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# The Effects Of Authoritarianism On Moral Schema Development And Usage

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THE EFFECTS OF AUTHORITARIANISM ON MORAL SCHEMA

DEVELOPMENT AND USEAGE

being

A Thesis Presented to the Graduate Faculty

of the Fort Hays State University in

Partial Fulfillment of the Requirements for

the Degree of Master of Science

by

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## ABSTRACT

The current published research on authoritarianism and morality has used the DIT in an overly simplistic manner to predict opinions and actions within the dual process model, using principled moral development (P) as a continuous variable only without examining the influence of schema structure on authoritarianism, and vice versa (McFarland, 2010a). While using P as a continuous variable is advised in most research cases, the scale developers recommend using schema measures when examining the relationship of the DIT to other judgment measures (Thoma, 2006). By interpreting moral development and decision making as a linear construct rather than as a set of interlocking schema, this reductionism likely muddled the connection between Duckitt's Dual Process Model and moral development, creating a simple model that mediated authoritarianism through P to predict prejudice (McFarland, 2010a).

By examining the relationship between moral reasoning *schemas* and authoritarianism while controlling these factors, a much more complex model for meaningfully explaining how moral reasoning fits into Duckitt's theories and McFarland's research was found involving both moral reasoning level and the gender of the subject, ultimately supporting separate models for the genders. The research was also an extension of the validity studies for the moral schema views mentioned previously by Thoma and others, determining the applicability of schema theory to Duckitt's model (Duckitt, 2001; McFarland, 2010a; Rest et al., 2000; Thoma, 2006).

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“I could never find two people who are perfectly equal: one will always be more valuable than the other. And many people, as a matter of fact, simply have no value.”

— Pentti Linkola, *Can Life Prevail?*

“Nice customs curtsy to great kings.”

— William Shakespeare, *Henry V*

### **Introduction**

Authority has played a critical role in human history-from a certain perspective humanity can be divided into rulers and the ruled, and the differences between them. But if this perspective is taken, one finds that there are in fact a number of things they share in common. This particular cluster of cognitive and behavioral traits is often identified in social psychology as belonging to an authoritarian personality. The term personality is a misnomer. The majority of current researchers view authoritarianism as a set of beliefs and styles of thinking and behaving that are distinct from personality, and not linked to any one type of personality. Individuals exhibiting such traits (rigidity, high resistance to change) tend to align into certain groups, hold certain opinions in common, and generally conduct themselves in a particular manner that results in a strong connection between thought and behavior-not so much a personological characteristic as a way of thinking.

So if the individual characteristics that make up the construct of authoritarianism are implicit in certain opinions, the logical question is why. One strong possibility is that the effects of authoritarianism are mediated by a more global cognitive model regarding how such individuals relate to others in their environment, particularly in regard to open ended issues that do not have a clear answer.

Less flexibility with styles and patterns of thinking, such as using inflexible rules rather than active reasoning, does not lend itself well to certain modes of thinking. Those who utilize more absolute or 'conventional' methods of reasoning to define the proper relationship between individuals often do not succeed in this regard. These judgments about the moral relationship between individuals constitute a major part of human interactions, which are in turn an absolutely important part of healthy mental functioning. Individuals who score low on measures of moral reasoning (and logical reasoning inventories in general) are less likely to learn new material, ideas, or ways of interacting with others without in depth and effortful work (Thoma, 2006). Establishing a connection between these two elements, authoritarianism and 'conventional' moral reasoning, will provide a model of mediation for the effects observed in research regarding authoritarian individuals. In effect, individuals who score high on measures of authoritarian thought are likely to utilize conventional methods of ethical/moral reasoning, making them less amenable to change, challenging of rules or deviation from tradition.

Therefore, there are two particular factors which are of interest in this study. The degree to which individuals embrace aspects of authoritarianism-for this study defined using Duckitt's Dual Process Model-and how this may predict the complexity and fixed patterns of reasoning used in their ethical and moral reasoning (Duckitt, 2001). By reviewing the connections already established between authoritarianism and moral reasoning, as well as by seeking a more accurate interpretation of these findings, a clearer understanding of this relationship will be outlined. It is believed that measures of authoritarianism should strongly predict membership in a conventional, static moral reasoning style on one of the most common inventories for moral and ethical reasoning, the Defining Issues Test (McFarland, 2010a).

### **Authoritarianism**

Authoritarianism, as it is commonly understood, is a form of political organization characterized by an extreme concentration of political franchise within a very small stratum of the overall population who exclude all other political opponents from free competition (Shepard & Greene, 2007). While a helpful structural definition, it fails to describe the reasons why a population would subscribe to such a model of government. The attempts to determine the answer to this question span more than half a century, and have stepped in and out of different disciplines in the field of psychology along the way. In other disciplines, the difference between 'authoritarianism' and other political systems that exclude the bulk of a population from decision making (i.e. totalitarianism), focuses on the legitimacy of the role of the ruling individual or party,

with a strictly authoritarian government lacking legitimacy and ruling by imposed control and force (Sondrol, 2009). As will be discussed further on, research in psychology has integrated the ‘imposition of power’ and ‘acceptance of order’ into a more combined model, blurring the dichotomy into a spectrum based on two factors-the measures used in this study.

There have traditionally been two different schools of thought underlying research into authoritarian individuals: a situational, social dynamic perspective, of which Milgram’s famous compliance studies are representative (Milgram, 1963); and a more steady, personality trait based model assuming individual differences in participants and the population. Research into situational effects of compliance and response to authority have run the gambit from impelling participants to “harm” other human beings to generating a more global tendency to accept socially normative responses as more valid than their own previous opinions (Milgram, 1963; Sherif, Harvey, White, Hood, & Sherif 1961). While interesting, these situational effects were just that: situational. They did little to explain the within groups difference in behaviors demonstrated by certain participants. While large scale social influences can and do modify behavior and make conformity more likely, the relatively high ‘noise’ in such experiments and the effects of self-categorization on the presentation of authoritarian behavior argues for the need for an individual differences perspective to be incorporated into any model of authoritarian behavior. Conversely, the more global, descriptive summaries provided in other literature are helpful only so far as to aid one in conceptualizing authoritarianism as it exists in a

real world expression-the measure of internalized constructs is simply beyond its purview.

The first concerted effort to measure and define the authoritarian behavior clinically was the result of work by Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950), who attempted to apply psychoanalytic theory to the behavioral archetype they saw present in fascist groups during World War II. Operating along much the same vein as Milgram's compliance studies, Adorno and colleagues sought a framework with which to explain the extreme behaviors exhibited by military and civilian personnel during the conflict. It was the working assumption that harsh, restrictive parenting style with low fatherly affection would result in a pathogenormic personality which gravitated towards dictatorial leadership. The F (facism) scale (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950) was the result of this effort; the test was composed of indirect questions designed to assess a set of nine personality tendencies: conventionalism, authoritarian submission, authoritarian aggression, anti-intraception, superstition and stereotype, power and toughness, destructiveness and cynicism, projectivity, and sex (attitude towards).

The scale had a number of serious problems associated with it, including its lack of empirical validation. Many of the "tendencies" measured were done so indirectly due to their psychodynamic basis. Viewed from such a perspective, many of the outlined traits consisted of inferred subconscious processes which, by their very nature, could not be directly measured. As such, stand in questions were utilized to probe past the "conscious resistance" of participants, which had low validity and reliability (Cohn,



1952). Likewise, the scale also varied according to participants' intellectual capacity, SES, and political orientation (Kelman & Barclay, 1964). While the scale was later revised (the Balanced F Scale, or F scale revised) to correct for some of these psychometric errors, the criticisms launched against the instrument rendered it untenable (Turner, Brown, & Tajfel, 1979). This lack of reliability led to the individual differences perspective of authoritarianism being neglected for roughly twenty years (Duckitt, Wagner, du Plessis, & Birum, 2002). The scale would later be entirely scrapped and replaced by a more empirically validated system of measurement.

**Current models of authoritarianism.** The contemporary view of authoritarian theory utilizes two linked constructs to explain the diversity of behaviors that fall under the purview of authoritarian behavior: authoritarian submission and authoritarian dominance. Based on the theoretical framework established by Duckitt's (1989) conception of authoritarianism, the concept of an overarching 'personality of authoritarianism' has been set aside as the "fruitless search for correlations between intra- and interpersonal phenomena" (Duckitt, 1989, p. 63). A more empirically productive view of authoritarian behavior is one of a cognitive set that is the product of social behaviors, individual traits, and situational variables which produce an internal system wherein pressures for cohesion and support for existing structure in society combine to create a steady system of political relationships that is not dependent on a pathogenic personality (Duckitt, 1992). Effectively, all of the above (interpersonal social effects, personality traits, previous experiences) feed into two separate factors that are then

directly related to social opinions and actions that are authoritarian in bent: a submissive, conforming factor and an aggressive, domineering factor. The relationship between the original factors, like personal experiences or personality traits, and authoritarian behavior is fully or significantly moderated by these “super factors” (Duckitt, 2001).

In hindsight, the search for a personality variable or trait which would be shared by enough individuals to constitute a political bloc was somewhat facetious. The view of authoritarian behavior springing from fixed (but not petrified) patterns of thought, rather than as absolute and embedded traits, simply makes more sense. After all, there is tremendous variation in the personality of most world dictators and those who actively support the government of such individuals, so it would seem odd for them all to possess some underlying trait which made them authoritarian (Carius, 2003).

There are two identified cognitive sets that underline authoritarian behavior, classified by shared desire for strong preference for social hierarchy and powerful centralized political structures, which were organized along two dimensions—a conservative/submissive dimension and a dominant/power motive dimension (Sibley & Duckitt, 2008). The conservative/submissive dimension outlined in research is linked to classical political conservatism, traditionalism, fear/threat of others, and restriction of behaviors and personal freedoms for the sake of continuity (Duckitt, Bizumic, Krauss, & Heled, 2010). Similarly, the dominant/power motive dimension strongly correlates with power seeking, toughmindedness, desire for status, low concern for social welfare, Micavilleiansim, and competitiveness (Duckitt & Fisher, 2003; Jugert & Duckitt, 2009;

Sibley, Harding, Perry Asbrock, & Duckitt, 2010). The common clusters of beliefs which constituted these dimensions folded surprisingly well into these categories (Feldman & Stenner, 1997). Both of these constructs are linked insofar as they explain the relationship of individuals to strongly asymmetric power structures in society. However, the manner in which they relate to this structure is different.

The conservative/submissive factor is built around content that indicates a desire to avoid competition by maintaining norms, while the dominant/power motive factor aims to use the asymmetric power structure to gain the upper hand in such conflicts. Such structures create the norms that conventionalist thinkers seek to maintain, and the support of such structures likewise protects the hierarchy they create. As these clusters of opinion and behavior match so well with two preexisting models of authoritarian behavior, much research subsequent to Duckitt's seminal paper have adopted these models to represent the two clusters: Right Wing Authoritarianism and Social Dominance Orientation.

**Right wing authoritarianism.** The current model of Right Wing Authoritarianism (RWA) is a construct proposed by Altemeyer (1998) to explain conventionalistic and conformitive behavior among certain individuals. Conventionalists tend to support and maintain current patterns of doing things, from interpersonal behavior up to law making. Conformative individuals are more likely to mimic or copy the behavior and actions of others. When applied to behavior as a whole these assumptions effectively amount to authoritarian submission to whatever ideal or power structure

currently holds sway by encouraging conformity to current norms and the maintenance of those norms. The title 'right wing authoritarianism' should not be misattributed to mean that the RWA scale is also a measure of political conservatism, only submission to current authorities (Sibley & Duckitt, 2008). Soviet citizens during the height of the cold war scored in a near identical manner on the scale as US citizens during the same era (Altemeyer, 1996; McFarland, Ageyev, & Abalakina-Paap, 1992). Soviet citizens were just as likely to maintain norms and conform to 'the government line' as their democratic counterparts. High scorers are more likely to accept authority, prefer strongly organized government, and the rule of law. Interestingly this 'absolutism of the law' is not universal in its application; RWA individuals are often lenient in enforcing the rules of society on those in authority when those violations of rules take place against individuals who threaten social and legal norms (Altemeyer, 1998; Sibley & Duckitt, 2010). It has been demonstrated, for example, that individuals who score high on RWA tests are more likely to support police who have broken procedure in handling criminals (Altemeyer, 1981, Feather, 1998, 1999).

Altemeyer (1981) developed the construct as a result of dissatisfaction with Adorno et al.'s (1950) psychodynamic model of authoritarian behavior and, by stripping out all variables that could not be empirically tested (as well as those that did not bear up under scientific scrutiny) arrived at a three factor structure for authoritarian behavior: Conventionalism (the tendency to maintain norms), Authoritarian Aggression (reaction against those who are perceived to threaten norms), and Authoritarian Submission

(wholesale acceptance of leadership). Altemeyer (1988) further stated that individuals who score high on the RWA scale are likely to fear outside influences both politically and in general, grant unreasonable latitude to properly elected authorities (Submission), and tend to conform to a greater degree to punitive group and legal norms (Conformity) than a normal population sample. However, recent factor analysis on larger and better stratified samples have reaffirmed the older three factor model (Funke, 2005; Mavor, Louis, & Sibley, 2010). Regardless of factor structure, the test nonetheless is a fit to the conservative/submissive construct outlined in Duckitt's original article (1989).

**Social dominance orientation.** While the Altemeyer theory (1981) certainly provides a meaningful definition for submission to authority, it does not fit the behavior or motivations for the type of individuals who often fall into the higher positions of an authoritarian system, who commonly are not conforming, norm obeying, or submissive (Pratto, Sidanius, Stallworth, & Malle, 1994). In an attempt to remedy this, Pratto attempted to create a construct that captured what elements of behavior and cognition that are related strongly to 'authoritarian dominators', those who tended to gravitate towards hierarchical authoritarian structures and use them to acquire power by maintaining or enhancing the status differences between individuals. The finalized scale, Social Dominance Orientation (SDO), measures the tendency of individuals to seek out and support the creation of unequal group hierarchies in society, with their own affiliate groups at or near the top (Sidanius & Pratto, 2001). High SDO scorers create and cling to justifying myths to explain and rationalize the existence and maintenance of unequal

distributions of power that sustain current the current social order (Sindinus & Pratto, 1993). For high scorers on the SDO, these myths are not isolated prejudices towards particular groups, but rather reflect a global processing of social information (Sibley & Liu, 2010).

