

MEDIATING ROLE OF OPENNESS IN THE LINKS OF RIGHT-WING
AUTHORITARIANISM, SOCIAL DOMINANCE ORIENTATION, AND
TRADITIONAL GENDER ROLE ATTITUDES TO ANTI-LESBIAN AND GAY
ATTITUDES AND BEHAVIORS

By

MELINDA BETH GOODMAN

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by

Melinda Beth Goodman

This thesis is dedicated to the good people at Starbucks who let me work there for many hours and whose chai tea helped me through the process. In addition, this document is dedicated to my cat Calvin who demonstrated his love for me and the literature as noted by the countless hours spent sitting on my lap and the Journal of Counseling Psychology.

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Abstract of Thesis Presented to the Graduate School
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By

Melinda Beth Goodman

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The present study examined concomitantly the links of right-wing authoritarianism (RWA), social dominance orientation (SDO), and traditional gender role attitudes to anti-lesbian and gay (LG) attitudes. In addition, the present study examined openness to experience as a mediator that might explain, partially or fully, the links of the aforementioned correlates to anti-LG attitudes. Finally, this study examined the extent to which RWA, SDO, traditional gender role attitudes, and openness are related to anti-LG behaviors directly or indirectly through anti-LG attitudes. Results showed that RWA and traditional gender role attitudes were the strongest predictors of anti-LG attitudes and behaviors. The role of openness as a mediator of the relations of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes was not supported. Finally, anti-LG attitudes did indeed partially mediate the relations of RWA, traditional gender role

attitudes, and SDO to anti-LG behaviors. Future directions for research and implications for practice are discussed.

CHAPTER 1 INTRODUCTION

A broad range of variables (e.g., age, income, education, gender, and interpersonal contact) has been shown to correlate with anti-lesbian and gay (LG) attitudes (e.g., Herek & Capitano, 1995, Johnson, Brems, & Alford-Keating, 1997). Within this body of literature, some of the most consistent correlates of anti-LG attitudes have been personality-related variables. More specifically, right-wing authoritarianism (RWA), social dominance orientation (SDO), and traditional gender role attitudes have been linked strongly and consistently to anti-LG attitudes. Although studies that focus on examining the link of each of these variables and anti-LG attitudes (e.g., Altemeyer & Hunsberger, 1992; Basow & Johnson, 2000; Whitley & Egisdóttir, 2000) are informative, theoretical and empirical scholarship is needed to integrate findings across such studies and explain the shared links of personality-related variables to anti-LG attitudes. More specifically, a question that needs to be examined is what, if any, underlying construct or set of constructs explains the common links of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes. Conceptual definitions of each of the aforementioned constructs and prior literature on their links to anti-LG attitudes provide a basis for exploring this question. Therefore, a brief overview of the literature associated with each construct and its link to anti-LG attitudes is provided next.

Altemeyer (1981) developed the concept of right-wing authoritarianism (RWA), based on social learning theory, to address a number of limitations (e.g., lack of conceptual clarity and falsifiability and psychometric problems in operationalization) in

Adorno, Frenkel-Brunswik, Levinson, and Sanford's (1950) earlier psychodynamic conception of authoritarianism. Altemeyer (1981) defined RWA as comprised of three attitudinal clusters. The first component, authoritarian submission, is defined as a "high degree of submission to authorities who are perceived to be established and legitimate in the society in which one lives" (p. 148). The second component is authoritarian aggression and reflects "general aggression, directed at various persons, which is perceived to be sanctioned by established authorities" (p. 148). Aggressiveness in this context is the predisposition to do physical, psychological, economic, or social harm to others. Persons with high levels of RWA tend to be aggressive or support aggressiveness toward targets that they believe are socially stigmatized. For example, persons high in RWA might support police violence against suspects in order to obtain confessions. The final component of RWA is conventionalism defined as a "high degree of adherence to the social conventions which are perceived to be endorsed by society and its established authorities" (p. 148). Altemeyer (1981) described "established and legitimate authorities" to include individuals in society who are usually considered to be legal or moral authorities such as parents for younger persons, religious officials, heads of government, police officers, judges, and military officials.

Altemeyer's (1981, 1988) theoretical conceptualization of right-wing authoritarianism as characterized by high degrees of submission to authorities, aggressiveness toward out-groups, and adherence to conventions perceived to be endorsed by society and its authorities, suggests that people with high levels of RWA are likely to exhibit anti-LG attitudes. More specifically, LG persons (a) are explicitly condemned by some religious and political leaders, making LG persons an acceptable

target for prejudice and hostility, (b) represent a socially stigmatized out-group relative to heterosexual women and men, and (c) are perceived as advocates for political change and challenges to social conventions of traditional gender roles. Indeed, a number of studies have found significant positive links between RWA and anti-LG attitudes (e.g., Altemeyer, 1981, 1998, 2001; Basow & Johnson, 2000; Whitley & Lee, 2000) indicating that persons with high levels of RWA express more anti-LG attitudes than do persons with low levels of RWA.

In addition to RWA, social dominance orientation (SDO) also has been linked consistently with anti-LG attitudes. Pratto, Sidanius, Stallworth, and Malle (1994) defined SDO as the “extent to which one desires that one’s in-group dominate and be superior to out-groups” (p 724). SDO taps a general attitudinal orientation toward intergroup relations that reflects a preference for hierarchical rather than egalitarian relations. More specifically, the desire to maintain the superior position of their in-groups relative to out-groups motivates people high in SDO to accept hierarchy-legitimizing myths that denigrate members of out-groups and enforce the status quo of their in-groups’ power position. Thus, persons high in SDO tend to have anti-LG attitudes because LG persons have lower perceived social status than do heterosexuals (Whitley & Lee, 2000). The empirical literature supports the expected link between SDO and anti-LG attitudes. Across a number of studies, significant correlations have been found between SDO and anti-LG attitudes (e.g., Altemeyer, 1998; Whitley, 1999; Whitley & Lee 2000) such that higher SDO scores are related to higher levels of anti-LG attitudes.

Although RWA and SDO both include an element of prejudice toward out-groups, Altemeyer (1988) argued that the two constructs are distinct in that SDO “does not have

the same psychological roots that previous studies have unearthed in right-wing authoritarians” (p. 61). More specifically, a person high in RWA is very accepting of traditional values and institutional authorities and is likely to follow the instructions of those in positions of power and influence. By contrast, an individual high in SDO is not motivated by a sense of duty or morality (Heaven & Bucci, 2001). Thus, although RWA and SDO both can explain prejudicial beliefs and behaviors, such as anti-LG attitudes, they do so in a complementary but not redundant fashion, such that each accounts for unique variance in a variety of prejudice-related beliefs, behaviors, and traits (Altemeyer, 1998). Indeed, empirical evidence indicates that RWA and SDO are only minimally correlated with each other (Altemeyer, 1998; Pratto et al., 1994) and the relationship of SDO to prejudice is not accounted for by a joint relationship with RWA (Altemeyer, 1988; Whitley & Lee, 2000).

The final personality-related construct that has been linked consistently to anti-LG attitudes is traditional gender role attitudes. Gender role attitudes are “beliefs about the appropriate role activities for women and men” (McHugh & Frieze, 1997, p. 4).

Individuals who endorse traditional gender roles believe that women should follow traditional female-role norms and that men should follow traditional male-role norms. A commonly held stereotype about LG persons is that such persons violate traditional gender roles, with gay men acting more feminine and lesbian women acting more masculine than heterosexual men and women should, respectively (Kite & Deaux, 1987). In addition, LG persons often are perceived to deviate from the cultural expectations of the roles that men and women should perform in their lives, for example, by not getting married and having children (Kite, 1984; Whitley, 1987). Thus, heterosexual persons

who hold traditional gender role attitudes are likely to express anti-LG attitudes because LG persons are stereotyped as having cross-gender traits, roles, and physical characteristics. Indeed numerous studies measuring constructs related to traditional gender role attitudes (e.g., Attitudes Toward Women Scale, Sex Role Egalitarianism Scale) have found that persons who hold more traditional gender role attitudes express more anti-LG attitudes than do those with less traditional gender role attitudes (Basow & Johnson, 2000; Herek, 1988; Whitley & Egisdóttir, 2000).

Thus, conceptual definitions of RWA, SDO, and traditional gender role attitudes suggest that each of these variables is related to anti-LG attitudes and empirical evidence supports such links. In addition to their shared links to anti-LG attitudes, RWA, SDO, and traditional gender role attitudes each also has been linked conceptually and empirically to openness to experience, a dimension of personality described in the Five Factor Model. Openness, in turn, has been shown to be related to anti-LG attitudes. Thus, openness to experience might be a mediating variable that provides a more parsimonious explanation of and accounts for the links of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes.

Within the framework of the Five Factor Model, openness to experience is conceptualized to reflect active imagination, aesthetic sensitivity, receptiveness to inner feelings, preference for variety, intellectual curiosity, and independence of judgment (McCrae & Costa, 2003). Additionally, lack of openness to experience characteristically involves intolerance for ambiguity and lack of flexibility. A person who is high in openness is likely to value intellectual matters, is nonconforming, introspective, has a vivid imagination, and admits that what is right and wrong for one person may not be

applicable in other circumstances. On the other hand, a person scoring low in openness is likely to be rigid and uncomfortable with complexities, have a narrow range of emotions, favor conservative values, and judge others in conventional terms (McCrae & Costa, 2003). The characteristics associated with low levels of openness appear to overlap with the characteristics associated with high levels of RWA, SDO, and traditional gender role attitudes.

For example, persons high in RWA are expected to reject any thoughts or experiences that are not sanctioned by authority figures, demonstrating a lack of flexibility. Characteristically, people high in RWA are rigid, conforming, and have conservative political values (Altemeyer, 1981, 1988). Indeed, RWA has been shown to relate significantly and negatively to openness to experience with correlations ranging from $-.30$ to $-.57$ (Altemeyer, 1996; Butler, 2000; Heaven & Bucci, 2001; Peterson, Smirles, & Wentworth, 1997).

Similarly, a lack of openness to experience is apparent in SDO. Persons high in SDO accept hierarchy-legitimizing myths in order to promote the superiority of one group over another (Pratto et al., 1994). Instead of viewing other people as individuals, persons high in SDO concentrate on the targets' out-group membership. Those high on SDO characteristically have a lack of sympathy, empathy, and tolerance. The lack of ability to view the complexities in the world and the narrow range of emotions that characterize persons high in social dominance are consistent with theoretical definitions of lack of openness to experience. Indeed, SDO has been shown to correlate significantly and negatively ($r = -.26$ to $-.28$) with openness to experience (Heaven & Bucci, 2001; Pratto et al., 1994).

