences emerged in moral conviction. Ethnicity also did not interact with moral conviction, with one exception. Those participants who wrote in an ethnicity, when grouped together, represented the lowest average moral conviction scores among ethnicities for both gay marriage ($m=6.4$ compared to $M= 7.58$) and teaching creationism ($m=5.8$ compared to $M= 6.96$). Among religious affiliations Buddhist participants represented the lowest average moral conviction for gay marriage ($m=6.2$ compared to $M= 7.58$) and for teaching creationism ($m=6.0$ compared to $M= 6.96$). Muslim/Islamic participants scored highest in moral conviction for both gay marriage ($m=9.2$ compared to $M= 7.58$) and teaching creationism ($m=8.6$ compared to $M= 6.96$). This suggests that at least among this sample participants of Muslim/Islam faith are taught to think of legal gay marriage and mandated teaching of creationism as issues that are moral in nature to a greater extent than followers of other religions or faiths, most notably Buddhists. Additionally, the present research seems to indicate that those less associated with a religious authority tend to consider gay marriage and teaching of creationism to be issues less moral in nature.

Moral Conviction and Resisting Counter-Attitudinal Views

Just as dogmatic individuals were thought by Rokeach to be unreceptive to the views of others, Skitka, Bauman & Sargis (2005) reported a similar resistance toward the

ideas of others among those high in moral conviction. In present research this claim was supported. Moral conviction was a significant variable discriminating on voting yes from voting no for gay marriage and teaching creationism. Negative correlations between moral conviction and consideration of the opposition view for both gay marriage ($r = -.17, p=.01$) and for teaching creationism ($r = -.18, p=.01$) were also found. Put another way, those participants who believed that the issue at hand was a moral issue and that the issue was deeply connected to the participant's sense of right and wrong also tended to report considering the opposition viewpoint to a lesser degree (compared to those scoring lower in moral conviction) when deciding how to cast "the deciding vote" affecting state laws. In turn, those who did not believe the issue at hand was moral in nature or deeply connected to his or her sense of right and wrong (compared with those high in moral conviction) tended to take into consideration the opposition viewpoint when deciding how to "cast the deciding vote" to make state laws.

Skitka, Bauman & Sargis (2005, p895) found that "stronger moral conviction led to ... greater preferred social and physical distance from attitudinally dissimilar others" and "intolerance of attitudinally dissimilar others." In the present research those scoring higher in moral conviction reported giving less consideration to the viewpoints of others when deciding how to "cast the deciding vote" on both issues.

Moral Conviction and Physician Assisted Suicide

Wisneski, Lytle, and Skitka (2009) and Skitka, Bauman and Lytle (2009) employed surveys to study moral conviction related to beliefs about physician-assisted suicide, finding that those high in moral conviction relative to physician assisted suicide

distrusted the Supreme Court's ability to do the right thing (Wisneski, Lytle, and Skitka, 2009). Skitka Bauman & Lytle (2009, p574) carried these findings a step further by demonstrating that moral conviction also predicted strong "reactions to the perceived fairness and unfairness of the Supreme Court's decision and people's acceptance or rejection of that decision as the final word on the issue." In the present research those scoring higher in moral conviction for each issue tended to consider the viewpoint of the opposition to a lesser degree than those lower in moral conviction. It is suggested that those higher in moral conviction for physician-assisted suicide would be less likely (than those to whom the issue seems less moral in nature) to consider the opposition viewpoint before voting to make a law against physician assisted suicide.

Moral Conviction and Political Engagement

In the context of the American democratic republic, moral conviction has been linked to voting behavior. Skitka and Bauman (2008) studied the relationship between moral conviction and voting in 2000 and 2004 U.S. presidential elections. High moral conviction was related to increased voting behavior in these two elections won by George W. Bush, who made morality an issue in each campaign. In the present research voting was done at the level of the issue, rather than at the level of the politician. It is suggested that elections where issues like gay marriage and teaching creationism are concerned, voting behavior of those high in moral conviction for those issues can be expected to spike.