This definition differs from the RWA in that whereas right wing authoritarianism is a tendency to seek stability and safety through conformity and regimented social hierarchies, SDO represents the desire to use those hierarches for personal benefit, with less concern about intangible factors. Social Dominance oriented individuals often do not care as much for ‘soft’ threats to power such as the presence of unacculturated foreigners, multicultural societies, etc; but are very apprehensive about any of those groups advancing in economic status (Duckitt, 2006; Sidanius, 1993). Because the questions on the form are phrased as indicating how society ‘should be’ rather than how it is, this need not reflect actual group differences in society wide power, only the desire for such an arrangement (Sidanius, Levin, Federico, & Pratto, 2001). Furthermore, questions are designed to allow the participant to assume that their group is dominant. For example, a sample question from the SDO reads, “Some groups of people are simply not the equals of others”, Both presently empowered and disenfranchised groups can self-identify as superior, and agree to this statement wholeheartedly by implicitly inserting “my group” into the question (Verkuyten & Hagendoorn, 1998). While this statement runs counter to the original claims by Sidanius and Pratto (1993), who believed that only the dominant group in a particular social arrangement should demonstrate elevated scores, what limited

research that has been conducted on non-dominant groups shows that bigoted opportunists are, at least according to scores on the SDO, evenly distributed across ethnicity and SES (Goodwin, Operario, & Fiske, 1998; Son Hing, Bobocel, Zanna, & McBride, 2007).

Multiple studies since the mid-nineties have borne up social dominance theory demonstrating its efficacy in predicting attitudes about public policy, wherein high SDO scorers significantly favored reducing hierarchy attenuating welfare funding (Pratto et al., 1994; Sidanius, van Larr, Levin, & Sinclar, 2003). Other examples for high SDO scorers include concomitantly high scores on inventories of prejudice (Sidanius, Pratto, & Bobo, 1996), and voting down women's rights legislation-even among women (Sibley, Robertson, & Wilson, 2006), which are all hierarchy enhancing behaviors. The scale is consistent across time as well, with ratings of SDO accounting for these differences longitudinally (Sibley & Duckitt, 2010). Again, SDO adequately summarizes all the related opinions and behaviors of the dominant/power motive group identified earlier (Duckitt, 1989).

**Interrelation of the scales.** SDO and RWA, while closely related, are separate and additive constructs of an underlying cognitive schema for decision making (Duckitt, 2009; Duckitt et al., 2002). While there is a meaningful overlap in scores when the inventories are administered concurrently, each appears to measure statistically distinct aspects of individuals functioning. As such, the constructs have a Pearson Product Movement of .18-.23, a mild correlation (Duckitt et al., 2002; Sibley et al., 2006).

Further, they show discriminant correlations with such factors as honesty and humility, which is positively correlated to RWA but negatively correlated to SDO (Sibley et al., 2010). Likewise, when examined using Big Five personality inventories, high SDO is correlated with low Agreeableness and elevated Extroversion, and RWA with high Conscientiousness and low Openness to New Experiences (Jugert & Duckitt, 2009; Sibley & Duckitt, 2009). The ‘personality profile’ of these two scales is not, therefore, entirely opposed. The use of personality to define authoritarianism should be tempered with the knowledge that these correlations with fixed traits are of a much lower magnitude than those between RWA/SDO and social opinions, and the Big Five and other personality measures correlate poorly to most social opinion measures (McFarland, 2010b; Sibley, Harding, Perry, Asbrock, & Duckitt, 2010; Sibley & Liu, 2010). No one established personality trait is so dominant a predictor as to be covariate with either scale or even tentatively dictate subscription to authoritarian thought. To state it simply, SDO and RWA are commonly used as rough approximations of ‘leader’ (SDO) and ‘follower’ (RWA) archetypes in authoritarian research, but the thought patterns they represent can both present in any kind of individual without being too bizarre an occurrence.

As stated previously, while both relate to and seek to maintain a strong, central authority, they do so for different reasons-security and conservation of roles for high RWA scorers, and increased competitive success and advancement for high SDO scorers (Thomsen, Green, & Sidanius, 2008). From this perspective, they also share a number of curious characteristics in common, statistically. They predict racially prejudiced attitudes



better when used together in regression than they do independently; they are likewise effective in predicting homophobic, sexist, and ethnically discriminatory attitudes (Cohrs, Moschner, Maes, & Kielmann, 2005; Sibley et al., 2006). This is due to the lack of covariate overlap, as both RWA and SDO add useful information independently. Finally, the effects of SDO and RWA are not consistent over all situations—they explain different amounts of variance for opinions when making judgments about different kinds of out groups, either threatening or competitive (Duckitt & Sibley, 2007, 2010b; Duckitt et al., 2002; Thomsen et al., 2008). The loading for each type of discriminant group varies by “type.” ‘Dangerous groups’ are more strongly accounted for by RWA, and ‘degraded or competitive’ groups by SDO (Duckitt, 2006; Duckitt & Sibley, 2010a, 2010c; Kreindler, 2005).

This difference bears further discussion. RWA, as a measure of conservation and fear of exterior threat, predicts negative reactions to those ‘others’ or situations which threaten established mores (Duckitt, 2006). This is why RWA is a stronger predictor for anti-gay affect than classical racism among individuals who report to be Christians (Goodman & Moradi, 2008; Hall, Matz, & Wood, 2010). The tenets of many forms of Christianity are profoundly hierarchy attenuating placing all humans regardless of race into one category, except for those identified as being sinners—e.g., gay or lesbian individuals (Wojtyla, 2000). As RWA is strongly influenced by submission to authority, particularly the clergy in this case, discrimination against such groups logically would be

and is in fact impacted, though the effects have not been universally conclusive (Mavor, Louis, & Laythe, 2011; Mavor, Macleod, Boal, & Louis, 2009; Wilton, 2005).

It bears noting that RWA shows an interesting pattern of effects that is not observed with SDO in relation to prejudice or aggression. As one of the strongest predictive factors for RWA is norm conformity, it is no great leap to assume that aggression, discrimination, and other socially reprehensible sentiments ought to be suppressed in high RWA individuals. Duckitt, Wagner, du Plessis, and Birum (2002) used SEM to test this theory using several large, multinational samples and discovered that the direct effect of norm conformity (a significant, negative relationship to expressions of prejudice) was almost perfectly counterbalanced by the mediated, and positive, effects through RWA. The result was a net-zero model: effectively, the reactive characteristics of norm conformity were canceled out or reduced to non-significance by the mediated relationship passing through RWA (Mavor et al., 2009).

Interestingly, no comparable relationship exists for SDO—that is, there is no latent variable ‘behind’ Social Dominance which has direct effects on classical authoritarian behaviors once SDO is factored in. SDO, conversely, does not necessarily demonstrate this same pattern (Sidanius, Mitchell, Haley, & Navarrete, 2006). For high SDO scorers, groups that are inferior or close to one’s own personal position in power will be viewed more negatively, regardless of the threat that may be posed to the social order—the “degraded/competitive” groups mentioned above (Duckitt, 2006; Kreindler, 2005; Levin & Sidanius, 1999). While manipulating the presentation of an imaginary surge in the

immigration of a particular population (Sardinians) into New Zealand, groups of high SDO scorers were more opposed to immigration when the Sardinians were described as affluent, educated, and likely to directly compete for jobs than when they were described as poor refugees unlikely to compete for employment (Duckitt, 2006). Similar results have been found in other experiments (Duckitt & Farre, 1994; Duckitt & Sibley, 2010a; McFarland, 1998 Sibley & Liu, 2010).

Regardless, in most cases, when either construct predicts exclusion of a group they both will. This finding is tempered by the fact that while both SDO and RWA may be predictive of a particular behavior, the degree to which they do follows the patterns outlined above. That is, the two constructs show different degrees of predictive power for different groups, and the degree to which they account for variance is independent of one another (Alteymer, 1998; Feather, 1999; Sibley & Duckitt, 2008). Thus, though the two operate in conjunction, they must still be understood as separate constructs which account for differing patterns of behavior and thought. This is particularly obvious when one examines the differences between the two scales.

**Scale differences.** Both SDO and RWA scores vary as a result of gender differences (Pratto, Stallworth, & Sidanius, 1997). These differences are not accounted for by the other common factors such as education and age, both of which reduce scores on the scales (Sidanius, Sinclar, & Pratto, 2006). As of current, this gender difference remains relatively unexplained. The reasons for the decrease by gender (females score 2.2 points lower on the SDO and 3.1 lower on the RWA, a significant difference), are hotly

contested with some claiming evolutionary causes for gender, and others assuming a model of socialization that favors hierarchy attenuating roles for women (Pratto, et al., 1997; Sibley et al., 2006; Sidanius, Pratto, & Bobo, 1994). A leading assumption is that males have historically benefited more from a strong social hierarchy, which allowed them better access to resources (SDO) and reduced the need for constant violent competition for status (RWA), thus propagating the behavior or ‘masculinizing’ it (Levin, Federico, Sidanius, & Rabinowitz., 2002). Likewise, many hierarchy attenuating (and therefore antiauthoritarian) roles in society such as charity sponsorship and children’s education have been canonically dominated by females, creating a bias for women against authoritarianism (Schmid Mast, 2002). Finally, ratings of empathy may serve as a mediator for females, with greater levels of empathy reducing the psychological distance between the individual one is judging and oneself (Sidanius et al., 1994).

Education is the center of a similar debate as gender. Does pursuing higher education naturally select for individuals who score lower on scales of authoritarianism (Rubin & Hewstone, 2004)? Research indicates that SDO scores decline for all individuals who receive post-secondary education, devaluating this argument (Sidanius et al., 2006a). Likewise, for high RWA scorers, increased exposure to education may increase ability to identify when a situation/group is nonthreatening, effectively equipping an individual to socialize without the need of authoritarianism (Altemeyer, 2002). Scores on the SDO may decline as a result of acquiring new methods of personal success that do not rely on group identification (Levin et al., 2002). In effect, education

may provide superior methods of satisfying needs and wants than utilizing group dynamics. What has been established is that gender and education do not interact significantly (Sidanius, van Larr, Levin, & Sinclar, 2003).

Age is also an important factor in scores on both of these variables. Both RWA and SDO decline with age (Altemeyer, 1996; Duckitt & Sibley, 2010c). It is assumed that age moderates the fear component of the RWA, as individuals are exposed to more real world experiences and build up a “reserve of real world experience to replace false beliefs” (Altemeyer, 1996, p. 114), and that SDO decreases as a result of lowered need to achieve (Duckitt & Sibley, 2010c). An example of this decrease in action may be useful for explaining this effect. Individuals who score high on the RWA and SDO tend to support harsher punishments for criminals (Carrol, Perkowitz, Lurigio, & Weaver, 1987; Feather, 1999; King & Maruna, 2009;). However it has also been shown that as participant’s age, their endorsement of harsh punishments for criminal behavior declines, as does their threat assessment of ‘abnormal’ groups (Feather, 1998; Narby, Cutler, & Moran, 1993). Likewise, ratings of authoritarianism are shown to decline throughout an individual’s life time due to basic changes in ratings of aggression (Sidanius et al., 2006).

**Origins of authoritarianism.** In examining the listed definitions of SDO and RWA, it becomes obvious that such individuals rather naturally gravitate towards mutually fulfilling roles (RWA individuals “following”, SDO individuals “leading”), and these roles are transmittable intergenerationally (Altemeyer, 1988; Peterson & Duncan, 1999; Vollebergh, Iedema, & Raaijmakers, 2001). According to the original theory,

individuals acquire the core traits of authoritarian personality through conscious modeling of parents or role models. Interestingly, the commonly explored methods of transmission such as parenting style and extrinsic orientation of motivation (Duriez, Soenens, & Vansteenkiste, 2007; Soenens et al., 2008) appear to indicate that high RWA parents often produce children with elevated SDO scores, and the inverse is also true. While strong connections between scores of parents and children on the RWA are easily explained by mediating child rearing processes (authoritarian parental style), SDO scoring appears to be more strongly influenced by individual goal orientation (Duriez & Van Hiel, 2002; Soenens, Luyckx, Vansteenkiste, Duriez, & Goossens, 2008). Even as children, orientation towards extrinsic motivators (what can I get out of this situation?) better predicts SDO scores than other factors (Duriez et al., 2007).

In examining the information above regarding scale differences and interactions both across other variables as well as intergenerationally, several things become clear. The degree to which the two constructs are separate appears to be more related to both the context of a situation and personally held opinions than any fixed factor, further affirming the theory that both are linked constructs under the overarching scheme of authoritarian theory and not simply a personality type (Duriez, Van Heil, & Kossowska, 2005; Schmitt, Branscombe, & Kappen, 2003; Kreindler, 2005). For example, many measures of individual 'personality' traits such as the Dangerous World Inventory and measures of Machiavellianism-which logically should relate to things like patriotism or

racism-are totally mediated by RWA and SDO when they are utilized as intervening steps in a model (Duckitt & Farre, 1994; Duckitt et al., 2002;).

Both SDO and RWA have been found to correlate much better with social opinion measures than many validated measures of personality such as the five factor model, or measures of temperament and motivation (Duriez & Van Hiel, 2002; Heaven & Connors, 2001; Sibley & Duckitt, 2009). It is assumed based on the fit indices for structural equation models used that this is because personality adds only a small percentage of the variance when mediated through RWA and SDO. While correlated to certain personality types as discussed above, the effects of the measures of RWA and SDO supersede and subsume those for measures of personality. These findings have been used to explain why it has been hard to reproduce many studies that used personality inventories to predict social opinions: they were missing the mediating step in the model. Thus there is evidence to support the conclusion reached by Duckitt in his 2001 work that RWA and SDO are super factors that are predicted and effected by not just personality, but an agglomeration of traits, beliefs, and experiences of individuals, and which mediate the relationship between these underlying variables and actual authoritarian behavior (Duckitt, 2001, 2006). Because of these differences and interactive effects, the two tests form a profitable two part model that is flexible enough to explain the phenomenon of authoritarianism, and can be used together to reliably assess all aspects of authoritarianism insofar as they relate to the individual. Therefore, the dual process model will be used to measure the degree of authoritarianism in participants. It is a

methodology that has been shown to be superior to other models or shotgun approaches (which often introduce extraneous noise data) for defining and identifying authoritarianism as a pure construct (Sibley & Duckitt, 2010).

### **Moral Reasoning**

Defining the socially appropriate response to human interactions has historically been a science unto itself, commanding a third of the “trivium” of classical western education, as well as being the focus of many enlightenment thinkers (Tierney, 1992; Kant, 1964). Given its soft and relatively unquantifiable nature however it has been, in most cases, relegated to languish among the humanities and passed over in terms of scientific endeavor. This was particularly true in the middle of the 20<sup>th</sup> century in the field of psychology, which was at the time deeply steeped in behaviorist theory. It was during this time that Lawrence Kohlberg first proposed both the value of studying moral development, as well as a systematic method of classifying it (Kohlberg, 1958). Inspired by previous work on child development by Piaget (1928, 1932), Kohlberg proposed a stage model for moral development. Piaget’s model of morality focused on the transition between Heterogeneous morality, characterized by inviolable rules and adult authority being paramount, and Autonomonous morality, which utilizes social reciprocity and views rules as flexible social constructions (Piaget, 1932). Kohlberg expanded on this model, utilizing these two stages as components in a broader stage theory.