Finally, persons who adhere to traditional gender role attitudes expect others to fit into a relatively stable set of gender roles, traits, and physical attributes (e.g., Kite & Whitley, 1998). This acceptance of traditional roles demonstrates a lack of tolerance for ambiguity and variety within the gender spectrum. It is expected that persons who adhere to traditional gender role attitudes would also be low in openness to experience. Although the links between openness and adherence to traditional masculine and feminine gender role norms have not been examined directly, extant data indicate a negative link between constructs that are related to traditional gender role ideology and openness. For example, among men, openness to experience was found to be significantly and negatively related to masculine gender role conflict and masculine gender role stress with correlations of $-.38$ and $-.21$, respectively (Tokar, Fischer, Schaub, & Moradi, 2000). Gender role conflict is a “psychological state in which gender roles have negative consequences or impact on the person or others” (O’Neil, 1981, p. 203). Men’s gender role stress results from a failure to meet cultural standards of masculinity (Eisler & Blalock, 1991). Although men’s gender role conflict and stress are not equivalent to traditional gender role attitudes, there is significant theoretical overlap in that one must endorse traditional gender roles in order to experience gender role conflict or stress. Indeed, gender role conflict and stress are significantly correlated with traditional gender role attitudes (Thompson, 1991, as cited in Thompson, Pleck, & Ferrera, 1992). Thus, it is expected that traditional gender role attitudes will relate to low openness and the present study will examine directly this proposition.

Taken together, the theoretical definitions and empirical evidence reviewed suggest that lack of openness to experience might be a global construct that ties together the links

of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes. Furthermore, openness might be an underlying construct that explains, partially or fully, the links of the aforementioned correlates to anti-LG attitudes. In fact, in addition to openness to experience's links with RWA, SDO, and traditional gender attitudes, openness is also significantly related to anti-LG attitudes. When examining the Five Factor Model of personality, Cullen, Wright, and Alessandri (2002) found that openness accounted for 25% of the variance in anti-LG attitudes, and none of the other Five Factor Personality traits were unique predictors. Due to the correlations of openness to the predictor variables (i.e., RWA, SDO, traditional gender role attitudes) and anti-LG attitudes, it is possible that openness will mediate the links of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes. In other words, RWA, SDO, and traditional gender attitudes might be related to anti-LG attitudes through their shared link with openness. Thus, the first general aim of the present study is to examine openness to experience as a mediator of the links of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes.

Studying anti-LG attitudes alone, however, is not sufficient. An implicit reason for studying anti-LG attitudes is that the expression of these attitudes as anti-LG behaviors might have serious negative interpersonal and intrapersonal consequences for LG persons and society at large. In fact, the prevalence of anti-LG behaviors (e.g., name-calling, threats, assaults) is staggering. D'Augelli (1989) found that 50% of the gay and lesbian college students surveyed reported having overheard disparaging comments, 26% reported having experienced personal verbal insults, 26% reported having been threatened with physical violence and 23% reported having been victims of assault.

Furthermore, such negative experiences have been linked to mental health-related concerns (e.g., suicidal ideation, psychological distress) among LG persons (e.g., Diaz, Ayala, Bein, Henne, & Marin, 2001; DiPlacido, 1998; Mays & Chochran, 2001). Thus, there is a need to study anti-LG behaviors in addition to anti-LG attitudes.

Despite the considerable prevalence and potential negative consequences of anti-LG behaviors and numerous calls for research examining such behaviors (Herek, 2000; Kite & Whitley, 1998; Whitley, 2001), the majority of extant research has not attended to predictors or correlates of anti-LG behaviors and has focused mostly on identifying correlates of anti-LG attitudes. The limited research available shows that although hate crimes and anti-LG behaviors are inevitably influenced by complex situational factors (Franklin, 1998), anti-LG attitudes do indeed contribute to anti-LG behaviors. In three studies that assessed self-reports of both anti-LG attitudes and behaviors, anti-LG attitudes were a significant predictor of negative behaviors. Correlations between anti-LG attitudes and behaviors toward LG persons ranged between .25 and .40 (Franklin, 2000; Patel, Long, McCammon, & Wuensch, 1995; Whitley, 2001).

Research also demonstrates that some of the major correlates of anti-LG attitudes are also related to anti-LG behaviors. For example, Haddock, Zanna, and Esses (1993) found that for college students, RWA is related to support of increased budget cuts to an LG student organization. Furthermore, Franklin (2000) and Whitley (2001) found that endorsement of traditional gender role attitudes was related positively to anti-LG behaviors. However, there is no research examining the correlations of SDO and openness to experience to anti-LG behaviors. Thus, the second general aim of the present study is to add to the literature by examining the extent to which psychological factors

that have been shown to be related to anti-LG attitudes are also related to anti-LG behaviors. Also, it is not known if RWA, SDO, traditional gender roles, and openness to experience will relate directly to anti-LG behaviors, or if their relationship is mediated by anti-LG attitudes. Thus, the present study will examine whether anti-LG attitudes mediate the relationships of RWA, SDO, and traditional gender roles and openness to experience to anti-LG attitudes.

In light of the conceptual and empirical literature reviewed here, the aims of the present study are to address the following gaps:

1. Examine openness to experience as a mediator of the links of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes.
2. Examine anti-LG attitudes as a mediator of the links of RWA, SDO, traditional gender role attitudes, and openness to anti-LG behaviors.

CHAPTER 2

REVIEW OF LITERATURE

A broad range of variables (e.g., age, income, education, gender, and interpersonal contact) has been shown to correlate with anti-lesbian and gay (LG) attitudes (e.g., Herek & Capitano, 1995; Johnson, Brems, & Alford-Keating, 1997). Within this body of literature, some of the most consistent correlates of anti-LG attitudes have been personality-related variables. More specifically, right-wing authoritarianism (RWA), social dominance orientation (SDO), and traditional gender role attitudes have been linked most strongly and consistently to anti-LG attitudes. Although studies that focus on examining these relationships (e.g., Altemeyer & Hunsberger, 1992; Basow & Johnson, 2000; Whitley & Egisdóttir, 2000) are informative, theoretical and empirical scholarship is needed to integrate these findings and explain the shared links of personality-related variables to anti-LG attitudes. More specifically, a question that needs to be examined is what, if any, underlying construct or set of constructs explains the common links of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes.

In order to provide the groundwork for exploring this question, the present chapter will review the extant literature on RWA, SDO, and traditional gender role attitudes and present a fourth variable, openness to experience, that might provide a potentially integrative and parsimonious explanation of the links of the aforementioned constructs to anti-LG attitudes. The first three sections of the present chapter reflect critical reviews of the literature linking RWA, SDO, and traditional gender roles to anti-LG attitudes. In the fourth section, literature will be reviewed that points to openness to experience as an

underlying construct that might explain the links of the aforementioned variables to anti-LG attitudes. Next, literature on the links of anti-LG attitudes and their predictors to anti-LG behaviors will be described. Finally, a conceptual model and the hypotheses that are examined in the present study will be presented.

Right-Wing Authoritarianism

Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950) first defined the authoritarian personality as a way to explain the rise of Fascism in the 1930s. The authoritarian personality style was conceptualized to include nine traits: Conventionalism, Authoritarian Submission, Authoritarian Aggression, Anti-intraception, Superstition and Stereotypy, Power and Toughness, Destructiveness and Cynicism, Projectivity, and exaggerated concern with sexual goings-on (Adorno et al., 1950). Authoritarianism highlighted the role of psycho-dynamic influences on the individual that, it was believed, predisposed one to become prejudiced. More specifically, Adorno et al. (1950) theorize that threatening, forbidding, and status-conscious parents who used harsh and arbitrary punishment raised authoritarian children. According to this conceptualization, children repress hostility toward their parents and instead overglorify their parents and act submissively toward them. Consequently, these children's repressed aggression toward their parents becomes displaced onto out-groups.

Authoritarianism became a popular variable to study, and a considerable amount of research was conducted using the *F* scale, the questionnaire developed by Adorno et al. (1950) to assess this construct. However, numerous problems were identified with this theory of authoritarianism and the *F* scale. First, definitions of the traits of authoritarianism were thought to be unclear, lack distinction, and reflect some redundancy (Altemeyer, 1981). Furthermore, the theory was criticized for lacking

testability and falsifiability. For example, if authoritarians report that their parents were especially harsh, then this supports Adorno et al.'s (1950) theory. If authoritarians report that their parents were not harsh, however, it can be claimed that they are overglorifying their parents, still supporting the theory. Lastly, the psychometric properties of scores on the *F* scale have been questioned (Altemeyer, 1981). For example, there are no reverse scored items, making *F* scale scores susceptible to response set bias. Also many items were intended to tap several of the nine traits at once, adding empirical ambiguity to the distinctiveness of the nine traits.

To address some of the limitations of Adorno et al.'s (1950) model, Robert Altemeyer (1981, 1988, 1996) developed the construct of right-wing authoritarianism (RWA) based on social learning theory. Altemeyer (1981) defined RWA as comprised of three attitudinal clusters. The first component, authoritarian submission, is defined as a “high degree of submission to authorities who are perceived to be established and legitimate in the society in which one lives” (p. 148). The second component is authoritarian aggression and reflects a “general aggression, directed at various persons, which is perceived to be sanctioned by established authorities” (p. 148). Such aggression is manifested as the predisposition to inflict physical, psychological, economic, or social harm onto targets perceived as socially stigmatized. The final component of RWA is conventionalism defined as a “high degree of adherence to the social conventions which are perceived to be endorsed by society and its established authorities” (p. 148). Established and legitimate authorities could include parents, religious officials, heads of government, police officers, judges, and military officials, and other persons or institutions perceived as legal or moral authorities (Altemeyer, 1981).

In contrast to Adorno et al.'s (1950) model of authoritarianism, Altemeyer's (1981, 1988) theory of RWA relies on a social learning explanation of development. According to this conceptualization, attitudes are shaped by other people, through direct teaching and modeling, and through direct and vicarious experiences with the objects of these attitudes. Thus, a right-wing authoritarian personality can be shaped by the child's parents, religious leaders, peers, teachers, and through other models in the community. Additionally, watching television, reading books, and hearing the news can shape the person's attitudes.

Theoretical conceptualization of RWA suggests that persons with high levels of RWA are likely to exhibit anti-LG attitudes because LG persons (a) are explicitly condemned by some religious and political leaders, making LG persons an acceptable target for prejudice and hostility, (b) represent a socially stigmatized out-group relative to heterosexual women and men, and (c) are perceived as advocates for political change and challenges to social conventions of traditional gender roles. Indeed, Robert Altemeyer has conducted extensive research demonstrating a link between RWA and anti-LG attitudes.

Altemeyer has measured the relationship between RWA and anti-LG attitudes with thousands of participants using his Right-Wing Authoritarianism (RWA) scale and Attitudes toward Homosexuals (ATH) scale (1988). The ATH is a balanced 12-item, Likert-type scale with scores ranging from -4 to +4, and higher scores indicating more anti-LG attitudes. ATH scores have been demonstrated to be relatively unidimensional, with average intercorrelations among items at about .45, producing an alpha internal consistency reliability estimate of about .90 (Altemeyer, 1988). ATH scores assess

cognitive, affective, and behavioral components of anti-LG attitudes. Sample items include, “I find the thought of homosexual acts disgusting” and “I won’t associate with a known homosexual if I can help it.”