Consideration of the Opposition View

Consideration of the opposition view was conceptualized and included to address a tendency toward justice inasmuch as one taking the point of view of others when making decisions that would affect a whole state is a display of justice. In the process of making state-level decision, considering the opposition viewpoint may be a more intuitive step for lawmakers who might be more familiar with answering to their constituency. In this study college students considering the opposition viewpoint in “casting the deciding vote” that would impact state-law are thought to be more likely to institute a law that is just.

Consideration of the Opposition View and Resisting Counter-Attitudinal Views.

Researchers studying moral conviction and dogmatism suggest relationships between these constructs and intolerance for counter-attitudinal views as well as people who hold them (Rokeach, 1954; Vacchiano, Strauss, and Hochman, 1969; Davies, 1998; Skitka, Bauman & Sargis, 2005). In the present research the variable representing consideration of the opposition view correlated negatively with moral conviction for both gay marriage ($r = -.17, p=.01$) and for teaching creationism ($r = -.18, p=.01$). Likewise present research found consideration of the views of others correlated negatively with dogmatism for both gay marriage ($-.26, p<.01$) and teaching creationism ($-.30, p<.01$). Consideration of the views of others seems related to dogmatism and moral conviction in ways that indicate those high in dogmatism and moral conviction are resistant to the views of others. Put another way, in the present research those scoring higher in moral

conviction and dogmatism reported giving less consideration to the opposition viewpoint when deciding how to “cast the deciding vote” for the state on both issues.

Consideration of the Opposition View, Religious Affiliation, Gender, and Ethnicity.

Some research suggests that in general women, being more person-centered, may be more likely to take the viewpoint of others into account when making decisions. In the present research no gender differences emerged in relation to consideration of opposition view for either issue. Buddhist participants, when grouped together, represented the highest consideration of the opposition view scores among religious affiliations for both gay marriage ($m=4.1$ compared to $M= 3.8$) and teaching creationism ($m=4.2$ compared to $M=3.69$). Religious affiliation data indicated that participants of the Muslim/Islamic faith gave the least consideration to the views of others when deciding how to vote on gay marriage (3.4 compared to a population average of .38) and teaching creationism (2.6 compared to a population average of 3.69), while Buddhists and Atheists weighed opposing views most heavily for both gay marriage (4.1 & 4.0 respectively compared to a population average of 3.8) and teaching creationism (4.2 & 3.8 respectively compared to a population average of 3.69). This may suggest that followers of Muslim/Islam faith may be less prone to considering opposing viewpoints when making decisions regarding gay marriage and teaching creationism, while Buddhists and Atheists may be more prone to considering opposing views in making those same decisions.

Summary

Both hypotheses were supported. Those scoring higher in dogmatism, higher in moral conviction and lower in consideration of the opposition view tended to vote in the direction of mandating the teaching of creationism in public schools and against legalization of gay marriage. Those scoring lower in dogmatism, lower in moral conviction and higher in consideration of the opposition view tended to vote in the direction of legalization of gay marriage and against the mandated teaching of creationism in public schools. Participants with higher dogmatism scores tended to consider an opposition view to a lesser degree than participants with lower dogmatism scores when deciding how to cast the deciding vote for the state on gay marriage and teaching creationism. This is consistent with previous dogmatism research linking dogmatism to intolerance, resistance to change, resistance to counter-attitudinal views, political conservatism, social traditionalism and social dominance orientation. In contrast to previous research where dogmatic thinkers tended to defer to proper procedural justice endorsed by a judge authority-figure (Shaffer and Wheatman, 2000), in present research participants acted as an unchecked authority themselves by “casting the deciding vote in the Kansas legislature.” Participants scoring high in dogmatism tended to vote in the direction of personal preferences without regard for the proper procedure of weighing more than one point of view while deciding about laws affecting the whole state. Previous researchers disagree as to the relationship of religion and dogmatism. Present research supports a relationship where, when compared by religion, Muslims’ average dogmatism scores were highest while average dogmatism scores of Atheists were lowest.