In Kohlberg's model, individuals sequentially advanced through irreversible moral stages, ranging from total hedonism, to self-imposition of social values, to a universal application of justice theory. This advancement progressed from a reward and punishment perspective toward individual relationships and finally to oblique social concepts such as justice and individual rights (Kohlberg, 1981; Rest, Power, & Brabeck, 1988). Each stage allowed for the contemplation and conclusion of more and more complex mental exercises. Effectively, the progression through stages represented the expansion of an operative system that allowed for more and more data to be constructively organized in a problem space (Kohlberg, 1976, 1981). In defense of his work, Kohlberg defined his theory as a model of cognitive behavior rather than 'moral prerogative'. Each stage of reasoning was best conceived of as a more complex set of mental processes for determining the most efficacious manner to fit ethical demands to a situation (Levine, Kohlberg, & Hower, 1985). In effect, Kohlberg's stages of moral reasoning represented a progressively more complex collection of cognitive sets for solving problems, rather than a process explaining how people figure out how to do what's right (Kohlberg, 1974).

While the theory provided a strong framework for defining moral development, it remained plagued with the initial issue that had relegated it to the fringes of scientific research. Most important, the process was tremendously difficult to objectively measure. Kohlberg himself relied almost entirely on lengthy, intensive interviews to collect his data, claiming that "[interviewing was]...theoretically the most valid method of scoring"

(Rest et al, 1999b, p. 295). However this method was not only time consuming, but at no point in Kohlberg's personal research did his rating team ever achieve an interrater agreement of greater than .65 (Kohlberg, 1971, 1976; Colby & Kohlberg, 1987). According to Rest (1999a), it was not uncommon for the descriptions of moral reasoning to sound like textbook accounts of whatever stage of moral reasoning the interviewer, not the participant, was rooted in. For example, many of the participants scored by Kohlberg himself ended up sounding like philosopher John Rawls, whose deontological ethics formed the core of higher moral reasoning for Kohlberg (Harkness, Edwards, & Super, 1981; Rawls, 1971; Thoma, Derryberry, & Narvaez, 2009). In order to explain the differences between Kohlberg's and Rest's conceptions of measuring morality, Kohlberg's original theory should be examined. Originally, Kohlberg divided his cognition model into six stages which were seen as 1) each stage could provide a response to all possible moral dilemmas, 2) each stage had to be reached in order-no skipping, and 3) regression back to an earlier stage was extraordinarily rare (Kohlberg, 1971; Levine et al., 1985; Walker, 1989). Each stage thus followed a generally sensible model of complexity and for Kohlberg, superiority.

The stages fit into three successive models that define how the stages relate to the concept of justice, Kohlberg's golden standard of ethical decision making: these are Pre-conventional (Stages 1 and 2), Conventional (Stages 3 and 4), and Post-Conventional (Stages 5 and 6), as well as a theoretical higher stage of universal morality which was not introduced into the model (Kohlberg, 1973). Each model encompasses a cardinal value

that is considered to be the most important piece of information when making a moral judgment. These range from the direct consequences of the action, to accepting social norms, as well as accepting individual rights and absolute principles as of paramount importance. The stages are as follows. Stage one reflects animalistic hedonism, where right and wrong are defined by the providence of operant conditioning and rewards or punishments; Stage two is defined by what the individual gains by acting in true 'self-interest' (Levine et al., 1985). Stage three and four focus on maintaining norms between individuals and society at large, respectively, whereas stages five and six focus on social contracts and universal rights in turn (Levine et al., 1985).

A body of data does exist to support many of Kohlberg's claims. Children do logically progress through the stages listed in his model when examined in large samples (Colby, Gibbs, Lieberman, & Kohlberg, 1983; Snarey, 1985). Likewise, individuals rate explanations that are considered stage five or six as more complex and sophisticated than explanations keyed to lower stage items (Boom, Brugman, & van der Heijden, 2001). However, the progression through stages is not nearly as clean cut as Kohlberg specified, as scores are rarely entirely at one level (Harkness et al., 1981; Rest & Narvaez, 1994). Further, cultural differences do impact scoring, with non-western cultures often being weighted towards stage three reasoning (Gibbs, Basinger, Grime, & Snarey, 2007; Kimmelmeier et al., 2003; Narvaez, Getz, Rest, & Thoma, 1999; Snarey, 1985; Walker, 1989).

**Defining issues test.** Building from this foundation, the Defining Issues Test (DIT) is the attempt by James Rest and others to define and quantify moral reasoning in terms related to those of Lawrence Kohlberg's original theory of moral development and reasoning while correcting for the difficulties in implementing valid measurements. The key difference between Kohlberg and Rest's methods is the use of completed choice banks from which participants select rationales for particular decisions (Rest, 1979). While the rationale for this decision has gone through several iterations, the current interpretation perspective of the DIT is the implicit assumption that it is designed to allow for recognition of cognitive processes, rather than relying on an individual to recall or expound the route their cognition took to arrive at the current conclusion. This was, according to Rest (1988), the critical weakness of Kohlberg's method of assessment. Interviews allow for far too much subjective interpretation of data, and the majority of participants could not (and should not be expected to be able to) outline the structure involved in their reasoning in open problem spaces. Interpreting responses separate from situational data was also problematic. By providing a series of preconstructed reasons, participants could engage in the much easier recognition task in selecting their reasoning, rather than attempt to recall what is often a "masked process" (Ericsson & Smith, 1991). Even experts (e.g., doctors, engineers) often have difficulty describing the line of reasoning which led to making correct decisions in their field. Further, one great difficulty of Kohlberg's interviewing methods was due to the fact that moral judgment was (and remains by itself) a poor predictor of action (Rest et al., 1999a; Walker,

Gustafson, & Hennig, 2001). Part of the reason behind this is that moral judgment-what the DIT aims to measure-is only part of four components used in moral functioning.

**Four component model.** This four component model, introduced in the mid '80s, consists of three other factors-moral motivation, moral sensitivity, and moral character, in addition to judgment (Rest, 1986). These components are semantically similar to motive, perception, and disposition in making nominal, everyday decisions. One must perceive a problem, be in a position to do something about it, and be motivated to take action, in addition to being able to judge the proper course.

The DIT focuses on moral judgment, the most cognitive component of this model (Bebeau, 2002). Likewise, it accesses the lowest level of this component, the bedrock schema (Rest & Narvaez, 1994). This level is the basic 'right and wrong' heuristic of individual reasoning, which is overlaid with codes of conduct (Thou shall not kill) and broader truisms, such as beneficence, fidelity, and justice (Bebeau & Thoma, 1999). These overlaid levels of moral judgement that are too specific for the DIT to measure are currently out of direct reach of the DIT (Bebeau, 2002). Therefore, the DIT provides a broad view of the moral judgment of individuals, not specifics. This lends the DIT to measuring macromorality, or how justice should function in society wide, general terms, as the specifics of judgment, as well as the other three aspects of the four factor model, are not measured (Derryberry & Thoma, 2005; Rest, Narvaez, Bebeau, & Thoma, 1999a).

Other factors, such as social stress and the availability of responses, exercise a large amount of influence on actual actions taken, even modifying judgment itself to match these expectations (Walker, 1995, 2004). This is why many adolescents who demonstrate exceptional altruism or prosocial behavior do not necessarily score highly on the DIT or other measures of moral development (Walker, 2004). What all this means is that the DIT is a solid instrument for judging dispositions and opinions, but not necessarily actions. The effects of macromorality on thought processes and perceptions of social cooperation instead grant the researcher a bird's eye view of individual processing of moral/ethical data (Rest, Narvaez, Bebeau, & Thoma, 1999b; Torney-Purta, 1990). By redefining what the DIT is intended to measure in light of newer models of moral functioning, the test remained a valid measure. Measuring individual tendencies on a global scale is the goal of this study; as such, the DIT is a very useful tool in this case.

**Schema theory.** In a further step away from Kohlberg's theory, researchers have now embraced a schema model rather than a stage model, doing away with the concepts of irreversible stages and replacing them with a model based around social cognition theory (Rest et al., 1999b). In this way, Rest's Neo-Kohlbergian model parallels the shift by Case and other researchers from Piaget's original theory towards a perspective utilizing favored schemas and central conceptual structures (Case, 1998; Case & Okamoto, 1996). This method of interpretation allows the older DIT to remain in line with the direction of its newer iteration, the DIT-2, without losing its validity. This new model modifies the original stage theory provided in Kohlberg's theory significantly.

In the current conception, the individual differences of the stages are less important, and the model of Pre-Conventional, Conventional, and Post-Conventional schema are emphasized. It is proposed that rather than view many previously solely developmental concepts as progressions through levels of maturity, it may be fruitful to understand many cognitive phenomenon that do not have an identifiable organic base (changes in brain structure) as shifting sets of perception-akin to changes in software as well as hardware (Snyder & Feldman, 1984). This model is more an information processing theory of development than the original Piagetian theory, incorporating gradual and not irrevocable changes in schema usage. As such, moral judgment can be seen just as fruitfully as differing social schemas, rather than radical developmental changes. Each of these models or schemas may be used by any one individual at any time, just like any social cognition schema. For the majority, one may be dominant but not exclusive, and which schema is used may shift depending on the issue being addressed.

This model allows for the findings with the original conception of the DIT that show moral stage development as progressing in an less linear pattern; it also explains why so few individuals reach stage six reasoning; much in the same way that few individuals achieve Piaget's Formal Operations stage of development (Rest, Narvaez, Bebeau, & Thoma, 1999c). Historically, very few individuals achieved the scores required to qualify as belonging to stage six (Kohlberg, Boyd, & Levine, 1990; Power & Kohlberg, 1981). Further, the philosophical definitions Kohlberg relied upon, the

deontological theories of Rawls, are part of the embedded system of classical western postmodern thought that is increasingly considered inflexible and less applicable in a multicultural context (Bauchamp & Childress, 2008; Rawls, 1971). Likewise, the supposition that post conventional reasoning is “superior” to conventional reasoning, instead of being simply more complex, is now viewed as a major conceit in the larger clinical and medical community (Bauchamp & Childress, 2008). Others have stated that the Conventional stage of reasoning (Stage 4) requires just as great a degree of intellectual maturity to implement and contain within them the ideal of social reciprocity, and that many of the most colloquially recognized moral people in communities score firmly in Stage 4 (Van Vugt, Gibbs, Stams, Bijleveld, & Hendriks, 2010).

This is a particularly hot button issue as ones location on the conventional/post conventional divide correlates strongly with a large number of political sentiments, religiousness, and other social concerns which are very difficult to judge impartially (Marty & Appleby, 1993). In a schema rather than stage theory, this difference can be more easily explained as the result of other schemas fitting the situation better: baroque, complex morality simply does not usually get used to address many problems. Basically, each stage can be seen as representing only a limited cross-section of a larger body of problem solving solutions which do not apply universally, as they would have to in a stage theory.

As it is understood, schemas better fit the research data available, as well as satisfying the major aspects of Kohlberg’s original cognition model. Each schema (or



developmental type) represents a dominant pattern for organizing information on an issue. To explain it in a simpler fashion, schema theory takes an accounting of each of Kohlberg's models (Pre-Conventional, Conventional, and Post-Conventional) and subsumes the original six stages within this system. The schemas are as follows. Pre-conventional (S23), or the personal interests schema, is a system of reasoning which follows personal hedonism and a desire to maximize personal gain while minimizing loss. In this system there is no social morality, only a series of interpersonal commitments and attempts to contain losses (Rest et al., 1999a). Conventional (S4), or maintaining norms focuses on maintaining ones place in a stable hierarchy; it involves uniform and immutable law, stable, hierarchical role relationships that are inflexible and which, if they did not exist, would spell total collapse of society (Rest, et al., 1999a). Post-conventional (S56), or post-conventional reasoning, focuses on social contracts and views laws as a means to an end rather than as a self-contained social idiom, which can be scrutinized and changed as needed by society.

Each of these schemas has a consolidated and a transitional form, determined by how much the individual relies on each schema to make decisions, and how strongly they favor it (Walker, Gustafson, & Hennig, 2001; Walker & Taylor, 1991). It is theorized that just as children vacillate between different strategies and schemas for problem solving, even after they have successfully completed a task, individuals will move from more or less complex strategies when consolidating a new cognitive schema in general, effectively 'feeling out' new modes of cognition (Siegler, 2007). Each form has its own

unique characteristics that are measurable and stable across samples (Thoma, 2002). Consolidated scorers show significant differences between their highest schema score and the other two (Rest, Thoma, & Edwards, 1997). Transitional scores are more akin to a plurality score on a schema, without it being statistically different from the next lowest (Rest et al., 1997). In order to prevent difficulties in classification, a general cutoff of 50% of total scores can be used to differentiate between transitional and consolidated scores (i.e, 51% or greater on any schema is considered consolidated on that schema), with the type of transitional schema being indicated by the second highest schema total—the ‘off schema’ (Rest et al., 1997; Walker et al., 2001). Collectively, these transitional and consolidated schemas form seven different types, numbered one through seven, starting from consolidated S23 to consolidated S56, each forming a separate group.

Table 1

*Schemas by type*


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<u>Pre-Conventional Schema</u>		<u>Conventional Schema</u>		<u>Post-Conventional Schema</u>		
<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>	<u>Type 4</u>	<u>Type 5</u>	<u>Type 6</u>	<u>Type 7</u>
S23	S23*, S4	S23, S4*	S4	S4*, S56	S4, S56*	S56

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\* Indicates dominant Schema, with a score greater than the other listed, but below 50%

As discussed below, schemas illuminate many patterns in data that had been rather baffling under older conceptions of the Defining Issues Test. There is a large body of research to support the schema method of sorting data from the DIT over two decades, including the use of non-moral information forms, in classifying individuals by career, age, and other personal characteristics (Derryberry & Thoma, 2005; Maeda, Thoma, & Bebeau, 2009; Thoma, Barnett, Rest, & Narvaez, 1999; Walker & Taylor, 1991). The data collected (from thousands of forms filed at the Center for Moral Development) does appear to fit these categories better than the original 6 stage model (Rest, Narvaez, Thoma, & Bebeau, 2000). Meta-analysis of forms collected by the Center for Moral Development at the University of Alabama have indicated that individuals appear to, rather than progress gradually through the six stages of Kohlberg's model, 'pop' between schemas, with more disorganized responding between stages three and four and four and five: the points where Rest divided the types of reasoning (Derryberry & Thoma, 2005).

For example, a significant percentage of respondents, while fitting into the factor model above, showed pronounced variance to the degree that they formed their own stable subgroups (Walker, et al., 2001). These "unconsolidated responders" (types two, three, five, and six) showed greater variance between the three schemas: they also made more errors in filling out the forms (failing to select the highest rated items for the top three most important, etc), and endorsed "I don't know" when asked to determine what should be done in a scenario, all of which is reflective of the difficulty of shifting from one cognitive schema to another (Rest et al, 1997; Thoma, 2002).