Every year since 1984, Altemeyer has used the RWA and ATH scales to assess attitudes of University of Manitoba Introductory Psychology students and their parents. Across these studies, Altemeyer has found a consistent significant relationship between RWA and anti-LG attitudes with correlations in the .50-.60 range (Altemeyer 1988, 1996, 2001). Based on this research, Altemeyer claimed that RWA “may explain hostility toward gays and lesbians better than any other personality variables” (1996, p. 26).

The research program of Robert Altemeyer has yielded insight into attitudes toward LG persons. However, there are particular limitations to these studies. For instance, Altemeyer sampled primarily Canadian introductory psychology students and their parents. Findings based on this population may not generalize to Canadian and North America populations as a whole. In fact, Altemeyer reported that Manitoba, Canada has recently elected an openly gay mayor (2001), suggesting that attitudes towards lesbian and gay persons in Manitoba might be more positive than other areas. Another limitation of Altemeyer’s (1981, 1988, 1996, 2001) studies is that he uses the ATH scale to assess anti-LG attitudes. This scale refers to “homosexuals” rather than to “lesbians” or “gay men,” leaving open the possibility that participants may consider their attitudes toward only gay men when responding to ATH items (e.g., Haddock, Zanna, and Esses, 1993). In addition, one question explicitly refers to “gay men” only. Therefore, it is difficult to generalize results based on this scale to attitudes toward lesbians.

Due to the lack of research on attitudes toward lesbians, Basow and Johnson (2000) specifically studied the attitudes of 71 undergraduate women toward lesbians. Using Herek's (1988) Attitudes Toward Lesbians scale, they found that RWA correlated strongly with negative attitudes at $r = .79, p < .001$. Furthermore, a multiple regression analysis revealed that RWA alone predicted 62% of the variance in attitudes toward lesbians. This study demonstrated that RWA is an important predictor of attitudes toward lesbian women.

Other studies also have found similarly strong relationships between RWA and anti-LG attitudes. Whitley and Lee (2000) conducted a meta-analysis that examined the relationships of authoritarianism, dogmatism, SDO, and political-economic conservatism to anti-LG attitudes. They analyzed the results of 36 studies that included a total of 16,218 research participants and provided 51 effect sizes. For authoritarianism, Whitley and Lee found a mean d of -1.21 and an equivalent r of $-.52, p < .001$. The d statistic represents the standardized difference in mean anti-LG attitude scores between participants scoring high and low on the predictor variable. These values for d and equivalent r are well above Cohen's (1988) criteria for large effect sizes (i.e., $d = 0.8; r = 0.5$)

Furthermore, Whitley and Lee (2000) found that authoritarianism had a stronger association with anti-LG attitudes when measured with the RWA scale, $d = -1.19, r = -.51, p < .001$, than with the F scale (based on Adorno et al.'s psychodynamic conceptualization of authoritarianism) $d = -0.96, r = -.43, p < .001$. The larger effect sizes found with the RWA scale could be due to the relatively stronger psychometric properties of this scale compared to that of the F scale. In addition, all of the studies using

Altemeyer's (1998) RWA scale used Canadian research participants, whereas the studies using Adorno et al.'s (1950) *F* scale used United States participants. Therefore, differences in mean effect sizes found for the two scales could also represent nationality differences. On the other hand, there was no significant difference in scores based on whether the ATH, the ATLG, or other measures of anti-LG attitudes was used. Overall, Whitley and Lee's meta-analysis demonstrates that RWA is indeed related to anti-LG attitudes.

Social Dominance Orientation

In addition to right-wing authoritarianism (RWA), social dominance orientation (SDO) has also been linked consistently with prejudice and specifically with anti-lesbian and gay (LG) attitudes. Pratto, Sidanius, Stallworth, and Malle (1994) defined SDO as the "extent to which one desires that one's in-group dominate and be superior to out-groups" (p 724). The desire to maintain the superior position of their in-groups motivates people high in SDO to denigrate members of out-groups, to oppose equality-enhancing social programs such as affirmative actions, and to discriminate against members of out-groups in order to enforce the status quo of the in-groups' power position. Thus, persons high in SDO tend to have anti-LG attitudes because LG persons have lower social status than do heterosexuals (Whitley & Lee, 2000) and because LG persons are perceived as advocates for social equality (Whitley, 1999).

Empirical research supports the proposed relationship between SDO and anti-LG attitudes. In addition to examining RWA, the meta-analysis described earlier by Whitley and Lee (2000) also examined the relationship between SDO and anti-LG attitudes. Based on 9 effect sizes, Whitley and Lee found that SDO was related to anti-LG attitudes with a mean $d = -.76$ and an equivalent $r = -.35$, $p < .001$, indicating effect sizes within

the medium to large range (Cohen, 1988). Effect sizes did not vary significantly whether SDO was assessed with Pratto et al.'s (1994) SDO scale or a measure developed by Altemeyer (1988). Results of Whitley and Lee's meta-analysis demonstrate that SDO, no matter which measure is used to assess it, is an important correlate of anti-LG attitudes.

Although RWA and SDO are both related to anti-LG attitudes, Altemeyer (1988) argued that the two constructs are distinct in that SDO "does not have the same psychological roots that previous studies have unearthed in right-wing authoritarians" (p. 61). RWA is conceptualized as an *intragroup* phenomenon, whereas SDO is conceptualized as an *intergroup* phenomenon (Altemeyer, 1998; Pratto et al., 1994). More specifically, RWA focuses on submission to in-group authority figures independent of whether they advocate intergroup dominance, whereas SDO focuses on dominance over out-groups independent of the views of the in-group authorities. As such, a person high in RWA is very accepting of traditional values and institutional authorities and is likely to follow the instructions of those in positions of power and influence. By contrast, an individual high in SDO is not motivated by a sense of duty to authorities or morality (Heaven & Bucci, 2001). Thus, although RWA and SDO frequently explain prejudicial beliefs and behaviors, such as anti-LG attitudes, they do so in a complementary but not redundant fashion, such that each accounts for unique variance in a variety of beliefs, behaviors, and traits (Altemeyer, 1998).

Indeed, empirical evidence indicates that RWA and SDO are only minimally correlated (Altemeyer, 1998; Pratto et al., 1994) and the relationship of SDO to prejudice is not accounted for by a joint relationship with RWA. For example, even after controlling for the effects of RWA, SDO still explained variance in ethnocentrism,

racism, and nationalism (Pratto et al. 1994). Furthermore, across several studies reviewed and conducted by Altemeyer (1998), RWA and SDO were only minimally correlated ($r = .22$), yet when entered into a regression equation with numerous other personality variables, together accounted for over 50% of the variance in a generalized prejudice index (comprised of prejudice against African Americans, women, and LG persons). Altemeyer (1998) stated that RWA and SDO each “explained different segments of the overall prejudice,” implying that both RWA and SDO accounted for unique variance in the equation, yet he did not describe the specific data that served as the basis for this statement.

Whitley and Lee (2000)’s findings, however, provided more detail and were consistent with Altemeyer’s (1998) conclusion that RWA and SDO each accounted for unique variance in anti-LG attitudes. More specifically, Whitley and Lee conducted a follow up study to the meta-analysis described above, in which they surveyed 316 Introductory Psychology students. The participants completed Herek’s (1988) Attitudes Toward Lesbians and Gay Men (ATLG) scale, Altemeyer’s (1998) RWA scale, Rokeach’s (1956) Dogmatism scale, Pratto et al.’s (1994) SDO scale, and Pratto et al.’s (1994) three-item scale for political-economic conservatism. These authors found that RWA and SDO were only slightly correlated with each other ($r = .28$). Of all the variables studied, RWA correlated most strongly with negative attitudes toward lesbians ($r = -.58$) and negative attitudes toward gay men ($r = -.54$). SDO was the second strongest correlate of negative attitudes toward lesbians ($r = -.39$) and negative attitudes toward gay men ($r = -.44$) (all $ps < .001$). Furthermore, with RWA and SDO controlled as covariates, political-economic conservatism did not significantly add any unique variance

to attitudes toward lesbians and gay men. Additionally, with RWA and SDO controlled as covariates, dogmatism added less than 2% unique variance to attitudes toward lesbians, $F(1, 312) = 8.29, p < .01$, and less than 1% of the variance in attitudes toward gay men, $F(1, 312) = 4.46, p < .05$. In another equation that included all four attitudinal variables as predictors, RWA and SDO each accounted for unique variance in attitudes toward lesbians ($\beta = -.42$ and $\beta = -.18$) and gay men ($\beta = -.43$ and $\beta = -.18$). Taken together, these results suggest that RWA and SDO are two primary correlates of anti-LG attitudes. Each variable was related to anti-LG attitudes with the other controlled and they jointly accounted for most of the relationships of dogmatism and conservatism to anti-LG attitudes.

Traditional Gender Role Attitudes

A third personality-related construct that has been demonstrated consistently to have a significant relationship with anti-lesbian and gay (LG) attitudes is traditional gender role attitudes. Gender role attitudes are “beliefs about the appropriate role activities for women and men” (McHugh & Frieze, 1997, p. 4). Those endorsing traditional gender roles have the attitude that women should abide by traditional female-role norms and that men should abide by traditional male-role norms. Heterosexual persons who endorse traditional gender roles hold anti-LG attitudes because LG persons are stereotypically perceived as having cross-gender traits, roles, and physical characteristics.

Empirical evidence suggests that a commonly held stereotype is that LG persons violate traditional gender roles, with gay men acting more feminine and lesbian women acting more masculine than heterosexual men and women should, respectively. Kite and Deaux (1987) examined gender stereotypes about LG persons with 206 participants from

introductory psychology courses. Participants rated lesbian women, gay men, heterosexual women, and heterosexual men on how likely each group was to possess masculine and feminine traits (e.g., self-confident, kind), role behaviors (e.g., financial provider, cooks the meals), physical characteristics (e.g., sturdy, graceful), and occupations (e.g., construction worker, telephone operator). Results were analyzed using multivariate analysis of variance and a significant interaction was found between sexual orientation of target and sex of target, multivariate $F(8, 182) = 20.60, p < .001$. This interaction demonstrated that participants accepted the implicit gender inversion theory for LG persons in that gay men were rated lower on masculine qualities, yet higher on feminine qualities than were heterosexual men, and that lesbian women were rated lower on feminine qualities, yet higher on masculine qualities than were heterosexual women. This was evident in all categories (i.e., traits, role behaviors, physical characteristics, occupations). These findings demonstrate that college students stereotypically describe LG persons in cross-gender ways.