Previously no relationship had been reported between moral conviction and dogmatism. Present research established correlations between dogmatism and moral conviction for both gay marriage and teaching creationism. Present research suggests a relationship between religion and moral conviction, in that, when compared by religion, Muslims' average moral conviction scores were highest while average moral conviction scores of Atheists and Buddhists were lowest. In keeping with previous research suggesting a relationship between moral conviction and resisting counter attitudinal views, present research found that those who scored higher in moral conviction reported giving less consideration to the viewpoints of others when deciding how to "cast the deciding vote" for the state on both gay marriage and teaching creationism. Moral conviction may also be connected to political engagement when moral issues dominate a campaign or debate.

Consideration of the opposition view seems related to dogmatism and moral conviction in ways that indicate those high in dogmatism and moral conviction are resistant to the opposition view. A lack of consideration for others' views in casting a deciding vote for state laws tends to be associated with high dogmatism, high moral conviction, and intolerance. Followers of Muslim/Islamic faith may be less prone to considering opposing viewpoints when making decisions regarding gay marriage and teaching creationism, while Buddhists and Atheists are more prone to considering opposing views in making those same decisions.

No notable age or gender differences emerged among dogmatism scores, consideration of the views of others scores, or moral conviction scores, but males and

females voted differently on both gay marriage and teaching creationism. This difference was not related to variables of interest.

CHAPTER VI

Conclusion and future research

Future Research

Discriminating Voting on Other Issues

Present research explored tendencies around dogmatism, moral conviction, consideration of the opposition view, and the issues of legalizing gay marriage and mandating the teaching of creationism in public schools. Future research may explore other issues, to see if dogmatism, moral conviction, and consideration of the opposition viewpoint discriminate voting behavior for issues other than gay marriage and teaching creationism. The issue of gay marriage is much deeper than the legal recognition of marital union. For example, future research may explore adoption rights for wed and unwed homosexuals, inheritance rights and Social Security benefits for gay and lesbian spouses or domestic partners, health insurance and other employee benefits for gay and lesbian spouses or domestic partners, or hospital visitation rights for gay and lesbian spouses or domestic partners.

Similarly, the issue of teaching creationism is deeper than whether it should be mandated in public schools. For example, future research might explore whether participants are in favor of other creation stories being taught in public school, whether creationism should be taught in science classes as opposed to a religion or theology class, whether other creation stories should be taught in science classes as opposed to a

theology class, to what extent the participant believes in creationism, whether participants believe that intelligent design is a theory equal to the theory of evolution, etc.

Political issues such as abortion, marijuana laws, handgun laws, physician assisted suicide, right to burn an American flag, citizen privacy issues, or undocumented students laws could be studied through the same lens applied to present research. Some issues are identified as “litmus issues” for their strong association with a direction of voting for a candidate or party. Identification of such issues could inform interventions aimed at more tolerant justice.

Both issues in the present research relate to laws that largely impact those other than the participant. All participants were 18 or older, so none would be back to public school to see creationism taught. Likewise, a small minority of the population is gay, so the likelihood that participants fairly and accurately approximated the views of the citizens most directly impacted by the laws in question is slim. Future researchers might explore whether a trend might be established among laws that would not impact the person voting consistent with the issues in the present research. More in-depth future research might also explore whether such trends would hold for issues that would directly impact the voter as well. For example future researchers could explore whether college freshmen would vote to require all college seniors to submit to a lie-detector test after completing coursework, before the degree is granted. In this case the participant would presumably expect that the law could pass in time for the student to be required to take a lie detector test before his or her own degree is granted, so personal relevance would be more salient than in issues of gay marriage and teaching creationism. The lie detector might be framed as screening for terrorists, academic dishonesty, illicit drug use, or intent

to pay off student loans. Dogmatism scores, moral conviction scores, and the tendency to consider the point of view of others in state-level decision making could be collected around the issues of terrorism, illicit drug use, academic dishonesty, and loan default.