Likewise, individuals who had consolidated schema scores took significantly longer to complete the DIT, and fewer “can’t decides” (in all versions of the DIT, the participant can state that they cannot decide on a correct answer to the questions posed in the test): it is assumed that this is due to the greater access these individuals have to their underlying bedrock morality resulting in deeper processing of issues (Derryberry & Thoma, 2005). In looking at the research, the utility and explanatory power of schema theory is obvious: the observable changes in answering pattern according to the degree to which a participant aligns with a schema appears to indicate that the schemas are definitely separate constructs with notable boundaries that occur where they would intersect (transition vs. consolidated). Further, schemas have been used in research to demonstrate differences other concepts not directly related to morality: espoused political allegiance, latent political opinions, and other factors (Maedea, Thoma, & Bebeau, 2009; Thoma et al., 1999). They have even been used to predict religious orthodoxy, though with mixed results (Getz, Rest, & Thoma, 1999; Wilton, 2005).

**Criticisms.** Beyond this, several criticisms have been directed at Kohlberg’s theory and thus at the DIT. Most prominent of these is Gilligan’s (1982) criticism of Kohlberg’s theory as sexist and biased towards an androcentric style of reasoning based off of male sample populations (Gilligan, 1982; Walker, 1995). Gilligan (1982) points out that in the original iteration of the DIT, females scored lower than males because women tended to focus on the interpersonal context of events, rather than on the principles alone which Kohlberg set out to measure. By Gilligan’s accounting, the DIT

was pejoratively constructed and did not accurately reflect the reasoning some of the population use. While extensively tested, many studies demonstrate marginal support for this hypothesis at best (Bebeau, 1994; Walker, 2006). The newer conception of the DIT, as well as the sample population for the DIT-2, correct many of these mistakes. Instead of viewing stages as a progression towards 'better reasoning', schemas which exist on a more or less equal playing field are used: that is, one is not innately superior to any other (Thoma, 2002). Finally, when using the schema system described below, gender differences become non-significant as stages two and three (where much of the gender differences were located) are combined (Rest et al., 1999b).

Other prominent criticisms include the conception that the test reflects political ideology rather than moral reasoning, measuring liberal tendency rather than moral development (Derryberry, Wilson, Snyder, Norman, & Barger, 2005; Sparks & Dirken, 1987). A similar argument has been made concerning verbal ability levels, implicating that the DIT only really distinguishes between levels of reading skill and education (Emler & Tarry 2007; Sanders, Lubinski & Benbow, 1995). In relation to indicting the DIT as a politically biased instrument or measure of verbal ability alone, a series of studies demonstrated that when verbal scores and political affiliation were controlled for, the DIT still provided significant amounts of discriminant information about participants (Rest et al., 1999; Thoma, Derryberry, & Navraez, 2009). In fact, the concept that verbal intelligence effects scoring was soundly beaten and demonstrated to be an artifact of the

population on which the effect was originally demonstrated (Derryberry et al., 2005; Thoma, Narvaez, Rest, & Derryberry, 1999).

Other claims include that its scenarios are biased against certain racial and cultural groups (Snarely, 1985), and finally, that the structured questions of the test are too far removed from everyday morality to measure any sort of valid construct (Killen & Hart, 1995). The replication of US scoring averages for the DIT in most European countries, China, and other nations across several studies conterindicates the first claim (Gibbs et al., 2007; Kimmelmeier et al., 2003). However, collectivist cultures do tend to score a greater percentage on stage 3, reflecting some degree of meaningful difference (Thoma, 1994). The last claim that the DIT, and Kohlbergs theory in general, do not represent adequately the day to day morality of life misses the point of the DIT. While there are measures of interpersonal, mundane morality available, the purpose of the DIT is to measure ‘macromorality’, or the manner in which the individual conceives of justice and proper arrangements between individuals (Rest et al., 2000). Given that the end goal is to discover not so much how individuals will react to a situation, but how they mentally process the information involved, the DIT remains a valid measure by all means.

### **Moral Judgment and Authoritarianism**

What was of interest in this study was the fact that S4 reasoning is, descriptively, quite similar to the vernacular definitions of high scorers on the RWA and SDO,

respectively. The emphasis on ‘law and order’ and ‘maintaining norms’ espoused by S4 reasoning are representative of two of the three common factors of RWA theory. The common factors for high scorers on the RWA (focus on maintaining absolute law, hierarchical roles, and deference to authorities for the purpose of smooth social functioning) are all part of the definition of the maintaining norms schema (Aletmeyer, 1996; Rest et al., 1999c). Authoritarian submission, in particular, fit with the classical definition of the maintaining norms schema, outlined above.

Likewise, a focus on the self that was implied by S23 and S4 fit the definition of hierarchy enhancing SDO theory: emphasis on maintaining power differentials, socially condoned roles, as well as a focus on self-interested advancement (Pratto et al., 1994; Rest et al., 1999b). SDO includes a good deal of instrumental action against other parties for ones benefit, a potential nod to preconventional, self-serving reasoning. Early attempts at wedding RWA and the earlier stage model of the DIT were partially effective, though they have been eclipsed by later research utilizing the Dual Process Model as well as changes in interpretation of the DIT (Crockett, 1996). Now, however, these forms should be comparable without the need to stretch their original purpose. This will allow the wedding of these measures without major issues. Because of this, predictive relationships should be found between authoritarianism and moral schema usage.

Several experiments have already demonstrated the link between authoritarianism though a shotgun application of a large number of associated traits (Crockett, 1996; Duckitt & Farre, 1994; McFarland & Mathews, 2005). Recently Duckitt’s Dual Process

Model and ratings of moral development on the DIT have been examined (McFarland, 2010a). This study focused more on adding moral reasoning to Duckitt's dual process model than the other studies which relied on the defuse method of scattershot forms, as they in general introduce a large chance for error and rarely add any predictive value outside the bounds of established theory (Duckitt & Sibley, 2009). By using correlations between items that are typically understood as descending from RWA or SDO to predict things, such experimental designs use things that have been established to be results of RWA and SDO as predictors (Duckitt, 2001; Jurgen & Duckitt, 2009). In the series of studies by McFarland (2010a, 2010b), principled moral development, or P, was shown to serve as a mediating step between authoritarianism (SDO and RWA) and several opinion measures such as belief in human rights or generalized prejudice.

There are several concerns about these findings, however. The current published research has used the DIT in an overly simplistic manner to predict opinions and actions within the dual process model, using principled moral development (P) as a continuous variable only without examining the influence of schema structure on authoritarianism, and vice versa. While using P as a continuous variable is advised in most research cases, the scale developers recommend using schema measures when examining the relationship of the DIT to nonmoral judgment measures (Thoma, 2006). By interpreting moral development and decision making as a linear construct rather than as a set of interlocking schema, this reductionism likely muddled the connection between Duckitt's Dual Process Model and moral development.



For example, McFarland found that principled moral development was only weakly negatively correlated with scores on measures of RWA and SDO, and accounted for only 21% and 11% of variance in scores, respectively (McFarland, 2010a). Several of the samples in fact failed to demonstrate a significant connection between SDO and principled moral development at all (McFarland, 2010a). While the reliability of scores using the DIT do likely account for some small percentage of this difference, this weakness is in greater part due to the fact that DIT scores of high authoritarian individuals likely fall into an undifferentiated middle range of scores on a continuous measure of principled moral development, thus creating a restricted range of scores which mask meaningful data. Thus, P is a measure that makes the overly wide discrimination between highly morally developed, post conventional thinkers, and everyone else; hardly the refined tool for detecting differences. This effect would likely have been exacerbated by the fact that there is no continuously significant difference between the hypothesized authoritarian S4 schema individuals and other S23 parties on ratings of P (Rest et al., 1999c). Therefore, the lower ends of P do not (and in previous research usage, cannot) differentiate between authoritarians and the simply morally underdeveloped. The scale used is not, from this perspective, a unidimensional measure of the increase of a single trait or skill, and using it as such is both methodologically and theoretically incorrect.

From this perspective, the use of P only provides reliable data on a part of the cogent factors involved in moral reasoning and authoritarianism, in much the same way

that Ebbinghaus's early attempts to measure intelligence though memory only accessed a relatively minor portion of  $G$ , which is especially troubling since the predictions derived from this information about 'intelligence' were almost universally inaccurate (Sattler, 2008). In effect,  $P$  measures only a section of what authoritarianism is not, while comparing the conventional schema with the other schemas will measure all that authoritarianism is. A method of comparison between moral reasoning and measures of authoritarianism which parcels out the influence of not only Post-Conventional reasoning but also those schema which likely do align with authoritarianism could not but be vastly superior, if only by the weight of applicable data. Utilizing  $P$  allows a researcher to determine only that one schema of moral judgment is opposed to authoritarianism; using schemas collectively allows a researcher to see all of the relationship between the two.

Effectively, while significant, this research by McFarland indicates that an overly simplified conception of moral cognition is ill suited to fully explain the connection between authoritarianism and moral development, let alone meaningfully utilize it as a mediating variable. Furthermore, the effects of age and education-both of which are strong predictors of scoring for all the variables in question, are not accounted for in McFarland's model as specified by the test's designers (Rest & Narvaez, 1994). Effectively, previous studies have 'jumped the gun' in adding moral reasoning to predictive models by failing to properly determine the relationship between Duckitt's Dual Process Model and measures of moral reasoning.

The goal for this current research was to build off of the established connection between Duckitt's Dual Process Model and DIT scoring in order to determine which moral schema is activated most often in high authoritarian individuals. The correlations found in previous research are mild, but significant at the .01 level, indicating that a relationship does exist between moral reasoning and measures of authoritarianism (McFarland, 2010a). The low alpha and weak correlations were, as discussed above, the result of poor methodological planning and a simplistic interpretation of moral reasoning as a continuous, undifferentiated progression. By instead utilizing the established schema perspective, an attempt was made to demonstrate that the connection between dual process authoritarianism is the result of particular schemas favoring the implied reasoning of RWA and SDO rather than the effect of some general moral deficit. Effectively, it was believed that it was not low scoring on the P measure of the DIT which was associated with authoritarianism, but rather use of very specific, conventional moral schemas that are not even directly measured by the index of P.

Finally, all current research bypassed the clear and long noted effects that age and education have on the SDO, RWA, and DIT measures (Altemeyer, 1998; Pratto et al., 1994; Rest & Navarez, 1994). Education drives up scores on the DIT, and conversely has a negative correlation with SDO and RWA, as does age. Of particular interest is the combined effect of education and changes in age, both of which are actively changing dimensions for this studies sample population. Changes in scoring on all of these inventories can be dramatic in the ages of 18-24 (Sindalus et al., 2006). By failing to

control for either of these effects, the true relationship between the variables was likely obscured. Adding this refinement was postulated to provide significantly better association between each set of predictors (RWA, SDO, and both combined) and moral reasoning. It was also intended to provide a model for better use of the DIT as an additional predictor in Dual Process Model. By examining the relationship between moral reasoning *schemas* and authoritarianism while controlling these factors, much stronger correlations were expected to be found. Seen from this perspective, this research was not only an effort to seek a meaningful model for explaining how moral reasoning fits into Duckitt's theories and McFarland's research: it was also an extension of the validity studies for the moral schema views mentioned previously by Thoma and others, determining the applicability of schema theory to Duckitt's model (Duckitt, 2001; McFarland, 2010a; Rest et al., 2000; Thoma, 2006).

To explain in detail, there are several core commonalities between the three concepts above, as well as their standard testing instruments. Both of the measures of authoritarianism selected, as well as the DIT, serve to measure macro level applications of the constructs they measure. That is, each form is concerned with how the participant applies the implied values of these measures to society in general rather than in ideographic fashion. Each is designed to quantify cognitive processes, in the case of the SDO and RWA, a very specific one, whereas the DIT examines more global reasoning. As such, the forms used in testing are relatively compatible.

Even basic traits that feed into these measures have opposed effects: several personality traits (openness to new experience, etc) are correlated negatively with ratings of authoritarianism and positively with ratings of moral reasoning (Hart, Keller, Edelstein, & Hofmann, 1998; Matsuba & Walker, 1998). Given the operant definitions for Rest et al.'s schema model (1999b), striking similarities can be drawn between S4 "Law and Order" processing and the definitions of RWA and SDO models. It was not too far a leap to assume that, as the majority of the components that feed into authoritarian models have to do with patterns of reasoning on 'open space' problems, the DIT should be particularly sensitive to the same core components that define RWA and SDO orientation. As such, one should be able to predict that individuals who score high on these scales will cluster around and utilize one particular schema-S4, while those who score highly on the SDO inventory should exhibit a profile on both S23 and S4 schemas, the design of achieving personal success at the expense of others should result in increased hedonism level scores.

Taking all of the above into account, further consideration was given to the more broad based effects of authoritarianism on individuals' general reasoning processes. Duckitt (2002), as well as Sidinus (1999), had called for an extension of the Dual Process Model and its underlying factors into the realm of real behavior or scenarios, rather than just opinion polling. There are two important issues here: directionality and applicability. The first, directionality, was rather important. Is moral reasoning a latent variable which feeds into measures of authoritarianism, just like belief in a dangerous world or

hardmindedness, or is it an outcome that can be predicted by scores on the SDO and RWA? Given that the DIT is, effectively a measure that elicits opinions to newly generated experiences (participants ought to have never read the scenarios used in the DIT), it should be affected by latent variables like SDO and RWA, not the other way around. Research precedent also places them in this order. The second, applicability, was less of an obstacle. Because of the meaningful effects all scales have on a wide variety of opinions and motivations, the outcome of this research is both valuable and interesting, further outlining the bounds and connections between both constructs. Effectively, this experiment was ultimately designed to lay the groundwork for later efforts to demonstrate the mediation of SDO and RWA through other multidimensional constructs. In effect, rather than using a simple and crude measure of authoritarianism to predict opinions, it will be feasible to utilize the model begun with McFarland's experimentation and refined herein to make more accurate assumptions.

### **Hypotheses**

**Hypothesis one.** Ratings of P were expected to be negatively correlated with SDO and RWA.

**Hypothesis two.** Scores on the SDO and RWA should allow for a reasonable disparity between moral reasoning schemas. SDO and RWA were positively correlated in previous work ( $r = .17$ ), but not greatly enough to be multicollinear (Duckitt & Sibley, 2010b). Thus, they were used as effective predictor variables when determining if a

participant's level of authoritarianism can predict what dominant moral schema they score highest in. It was expected that higher scores on both the SDO and RWA would predict elevated scores in both S4 and S23 schemas, with SDO predicting greater total variance for S23 and RWA having a similar effect on S4 schemas.

**Hypothesis three.** It is established that men score higher than women on the SDO (Pratto et al., 1994, Pratto, Stallworth, & Sidanius, 1997; Sidanius, 1996, 2003).

Likewise, men score 3-5 points higher on RWA than women, depending on the study (Altemeyer, 2006). The DIT, however, does not show a similar discrepancy in gender for scoring (Rest et al., 1997). This fact introduces some questions that must be addressed when interpreting the data from the above hypotheses. It is hypothesized that females' moral reasoning schema will be less well predicted by authoritarian scales in general. This was done by repeating the above hypotheses using a split file process.

**Hypothesis four.** It was expected that controlling for age differences would lead to stronger relationships between scores on the SDO and RWA in relationship to P, S4, and S23. In effect age was expected to act as a 'noise suppressor' for each of the items and increasing the derived r value.