In general, people who act in ways consistent with the opposite gender are not viewed positively (e.g., Laner & Laner, 1979, 1980). Therefore, heterosexual persons might hold anti-LG attitudes because LG persons are, as previously shown, stereotypically viewed as deviating from the cultural expectations of the roles that men and women should perform in their lives. These anti-LG attitudes should be particularly strong among people who hold traditional gender role attitudes because homosexuality poses a threat to their world view that places “masculine” and “feminine” at opposite ends of a bipolar dimension (Kite & Whitley, 1998) and stereotypical views of LG persons place them at inappropriate ends of the gender dichotomy.

Indeed, research using various indicators of traditional gender role attitudes has found significant correlations with anti-LG attitudes. Whitley (2001) conducted a meta-analysis to examine the relationship between traditional gender role attitudes and anti-LG attitudes. This meta-analysis included 42 studies with a total of 9629 research participants that yielded 50 effect sizes for the relationship between gender-role beliefs and attitudes toward LG persons. Whitley (2001) included seven types of measures for gender role attitudes: Attitudes Toward Women Scale (ATW; Spence & Helmreich, 1978), Attitudes Toward Feminism (FEM) scale (Smith, Ferree, & Miller, 1975), a measure of attitudes toward sexual equality (MacDonald, 1974), measures of old-fashioned sexism (i.e., belief in traditional gender stereotypes or approval of unequal treatment of men and women), measures of endorsement of traditional male role norms, and measures that assessed attitudes toward both male and female roles. The mean overall effect size indicated that people who endorsed traditional gender role attitudes held more anti-LG attitudes, $d = -1.11$, $r = -.48$, $Z = -102.03$, $p < .001$, $Q_W(49) = 1041.87$, $p < .001$, with effect size in the large range (Cohen, 1988).

Whitley (2001) also compared the magnitude of the anti-LG attitudes-gender role ideology link across different operationalizations of traditional gender role attitudes. These comparisons revealed that endorsement of traditional gender roles and gender hierarchies, rather than awareness of and sensitivity to gender discrimination or gender-related self-concept, are key correlates of anti-LG attitudes. More specifically, the mean effect size for studies that assessed endorsement of traditional gender hierarchies (i.e., old fashioned sexism) was similar to that of studies that assessed endorsement of male role norms, but was significantly greater than that of studies that assessed perceptions of

discrimination against women (i.e., modern sexism) $\chi^2(1) = 119.11, p = .001$. With regard to gender-related self-concept, the mean effect size for the relationship of femininity/expressiveness to anti-LG attitudes was not statistically significant. Although the mean effect size of the relationship between masculinity/instrumentality and anti-LG attitudes was significant, it was quite small (Cohen, 1988) and therefore of little practical significance, $d = .07, r = .03, Z = 3.83, p < .001, Q_w(19) = 179.62, p < .001$.

Overall, these results indicate that modern sexism and gender-role self-concept are not closely linked to anti-LG attitudes. On the other hand, traditional gender role attitudes defined to “represent people’s ideas of the proper roles for men and women in society and of behavioral norms for men and women” (Whitley, 2001, p. 692) and typically assessed with measures such as the Masculine Role Norms Scale (Thompson & Pleck, 1986) and the ATW (Spence & Helmreich, 1978) are closely linked with anti-LG attitudes. Indeed, Whitley’s (2001) results indicated that traditional gender role attitudes accounted for a substantial (23%) amount of variance in anti-LG attitudes. The magnitude of this relationship was similar for attitudes toward lesbians and attitudes toward gay men. Finally, the relatively high consistency of mean effect sizes across different measures of traditional gender role attitudes and anti-LG attitudes attests to the robustness of the relationship (Whitley, 2001).

Kite and Whitley (1998) noted that the relationship between traditional gender role attitudes and anti-LG attitudes could reflect a relationship between attitudes toward LG persons and a generalized conservative belief system. As such, it could be that the relationship between traditional gender role attitudes and anti-LG attitudes could be explained by variables such as RWA and SDO. Whitley and Egisdóttir (2000) examined

this possibility with 266 introductory psychology students. Each participant completed the ATLG (Herek, 1988), AWS (Spence, Helmreich & Stapp, 1973), RWA (Altemeyer, 1988) and SDO (Pratto et al., 1994) scales. In this study, gender role attitudes accounted for an additional 4% of the variance in attitudes toward lesbians, $F(1, 249) = 17.22, p < .001$, and an additional 8% of the variance in attitudes toward gay men, $F(1, 249) = 36.66, p < .001$, beyond variance accounted for by RWA and SDO. Therefore, gender role attitudes appear to account for variance in attitudes toward LG persons beyond that accounted for by RWA and SDO.

Overall, studies on the link of traditional gender role attitudes to anti-LG attitudes demonstrate that heterosexual persons stereotypically assume that lesbians and gay men violate traditional gender role norms. Thus, persons who endorse traditional gender role attitudes hold more anti-LG attitudes. This significant relationship has been demonstrated using various measures of traditional gender role attitudes. However, the key aspect of gender role-related variables that is related to anti-LG attitudes appears to be traditional gender role attitudes and not gender role self-concept or modern sexism. Finally, the relationship between traditional gender role attitudes and anti-LG attitudes is not accounted for fully by a joint relationship with either RWA or SDO. Taken together, these findings support the inclusion of traditional gender role attitudes in the present study.

Openness to Experience: An Underlying Construct

The literature reviewed thus far indicates that conceptual definitions of right-wing-authoritarianism (RWA), social dominance orientation (SDO), and traditional gender role attitudes link each of these variables to anti-lesbian and gay (LG) attitudes and empirical evidence supports such links. In addition to their links to anti-LG attitudes, RWA, SDO,

and traditional gender role attitudes, each have also been linked conceptually and empirically to openness to experience, a dimension of personality described in the Five Factor Model. Openness, in turn, has been shown to be related to anti-LG attitudes. Thus, openness to experience might be a mediating variable that provides a more parsimonious explanation and accounts for the links of RWA, SDO, and traditional gender roles to anti-LG attitudes.

Within the framework of the Five Factor Model, openness to experience is conceptualized to reflect active imagination, aesthetic sensitivity, receptiveness to inner feelings, preference for variety, intellectual curiosity, and independence of judgment (McCrae & Costa, 2003). A person who is high in openness values intellectual matters, is nonconforming, introspective, has a vivid imagination, and admits that what is right and wrong for one person may not be applicable in other circumstances. On the other hand, a person scoring low in openness is likely to be rigid, have intolerance for ambiguity, have a narrow range of emotions, favor conservative values, judge others in conventional terms, and is uncomfortable with complexities. These characteristics associated with low levels of openness overlap with the characteristics associated with high levels of RWA, SDO, and traditional gender role attitudes.

First, a lack of openness is evident in the traditional conception of authoritarianism and in the more modern definition of RWA. Adorno et al. (1950), who first defined authoritarianism, argued that persons high in this variable are closed-minded, mentally rigid, and disinterested in imaginative pursuits. These traits are also evident in Altemeyer's (1981) conceptualization of RWA. More specifically, Altemeyer conceived RWA as being comprised of conventionalism or a "high degree of adherence to the social

conventions which are perceived to be endorsed by society and its established authorities” (p. 148). Thus, persons high in RWA are likely to reject thoughts or experiences that are not sanctioned by proper authorities.

Indeed, RWA has consistently been shown to relate significantly and negatively to openness to experience, with correlations ranging from $-.30$ to $-.57$ (Altemeyer, 1996; Butler, 2000; Heaven & Bucci, 2001; Peterson, Smirles, & Wentworth, 1997). For example, Butler (2000) administered the full 240-item NEO Personality Inventory (PI; Costa & McCrae, 1992) and the RWA scale (Altemeyer, 1996) to 76 participants recruited from psychology courses. In this sample, RWA was significantly correlated with openness, $r = -.48$, $p < .001$, but not with any of the other personality dimensions (i.e., extroversion, neuroticism, agreeableness, and conscientiousness). Furthermore, RWA was significantly correlated with five of the six facets of openness. The exception was the fantasy facet, but even this relationship was in the predicted direction and fantasy did not correlate strongly with any of the other openness facets in this sample. Consistent with theoretical conceptions of RWA, RWA scores were most strongly correlated with openness to values, followed closely by feelings and actions. Butler (2001) claimed “given that the mean correlation of RWA and the openness facets ($r = -.30$), compares favorably to the magnitude of the mean intercorrelations among the facets themselves ($r = .22$), we may be justified in viewing authoritarianism as an additional facet of openness to experience” (p. 8). Furthermore, McCrae (1996) suggested that openness versus closedness “is an indispensable element” (p. 327) in explaining an authoritarian personality.

Similarly, a lack of openness to experience is apparent in SDO. Persons high in SDO accept hierarchy-legitimizing myths in order to promote the superiority of one group over another (Pratto et al., 1994). Instead of viewing other people as individuals, persons high in SDO concentrate on targets' out-group membership and characteristically have a lack of sympathy, empathy, and tolerance for members of out-groups. These characteristics, along with the lack of ability to view the complexities in the world and the narrow range of emotions evident in persons high in SDO, are consistent with a lack of openness to experience. Consistent with this theoretical expectation, research has shown that SDO is correlated significantly and negatively with openness. Heaven and Bucci (2001) used the International Personality Item Pool (IPIP; Goldberg, 1999) with a sample of psychology students and found a correlation of $r = -.26, p < .001$ between SDO and openness. Additionally Pratto et al. (1994) used John, Donahue, and Kentle's (1992) Big-Five Personality Inventory and, with a sample of college students, found a correlation of $r = .28, p < .01$ between SDO and openness.

Finally, there is a theoretical link between an adherence to traditional gender role attitudes and a lack of openness to experience. Persons who adhere to traditional gender role attitudes expect others to fit into a relatively stable set of gender roles, traits, and physical attributes (e.g., Kite & Whitley, 1998). This acceptance of traditional roles demonstrates a lack of tolerance for ambiguity and variety within the gender spectrum. Additionally, it represents traditional and conforming values. Therefore persons who adhere to traditional gender role attitudes are expected to have low levels of openness to experience. Although there is a theoretical connection between traditional gender role attitudes and openness, previous research has not examined this link directly.

Nevertheless, extant findings indicate a negative link between openness and constructs that are linked with traditional gender role attitudes. For example, Tokar, Fischer, Schaub & Moradi (2000) administered to a sample of male university students the Gender Role Conflict scale (O'Neil, Helms, Gable, David & Wrightsman, 1986), the Masculine Gender Role Stress scale (Eisler & Skidmore, 1987), and the 60 item NEO Personality Inventory (Costa & McCrae, 1985). These authors found that masculine gender role conflict and gender role stress both were significantly and negatively related to openness to experience with correlations of $-.38$ and $-.21$, respectively. Gender role conflict is a “psychological state in which gender roles have negative consequences or impact on the person or others” (O'Neil, 1981, p. 203). Men's gender role stress results from a failure to meet cultural standards of masculinity (Eisler & Blalock, 1991). Thus, although men's gender role conflict and stress are somewhat different from traditional gender role attitudes, there is significant theoretical overlap in that one must endorse traditional gender roles in order to experience gender role conflict or stress. Indeed, both gender role conflict and stress are correlated significantly with traditional gender role attitudes (Thompson, 1991, as cited in Thompson, Pleck, & Ferrera, 1992). Thus, it is expected that traditional gender role attitudes will relate to low openness and the present study will examine directly this proposition.