Greater Diversity

Present research collected data related to religious affiliation and ethnicity, but did not preferentially seek out an even distribution of each. Present research sampled several ethnicities and religious affiliation, but (with the exception of Caucasians and Christians) not in great enough number to make statistically supported statements about the ways these populations interact with the tendency of moral conviction, dogmatism, and consideration of the opposition view to discriminate voting behavior. Future research may explore the possibility of selectively sampling for religious affiliation and ethnicity. Future research that preferentially recruits those of varying ethnic and religious affiliation could accumulate enough participants from a variety of religions and ethnicities to perform meaningful statistical analyses comparing those groups in terms of dogmatism. One might expect to find greater dogmatism and moral conviction scores, and lower consideration of others scores among those following faiths more fundamentalist in nature.

Intervention

The present research found a relationship among dogmatism and moral conviction and further established that these two variables and consideration of the opposition view discriminate voting on two issues many consider moral in nature. Future research may

plan an intervention to increase voting in a tolerant direction. Interventions might focus on decreasing dogmatism or increasing the tendency to consider the opposition view related to moral issues.

Future Dogmatism Research

Present research challenged the results of previous research that suggested that dogmatic thinkers (due to their authoritarianism) are most apt to follow the procedures of justice. The present research presented participants with the role of ultimate authority for the state and participants voted in line with their own preferences without consideration of the views of others. Future research may also explore how participants would act to impact justice in the role of the authority (i.e., “cast the deciding vote in the state legislature”) rather than as subject to greater authority (i.e., as part of a jury with orders from a judge) since it is through lawmakers in such a role that laws come into being.

Future Moral Conviction Research

Moral conviction and dogmatism come from different literature bases. Dogmatism has not been previously linked to moral conviction. Present research established preliminary correlations. Future research might pursue relationships among dogmatism and moral conviction related to other issues. Determining which issues are most and least related in terms of dogmatism and moral conviction could be interesting. Those issues demonstrating the highest correlations between dogmatism and moral conviction might be most susceptible to the tendency to be voted on in an intolerant

direction by those scoring low in consideration of the opposition view, high in dogmatism, and high in moral conviction for those issues.

Previous research demonstrated that moral conviction brought voters to the polls in 2000 and 2004. Present research indicated that moral conviction for an issue was related to voting on that issue. Future research may explore a suspected relationship between moral conviction around a variety of issues and political engagement. It is suspected that as moral conviction increases for issues chosen by realistically viable candidates to define the political platform, political engagement would increase among voters scoring higher in moral conviction for those issues.

Future Research and Consideration of the Views Others

In present research consideration of the opposition view was assessed with one self-report item. Future research may explore more statistically sound ways to measure a voter's tendency to take the point of view of others into consideration when casting a meaningful vote. Perhaps several items demonstrated to cluster together into a factor, or behavioral measures could be established.

In present research a lack of consideration of the opposition view during state-level decision making was related to intolerance as represented by voting against gay marriage and for mandated teaching of creationism in public schools. Future research may explore a connection between consideration of the views of others during state-level decision making and a decisive measure of intolerance. Such research could speak more directly to the expected negative relationship between consideration of the views of others and intolerance.

Limitations

One limitation of present research was the creation and use of one item to measure consideration of the views of others for each issue. A behavioral measure or multiple items demonstrated to create a factor together, and demonstrating reliability and validity prior to inclusion would be superior ways to measure this construct.

While gay marriage and teaching creationism were identified as moral in nature by research participants, the selection of these issues presented a limitation in that these issues were most personally relevant to marginalized populations, or “other people.” Because both laws selected for this study are not apt to affect the voter, it is not possible to say whether moral conviction, dogmatism, and consideration of the views of others will discriminate voting among issues or laws that would more directly impact the voter as well. The selection of these two issues also represents a limitation in that the narrow scope of the study does not allow for identification of trends that would be possible with an array of issues.

The present research was limited in that Caucasians and Christians dominated the sample. The sample well-represented a Wichita State University student population, but the number of participants identifying with some ethnicities and some religious affiliations were insufficient for the application of meaningful statistics to questions about differences among religious affiliation and ethnicity.