**Hypothesis five.** There are several scenarios in the original DIT form which will invariably elicit certain responses by high scoring SDO and /or RWA participants. Three of the scenarios in the full version of the DIT possess a 'sign stimuli' for authoritarians, which were expected to result in near universal responses from those participants who

score in the upper range of the SDO and RWA-the Doctors Dilemma, the Mechanics Dilemma, and Heinz Dilemma. It was hypothesized that because the core content of these scenarios is a direct reflection of the threats most salient to high scorers on the authoritarian inventories, those who score high on them should universally indicate that they 'do not approve' of the content, marking the 'no' box for each scenario. Specifically, RWA individuals were expected to not endorse taking action in the Doctors Dilemma and the Heinz Dilemma, while SDO scorers were expected to not endorse hiring in the Mechanics Dilemma.

**Hypothesis six.** The DIT scoring manual contains rules for scoring responses that fall under the category of "anarchy" (Rest, 1979). While not commonly utilized in current research, this index is described in terms that are opposed to the definition RWA, but do not significantly reference the semantic components of SDO. In effect, this "anarchy" (A) index was expected to provide a serendipitous tool for differentiating between high RWA individuals and high SDO individuals. It was hypothesized that scores on the A index of the DIT would be strongly inversely related with ratings of RWA across participants, while being mildly or not at all related to ratings of SDO.

## **Method**

### **Participants**

In order to achieve the desired level of power indicated for two predictor variables (.85,  $\alpha=.05$ , a medium effect size), a subject pool of approximately 197 participants was



assembled (Cohen, 1992). A convenience sample of Fort Hays State University students of general psychology was sufficient to satisfy the needs of the experiment. Of the 132 valid responses, the sample consisted of 46 males and 86 females, average age 20.75 ( $SD=4.5$ ). Because the focus of this research was to identify widely applicable traits in young adult populations the use of a convenience sample was considered appropriate. The gender and ethnic composition of the sample was, as expected, weighted towards females, with a heavy preponderance of Caucasian participants in ratio to other reported ethnicities. While this may have limited the ecological validity of the study in a wider sense, the artificial homogeneity of the available population made initial interpretation of findings simpler. Participants were introductory psychology students at a Midwestern university who were offered extra credit for completing an online administration of the three test forms and demographic form.

## **Measures**

The four measures that were used in assessing this research question were the Right Wing Authoritarianism Scale (Alemeyer, 1993), the Social Dominance Orientation Scale (Pratto et al., 1994), and the Defining Issues Test (Rest et al., 1986), as well as a simple demographic questionnaire.

**Right wing authoritarianism scale.** The Right Wing Authoritarianism (RWA) Scale was a refinement of Adorno's original F (Fascism) Scale (Adorno et al., 1950). The scale has been revised several times since its initial appearance in 1981, and consists of

22 seven point likert scale questions designed to measure the existence of the three traits that remained after initial screening: aggressive response style to threats, conformity seeking, and overly sensitive threat judgment (Altemeyer, 1996; Manganelli, Bobbio, & Canova, 2007). An example item that is keyed to all of these factors is item five: “It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people’s minds.” Participants rate each item in a range from 1) strongly disagree to 5) neutral to 9) strongly agree. Items are added to provide a total, which indicates the level of authoritarianism. Higher scores indicated a greater predilection towards authoritarian behavior.

The Scale has high internal reliability (.87) and strong test-retest reliability (.83), making it a useful instrument for measuring authoritarianism (Altemeyer, 1996). Likewise, it has been exhaustively tested since its initial debut on differing groups, ages, and cultures including Europe, Israel, and China (Altemeyer, 2006; Levin, Federico, Sidanius, & Rabinowitz, 2002; Rubinstein, 1996). The scale takes less than five minutes to complete.

**Social dominance orientation scale.** The Social Dominance Orientation Scale (SDO) was constructed to assess the presence of “legitimizing myths” about the unequal distribution of resources in multigroup societies (Sidanius, 1993). The test consists of 16 seven point likert scale questions (ten of which are reverse scored to reduce the effects of response bias) which assess “the degree to which you (the participant) endorse this

statement” (Pratto et al, 1994). Responses range from 1) very much do not agree, 4) I have no strong opinion, to 7) very much agree. The tests measures if the participant thinks that certain people deserve more praise, opportunity, and advantage than others intrinsically (Pratto et al, 1994). Items are added, providing a single, total score.

The scale itself consists of questions such as “Increased economic equality is important to me”, a positive response to which would indicate support for hierarchy attenuation (Pratto et al, 1994). The scale has been thoroughly examined and validated with external measures of interpersonal aggression, scales of social darwinism, and endorsements of aggressive unilateral foreign policy, as well as being negatively correlated with scores on established empathy tests such as Super and Nevill’s Altruism scale (Super & Newill, 1985) and Davis’s Multidimensional Empathy Scale (Davis, 1983), which are conceptually opposed to the SDO. Similar to the RWA scale, SDO has been validated cross culturally (Levin & Sidanius, 1999). The instrument itself has high internal reliability ( $\alpha = .88$ ) and strong test-retest reliability, .78 (Pratto et al., 1994). The scale takes five minutes to complete, on average.

**Defining issues test.** The Defining Issues Test (DIT) was developed by James Rest in the seventies to serve as a quantitative measure of the style of moral reasoning utilized by an individual. The test itself is fairly valid, with estimates of reliability ranging from .73 to .85 (Rest et al., 1986; Thoma, 2006). It consists of a set of five scenarios posing an ethical dilemma to the participant, who answers in the affirmative or negative to a question poised at the end, such as, “should Heinz steal the drug?” (Rest,

1979). The participant is then presented with a series of “rationales” which could have been used in arriving at their conclusion. The primary concept behind the measure is that individuals will recognize the line of reasoning that they used better than they could recall the path of their cognitive process (Ericsson & Smith, 1991).

Each of these items was ranked in degree of importance along a five point scale (1 being not at all important, 3 being somewhat important, and 5 being very important). Each item is also keyed to a stage of moral development, vis a vis Kohlberg’s original theory-2 through 6. Finally, the participant was asked to rank the top four rationales for their decision. The ratings that they provided for each individual rationale are scored depending on their rank in the “top four” category; these weighted values for each item are added across scenarios to provide a “value of principled morality”, or P. In the initial iteration of the test, the highest scoring value was the participants current stage of moral reasoning-so a participant who scored highest in stage 4 would be a stage 4 moral reasoner.

While a large amount of ancillary information can be harvested from the individual rankings of importance for items, for the purpose of this study they were used in their primary role as a consistency check-participants should have selected items they ranked highest for their top four; if they do not, they likely did not understand the instructions. There are other validity scales built into the form to detect self-aggrandizement, but they are not particularly sensitive. The importance of the rating system for each item is greater under the auspices of current DIT test usage (Rest et al.,

1999c). Participants who show difficulty in properly selecting the most important items from their own ranking but who otherwise properly fill out the test form are now identified as being a stable population associated with the transitional schemas that exist between one moral reasoning schema and another (Rest, Narvaez, Bebeau, & Thoma, 1999b).

While the DIT has been superseded by a revised version (the DIT-2), the original framework of the DIT remains viable and the data gathered with it can be integrated into the more modern ‘schema of moral reasoning’ model, which has supplanted the previous stage model (Bebeau & Thoma, 1999). By classifying scores into the seven types of schema categories outlined in Rest (1999), consolidated Pre-conventional, Conventional, and Post-Conventional, as well as their disorganized or ‘transitional’ counterparts, a stable system of classification exists which is compatible with current research using the DIT-2 (Walker et al., 2001). This organization was achieved by taking participants who scored majority scores (cutoff set at 30) in the 2 and 3 range on the DIT and collapsing them into a single category: a similar operation is carried out for all other schemas (Rest et al., 1999b). The disorganized categories are collated by adding together those participants who failed to reach the 30 point cutoff on any index. A meta-analysis of over 40,000 DIT forms collected over a twenty year period demonstrated the consistency and validity of this seven type model (Rest et al, 1999). The Defining Issues Test takes a significant amount of time to complete: most participants finish within a window of 20 to 45 minutes.

It should be noted that there was a newer version of the DIT currently available. The DIT-2 was developed and introduced by Rest (1999c) at the turn of the century as a replacement for the original DIT. The differences between these two forms are marginal, consisting mostly of cosmetic updates (the war in question is now in the Persian Gulf, not the bay of Tonkin) and renorming of the test on updated and stratified sampling. The DIT and DIT-2 are nearly as correlated as each forms test-retest value (.81), and agreement between forms comes to a very high .98 once age and education differences are factored in, as many of the retested individuals had aged significantly from the original test (Thoma, 2006). Finally, a new index of principled morality, N2, has been added to allow greater discrimination between scores for those at the highest levels of moral development. As the sample for this experiment consisted of college students of mostly younger age stratum who were measured using a schema model, this addition added nothing to the test for this experiment. Given the high correlation between scores and the high cost of the DIT-2, the original form was used; this did not adversely impact results.

**Demographic form.** A simple demographic form was included to collect information about participant age, gender, level of education, and ethnicity. The entire form could be completed in under a minute.

### **Procedure**

A recruiting script was read in class and a web address for an online testing site provided so that participants can complete the forms at leisure, beginning with the

authoritarian scales and DIT, and finishing with the demographic form. Participants were provided with a debriefing sheet outlining both the purpose of the experiment as well as contact information for the Kelly Center on campus, the experimenter, and the experimenter's advisor if there are any concerns or complaints-this was available online at the end of the survey.

### **Initial Data Screening**

A total of 198 students completed the survey; however, 66 participants failed to properly complete the study. Their results were discarded if they a) provided incomplete data for any of the scales, b) showed a greater than 20 point difference on a split half comparison in scores on the RWA or SDO (indicative of random responding), or c) exceeded the validity scale cutoff scores for the DIT, including unlikely times of completion for the form (either less than a half hour or greater than 90 minutes). After these exclusionary criteria were applied, a normal distribution was achieved for P, and split half correlations for RWA and SDO reached the acceptable .75 level. The collated data was analyzed using multiple regression procedure to determine if there are differences between moral reasoning schemas established by DIT scores on the ratings gathered from the RWA and SDO forms. While a DA procedure was initially proposed, the resultant sample size precluded the use of this particular procedure. Regressions proved to be sufficient to produce meaningful findings, however, for each hypothesis.

Further, it was useful to run separate iterations for each gender. The difference in scoring that was expected for the SDO and RWA resulted in a different profile for men and women (Sidanius et al, 2006). A split file version of all the operations for hypothesis one and two were run in order to determine the relationship between authoritarianism and moral judgment by gender.

## Results

As postulated in hypothesis one findings for this experiment were in basic agreement with McFarland (2010), demonstrating of correlation between SDO, RWA, and levels of P. A Pearson correlation demonstrated that RWA was negatively correlated with ratings of P,  $r(125) = -.19, p < .05$ . SDO was not significantly correlated with P,  $r(125) = .03, p > .05$ . The mean scores for RWA ( $M=89.52, SD=13.39$ ) and SDO ( $M=48.2, SD=16.85$ ) were in the average range for these inventories (Altemeyer, 1998; Pratto et al., 1994). The sample's P score ( $M=21.46, SD=7.55$ ) showed a lower average value and restricted range, common with scores from the Midwest and South (Navarez et al., 2002). Scores for S4 ( $M=33.25, SD=8.4$ ) and S23 ( $M=35.2, SD=8.3$ ) also fit this conclusion. In sum, RWA and SDO were either not correlated with, or negatively correlated with P.

As outlined in hypothesis two, multiple regression analysis was used to determine if scores on the RWA or SDO (independently or in conjunction) predicted the moral schema of individuals (S23, S4, or S56-the schema that overlaps with P), particularly in relation to the S4 schema types. This was done using a backwards entry of the SDO and RWA into a regression model, with RWA entered first when predicting type S4 schema



and SDO entered first for type S23. It was expected that these correlations should be much stronger than those demonstrated by McFarland (2010a) as they much more directly address the manner in which the content of the DIT interacts with established measures of authoritarianism. Multiple regressions were chosen to capture the implied covariance which was expected to account for a degree of difference in scoring on the DIT that would otherwise be inaccessible. Backwards entry was used so as to start with a model that most closely resembled that used by McFarland (2010a), removing variables only if they did not prove useful. The SDO and RWA measure were related (.19), but otherwise represent separate constructs reflecting the two common variables in authoritarian theory; as such, they were acceptable for use in a multiple regression.

Starting with P/S56, the initial model that included both SDO and RWA proved to be less useful than one that excluded SDO, as suggested by the lack of substantive correlation noted above. As such, the model used for P/S56 included RWA only,  $F(1,123)=4.37, p<.05$ . The slope for this variable model was significant,  $\beta=-.19, t(122)=2.09, p<.05$ , and predicted 3.4% of variance (Adjusted  $R^2=.034$ ). For P/S56, only RWA was an effective predicting variable, and results indicated that the higher a participants RWA score, the lower their P/S56 score would be.

Similarly, the predictive model for S4 which initially included RWA and SDO was set aside in favor of one that included SDO only, as RWA did not prove to be an effective predictor of S4,  $r(122)=.08, p>.05$ . The final best fit model was produced by SDO alone,  $F(1,120)=7.06, p<.01$ , and predicted 5.6% of variance (Adjusted  $R^2=0.56$ ).

The slope of this variable was significant,  $\beta=.24$ ,  $t(119)=-2.66$ ,  $p<.01$ . SDO was the only effective predictor of S4: the higher a participants SDO score the higher their total score for S4.

Finally, the original regression model for S23, which included SDO and RWA, was superseded by one utilizing SDO as the only effective predictor for S23. RWA was essentially uncorrelated with S23,  $r(129)=.004$ ,  $p>.05$ . The final selected, significant model for S23 (SDO only) was  $F(1,127)=5.08$ ,  $p<.05$ , and predicted 3.8% of variance (Adjusted  $R^2=.038$ ). The slope of this variable was significant,  $\beta=-.20$ ,  $t(126)=-2.25$ ,  $p<.05$ . Interestingly, the higher ones SDO score, the lower their score total in S23.

Hypothesis three consisted of replicating aspects of the two previous hypotheses, using split file analyses by gender to analyze genders independently after the overall total has been examined. This determined that the model of association between authoritarian personality and moral reasoning style changed based on participant gender: the gender of participants was found to have an impact on the relationship of RWA and SDO to P, S4, and S23. Males in the sample had higher mean P scores ( $M=22.52$ ,  $SD=8.69$ ), RWA scores ( $M=94.84$ ,  $SD=16.27$ ), and SDO scores ( $M=51.2632$ ,  $SD=16.49$ ) when compared to females. Female scores for P were close to male scores ( $M=21.06$ ,  $SD=7.01$ ); however, female scores on RWA ( $M=88.52$ ,  $SD=10.92$ ), and SDO ( $M=46.66$ ,  $SD=16.69$ ) were lower, fitting expectations. This determined that the association between authoritarian personality and moral reasoning style would likely change based on participant gender.