It follows from the theoretical conceptualization of RWA, SDO, and traditional gender role attitudes and from empirical evidence, that lack of openness to experience might be a global construct that underlies these various correlates of anti-LG attitudes. Furthermore, openness might be an underlying construct that explains partially or fully, the links of the aforementioned correlates to anti-LG attitudes. In fact, in addition to its

conceptual and empirical links to RWA, SDO, and traditional gender attitudes, openness is also significantly related to prejudicial attitudes in general and more specifically to anti-LG attitudes. For example, Ekehammar and Akrami (2003) examined the Five Factor Model and a generalized prejudiced factor with a sample of 156 Swedish, non-psychology university students. The generalized prejudice factor included anti-LG attitudes in addition to modern and classical racism, sexism, and attitudes toward intellectually disabled individuals. The participants took a Swedish translation of the NEO-PI (Costa & McCrae, 1985) and Scandinavian versions of instruments assessing the prejudice variables. In this study, openness was significantly related to scores on the generalized prejudice factor, $r = -0.45$, $p < .001$. In another study, Cullen, Wright, and Alessandri (2002) focused more specifically on the link between anti-LG attitudes and the Five Factor Model dimensions of personality with a sample of 123 university students. Participants completed the Neuroticism, Extroversion, and Openness scales of the NEO-PI (Costa & McCrae, 1985) and the ATLG (Herek, 1984). In a regression equation that included openness, neuroticism, extroversion, gender, and contact with LG persons, 25% of the total variance in anti-LG attitudes was accounted for, and openness was the only personality variable that accounted for significant unique variance.

Since openness is correlated with both the predictor variables and the outcome variable of anti-LG attitudes, it is hypothesized that openness will mediate the links of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes. In other words, it is predicted that RWA, SDO and traditional gender attitudes have indirect links to anti-LG attitudes through openness. According to Baron and Kenny (1986) for a variable to be considered a mediator, there must be a significant relationship (a) between the predictor

and the mediator, (b) between the mediator and the criterion, and (c) and the predictor and the criterion. The literature reviewed thus far fits with this definition and statistical requirements. More specifically, in the previous literature, openness to experience (mediator) has been shown to be correlated significantly with RWA, SDO, and traditional gender role attitudes (predictors) as well as with anti-LG attitudes (criterion). The present study will provide an empirical test of this mediational relationship.

Need to Study Anti-Lesbian and Gay Behaviors

Although much of extant literature has focused on the correlates of anti lesbian/gay attitudes, an implicit reason for studying anti-LG attitudes is that the expression of these attitudes as anti-LG behaviors might have serious negative interpersonal and intrapersonal consequences for LG persons and society at large. In fact, the prevalence of anti-LG behaviors (e.g., name-calling, threats, assaults) is staggering. D'Augelli (1989) found that 50% of the gay and lesbian college students surveyed reported having overheard disparaging comments, 26% reported having experienced personal verbal insults, 26% reported having been threatened with physical violence, and 23% reported having been victims of assault. Furthermore, such negative experiences have been linked to mental health related concerns (e.g., suicidal ideation, psychological distress) among lesbian and gay persons (e.g., Diaz et al, 2001; DiPlacido, 1998; Mays & Chochran, 2001). Thus there is a need to study anti-LG behaviors in addition to anti-LG attitudes.

Despite the considerable prevalence and potential negative consequences of anti-LG behaviors and numerous calls for research examining such behaviors (Kite & Whitley, 1998; Herek, 2000; Whitley, 2001), the majority of extant research has not attended to predictors or correlates of anti-LG behaviors and has focused mostly on identifying correlates of anti-LG attitudes. The limited research available shows that

although hate crimes and anti-LG behaviors are inevitably influenced by complex situational factors (Franklin, 1998), anti-LG attitudes do indeed contribute to anti-LG behaviors. A review of extant literature on the link between anti-LG attitudes and anti-LG behaviors will now be discussed.

Franklin (2000) conducted empirical research into prevalence rates and motivations for anti-LG harassment and violence with a noncriminal sample. Her sample included 489 students at six community colleges in five counties in Northern California. The sample was racially and economically diverse with 40% White, 30% Asian, 14% Latino, and 12% African American, and 59% reporting that their father's highest educational degree was a high school degree. Approximately 93% of the participants identified as heterosexual. The participants completed an Antigay Behaviors Inventory developed for this study. This 89-item inventory assessed (a) frequencies of various types of anti-LG behaviors, (b) descriptions of specific incidents, (c) the stated motivations for such behaviors, and (d) motivations reported by nonassailants for not engaging in anti-LG assaults. In addition, participants completed the ATLG (Herek, 1988), a measure of social drinking, and the Attitude Function Inventory (Herek, 1986), which measures four distinct social and psychological functions served by attitudes toward LG persons.

Results of this study indicated that large percentages of the participants admitted engaging in anti-LG behaviors, having friends who had engaged in such behaviors, and witnessing anti-LG incidents. In fact, 10% ($n = 49$) of the sample reported physically assaulting or threatening people whom they believed were lesbian or gay and 32% ($n = 158$) reported calling LG persons by insulting names (but not physically assaulting them).

Additionally, of the 321 respondents who denied any verbal or physical harassment, 23% ($n = 83$) reported witnessing such incidents.

As part of the Antigay Behaviors Inventory, individuals who admitted to engaging in anti-LG behavior were asked to rate 19 motivations on a 4-point Likert scale. The motivations included such items as “I did it to have fun” and “I did it because homosexuals disgust me.” Franklin (2000) examined the structure of these motivations using exploratory factor analytic procedures. She identified four factors labeled peer dynamics, antigay ideology, thrill seeking, and self-defense, which accounted for 64% of the variance in the data. Although peer dynamics (35%) accounted for the greatest percentage of variance, antigay ideology accounted for the second highest amount of variance at 15%. This factor reflected anti-LG attitudes such as disgust, hatred, religious and moral values, and the belief that LG persons spread AIDS. The emergence of this factor demonstrates that anti-LG attitudes were a motivation for anti-LG behaviors.

Furthermore, in this sample, a significant relationship between anti-LG attitudes and anti-LG behaviors was found. The mean attitude score for participants who reported anti-LG behaviors ($M = 25.3$, $SD = 6.92$) was significantly greater than that for nonassailants ($M = 21.5$, $SD = 7.24$), $t(484) = .25$, $p < .001$. In addition, Franklin separated the sample into those who had committed anti-LG behaviors and those who had not. A point-biserial correlation revealed a positive relation between committing anti-LG behaviors and anti-LG attitudes as measured by the ATLG, $r = .25$, $p < .001$.

Other studies have provided further support for the link between anti-LG attitudes and behaviors. For example, Patel, Long, McCammon, and Wuensch (1995) found a relationship between anti-LG attitudes and behaviors with 102 male college students.

Approximately half of the participants were enlisted marines enrolled in college classes on two military bases, whereas the rest were civilians enrolled in classes at a university. Participants completed a modified version of the Index of Attitudes Toward Homophobia (IAH; Hudson & Ricketts, 1980). This scale was developed to measure fear, disgust, anger, discomfort, and aversion toward LG people. Patel et al. (1995) created the Self-Report of Behavior Scale (SBS) for this study to measure past negative behavior toward gay men in a variety of situations. Similar to Franklin's (2000) findings, anti-LG behaviors were not uncommon. In this sample of men, 5% reported getting into a "physical fight with someone who I thought was making moves on me," 34% verbally threatened someone who had "checked me out," and 42% moved away from someone who was believed to be gay. Anti-LG attitudes were significantly correlated with anti-LG behaviors, $r = .40, p < .01$. A multiple regression analysis was conducted predicting anti-LG behaviors with anti-LG attitudes and personality variables (social adjustment, emotional stability, defensiveness) measured with the Minnesota Multiphasic Personality Inventory (MMPI). In this equation, anti-LG attitudes accounted for significant unique variance in anti-LG behaviors ($\beta = .38, p < .001$).

A limitation of the Patel et al. (1995) study is that all of the participants were male and that attitudes and behaviors were assessed toward only gay men. Whitley (2001) addressed this limitation by assessing attitudes and behaviors toward lesbians and gay men with a sample of 227 female and 207 male introductory psychology students. Anti-LG attitudes were assessed using a composite score of an affective measure and the Beliefs About Lesbians and Beliefs About Gay Men scales (LaMar & Kite, 1998). Whitley (2001) assessed anti-LG behaviors using a revised version of Patel et al.'s (1995)

Self Report of Behavior Scale (SRBS-R). The scale was revised to include questions about lesbians in addition to questions about gay men. In this study, anti-LG attitudes and anti-LG behaviors were significantly and moderately correlated $r = .39$.

In addition to research on the self-report of anti-LG behaviors, experimental research has demonstrated that anti-LG attitudes are related to actual anti-LG behaviors, measured in a variety of ways. Bernat, Calhoun, Adams, and Zeichner (2001) found that in a sample of college men, those who held more anti-LG attitudes as measured by the Homophobia Scale (HS) were more aggressive toward an LG target. In this experiment, physical aggression was measured by the number of shocks given to a fictitious opponent during a competitive reaction time task. Additionally, Kite (1992) found that college men who held more anti-LG attitudes as measured by the Homosexuality Attitude Scale (HAS) were less likely to choose to meet a partner perceived to be lesbian or gay. In another study, Kite and Deaux (1986) found that when male college student participants had an interpersonal interaction with an LG target, those with anti-LG attitudes formed more negative impressions and recalled less information about the target than did participants who did not hold negative attitudes. A limitation of the previously described studies is that they only assessed anti-LG behaviors for male participants. A study that addressed this limitation examined proposed budget cuts for student organizations. Haddock and Zanna (1998) found that male and female students with anti-LG attitudes proposed greater cuts to an LG student organization (mean percentage funding reduction = 42%) than did participants with relatively neutral (25%) or favorable attitudes (27%). Additionally, Swim, Ferguson, and Hyers (1999) found that female college students engaged in greater social distancing (by altering their stated opinions to disagree with the

target) from a lesbian confederate than from a heterosexual woman confederate. Furthermore the participants with greater anti-LG attitudes, as measured by the HAS, socially distanced themselves in more ways (i.e., by altering their opinion to agree with the majority as opposed to making independent responses which differed from all participants) than those participants with less anti-LG attitudes. Overall, these experiments demonstrate that for both men and women anti-LG attitudes are positively related to anti-LG behaviors.