In the present research dogmatic thinkers and those scoring high in moral conviction for each issue demonstrated intolerance by voting for the mandated teaching of creationism in public schools and against gay marriage. This research was limited in

that it did not directly address political engagement or an array of other variables known to be related to dogmatism such as social traditionalism, social dominance orientation or Right Wing Authoritarianism.

Finally, the sample was younger and of higher education than the greater population. The dependant variable of casting a deciding vote in the Kansas Legislature would be more meaningful among a sample of voters. It would be more meaningful if these variables were demonstrated to discriminate voting behavior for a population most likely to vote, as is done in candidate polls. At the same time, even with a younger, more diverse and educated sample, dogmatism and moral conviction were influential in decisions related to important social issues.

Conclusions

Previous dogmatism research does not agree about the relationship of religion to dogmatism. Where Rokeach (1954) separated religion from dogmatism, Altemeyer (1996) conceptualized dogmatism as related to religion. Present research supported a relationship between dogmatism and religion. Differences were found among Buddhists, Atheists, and Muslims in terms of voting behavior, moral conviction, dogmatism and consideration of the views of others. Although the numbers of Muslims and Buddhists in the present study were low, mean differences on moral conviction and dogmatism scales might suggest that differences in Muslim and Buddhist practices relate to dogmatism and moral conviction scores. The tendency of Atheists to vote as a block is interesting because it cannot be traced to a church, mosque, or temple.

Moral conviction research to date has not established correlations with dogmatism. Present research established preliminary correlations between dogmatism and moral conviction connected to gay marriage and teaching creationism. Because dogmatism is a general processing style and moral conviction is a domain-specific attitude, the relationship between dogmatism and moral conviction will be different for each issue.

In the present research, the combination of moral conviction and dogmatism was associated with an unwillingness to take on the opposition viewpoint when casting a deciding vote for or against state laws. If those who are higher in moral conviction and dogmatism are less likely to consider the views of others and more likely to vote in a direction of intolerance, then this combination is likely having an impact on equality and justice, even now.

Kansas is currently experiencing a legislative body more conservative and fundamentalist in campaign promises and voting records than the state has experienced in many years. Many of these incoming legislators ran on morally-centered campaigns; if these legislators are also dogmatic thinkers, they may be likely to give little or no consideration to opposing views in casting votes related to social and moral issues before the House and Senate. A responsibility of legislators is to represent a constituency, which is composed of citizens with opposing as well as similar viewpoints. The administration of social justice depends on weighing more than one viewpoint in state-level decision making. If these lawmakers are both dogmatic thinkers and morally-centered, intolerant laws and policies would be predicted within the state. On a national level, in recent years a corporately funded and orchestrated grass-roots organization

calling itself the Tea Party has taken hold and seated legislators. Those identifying themselves with this party tend to run morally charged campaigns and make public statements in keeping with dogmatic thinking. These factors suggest that the Kansas legislature and Tea Party politicians may be instrumental in the implementation of unjust laws at state and national levels.

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APPENDICES

Appendix A

Rokeach (1954) - 43 items

1. A man who does not believe in some great cause has not really lived.
2. My blood boils whenever a person stubbornly refuses to admit he's wrong.
3. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does,
4. It is when a person devotes himself to an ideal or cause that he becomes important.
5. Man on his own is a helpless and miserable creature.
6. In times like these, a person must be pretty selfish if he considers primarily his own personal happiness.
- 7.. In a discussion people have a way of getting back at you by accusing you of quibbling and hair-splitting.
8. Communism and Catholicism have nothing in common.
9. There is nothing new under the sun.
10. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
11. While I don't like to admit this even to myself, I sometimes have the ambition to become a great man, like Einstein, or Beethoven, or Shakespeare.
12. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
13. It is sometimes necessary to resort to force to advance an ideal one strongly believes in.
14. It is better to be a dead lion than to be a live dog.
15. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
16. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all".
17. A person who thinks primarily of his own happiness is beneath contempt.
18. It is better to be a dead hero than a live coward.
19. Nothing is impossible.
20. If I had to choose between happiness and greatness, I'd choose greatness.
21. I am not likely to speak to people until they speak to me.
22. To compromise with our political opponents is to be guilty of appeasement.
23. It's all too true that most people just won't practice what they preach.
24. Once I get wound up in a heated discussion I just can't stop.
25. The United States and Russia have just about nothing in common.
26. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.
27. To one who really takes the trouble to understand the world he lives in, it's a relatively easy matter to predict future events.
28. To achieve the happiness of mankind in the future it is sometimes necessary to put up with injustices in the present.