First, regressions were run for the two predictor variables (RWA and SDO) with P/S56. These variables were used in individual regressions in order to determine the effects of gender on each variable in isolation. The regression for males using RWA as a predictor produced a significant model  $F(1,38)=8.86, p<.01$ , and predicted 19.8% of variance (Adjusted  $R^2=.198$ ). The slope for RWA was significant,  $\beta=-.44, t(36)=-2.98, p<.01$ . However, RWA was not a significant predictor for females,  $F(1,85)=0.07, p>.05$ . The slope for RWA was non-significant,  $\beta=-.03, t(84)=-.27, p>.05$ . In effect, RWA predicted lower P/S56 scores for men, but not for women.

In regards to SDO, males did not produce a significant model,  $F(1,38)=1.07, p>.05$ . The slope for SDO was non-significant,  $\beta=.17, t(36)=1.04, p>.05$ . Females, likewise, did not produce a significant model,  $F(1,85)=0.5, p>.05$ . The slope for SDO was non-significant,  $\beta=-.07, t(84)=-.68, p>.05$ . As such, SDO was not useful for predicting scores on P/S56 for either gender.

Next a similar procedure was conducted for S4 scoring. Male scores ( $M=34.22, SD=7.84$ ) were notably higher than female scores ( $M=32.69, SD=8.68$ ). The regression for males using RWA as a predictor for S4 produced a non-significant model,  $F(1,38)=.35, p>.05$ . The slope for RWA was non-significant,  $\beta=-.06, t(36)=-.298, p<.01$ . RWA was also not a significant predictor for females,  $F(1,85)=0.31, p>.05$ . The slope of RWA was non-significant,  $\beta=-.06, t(84)=.56, p>.05$ .

For to SDO, males did not produce a significant model,  $F(1,38)=1.48, p>.05$ . The slope for SDO was non-significant,  $\beta=.01, t(37)=.6, p>.05$ . Females did, however, produce a significant model,  $F(1,85)=5.42, p<.05$ , predicting 6.4% of variance (Adjusted

$R^2=.062$ ). The slope for SDO in this case was significant,  $\beta=.25$ ,  $t(84)=2.38$ ,  $p<.05$ . Thus, for males, SDO was not useful in prediction of scores in S4, but it did help in predicting female scores, with higher SDO scores predicting higher scoring on S4.

Finally, S23 scoring was assessed with the same method. Male scores ( $M=33.54$ ,  $SD=7.92$ ) were lower than female scores ( $M=36.01$ ,  $SD=8.43$ ). The regression for males using RWA as a predictor for S4 produced a non-significant model  $F(1,38)=2.75$ ,  $p>.05$ . The slope for RWA was nonsignificant,  $\beta=.26$ ,  $t(37)=1.66$ ,  $p>.05$ . RWA was not a significant predictor for females either,  $F(1,85)=1.42$ ,  $p>.05$ . The slope for RWA was non-significant in this case,  $\beta=-.13$ ,  $t(84)=-1.19$ ,  $p>.05$ . RWA was, effectively, not useful in predicting scores in S23.

In regards to SDO, males did not produce a significant model,  $F(1,38)=3.2$ ,  $p>.05$ , though they trended towards significance and likely would have achieved it with proper sample size. The slope for SDO was non-significant,  $\beta=-.27$ ,  $t(37)=-1.8$ ,  $p>.05$ . Females also did not produce a significant model,  $F(1,84)=1.86$ ,  $p>.05$ , with SDO producing a non-significant slope,  $\beta=-.15$ ,  $t(83)=-1.36$ ,  $p>.05$ . With a split file for gender, SDO, which significantly predicted scores for S23, was not useful for either gender. This is likely because of the fact that in splitting the sample, a lower number of participants were available for each statistical test. As both male and female tests trended towards significance, it can be assumed that with more participants, both would have been significant-males more so than females.

Hypothesis four suggested that controlling for age differences will lead to stronger relationships between scores on the SDO and RWA in regards to P, S4, and S23.

Because age is a strong predictor for scores on all three of the scales being used (Duckitt et al., 2002; Rest et al., 1999b), controlling for its effects may provide important information about how the measures in this experiment will interact. As age was expected to be evenly distributed across scores for all tests (Duckitt & Sibley, 2009; Thoma, 2006), partial correlations were used to test the nature of the relationship. Partial correlations were conducted for P, S4, and S23 with both RWA and SDO. Initial bivariate correlations to P were  $r(125) = -.19, p < .05$  for RWA and  $r(125) = .03, p > .05$  for SDO. RWA was correlated significantly, and SDO was not.

Adjusted for age effects, P correlated significantly with RWA,  $r(119) = -.21, p < .05$ , a minor increase in correlation from  $-.19$ . Removing the age effects increased the strength of the correlation between P and RWA. SDO was unaffected by the removal of age,  $r(119) = .03, p > .05$ , and caused no change in correlation strength.

Using data from the bivariate and partial correlations above, the effective slope for RWA and S4 was unaffected,  $r(119) = .08, p > .05$ , the exact same as it was without removing age effects. SDO and S4 (the only significant predictor) changed from  $.24$  to  $.25, r(119) = .25, p < .01$ . Removing age effects increased the strength of the correlation very slightly.

The correlation for RWA and S23 changed from  $.08$  to  $.006, r(119) = .006, p > .05$ . This non-significant change means that removing age had little effect. SDO and S23 did not change:  $-.2$  to  $-.2, r(119) = -.2, p < .05$ . Age had no effect at all in this case.

Hypothesis five used SDO and RWA to predict the forced choice items from the DIT. For example, among high SDO scorers, the Mechanics Dilemma presents the story of an ethnic out group who was competent and capable attempting to close the social gap between himself and the protagonist via employment. This was the exact sort of threat that offends SDO sensibilities (Pratto et al, 1994). Thus, high scorers on this inventory were not expected to endorse hiring the mechanic, therefore symbolically maintaining Social Dominance. In the case of high RWA scorers, the Doctors Dilemma and Heinz Dilemma scenarios were hypothesized to elicit a similar response. Both represent action being taken against the proper authorities, something very threatening to RWA individuals. These assumptions were tested using simple regressions, as data should be robust enough that it will not require dummy coding. All combinations of response for all six scenarios and two authoritarianism predictors were tested. Of these combinations, four were found to be significant.

RWA was found to have a negative effect on scenario four, the doctors dilemma,  $F(1, 120)=-6.48, p<.05$ . The slope was  $\beta=-.27, t(123)=-2.55, p<.05$ . The model predicted 7% of variance (Adjusted  $R^2=.07$ ). High RWA scorers more frequently indicated that the doctor should not administer an overdose.

SDO was found to predict an increase in “yes” responses to scenarios one and four, indicating that Heinz should rob the chemist and the doctor should administer a lethal overdose. For the Heinz scenario (scenario one) the regression model was significant  $F(1, 120)=7.55, p<.01$ , with a significant slope of  $\beta=.24, t(118)=2.75, p<.01$ .

The model predicted 5.9% of variance (Adjusted  $R^2=.059$ ). The Doctor scenario (scenario four) regression model was significant  $F(1, 122)=7.55, p<.01$ , with a significant slope of  $\beta=.24, t(120)=2.73, p<.01$ . The model predicted 5.6% of variance (Adjusted  $R^2=.056$ ). Scenario five, Webster, was negatively affected by SDO—that is, the higher the SDO score, the more likely participants were to indicate “no” that Webster should not hire a nonwhite mechanic. The regression model was significant  $F(1, 124)=9.77, p<.01$ , with a significant slope of  $\beta=-.27, t(123)=-3.13, p<.01$ . The model predicted 7.3% of variance (Adjusted  $R^2=.073$ ).

Finally, for Hypothesis six, scores of RWA were used to predict scores on the Anarchy (A) index. A simple Pearson correlation was used, but the findings were not significant,  $F(1, 119)=.05, p>.05$ . The slope was likewise not significant,  $\beta=.03, t(118)=.22, p>.05$ . SDO was also tested, resulting in a non-significant regression model:  $F(1, 119)=.66, p>.05$ . The slope was also not significant,  $\beta=.08, t(117)=.82, p>.05$ . That is, there was no meaningful relationship between scores for the Anarchy index and RWA or SDO.

### **Discussion**

The data derived from this study is interesting for several reasons. Foremost, it deviates from McFarland (2010b), in that only ratings of RWA were significantly negatively correlated with P, though the expected strength (.25) was not far off of the resulting value found in this study. This called into question the validity of a RWA/SDO/DIT axis for predicting prejudice; however, possible reasons for this exist. In

regards to P, the difference from this study and McFarland's model may likely be the result of sophisticated responders among high SDO scorers. For example, the majority (N=10, 71%) of those participants discarded for scoring above the cutoff of invalid responding for the DIT were above the mean on their SDO scores. The M, or invalid scale, for the DIT is designed to detect attempts at sounding righteous or morally highminded, but which are effectively meaningless responses that are unlikely to be endorsed by an actual responder.

As such, it can be concluded that among this sample, a higher percentage of participants who produced elevated SDO scores attempted to provide higher moral reasoning scores than they would have if they were attempting to respond honestly. This may be a confounding variable introduced by the testing environment that reduced the likelihood and perception of culpability (Zimbardo, 1972), as this testing was administered in a differing manner than that conducted by previous researchers who used an in class environment. This seems all the more likely, given that the arrangement of RWA scores was close to previous studies, indicating an otherwise valid data batch, rather than simple social desirability.

It was expected that in addition to negative correlations with P, RWA and SDO would correlate positively with S4 and S23. The emphasis on conformity, social stability, and immutability of social structures (laws, hierarchies) which form the semantic core of conventional (S4) schema reasoning in the DIT are all core concepts of the Right Wing personality outlined by Altemeyer (1998). Likewise, the desire for static social structure



and application of law to enforce social roles present in S23 reasoning is easily wedded to Sindal and Pratto's conception of Social Dominance Orientation (Pratto et al., 1994).

Against expectations, RWA was not a predictive factor for either S4 or S23, though SDO was. It was expected that as RWA was negatively correlated with P in previous studies (McFarland, 2010a), it should align with the other schemas. Interestingly, while elevated SDO scores predicted higher scoring on S4, the reverse was true regarding S23, which was negatively correlated with SDO. There are several possible explanations for this interesting arrangement: the first is likely due to pre-established characteristics of high authoritarian scorers, the other has to do with differences found as a result of gender.

In examining the regression data, SDO demonstrates a very interesting and varied response to S4 and S23 schemas. S4 is positively correlated with SDO. This makes sense when examining the basic concept of social dominance. High SDO individuals utilize preexisting social structures to maintain authority and dominance (Sidanius et al., 2004); obviously they would 'hitch their wagons' to ideologically fixed perceptions of rule and order which are associated with S4, the "maintaining order" schema. The inverse relationship with S23 is likely a result of the lesser predictability associated with level two and three moral reasoning. Level two, which relies solely on getting what it is possible to get without punishment, and level three, which is keyed to personal relationships, was in retrospect obviously antithetical to any attempt to maintain order and control over responding of society. This is probably a result of the structure of the

DIT, which poses moral questions focused on other individuals-perhaps SDO scorers would respond differently if they were asked explicitly if they would steal the drug, rather than Heinz.

RWA's lack of relationship with S4 was curious, but not without explanation. The previously suspected one-to-one relationship between RWA and S4 may have been exaggerated. While S4 appears to pull directly from the same ideological base as RWA on the surface, it is entirely possible that they represent differing aspects of a similar concept. For example, S4 reasoning relies on questions that focus on the rule of law itself (Rest, 1978). RWA, by contrast, is more focused on "submission to a strong ruler" and "surrender of independent freedoms for safety" (Altemeyer, 1998). That is, RWA is more focused on concrete expressions of order-on the personal relationship between authority figures and subjects, between fear of harm and the creation of order at any cost.

It is possible that the DIT's focus on abstracted principles of law did not adequately tap into the emotionally biased content of RWA, and failed to elicit the expected reaction simply because it did not trigger the emotional, or fear response, so strongly associated with authoritarianism in both scientific literature and in political critiques (Altemeyer, 2006; Anagazi, 1980). In effect, the DIT is too emotionally flat to evoke the emotionally laden construct of Right Wing Authoritarianism. While some of the individual scenarios in the DIT may have triggered the emotional content of RWA (the student take over, etc), the overall measures used to generate S4 scores simply did not produce the response from RWA scorers that a more pathos laden form may have. If

a more personal alternative form could be constructed, or scenarios depicting social upheaval or moral choice options that indicated a more emotion laden reasoning could be used, the association between RWA and S4 would likely be very strong indeed.

The relationship of RWA to S23 was perhaps the most interesting, as it was in fact the product of moderating influences. In running a split file computation, gender was found to be critically important in the lack of correlation found with RWA and S23. Males were in fact more likely to score high on S23 if they possessed higher RWA scores, whereas women were less likely to. These statements must be tempered by the lack of significance, but both findings trended towards significance—a more complete sample would have likely found them to be pertinent. This follows the rationale stated in Altemeyer's latest revision of the authoritarian concept (2006) which indicated that high scoring males are more likely to endorse force, aggression, and violation of 'the rules' in order to enforce order (similar to S23), whereas women who score high are less likely to do so. It should be noted that SDO demonstrated the same lack of significance due to low N (trended towards significance), and higher correlation values for men than women; however, both genders showed movement in the same direction. This is a common finding in most literature (Pratto et al, 1994, Sidanius, 2002). What is important is that this moderation of effect for RWA and S23 calls for an even more in depth analysis of the scores in regards to P and S4.

In regards to gender effects, the relationship between P and authoritarian measures changed a good deal. This is a potentially interesting finding as research up to

this point with the SDO indicates both invariance, in the case of career outcomes, choice of college major, etc (Sidanius et al., 2006a), as well as pronounced gender effects which are common among political issues. The RWA does not demonstrate such interactive effects (Duckitt & Sibley, 2009). This represented a great opportunity for the DIT to help further elucidate the meaning of gender differences in scores for SDO, and to a lesser extent, RWA.

RWA showed a powerful relationship between RWA males and P and nearly none between females and P. As discussed above, this further outlines the possibility that authoritarian measures may be highly reactive to gender when applied to moral reasoning or other similar measures. SDO did not show a pattern of gender variance, being closely collinear for P. When applied to S4, female SDO scorers were found to significantly endorse S4 choices, though males did not (bearing in mind the smaller male sample, it is possible that an equally sized sample would have produced significant findings).

Further, females had a stronger correlation than males, a reverse of the relationship for S23. This may again be an effect of aggression and antisocial behavior being more common in males, thus converging with the manner in which S23 moral choice responses are written (Sibley & Liu, 2010). The fact that SDO was a positive predictor for one gender but not the other in regards to S4 argues for a more complex method of integrating the DIT into predictive models of prejudice, especially in light of the relationship between RWA and S23. RWA was not significant for S4 regardless of gender split file operations-given the total lack of correlation between the two, this was

unlikely. Obviously the relationship between these two measures of authoritarianism and moral reasoning is more complex than previously postulated: methods for properly utilizing it within a predictive model will be discussed below. Before this, there are a few remaining hypotheses that need to be discussed.