Just as there is evidence linking anti-LG attitudes to anti-LG behaviors, there is also some support for the notion that the predictors of anti-LG attitudes (i.e., right-wing authoritarianism (RWA), social dominance orientation (SDO), and traditional gender role attitudes are related to anti-LG behaviors. Support for the link between RWA and anti-LG behaviors can be inferred from Schope and Ellison's (2000) study on religious fundamentalism. These authors found, in a sample of 129 college student participants, that those who self identified as having "very traditional or fundamentalist" religious beliefs were more likely than their less religiously fundamentalist counterparts to have engaged in anti-LG behaviors. More specifically, one third of the religious fundamentalist participants reported that they had threatened a lesbian or gay person within the last year, compared to only 4% of participants who identified their religion as "somewhat traditional or conservative" or liberal. While the religious fundamentalists comprised only 12% of the sample, they accounted for 50% of those who had threatened gay persons. Although RWA was not directly examined in this study, RWA has been shown (a) to be related strongly ($r = .68$) to religious fundamentalism (Altemeyer & Hunsberger, 1992) and (b) to account for the link of religious fundamentalism to anti-LG

(Hunsberger, 1995). Therefore, evidence linking religious fundamentalism to anti-LG behaviors suggests that RWA is likely to be related to anti-LG behaviors as well.

Furthermore, direct support for the link between RWA and anti-LG behaviors is provided by an experiment by Haddock, Zanna, and Esses (1993). In this study, 63 college student participants completed the RWA scale. Two weeks later these participants returned and were told that the undergraduate psychology society was soliciting views of psychology students for the student government about budget cuts for student groups. A median split was conducted for RWA scores and an ANOVA revealed that those with high RWA scores proposed significantly greater cuts (37%) to an LG student organization than those with low RWA scores (25%), $F(1, 53) = 6.05, p < .05$. This study demonstrates that RWA is indeed related to anti-LG behaviors.

Unlike research on the link of RWA to anti-LG behaviors, no empirical research to date has examined the relationship between SDO and anti-LG behaviors. However, SDO has a strong relationship with anti-LG attitudes. Furthermore, SDO is based on a theory of group conflict, which postulates that people will engage in unofficial terror, which is “violence or threat of violence perpetrated by private individuals from dominant groups against member of subordinate groups” (Sidanius & Pratto, 1999, p. 42). Thus it is expected that persons high in SDO will report more anti-LG behaviors. This study will be the first to empirically examine this relationship.

Lastly, extant data suggest that traditional gender role attitudes are related to anti-LG behaviors. Franklin’s (2000) study provided some support for the relationship between traditional gender role attitudes and anti-LG behaviors. Her participants completed the Male Role Attitudes Scale (MRAS; Pleck, Sonenstein, & Ku, 1993), which

assesses participants' perceptions about the importance of men fulfilling masculinity standards. Franklin found that male assailants scored significantly higher on masculinity ideology than did their nonassailant counterparts, $t(202) = 3.24, p = .001$. Also, for men, there was a significant correlation between masculine ideology and anti-LG behaviors, $r = .21, p < .01$. On the other hand, there was not a significant difference between female assailants and nonassailants on masculine ideology, and for women, the relationship between masculine ideology and anti-LG behaviors was non-significant.

MRAS scores only had adequate reliability with a coefficient alpha of .68 for the entire sample, male and female. This could be one reason why a significant relationship between masculine ideology and anti-LG behaviors was not found among the female participants. In fact, when Whitley (2001) examined traditional gender role attitudes about women and men (using AWS and MRNS scores, which had better psychometric properties than did MRAS scores in Franklin's sample), he found that scores on the AWS ($r = .49, p < .001$) and MRNS ($r = .45, p < .001$) were both correlated with anti-LG behaviors for women and men participants. In summary, traditional masculine ideology, a component of gender roles attitudes was shown to be related to anti-LG behaviors for men. Furthermore, gender role attitudes assessed more broadly were also related significantly to anti-LG behaviors for both women and men.

Purpose of Study

Previous research has demonstrated that right-wing authoritarianism (RWA), social dominance orientation (SDO), and traditional gender role attitudes are important predictors of anti-LG attitudes. Each of these variables is also related conceptually and empirically to openness to experience. Openness in turn is related to anti-LG attitudes. Therefore, openness to experience may serve as a mediator of the relationships of RWA,

SDO, and traditional gender role attitudes to anti-LG attitudes. Furthermore, research has also shown that anti-LG attitudes, RWA, and traditional gender roles are predictors of anti-LG behaviors. It is expected that SDO and openness to experience will also be related to anti-LG behaviors. However, it is not known if RWA, SDO, traditional gender roles, and openness to experience will relate directly to anti-LG behaviors, or if their relationship is mediated by anti-LG attitudes. Thus, the present study will examine if anti-LG attitudes mediate the relationships of RWA, SDO, traditional gender role attitudes, and openness to anti-LG behaviors. The model tested in the current study is presented in Figure 1 and examines the following hypotheses:

1. RWA, SDO, and traditional gender role attitudes will be significantly and positively related to anti-LG attitudes and behaviors and openness to experience will be significantly and negatively related to anti-LG attitudes and behaviors. Support for these links is a prerequisite for examining corresponding links in Hypothesis 2 and 3.
2. Openness to experience will either partially or fully mediate the relationships of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes.
3. Finally, anti-LG attitudes will either partially or fully mediate the relationships of RWA, SDO, traditional gender role attitudes, and openness to experience to anti-LG behaviors.

CHAPTER 3 METHODS

Participants

A total of 238 undergraduate students were recruited at a large southeastern university from the Psychology 100 participant pool and from two other undergraduate psychology courses where extra credit was granted. Given the present study's focus on heterosexual persons' attitudes toward lesbian and gay persons, two participants who identified as bisexual were not included in analyses, because it is expected that such persons' attitudes and behaviors toward LG individuals could stem from different constructs than those focused on in the present study. In addition, 4 participants were not included in analyses because they did not complete significant portions of the survey packet, and 1 participant was excluded because she or he did not indicate gender. Therefore analyses were conducted using data from 231 participants; 97 men and 134 women.

Participants ranged in age from 17 to 27 years ($M = 19.48$; $Mdn = 19$; $SD = 1.51$). Eighty-nine percent of the sample identified as exclusively heterosexual and 11% as mostly heterosexual. With regard to race/ethnicity, 58% of the sample identified as White, 16% Latina/Hispanic, 11% African American/Black, 6% Asian American/Pacific Islander, 0.4% Native American, and 10% multiracial or other. Overall, 50% of the participants were in their first year of college, 23% in their second year, 17% in their third year, and 10% in their fourth year. Fifty-two percent of the participants reported that they were single, 37% were in a dating relationship, and 11% were married or in a

committed relationship. In terms of social class, 44% of the sample identified as middle class, 34% upper middle class, 15% working class, 4% lower class, and 3% upper class. With respect to religious identification, 32% identified as Catholic, 23% Christian, 11% Baptist, 8% Methodist, 5% Jewish, 4% Presbyterian, 1% Muslim, .5% Buddhist, 3% Agnostic, and 3% Atheist or no religious orientation. Furthermore, 31% of the sample reported that they never attend religious services, 29% attend less than once a month, 9% once a month, 9% twice a month, 14% once a week, and 9% attend services more than once a week.

Procedures

Participants completed a survey packet that included the instruments described below as well as a demographic questionnaire. Before beginning the survey, participants received written informed consent, and after completing the survey, they received written debriefing. The order of the instruments in the survey packet was counterbalanced to control for order effects.

Instruments

Criterion Variables

Attitudes toward LG persons were assessed with the *Attitudes Toward Lesbians and Gay Men (ATLG)* scale. Herek's (1988) scale is one of the more commonly used measures of anti-LG attitudes and assesses the affective component of anti-LG attitudes referred to as "condemnation-tolerance." The ATLG is a 5-point Likert scale ranging from 1 = disagree strongly to 5 = agree strongly. The scale has 20 items; 10 items assess attitudes toward lesbians (ATL), and 10 items assess attitudes toward gay men (ATG). Sample items include "Homosexual behavior between two men is just plain wrong" and "The growing number of lesbians indicate a decline in American morals." With this

scale, separate scores for attitudes toward lesbian persons and attitudes toward gay persons can be computed by averaging or adding ATL or ATG items, respectively. However, given that the focus of the present study is on anti-LG attitudes in general, and that ATL and ATG scores are highly correlated ($r = .88$), overall ATLG scores were used in the present study. Appropriate items were reverse scored and item ratings were averaged to yield an overall ATLG score with higher scores indicating more negative attitudes. Construct validity for ATLG scores has been demonstrated through consistently high correlations with variables associated conceptually with anti-LG attitudes such as dogmatism, conservative political ideology, and lack of personal contact with LG persons (Herek, 1988; Whitley & Lee, 2000). ATLG scores have yielded satisfactory levels of internal consistency. More specifically, for scores on the combined scale, attitudes toward lesbians subscale, and attitudes toward gay men subscale, Cronbach's alphas were .95, .90, and .90 respectively with Herek's (1988) sample of 405 college students. In the sample for the present study, the Cronbach's alpha for ATL scores was .90 for men, .92 for women, and .91 for the combined sample. ATG scores yielded a Cronbach's alpha of .93 for men, women, and combined samples. Finally, overall ATLG scores (used in the analyses) yielded a Cronbach's alpha of .95 for men, .96 for women, and a .96 for the combined sample.

Behaviors toward LG persons were assessed with the *Self-Report of Behavior Scale-Revised (SRBS-R)*. The SRBS-R is a 30 item, 5-point Likert-type scale with item ratings ranging from 1 = never to 5 = always. Item ratings were averaged to yield an overall scale score and higher scores indicate more negative behaviors. The scale was originally created by Patel, Long, McCammon, and Wuensch (1995) and then revised by

Roderick, McCammon, Long, and Allred (1998). It was designed to measure the extent to which respondents report having engaged in anti-LG behaviors in the past. A factor analysis demonstrated that the SRBS-R consisted of two factors that reflected *passive avoidance*, or moving-away-from behaviors and *active aggression*, or moving-against behaviors. Although the original version of the SRBS-R refers to “a gay person” as the target of the behaviors, the current study asked participants to report their behaviors separately for lesbians and gay men as used by Whitley (2001). Sample items include: “I have spread negative talk about someone because she was a lesbian,” and “I have participated in playing jokes on someone because I suspected he was gay.” In addition, validity is demonstrated by the relationship between SRBS-R scores and negative affective responses to gay persons as measured by the Index of Attitudes Toward Homosexuals scale (IAH; Roderick et al., 1998). Furthermore, SRBS-R scores are related to Scale 9 of the Minnesota Multiphasic Personality Inventory (MMPI), which measures overactivity, emotional lability, hostility, aggressive outbursts, and thrill seeking (Patel et al., 1995). In the current sample, for both men and women, SRBS-R scores were not significantly related to scores on the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1994). SRBS-R scores have good internal consistency, with Cronbach’s alphas of .88 for the lesbian scale and .93 for the gay male scale (Whitley, 2001). Whitley reported that anti-lesbian behaviors and anti-gay behaviors were strongly correlated ($r = .41$) and loaded strongly on a single factor in a factor analysis of attitudinal and behavior measures. Thus, Whitley (2001) argued that the two subscales should be combined into a single scale score labeled anti-LG behavior, as was done in the present study. The

obtained alpha internal consistency reliability estimate for SRBS-R scores with the current sample was .93 for men, .89 for women, and .91 for the combined sample.