29. The present is all too often full of unhappiness. It is the future that counts.
 30. It is by returning to our forgotten and glorious past that real social progress can be achieved.
 31. I am afraid of people who want to find out what I'm really like, for fear they'd be disappointed in me.
 32. I feel self-conscious when I'm with people who have a superior position to mine in school or business.
 33. I'd like it if I could find someone who would tell me how to solve my personal problems.
 34. My hardest battles are with myself.
 35. At times I think I am no good at all.
 36. All too many people are failures and it is the system which is responsible for this.
 37. It is only natural for a person to have a guilty conscience.
 38. It is generally safer to trust nobody.
 39. Much of the time I feel as if I have done something wrong or evil.
 40. I have often felt that strangers were looking at me critically.
 41. If given the chance I would do some things that would be of great benefit to the world.
 42. I have often felt that people say insulting and vulgar things about me.
 43. I am sure I am being talked about.
-

Appendix B

Rokeach (1960) - 66 items

- 1 The United States and Russia have just about nothing in common.
- 2 Communism and Catholicism have nothing in common.
- 3 The principles I have come to believe in are quite different from those believed in by most people
- 4 In a discussion people have a way of bringing up irrelevant issues rather than sticking with the main issue.
- 5 The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
- 6 Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
- 7 While the use of force is wrong by and large, it is sometimes the only way to advance a noble idea.
- 8 Even though I have a lot of faith in the intelligence and wisdom of the common man, I must say that the masses behave stupidly at times.
- 9 It is only natural that a person would have a much better acquaintance with ideas he believes than ideas he opposes.
- 10 There are certain "isms" are really the same, even though people who believe in these isms try to tell you they are different.
- 11 Man on his own is a helpless and miserable creature.
- 12 Fundamentally, the world we live in is a pretty lonesome place
- 13 Most people just don't give a "damn" for others.
- 14 I'd like it if I could find someone who would tell me how to solve my personal problems.
- 15 It's only natural for someone to be a bit fearful of the future
- 16 There is much to be done and so little time to do it
- 17 Once I get wound up in a heated discussion I just can't stop.
- 18 In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what others are saying
- 19 In a discussion I often find it necessary to repeat myself several times to make sure I am being understood
- 20 In a discussion I sometimes interrupt others too much in my eagerness to put across my own point of view
- 21 It is better to be a dead hero than a live coward.
- 22 My hardest battles are with myself.
- 23 At times I think I am no good at all.
- 24 I am afraid of people who want to find out what I'm really like, for fear they'd be disappointed in me.
- 25 While I don't like to admit this even to myself, I sometimes have the ambition to become a great man, like Einstein, or Beethoven, or Shakespeare.
- 26 The main thing in life is for a person to want to do something important.