The effects of age were minimal, only increasing the strength of correlation between RWA and P, and nullifying it in relationship to RWA and S23. This is more than likely the result of the limited spread of age throughout the sample. Likewise, range constriction undermined the hypothesis that the anarchy index (A) of the DIT would be negatively correlated with RWA and SDO. Only a limited number of participants whose profiles turned out to be valid endorsed a large number of A responses. Because of this, no meaningful finding was made in this regard.

This was not the case for hypothesis five, which predicted that ratings of authoritarianism would impact the actual decision made by participants in each scenario. Each of the significant findings will be discussed in order. Interestingly, and expectedly, high RWA scorers refused to endorse killing the woman in the doctor scenario. Likely, the more direct nature of an ipsative question forced the emotional content of scenario four to impact RWA scorers more than S4 itself did. Previous studies of seminary students did not find a significant effect for the doctor scenario, the fact that this study did is indicative of the soundness of such a concept (Wilton, 2005).

Other meaningful findings included the fact that high SDO scorers leaned the opposite way regarding the doctor scenario, indicating that they would be willing to kill the woman. This was likely a power relationship between the doctor and others coming into play. SDO scorers also stated that Heinz should rob the chemist, which is an interesting finding what seems to go counter to normal reasoning. It is entirely possible that the effects of perspective taking impacted this outcome, as participants assume that they are the more elevated class and therefore impute absolute right to Heinz actions (Sidanius, 1993; Sidanius et al., 2001). This conclusion was supported by the fact that many lower economic class participants who scored high in the original SDO norming study endorsed items that seemed counter intuitive, such as increased funding for government projects that benefitted them more than others (Pratto et al, 1994), resulting in a net gain for their group at the cost of others. Thus, such an action still maintains the drive to use the status quo to acquire resources for one's own group at the expense of others-Heinz theft can be seen in a similar light.

SDO scorers, finally, endorsed not hiring the racial minority mechanic in the Webster scenario, which is a classical use of a power position to maintain economic hegemony over others (Duckitt, 2001). The use of direct, forced choice questions opens up another avenue for measuring the effects of authoritarianism on choice making, and while beyond the scope of this work, could be a useful direction for future investigations on the subject, as the results provide a more directly relatable view of individual

information processing that is not mediated through constructs that do not necessarily translate into actual behavior (Rest, 1999, Walker, 2004).

While P is a standard measure and it is encouraged that researchers nominally approach the variable as a scaled rather than categorical construct (Navarez et al, 2000), Thoma (2006) indicated that it may be useful to view it as a representation of several schemas in certain cases. By applying this reasoning, this study found that significant variation in the distribution of scores for RWA and SDO exists “below” the range utilized by previous studies with the DIT. SDO, in particular, varies between S4 and S23 schemas, and RWA demonstrated a range of effects based on the gender of the participant.

Obviously, the multiplicity of variance that can be pulled out from a detailed examination of the relationship between SDO, RWA, and the results of the DIT indicate that a much more specific and well defined use of each of the tests must be arrived at before they can be accurately used to predict any sort of behavior or ideation. Both the variance of the authoritarian scales prediction of each schema, as well as the unexpected gender effects, seems to imply that a blunt use of the scales is countermanded. It would likely be more useful to mediate the influences of each scale through scoring for the components of the DIT that they are significantly correlated with—for example, RWA should be mediated through scores of P, while the same could be done with SDO and S4 and S23.

In this way, a stronger pathway between measures of authoritarianism and the DIT can be established, increasing predictive value for the entire model. By expanding the interaction between the DIT and authoritarian measures to include S4 and S23, as well as P, more variance can be picked up and utilized, rather than cast off as useless. It is very likely that S4 and S23 would correlate with prejudice and other similar constructs (Thoma, et al., 2009). This would allow for more data to be used in predictions, instead of it being lost, increasing the efficiency of the structural model being used for predictions.

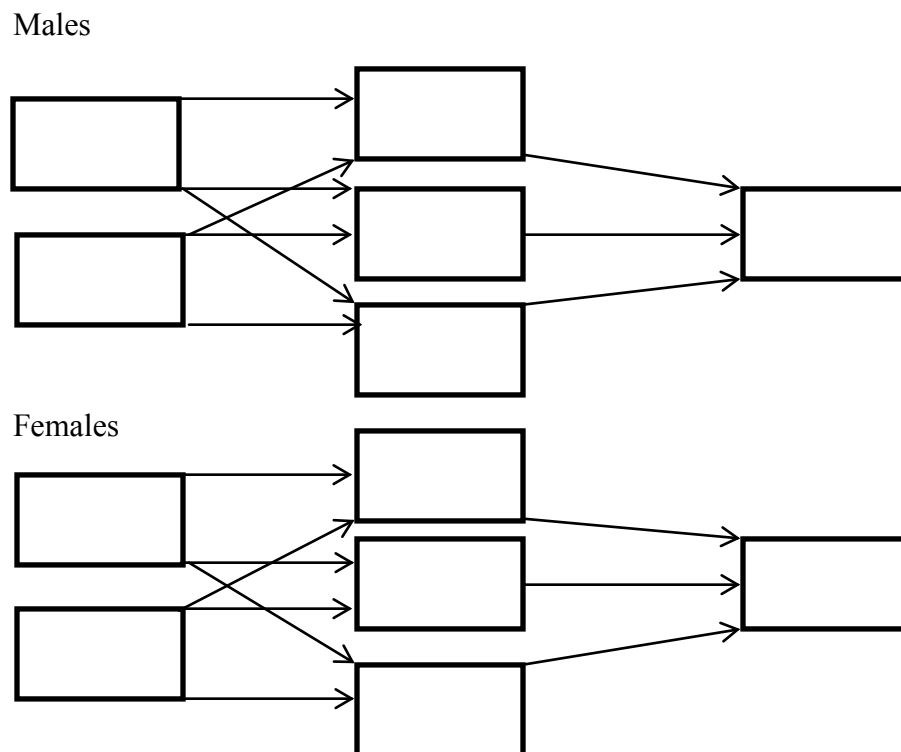
Likewise, due to the gender effects both in this study and in regards to authoritarian scales, it may also be useful to split samples much like what was done in this study in order to achieve an even finer grain on the true relationship between measures and attitudes. In particular, the relationship between female participants' score profiles and those produced by male participants needs to be illuminated. Perhaps the entire model used by McFarland could benefit from splitting genders due to the number of differences in how these scales interact with gender.

In so doing, the degree to which the DIT can predict and be used to mediate effects can be expanded, by bifurcating data into multiple streams instead of a single, awkward construct that fails to capture the multiplicity of effects that authoritarianism has on moral reasoning. A fully expanded model would have each variable fed through the schema that it shows correlation with, and include parallel models for both males and



females. The total gain would likely outstrip the previous incarnation, and could be overlapped with other variables such as empathy and hard mindedness.

Fig. 1. Proposed Prejudice Model



Also, in detecting differences in the way that moral reasoning interacts with differing forms of authoritarianism, it is possible that the nature of the construct of moral reasoning might be further illuminated. For example, the lack of correlation between RWA and S4 raises the question as to how the constructs are defined, and the accuracy of their definitions. Thoma (2006) describes S4 as a tendency to uphold traditions, maintain order, and follow established rules—strikingly similar to Altemeyers (2006) description of RWA as a tendency to conserve socially and give authority to leaders in order to

maintain order. While these definitions appear to be quite similar, the lack of correlation between measures may lead to the question of either the accuracy of the tests or the definition of what they measure. Further investigation is warranted, regardless.

In summary, this study demonstrates the complex nature of authoritarianism and moral schema scoring on the DIT, and opens up many avenues for future research, including using the RWA/SDO/DIT components in defining authoritarian ideology, but also in the relationship between these components and their parent concepts of authority and morality.

### **Limitations**

There are several important limitations for this study. First of all, a good deal of data had to be discarded due to the nature of the administration, which lent itself to random responding for some participants. It may be useful, from an administrative perspective, to modify online testing procedures so that only valid profiles count towards extra credit or other rewards: the manner of doing so is beyond the purview of this work, but is worth consideration for other future experimenters. This reduced the sample size significantly, though not to a degree that rendered statistical procedures unable to adequately detect differences. Several regressions, such as the gender by RWA regressions for S23 may have been significant with a larger sample, and the overall power of findings could have been increased.

Further, the age range of this study was relatively constricted; it would have been beneficial to have expanded the sample to include a broader populations. Likewise, the DIT is heavily impacted by education level-by limiting the sample to college students, a degree of range restriction was likely spuriously introduced to the results; however, college students have most often been the subject of testing involving both the DIT (Rest et al, 1999) and most authoritarian measures (Pratto et al, 1994). As such, this may not be so much a limitation as a necessary protocol in order to allow data to be comparable with the general pool of studies available.

The final major concern relates to the DIT as an obsolete form. The newer version-the DIT-2-while strongly correlated with the original form, does represent a major step forward in refreshing the test and making it cogent for current students. It is possible that the use of more modern forms may change the scoring to a minor degree, changing the end results of the study.

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Appendix A  
Informed Consent Form

**CONSENT TO PARTICIPATE IN RESEARCH**  
*Department of Psychology, Fort Hays State University*

*Study title: The effects of authoritarianism on moral schema development and usage*

*Name of Researchers* **Clinton Luth: 308-390-1165 or [cmluth@mail.fhsu.edu](mailto:cmluth@mail.fhsu.edu)**

*Name of Faculty Supervisor & Contact Information:* **Dr. Janett Naylor, [jmnavlor@fhsu.edu](mailto:jmnavlor@fhsu.edu) 785.628.4405**

**You are being asked to participate in a research study. It is your choice whether or not to participate.** Your decision whether or not to participate will have no effect on your standing with the Department of Psychology or Fort Hays State University. Please ask questions if there is anything you do not understand.

**What is the purpose of this study ?** The purpose of this study is to expand upon the existing knowledge regarding how moral reasoning interacts with certain social opinions. This experiment will use three short surveys to collect data on your opinions regarding social issues as well as examining your style of moral reasoning via a short test. A demographic form is also attached to allow us to further clarify findings.

**What does this study involve ?** If you agree to participate, you will be asked to complete surveys designed to measure your answers to moral situations, personal opinions on social issues, and basic demographic information. If you decide to participate in this research study, you will be asked to sign this consent form after you have had all your questions answered and understand what will happen to you. The length of time of your participation is 35 minutes. Approximately 300 participants will be in this study.

**Are there any benefits from participating in this study ?** As participants, you will be able to learn about your personal level of moral reasoning by confronting several hypothetical situations. Likewise, you will be helping to further refine our understanding of the long range effects that changes in early family structure have on later life development.

**Will you be paid or receive anything to participate in this study ?** Extra credit may be offered by your instructor.

**What are the risks involved with being enrolled in this study ?** It is unlikely that participation in this project will result in harm to you. Sometimes talking about these subjects can cause people to become upset. You do not have to talk about any subjects you do not want to talk about, and you may stop participating at any time. If you feel distressed or become upset by participating contact the Kelly Center, the Psychology Department Ethics Chair, or the course instructor. This contact information will be provided for you at the end of the experiment, or at any time that you request. Also, the experimenter will be able to provide directions and offer assistance if necessary.

Your information will not be linked to you in any way. The surveys will be numbered with an ID number for data collection purposes only. The consent forms with your name will be kept separate from the surveys. Your confidentiality will be protected by not linking names with information and keeping the forms entirely separate. All forms will be destroyed after the experiment is fully completed and all presentations with the data have concluded.

**How will your privacy be protected?** Potentially identifiable information about you will consist of surveys and signed consent documents. Data are collected only for research purposes and your data will be identified by ID number, not name. All information will be stored separately in a locked file cabinet. All surveys and consents will be kept in locked files and these files will be shredded at the end of the fall 2013 semester. Electronic and de-identified records will be kept in a locked file for up to 5 years or until the study ends and will be destroyed at that time. Access to all data will be limited to the researchers listed above. The information collected for this study will be used only for the purposes of conducting this study. What we find from this study may be presented at meetings or published in papers but your name will not ever be used in these presentations or papers. Data will only be presented in aggregate form in any publication or presentation.

**Other important items you should know:**

- **Withdrawal from the study:** You may choose to stop your participation in this study at any time. Your decision to stop your participation will have no effect on your academic standing within this course, the Department of Psychology or Fort Hays State University.
- **Funding:** There is no outside funding for this research project.

**Whom should you call with questions about this study ?** Questions about this study may be directed to the Ethics Chairperson in Psychology: Dr. Janett Naylor at [jmnaylor@fhsu.edu](mailto:jmnaylor@fhsu.edu). If you have questions, concerns, or suggestions about human research at FHSU, you may call the Office of Scholarship and Sponsored Projects at FHSU (785) 628-4349 during normal business hours.

**CONSENT**

I have read the above information about *The effects of authoritarianism on moral schema development and usage* and have been given an opportunity to ask questions. By signing this I agree to participate in this study and I have been given a copy of this signed consent document for my own records. I understand that I can change my mind and withdraw my consent at any time. By signing this consent form I understand that I am not giving up any legal rights. I am 18 years or older.

---

Participant's Signature and Date

Appendix B  
Defining Issues Test

### Opinions about social problems

This questionnaire is aimed at understanding how people think about social problems. Different people often have different opinions about questions of right and wrong. There are no “Right” answers in the way that there are right answers to math problems. We would like you to tell us what you think about several problem stories. The papers will be fed to a computer to find the average for the whole group, and no one will see your individual answers.

In this questionnaire you will be asked to give your opinions about several stories. Here is a story as an example.

Frank Jones has been thinking about buying a car. He is married, has two small children and earns an average income. The car he buys will be his family’s only car. It will be used mostly to get to work and drive around town, but sometimes for vacation trips also. In trying to decide what car to buy, Frank Jones realized that there are a lot of questions to consider. Below there is a list of some of these questions.

If you were Frank Jones, how important would each of these questions be in deciding what car to buy?

#### Instructions for Part A: (Sample Question)

On the left hands side check one of the spaces by each statement of a consideration. (For instance, if you think that statement #1 is not important in making a decision about buying a car, check on the right.)



## IMPORTANCE:

great	much	Some	Little	no	
				X	1. Whether the car dealer was in the same block as where Frank Lives. (Note that in this sample, the person taking the questionnaire did not think this was important in making a decision.)
X					2. Would a <u>used</u> car be more economical in the long run than a <u>new</u> car? (Note that a check was put in the far left space to indicate the opinion that this is an important issue in making a decision about buying a car.)
		X			3. Whether the color was green, Frank's favorite color.
				X	4. Whether the cubic inch displacement was at least 200. (Note that if you are unsure about what "cubic inch displacement" means then mark it "No importance".)
X					5. Would a large, roomy car be better than a compact car?
				X	6. Whether the front connibilies were differential. (Note that if a statement sounds like gibberish or nonsense to you, mark it "no importance".)