Predictor Variables

Right-wing authoritarianism was measured with the *Right-Wing Authoritarianism (RWA) scale*. Developed by Altemeyer (1981, 1988), this scale assesses authoritarian submission, authoritarian aggression, and conventionalism. It is a 30-item, 9-point Likert-type scale, with item ratings ranging from -4 = very strongly disagree to 4 = very strongly agree, as recommended by Altemeyer (1998). Item ratings were transposed to a 1-9 scale and then averaged to yield an overall score, with higher scores indicating higher levels of RWA. Sample items include: “Obedience and respect for authority are the most important virtues children should learn,” and “What our country really needs is a strong, determined leader who will crush evil and take us back to our true path.” One item assesses attitudes toward LG persons. Consistent with prior research (Whitley & Egisdottir, 2000; Whitley & Lee, 2000), this item was not scored in the present study to avoid an inflated correlation with the ATLG due to item overlap. With regard to validity, Altemeyer (1981) demonstrated that RWA scores were correlated positively with scores on other measures of authoritarian personality including the F scale (Adorno et al., 1950), the Dogmatism scale (Rokeach, 1960), the Conservatism scale (Wilson & Paterson, 1968), the Balanced F scale (Kohn, 1972), and the Authoritarianism Rebellion scale. Additionally, RWA scores were significantly correlated with scores on theoretically related variables such as orientation to established authority and the law, acceptance of the law as the basis of morality, and punitiveness toward sanctioned targets (Altemeyer, 1981, 1988, 1996). In terms of reliability, RWA scores have yielded

Cronbach's alphas ranging from .81 to .95 (Hill & Wood, 1999). In the current sample, the obtained alphas were .95 for the men, women, and combined samples.

Social dominance orientation was assessed with the *Social Dominance Orientation (SDO) scale*. Pratto et al. (1994) developed this scale to measure respondents' preference for inequality among social groups. The SDO is a 14 item, 7-point Likert-type scale and participants rate their responses on a range from 1 = very negative to 7 = very positive. A scale score was computed by averaging item ratings and higher scores indicate greater levels of SDO. Sample items include: "It's OK if some groups have more of a chance in life than others," and "We would have fewer problems if we treated people more equally." With regard to validity, SDO scores have been shown to correlate positively with cultural elitism, ethnic prejudice, sexism, political-economic conservatism, and a desire to end affirmative action, thus demonstrating a high degree of construct validity (Pratto et al., 1994). Additionally, SDO scores have yielded high reliability estimates with an average Cronbach's alpha of .90 across multiple samples (Pratto et al., 1994). In the current sample, alpha was .87 for men, .87 for women, and .88 for the combined sample.

Traditional gender role attitudes was measured with two scales, the *Anti-Femininity* subscale of the *Male Role Norms Scale (MRNS)* and the *Anti-Masculinity* subscale of the *Female Role Norms Scale (FRNS)*. These scales assess the degree to which participants endorse traditional gender roles, that women should abide by traditional female-role norms and that men should abide by traditional male-role norms. Thompson and Pleck (1986) developed the Anti-Femininity subscale to assess the degree to which participants endorsed the traditional male role norm that men should avoid

anything feminine. The scale consists of 7 items and uses a 7-point Likert-type scale, with item ratings ranging from 1 = very strongly disagree to 7 = very strongly agree. A scale score was computed by averaging item ratings and higher scores indicate more traditional masculine ideology. Sample items include: “It bothers me when a man does anything that I consider ‘feminine’,” and “I might find it a little silly or embarrassing if a male friend of mine cried over a sad love scene in a movie.” Although this scale was originally normed on men, it has since been used with women (e.g., Kurpius & Lucart, 2000; Whitley, 2001). With samples of men, the validity of MRNS scores is supported by their relationship to holding an adversarial view of sexual relationships, lower levels of self-disclosure, and a greater number of reported sexual encounters (Sinn, 1997). With a sample that included women and men, MRNS scores were related positively to AWS scores and endorsement of traditional gender roles for oneself (Whitley, 2001).

Furthermore, MRNS scores were minimally correlated with the masculinity and femininity scales of the Bem Sex Role Inventory (Bem, 1974), demonstrating that the MRNS assesses a construct that is unique from trait based masculinity and femininity (Sinn, 1997). In addition, MRNS scores have good internal consistency with a Cronbach’s alpha of .88 for a male sample (Sinn, 1997). Of the two studies that used the MRNS with women, one did not report reliability information (Kurpius & Lucart, 2000). The other reported an alpha of .87 for a combined sample of men and women and for the total MRNS score including the Toughness and Status Seeking subscales. With the current sample, alpha for MRNS scores was .80 for men, .77 for women, and .82 for the combined sample.

The Anti-Masculinity scale assesses the degree to which respondents believe that women should abide by traditional female role norms by avoiding anything masculine (Lefkowitz, Shearer, Gillen, & Espinosa-Hernandez, 2003). The scale consists of 7 items and uses a 7-point Likert-type scale with item ratings ranging from 1 = strongly disagree to 7 = strongly agree. An overall score was computed by averaging the item ratings and higher scores indicate more traditional gender role attitudes. Sample items include: “A woman whose hobbies are fishing, fixing cars, and watching sports probably wouldn’t appeal to me,” and “Unless she was really desperate, I would probably advise a woman to keep looking rather than accept a job as a construction worker.” In this sample, scores on the Anti-Masculinity scale were significantly correlated with scores on the Anti-Femininity scale ($r = .55$ for women; $r = .71$ for men), and in other samples to beliefs about males’ and females’ roles in the family such as marital and childrearing roles, and endorsement of a sexual double standard (Lefkowitz et al., 2003). Anti-Masculinity scores yielded Cronbach’s alpha of .79 with a sample of males and females (Lefkowitz et al., 2003). In the current sample, FRNS scores yielded an alpha of .66 for men, .78 for women, and .75 for the combined sample.

Since there is theoretical evidence that an overall endorsement of traditional gender role attitudes for the roles of women and men is related to anti-LG attitudes and behaviors, in this study an overall composite score of traditional gender role attitudes was created by computing the average of Anti-Femininity and Anti-Masculinity item ratings. Evidence of reliability for the composite traditional gender role attitudes scores was obtained by examining item-total correlations and the alpha internal consistency reliability estimate for the sample. With the current sample, the composite scale scores

yielded a Cronbach's alpha of .82 for men, .86 for women, and .87 for the combined sample. The range of corrected item-total correlation was .05-.61 for men ($M = .45$), .33-.70 for women ($M = .48$), and .29-.64 for the combined sample ($M = .53$). The item with the lowest corrected item-total correlation of .05 for men was "I might find it a little silly or embarrassing if a female friend of mine shouted at the television during a football game." With this item removed, the range of corrected item-total correlations would have been .21-.61, but overall alpha would not have improved substantially (alpha = .84 if the item is deleted). Furthermore, this item had a corrected item-total correlation of .41 for women and .29 for the combined sample. Therefore, this item was retained in computing overall traditional gender role attitudes scores.

Based on theoretical conceptualizations and past research, positive correlations between traditional gender role attitudes and RWA and SDO as well as non-significant or small correlations with social desirability would support the construct validity of scores on the composite measure. As such, validity of composite traditional gender role attitudes scores was supported by significant positive correlations with RWA ($r = .39$ for men and .44 for women) and SDO ($r = .29$ for men and .40 for women) scores (convergent validity) and non-significant correlations with the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1994) for men and the combined sample and a negative correlation for women ($r = -.19$).

Openness to experience was measured with the *International Personality Item Pool (IPIP)* openness scale. The IPIP was designed by Goldberg (1999) and is available through the website: <http://ipip.ori.org>. Like the NEO-PI-R (Costa & McCrae, 1992), the IPIP scales assess the personality dimensions of the Five Factor Model (International

Personality Item Pool, 2001). The 20-item openness to experience subscale was used in the present study. Respondents rated how accurately each item described them on a five-point scale from 1=very inaccurate to 5=very accurate. Sample items include: “Have difficulty understanding abstract ideas” and “Enjoy hearing new ideas.” IPIP Openness scores correlate highly ($r = .83$) with the corresponding Openness scores on the NEO-PI-R (International Personality Item Pool, 2001). In addition, subscale scores of the IPIP’s openness scale correlate with corresponding subscale scores of the Sixteen Personality Factors Questionnaire (16PF; Conn & Rieke, 1994); more specifically, Intellect scores correlate to Reasoning at $r = .51$, Imagination scores correlate with Abstractedness at $r = .65$, and Emotionality scores correlate with Tension at $r = .59$ (International Personality Item Pool, 2001). Openness scores yielded a Cronbach’s alpha of .89 in previous research (International Personality Item Pool, 2001) and with the current sample, alphas were .87 for men, .88 for women, and .88 for the combined sample.

CHAPTER 4 RESULTS

Preliminary analyses were conducted to explore potential gender differences, examine descriptive statistics, and test potential order effects. Tests of hypotheses were conducted following these preliminary analyses.

Gender Differences

Examination of correlation matrices for variables of interest by gender revealed a few differences in the pattern of intercorrelations for women and men (see Tables 1 and 2).

Table 1. Zero-Order Correlations Among Variables of Interest for Women

Variables	1	2	3	4	5
1. Negative Attitudes Toward LG Persons					
2. Negative Behaviors toward LG persons	.53**				
3. Right-Wing Authoritarianism	.79**	.34**			
4. Social Dominance Orientation	.19*	.22*	.36**		
5. Traditional Gender Role Attitudes	.46**	.47**	.44**	.40**	
6. Openness to Experience	-.23**	-.23**	-.35**	-.34**	-.52**

Note. * $p < .05$. ** $p < .001$.

Table 2. Zero-Order Correlations Among Variables of Interest for Men

Variables	1	2	3	4	5
1. Negative Attitudes Toward LG Persons					
2. Negative Behaviors Toward LG persons	.47**				
3. Right-Wing Authoritarianism	.79**	.34**			
4. Social Dominance Orientation	.17	.24*	.08		
5. Traditional Gender Role Attitudes	.50**	.50**	.37**	.29**	
6. Openness to Experience	-.37**	-.37**	-.45**	-.16	-.32**

Note. * $p < .05$. ** $p < .001$.