- 27 If given the chance I would do some things that would be of great benefit to the world.
- 28 If I had to choose between happiness and greatness, I'd choose greatness.
- 29 It's all too true that most people just won't practice what they preach.
- 30 All too many people are failures and it is the system which is responsible for this.
- 31 I have often felt that strangers were looking at me critically.
- 32 It is only natural for a person to have a guilty conscience.
- 33 I have often felt that people say insulting and vulgar things about me.
- 34 I am sure I am being talked about.
- 35 In the history of mankind there have probably been just a handful of really great thinkers.
- 36 There are a number of people I have come to hate because of things they stand for.
- 37 A man who does not believe in some great cause has not really lived.
- 38 It is when a person devotes himself to an ideal or cause that he becomes important.
- 39 Of all the different philosophies which exist in this world there is probably only one which is correct.
- 40 A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
- 41 To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
- 42 When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
- 43 In times like these, a person must be pretty selfish if he considers primarily his own personal happiness.
- 44 To compromise with our political opponents is to be guilty of appeasement.
- 45 The worst crime a person could commit is to attack publicly the people who believe in the same thing he does,
- 46 In times like these, it is often necessary to be more on guard against ideas put out by people in one's own camp than by those in opposing camps.
- 47 A group which tolerates too much differences of opinion among its own members cannot exist for long.
- 48 There are two kinds of people in this world: those who are for the truth and those who are against the truth.
- 49 My blood boils whenever a person stubbornly refuses to admit he's wrong.
- 50 A person who thinks primarily of his own happiness is beneath contempt.
- 51 Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
- 52 I sometimes have a tendency to be too critical of the ideas of others.
- 53 In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
- 54 It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

- 55 In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
 - 56 There is no use wasting your money on newspapers which you know in advance are just plain propaganda.
 - 57 Young people should not have too easy access to books which are likely to confuse them.
 - 58 The present is all too often full of unhappiness. It is the future that counts.
 - 59 It is by returning to our forgotten and glorious past that real social progress can be achieved.
 - 60 To achieve the happiness of mankind in the future it is sometimes necessary to put up with injustices in the present.
 - 61 If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all".
 - 62 Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
 - 63 Most people just don't know what's good for them.
 - 64 There is nothing new under the sun.
 - 65 To one who really takes the trouble to understand the world he lives in, it's a relatively easy matter to predict future events.
 - 66 It is sometimes necessary to resort to force to advance an ideal one strongly believes in.
-

Appendix C

Cottle (1971) - 22 items

- 1 In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what others are saying (.75);
 - 2 In a discussion I sometimes interrupt others too much in my eagerness to put across my own point of view (.71);
 - 3 Once I get wound up in a heated discussion I just can't stop (.61);
 - 4 In a discussion I often find it necessary to repeat myself several times to make sure I am being understood (.56).
 - 5 I'm afraid of people who want to find out what I'm really like for fear they'll be disappointed in me (.62);
 - 6 My hardest battles are with myself (.62);
 - 7 There is much to be done and so little time to do it (.60);
 - 8 At times I think I'm no good (.59);
 - 9 It's only natural for someone to be a bit fearful of the future (.54);
 - 10 It's better to be a dead hero than a live coward (.34);
 - 11 I would like it if I could find someone who would tell me how to solve my personal problems (.35).
 - 12 Unfortunately, a good many people with whom I have discussed important social and moral problems don't really know what's going on (.60);
 - 13 If a man is to accomplish his mission in life, it is sometimes necessary to gamble "all or nothing at all" (.59);
 - 14 Most people just don't know what's good for them (.57);
 - 15 To achieve the happiness of mankind in the future it is sometimes necessary to put up with injustices of the present (.55);
 - 16 To one who really takes the trouble to understand the world he lives in, it's an easy matter to predict future events (.38).
 - 17 Most people just don't give a darn for others (— .66);
 - 18 There is nothing new under the sun (— .61);
 - 19 Fundamentally, the world we live in is a pretty lonesome place (— .54);
 - 20 Man on his own is a helpless and miserable creature (— .51);
 - 21 The present is all too full of unhappiness, it's only the future that counts (— .43);
 - 22 It is by returning to our glorious and forgotten past that real social progress can be made (— .41).
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Appendix D

Draft Survey

Screen 1

A new state legislature has just been elected resulting in more change in membership than the state has experienced in decades. Several bills will be before the lawmakers this session. The present research was designed to inform and influence the decisions of legislators. This survey will ask you some questions about your views related to two controversial issues linked to bills expected to be voted on this session.

Screen 2

If mine was the deciding vote in the KS legislature, I would vote to outlaw handguns.