Instructions for part B: (Sample Questions)

From the list of questions above, select the most important one of the whole group. Put the number of the most important question on the top line below. Do likewise for your 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> most important choices. (Note that the top choices in this case will come from the statements that were checked on the far left hand side—statements #2 and #5 were thought to be very important. In deciding what is the most important, a person would re-read #2 and #5, and then pick one of them as the most important, then put the other one as "second most important," and so on.)

<u>Most</u>	<u>Second most important</u>	<u>Third most important</u>	<u>Fourth most important</u>
5	2	3	1

### Heinz and the drug

In Europe a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost to make. He paid \$200 for the radium and charged \$2000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the Druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and began to think about breaking into the man's store to steal the drug for his wife.

Should Heinz steal the drug? (Check one)

Should steal it

Can't decide

Should not steal it

## IMPORTANCE:

Great	Much	Some	Little	No	
					1. Whether a community's laws are going to be upheld.
					2. Isn't it only natural for a loving husband to care so much for his wife that he'd steal?
					3. Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?
					4. Whether Heinz is a professional wrestler, or has considerable influence with professional wrestlers.
					5. Whether Heinz is stealing for himself or doing this solely to help someone else.
					6. Whether the druggist's rights to his invention have to be respected.
					7. Whether the essence of living is more encompassing than the termination of dying, social and individually.
					8. What values are going to be the basis for governing how people act towards each other?
					9. Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyhow.
					10. Whether the law in this case is getting in the way of the most basic claim of any member of society.
					11. Whether the druggist deserves to be robbed for being so greedy and cruel.
					12. Would stealing in such a case bring about more total good for the whole society or not.

From the list of questions above, select the four most important:

- Most important
- Second most important
- Third most important
- Fourth most important

### Student take-over

At Harvard university group of students, called the Students for a Democratic Society (SDS), believe that the University should not have an army ROTC program. SDS students are against the war in Vietnam, and the army training program helps send men to fight in Vietnam. The SDS students demanded that Harvard end the army ROTC training programs as a university course. This would mean that Harvard students could not get army training as part of their regular course work and not get credit for it towards their degrees.

Agreeing with the SDS students, the Harvard professors voted to end the ROTC as a university course. But the president of the University state that he wanted to keep the program on campus as a course. The SDS students felt that the president was not going to pay attention to the faculty vote or to their demands.

So, one day last April, two hundred SDS students walked into the universities administration building, and told everyone to get out. They said they were doing this to force Harvard to get rid of the army training program as a course.

Should the students have taken over the administration building? (Check one)

Yes, they should take it over       Can't decide       No, they shouldn't take it over

## IMPORTANCE:

Great	Much	Some	Little	No	
					1. Are the students doing this to really help other people or are they doing it just for kicks?
					2. Do the students have any right to take over property that doesn't belong to them?
					3. Do the students realize that they might be arrested and fined, and even expelled from school?
					4. Would taking over the building in the long run benefit more people to a greater extent?
					5. Whether the president stayed within the limits of his authority in ignoring the faculty vote.
					6. Will the takeover anger the public and give all students a bad name?
					7. Is taking over a building consistent with principles of justice?
					8. Would allowing one student take-over encourage many other student take-overs?
					9. Did the president bring this misunderstanding on himself by being so unreasonable and uncooperative?
					10. Whether running the university ought to be in the hands of a few administrators or in the hands of all the people.
					11. Are the students following principles when they believe they are above the law?
					12. Whether or not university decisions ought to be respected by students or not.

From the list of questions above, select the four most important:

- Most important  
 Second most important  
 Third most important  
 Fourth most important

### Escaped Prisoner

A man has been sentenced to prison for 10 years. After one year, however, he escaped from prison, moved to a new area of the country, and took on the name of Thompson. For eight years he worked hard, and gradually he saved enough money to buy his own business. He was fair to his customers, gave his employees top wages, and gave most of his profits to charity. Then one day, Mrs. Jones, an old neighbor, recognized him as the man who had escaped from prison 8 years before, and whom the police had been looking for.

Should Mrs. Jones report Mr. Thompson to the police and have him sent back to prison? (Check one)

Should report him

Can't decide

should not report him

## IMPORTANCE:

Great	Much	Some	Little	No	
					1. Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person?
					2. Every time someone escapes punishment for a crime, doesn't that just encourage more crime?
					3. Wouldn't we be better off without prisons and the oppressions of our legal systems?
					4. Has Mr. Thompson really paid his debt to society?
					5. Would society be failing what Mr. Thompson should fairly expect?
					6. What benefits would prisons be apart from society, especially for a charitable man?
					7. How could anyone be so cruel and heartless as to send Mr. Thompson to prison?
					8. Would it be fair to all the prisoners who had to serve out their full sentences if Mr. Thompson was let off?
					9. Was Mrs. Jones a good friend of Mr. Thompson?
					10. Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances?
					11. How would the will of the people and the public good best be served?
					12. Would going to prison do any good for Mr. Thompson or protect anybody?

From the list of questions above, select the four most important:

- \_\_ Most important
- \_\_ Second most important
- \_\_ Third most important
- \_\_ Fourth most important

### The Doctors Dilemma

A lady was dying of cancer which could not be cured and she had only about six months to live. She was in terrible pain, but she was so weak that a good dose of pain-killer like morphine would make her die sooner. She was delirious and almost crazy with pain, and in her calm periods, she would ask the doctor to give her enough morphine to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway.

What should the doctor do? (Check one)

He should give the lady an overdose that will make her die

Can't decide

Should not give the overdose



## IMPORTANCE:

Great	Much	Some	Little	No	
					1. Whether the woman's family is in favor of giving her the overdose or not.
					2. Is the doctor obligated by the same laws as everybody else if giving her an overdose would be the same as killing her?
					3. Whether people would be much better off without society regimenting their lives and even their deaths.
					4. Whether the doctor could make it appear like an accident.
					5. Does the state have the right to force continued existence on those who don't want to live?
					6. What is the value of death prior to society's perspective on personal values?
					7. Whether the doctor has sympathy for the woman's suffering of cares more about what society might think.
					8. Is helping to end another's life ever a responsible act of cooperation?
					9. Whether only God should decide when a person's life should end.
					10. What values the doctor has set for himself in his own personal code of behavior.
					11. Can society afford to let everybody end their lives when they want to?
					12. Can society allow suicides or mercy killing and still protect the lives of individuals who want to live.

From the list of questions above, select the four most important:

\_\_\_ Most important

\_\_\_ Second most important

\_\_\_ Third most important

\_\_\_ Fourth most important

Webster

Mr. Webster was the owner and manager of a gas station. He wanted to hire another mechanic to help him, but good mechanics are hard to find. The only person he found who seemed to be a good mechanic was Mr. Lee, but he was Chinese. While Mr. Webster himself didn't have anything against Orientals, he was afraid to hire Mr. Lee because many of his customers didn't like Orientals. His customers might take their business elsewhere if Mr. Lee was working in the gas station.

When Mr. Lee asked Mr. Webster if he could have the job, Mr. Webster said that he had already hired someone else. But Mr. Webster really had not hired anybody, because he could not find anybody who was a good mechanic besides Mr. Lee.

What should Mr. Webster have done? (Check one)

Should have hired Mr. Lee

Can't decide

Should not have hired him



## Newspaper

Fred, a senior in high school, wanted to publish a mimeographed newspaper for students so that he could express many of his opinions. He wanted to speak out against the war in Vietnam and to speak out against some of the school's rules, like the rule forbidding boys to wear long hair. When Fred started his newspaper, he asked his principal for permission. The principal said it would be all right if before every publication Fred would turn in all his articles for the principal's approval. Fred agreed and turned in several articles for approval. The principal approved all of them and Fred published two issues of the paper in the next two weeks. But the principal had not expected that Fred's newspaper would receive so much attention. Students were so excited by the paper that they began to organize protests against the hair regulation and other school rules. Angry parents objected to Fred's opinions. They phoned the principal telling him that the newspaper was unpatriotic and should not be published. As a result of the rising excitement, the principal ordered Fred to stop publishing. He gave as a reason that Fred's activities were disruptive to the operation of the school.

Should the principal stop the newspaper? (Check one)

Should stop it

Can't decide

Should not stop it

## IMPORTANCE:

Great	Much	Some	Little	No	
					1. Is the principal more responsible to students or to the parents?
					2. Did the principal give his word that the newspaper could be published for a long time, or did he just promise to approve the newspaper one issue at a time?
					3. Would the students start protesting even more if the principal stopped the newspaper?
					4. When the welfare of the school is threatened, does the principal have the right to give orders to students?
					5. Does the principal have the freedom of speech to say "No" in this case?
					6. If the principal stopped the newspaper would he be preventing full discussion of important problems?
					7. Whether the principal's order would make Fred lose faith in the principal.
					8. Whether Fred is really loyal to his school and patriotic to his country.
					9. What effect would stopping the paper have on the students education in critical thinking and judgments?
					10. Whether Fred was in any way violating the rights of others in publishing his own opinions.
					11. Whether the principal should be influenced by some angry parents when it is the principal that knows best what is going on in the school.
					12. Whether Fred was using the newspaper to stir up hatred and discontent.

From the list of questions above, select the four most important:     \_\_\_ Most important

\_\_\_ Second most important

\_\_\_ Third most important

\_\_\_ Fourth most important

Appendix C

Right Wing Authoritarianism Scale



\_\_\_ 5. It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds

1.....2.....3.....4.....5.....6.....7.....8

Strongly disagree

neutral

Strongly agree

\_\_\_ 6. Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.

1.....2.....3.....4.....5.....6.....7.....8

Strongly disagree

neutral

Strongly agree

\_\_\_ 7. The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.

1.....2.....3.....4.....5.....6.....7.....8

Strongly disagree

neutral

Strongly agree

\_\_\_ 8. There is absolutely nothing wrong with nudist camps.

1.....2.....3.....4.....5.....6.....7.....8

Strongly disagree

neutral

Strongly agree

\_\_\_ 9. Our country needs free thinkers who have the courage to defy traditional ways, even if this upsets many people.

1.....2.....3.....4.....5.....6.....7.....8

Strongly disagree

neutral

Strongly agree





\_\_\_ 15. Some of the best people in our country are those who are challenging our government, criticizing religion, and ignoring the “normal way things are supposed to be done.”

1.....2.....3.....4.....5.....6.....7.....8  
Strongly disagree neutral Strongly agree

\_\_\_ 16. God’s laws about abortion, pornography and marriage must be strictly followed before it is too late, and those who break them must be strongly punished.

1.....2.....3.....4.....5.....6.....7.....8  
Strongly disagree neutral Strongly agree

\_\_\_ 17. There are many radical, immoral people in our country today, who are trying to ruin it for their own godless purposes, whom the authorities should put out of action.

1.....2.....3.....4.....5.....6.....7.....8  
Strongly disagree neutral Strongly agree

\_\_\_ 18. A “woman’s place” should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.

1.....2.....3.....4.....5.....6.....7.....8  
Strongly disagree neutral Strongly agree

\_\_\_ 19. Our country will be great if we honor the ways of our forefathers, do what the authorities tell us to do, and get rid of the “rotten apples” who are ruining everything.

1.....2.....3.....4.....5.....6.....7.....8  
Strongly disagree neutral Strongly agree

|

\_\_\_ 20. There is no “ONE right way” to live life; everybody has to create their own way.

1.....2.....3.....4.....5.....6.....7.....8

Strongly disagree

neutral

Strongly agree

\_\_\_ 21. Homosexuals and feminists should be praised for being brave enough to defy “traditional” family values.

1.....2.....3.....4.....5.....6.....7.....8

Strongly disagree

neutral

Strongly agree

\_\_\_ 22. This country would work a lot better if certain groups of troublemakers would just shut up and accept their group’s traditional place in society.

1.....2.....3.....4.....5.....6.....7.....8

Strongly disagree

neutral

Strongly agree

Appendix D

Social Dominance Orientation-6



6. It's probably a good thing that certain groups are at the top and other groups are at the bottom. \_\_

1.....2.....3.....4.....5.....6.....7

Very negative

neither positive or negative

Very positive

7. Inferior groups should stay in their place. \_\_

1.....2.....3.....4.....5.....6.....7

Very negative

neither positive or negative

Very positive

8. Sometimes other groups must be kept in their place. \_\_

1.....2.....3.....4.....5.....6.....7

Very negative

neither positive or negative

Very positive

9. It would be good if groups could be equal. \_\_

1.....2.....3.....4.....5.....6.....7

Very negative

neither positive or negative

Very positive

10. Group equality should be our ideal. \_\_

1.....2.....3.....4.....5.....6.....7

Very negative

neither positive or negative

Very positive

11. All groups should be given an equal chance in life. \_\_

1.....2.....3.....4.....5.....6.....7

Very negative

neither positive or negative

Very positive

12. We should do what we can to equalize conditions for different groups. \_\_

1.....2.....3.....4.....5.....6.....7

Very negative

neither positive or negative

Very positive

13. Increased Social Equality\_\_  
 1.....2.....3.....4.....5.....6.....7  
 Very negative                                  neither positive or negative                                  Very positive

14. We would have fewer problems if we treated people more equally. \_\_  
 1.....2.....3.....4.....5.....6.....7  
 Very negative                                  neither positive or negative                                  Very positive

15. We should strive to make incomes as equal as possible. \_\_  
 1.....2.....3.....4.....5.....6.....7  
 Very negative                                  neither positive or negative                                  Very positive

16. No one group should dominate in society. \_\_  
 1.....2.....3.....4.....5.....6.....7  
 Very negative                                  neither positive or negative                                  Very positive

Appendix E  
Demographic Form



## Demographic form

**Student Information**

Age: \_\_

Gender: M F

**Class standing:** (please check the appropriate item)

KAM\_\_

Freshman\_\_

Sophomore\_\_

Junior\_\_

Senior\_\_

Graduate\_\_

**Race/ethnicity:** (please check the appropriate item)

Asian/Pacific Islander\_\_

Black/African American \_\_

Hispanic/Latino\_\_

Native American\_\_

White/Caucasian\_

Appendix F  
Debriefing Form

**Study title: The effects of authoritarianism on moral schema development and usage**

The purpose of this study was to expand upon the existing knowledge regarding how moral reasoning interacts with certain social opinions. This experiment used three short surveys to collect data on your opinions regarding social issues as well as examining your style of moral reasoning via a short test. A demographic form was also attached to allow us to further clarify findings. There are no right or wrong answers to any of these questions, and any responses you provide will be anonymous.

**If after participating in this student project you are feeling distressed from any questions on the surveys the following resource can offer you professional support and counseling. Also, feel free to ask any questions or express any concerns that you have to the experimenter. They will be happy to provide you with any resources you need if you have any concerns or complaints.**

**Kelly Center (free of charge to students)  
Picken Hall Room 117  
785.628.4401**

**If you have any questions about this student project or your rights as a participant in this student project, please contact:**

**Dr. Janett Naylor  
Chair, Ethics Committee  
[jmnaylor@fhsu.edu](mailto:jmnaylor@fhsu.edu)  
785.628.4405**

**Clinton Luth  
Student  
[cmluth@mail.fhsu.edu](mailto:cmluth@mail.fhsu.edu)  
308.390.1165**