Vote	Vote
Yes	No

If mine was the deciding vote in the KS legislature, I would vote to make gay marriage illegal.

Vote	Vote
Yes	No

If mine was the deciding vote in the KS legislature, I would vote to make civil unions the legal alternative to gay marriage.

Vote	Vote
Yes	No

If mine was the deciding vote in the KS legislature, I would vote to make Kansas Science teachers teach Creationism as an alternative to the theory of evolution.

Vote	Vote
Yes	No

If mine was the deciding vote in the KS legislature, I would vote to make children of illegal residents pay out of state tuition.

Vote	Vote
Yes	No

Screen 3

My feelings about outlawing handguns are a reflection of my core moral values.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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My feelings about outlawing handguns are deeply connected to my beliefs about “right” and “wrong”.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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My feelings about gay marriage are deeply connected to my beliefs about “right” and “wrong”.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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My feelings about gay marriage are a reflection of my core moral values.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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My feelings about mandating the teaching of Creationism are deeply connected to my beliefs about “right” and “wrong”.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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My feelings about mandating the teaching of Creationism are a reflection of my core moral values.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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My feelings about children of illegal residents getting in-state tuition are deeply connected to my beliefs about “right” and “wrong”.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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My feelings about children of illegal residents getting in-state tuition are a reflection of my core moral values.

Strongly Agree Agree Neutral Disagree Strongly Disagree

When answering each of the questions above I answered quickly without considering how anyone else may answer.

Strongly Agree Agree Neutral Disagree Strongly Disagree

When answering each of the questions above I took my time and considered the reasoning of the opposition argument.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Screen 4

1. Anyone who is honestly and truly seeking the truth will end up believing what I believe

Strongly Agree Agree Neutral Disagree Strongly Disagree

2. There are so many things we have not discovered yet, nobody should be absolutely certain his beliefs are right

Strongly Agree Agree Neutral Disagree Strongly Disagree

3. The things I believe in are so completely true, I could never doubt them

Strongly Agree Agree Neutral Disagree Strongly Disagree

4. I have never discovered a system of beliefs that explains everything to my satisfaction

Strongly Agree Agree Neutral Disagree Strongly Disagree

5. It is best to be open to all possibilities and ready to reevaluate all your beliefs

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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6. My opinions are right and will stand the test of time

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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7. Flexibility is a real virtue in thinking, since you may well be wrong

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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8. My opinions and beliefs fit together perfectly to make a crystal-clear “picture” of things

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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9. There are no discoveries or facts that could possibly make me change my mind about the things that matter most in life

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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10. I am a long way from reaching final conclusions about the central issues in life

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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11. The person who is absolutely certain she has the truth will probably never find it

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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12. I am absolutely certain that my ideas about the fundamental issues in life are correct

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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13. The people who disagree with me may well turn out to be right

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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14. I am so sure I am right about the important things in life, there is no evidence that could convince me otherwise

Strongly Agree Agree Neutral Disagree Strongly Disagree

15. If you are “open-minded” about the most important things in life, you will probably reach the wrong conclusions

Strongly Agree Agree Neutral Disagree Strongly Disagree

16. Twenty years from now, some of my opinions about the important things in life will probably have changed

Strongly Agree Agree Neutral Disagree Strongly Disagree

17. “Flexibility in thinking” is another name for being “wishy-washy”

Strongly Agree Agree Neutral Disagree Strongly Disagree

18. No one knows all the essential truths about the central issues in life

Strongly Agree Agree Neutral Disagree Strongly Disagree

19. Someday I will probably realize my present ideas about the BIG issues are wrong.

Strongly Agree Agree Neutral Disagree Strongly Disagree

20. People who disagree with me are just plain wrong and often evil as well

Strongly Agree Agree Neutral Disagree Strongly Disagree

Screen 5

Please select your gender:

Male
 Female

_Other

Please select the ethnicity with which you most identify:

_Caucasian

_African American

_Asian/Pacific Islander

_Mexican/Mexican American

What is your religious affiliation?

Please enter your date of birth (mm/dd/yyyy).