Previous research also has found gender differences in levels of negative attitudes towards lesbian and gay (LG) persons (Kerns & Fine, 1994; Kite & Whitley, 1996; LaMar & Kite, 1998) and in relations among predictors of negative attitudes towards LG persons (Basow & Johnson, 2000). Due to the pattern of gender difference in the present data and prior literature, all analyses were conducted separately for women and men in order to ensure that combining all participants into one sample did not mask unique patterns of findings for women and men.

Descriptive Statistics

Although the present sample's scores on some of the variables of interest indicated some restriction in range (see Tables 3 and 4), means and standard deviations for the present sample were generally comparable to those obtained using the same instruments in previous samples of undergraduate students.

Table 3. Summary Statistics Among Variables of Interest for Women

Variables	Possible Range	Sample Range	M	SD	α
1. Negative Attitudes Toward LG Persons	1.00-5.00	1.00-4.80	2.25	.95	.96
2. Negative Behaviors toward LG persons	1.00-5.00	1.00-2.90	1.23	.28	.89
3. Right-Wing Authoritarianism	1.00-9.00	1.03-6.55	3.82	1.53	.96
4. Social Dominance Orientation	1.00-7.00	1.00-4.64	2.34	.86	.87
5. Traditional Gender Role Attitudes	1.00-7.00	1.00-5.00	2.53	.92	.86
6. Openness to Experience	1.00-5.00	2.45-4.95	4.01	.55	.88

Note. Higher scores indicate higher levels of the construct assessed.

More specifically, levels of anti-LG attitudes were generally close to the mid range of possible scores for both women and men and the current sample's means and standard deviations for anti-LG attitudes (women: $M = 2.25$, $SD = .95$; men: $M = 2.59$, $SD = .91$) were comparable to those reported by Kerns and Fine (1994) in a sample of undergraduate women ($M = 2.88$, $SD = .80$) and men ($M = 3.26$, $SD = .99$). Relatively

few anti-LG behaviors were reported in the current sample by women ($M = 1.23$, $SD = .28$) and men ($M = 1.42$, $SD = .42$). These low scores are comparable to the scores reported by Whitley (2002) with an undergraduate university sample of women ($M = 1.25$, $SD = .28$) and men ($M = 1.55$, $SD = .56$). Scores for right-wing authoritarianism (RWA) were below the possible mid-point demonstrating lower levels of the variable. In addition, this sample's scores for RWA (women: $M = 3.82$, $SD = 1.53$; men: 3.92 , $SD = 1.40$), were lower than those reported by Whitley and Egisdóttir (2000) for undergraduate women ($M = 5.28$, $SD = 1.00$) and men ($M = 5.03$, $SD = 1.18$), but comparable to those reported by Basow and Johnson (2000) for undergraduate women ($M = 3.95$, no SD reported) and those reported by Butler (2000) for undergraduate men and women ($M = 4.10$, $SD = 1.00$). Like RWA scores, social dominance orientation (SDO) scores also were below the possible mid-point demonstrating lower levels of this variable. Nevertheless, the current sample's means and standard deviations for SDO scores (women: $M = 2.34$, $SD = .86$; men: $M = 2.99$, $SD = .99$) were comparable to those reported by Whitley (1999) with a sample of undergraduate women ($M = 2.79$, $SD = .96$) and men ($M = 3.46$, $SD = 1.17$).

Table 4. Summary Statistics Among Variables of Interest for Men

Variables	Possible Range	Sample Range	M	SD	α
1. Negative Attitudes Toward LG Persons	1.00-5.00	1.00-4.78	2.59	.91	.95
2. Negative Behaviors toward LG persons	1.00-5.00	1.00-3.10	1.42	.42	.93
3. Right-Wing Authoritarianism	1.00-9.00	1.00-7.45	3.92	1.40	.95
4. Social Dominance Orientation	1.00-7.00	1.00-5.57	2.99	.99	.87
5. Traditional Gender Role Attitudes	1.00-7.00	1.00-5.57	3.29	.86	.82
6. Openness to Experience	1.00-5.00	2.45-4.95	3.75	.56	.87

Note. Higher scores indicate higher levels of the construct assessed.

Since the traditional gender role attitudes measure used in the present study was a combination of previously used scales, the present sample's scores on overall traditional gender role attitudes (women: $M = 2.53$, $SD = .92$; men: $M = 3.28$, $SD = .86$) could not be compared directly to that of prior samples. However, this sample's scores on the Antifemininity subscale (women: $M = 2.80$, $SD = 1.04$; men: $M = 3.76$; $SD = 1.14$), which comprised half of the items in the composite measure, were comparable to Kurpius and Lucart's (2000) scores for a sample of college students (women: $M = 2.67$, $SD = 1.02$; men: $M = 3.36$, $SD = .80$). Past research has not reported means and standard deviations for the Antimascularity subscale of the Female Role Norms Scale, which comprised the second half of the traditional gender role attitudes scale. Lastly, with respect to openness to experience, scores were generally close to the mid range of possible scores for both women and men. The current sample's means and standard deviations for openness to experience (women: $M = 4.01$, $SD = .55$; men: $M = 3.75$, $SD = .56$) were comparable to those reported by Chan, Rounds and Drasgow (2000) for openness with a combined sample of college women and men ($M = 3.79$, $SD = .55$). Overall, the pattern of similarity of descriptive statistics for the present sample, and that of previous samples of undergraduate students, suggests that any restriction in range of variables of interest found in the present sample likely reflects the range of attitudes among undergraduate students rather than pointing to sample specific idiosyncrasies.

Test for Order Effects

To test for order effects across the two orders of the survey, a MANOVA was conducted with survey order as the independent variable and the variables of interest (i.e., anti-LG attitudes, anti-LG behaviors, RWA, SDO, traditional gender role attitudes, and openness to experience) as dependent variables. The overall model was not significant (F

[3, 229] = .77, $p > .05$, $\eta_p^2 = .20$), demonstrating that survey order did not significantly impact participants' responses.

Intercorrelations Among Variables of Interest: Hypothesis 1

Zero-order correlations were computed to test hypothesized relations among variables of interest. More specifically, Hypothesis 1 stated that (a) RWA, SDO, and traditional gender role attitudes will be significantly and positively related to anti-LG attitudes and behaviors and (b) openness to experience will be significantly and negatively related to anti-LG attitudes and behaviors. Analyses were conducted separately for women and men participants.

Intercorrelations for women. For women, Hypothesis 1 was fully supported (see Table 1). As expected, anti-LG attitudes were correlated positively with RWA ($r = .79$, $p < .001$), SDO ($r = .19$, $p < .05$), and traditional gender role attitudes ($r = .46$, $p < .001$), and negatively with openness to experience ($r = -.23$, $p < .001$). Additionally, anti-LG behaviors were correlated positively with RWA ($r = .34$, $p < .001$), SDO ($r = .22$, $p < .05$), and traditional gender role attitudes ($r = .47$, $p < .001$), and negatively with openness to experience ($r = -.23$, $p < .01$). Furthermore, openness to experience was negatively correlated with RWA ($r = -.35$, $p < .001$), SDO ($r = -.34$, $p < .001$), and traditional gender role attitudes ($r = -.52$, $p < .001$).

Intercorrelations for men. For the men, Hypothesis 1 was partially supported (see Table 2). Anti-LG attitudes were correlated positively with RWA ($r = .79$, $p < .001$) and traditional gender role attitudes ($r = .50$, $p < .001$), and negatively with openness to experience ($r = -.37$, $p < .001$). Additionally, anti-LG behaviors were correlated positively with RWA ($r = .34$, $p < .01$), SDO ($r = .24$, $p < .05$), and traditional gender

role attitudes ($r = .50, p < .001$), and negatively with openness to experience ($r = -.37, p < .001$). Furthermore, openness to experience was correlated negatively with RWA ($r = -.45, p < .001$) and traditional gender role attitudes ($r = -.32, p < .01$). However, inconsistent with Hypothesis 1, anti-LG attitudes were not correlated significantly with SDO, and SDO was not correlated significantly with openness to experience.

Tests of Mediation: Hypotheses 2 and 3

Hypothesis 2 stated that openness to experience would either partially or fully mediate the relations of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes. In addition, Hypothesis 3 stated that anti-LG attitudes will either partially or fully mediate the relations of RWA, SDO, traditional gender role attitudes, and openness to anti-LG behaviors. To test the mediations proposed in these hypotheses, Baron and Kenny's (1986) procedures were followed. According to these authors, for a variable to be considered as a mediator, significant relations must exist between (a) the predictor and the mediator, (b) the mediator and the criterion, and (c) the predictor and criterion. According to Baron and Kenny (1986), if preconditions are satisfied, a variable acts as a mediator to the extent that it accounts for the relationship between the predictor and criterion. In order to test the significance of mediations, Amos 5.0 (Arbuckle, 2003) was used to conduct path analyses of a fully saturated model in which all direct and indirect paths were estimated (see the models presented in Figures 1 and 3). To test the significance of mediation, appropriate standardized path coefficients were multiplied to compute indirect effects, a procedure recommended by Cohen and Cohen (1983), and Sobel's formula (1982) was used to determine whether or not the indirect effects were significantly different from zero. Again, separate analyses were conducted for women and men. Maximum likelihood estimation was utilized with the covariance matrix of the

variables of interest as input. Given that the models tested were fully saturated, values for the Goodness of Fit Index (GFI), Incremental Fit Index (IFI), Comparative Fit Index (CFI), and the Normed Fit Index (NFI) all were 1.0. The model for women accounted for 67% of the variance in anti-LG attitudes, 38% of the variance in anti-LG behaviors, and 30% of the variance in openness to experience. The model for men accounted for 67% of the variance in anti-LG attitudes, 35% of the variance in anti-LG behaviors, and 24% of the variance in openness to experience.

Tests of mediation with women. Hypothesis 2 proposed that openness would mediate the links of RWA and traditional gender role attitudes to anti-LG attitudes. For Hypothesis 2, preconditions for mediation were satisfied for the role of openness as a mediator of the link of traditional gender roles to anti-LG attitudes, but not for openness as a mediator of RWA and SDO to anti-LG attitudes (see Figure 1 for path coefficients). That is, zero order correlations indicated that traditional gender role attitudes (predictor variable) were correlated significantly with anti-LG attitudes (criterion). Furthermore, the path model indicated that traditional gender role attitudes (predictor variable) were related significantly and uniquely to openness (potential mediator), which in turn was related significantly and uniquely with anti-LG attitudes (criterion).

Sobel's test indicated, however, that the indirect link of traditional gender role attitude to anti-LG attitudes through openness was not significant. Given that in the full model preconditions for mediation were not met for RWA or SDO (i.e., neither variable was related uniquely to openness) and the indirect effect was not significant for traditional gender role attitudes, openness did not act as a mediator and thus Hypothesis 2 was not supported.

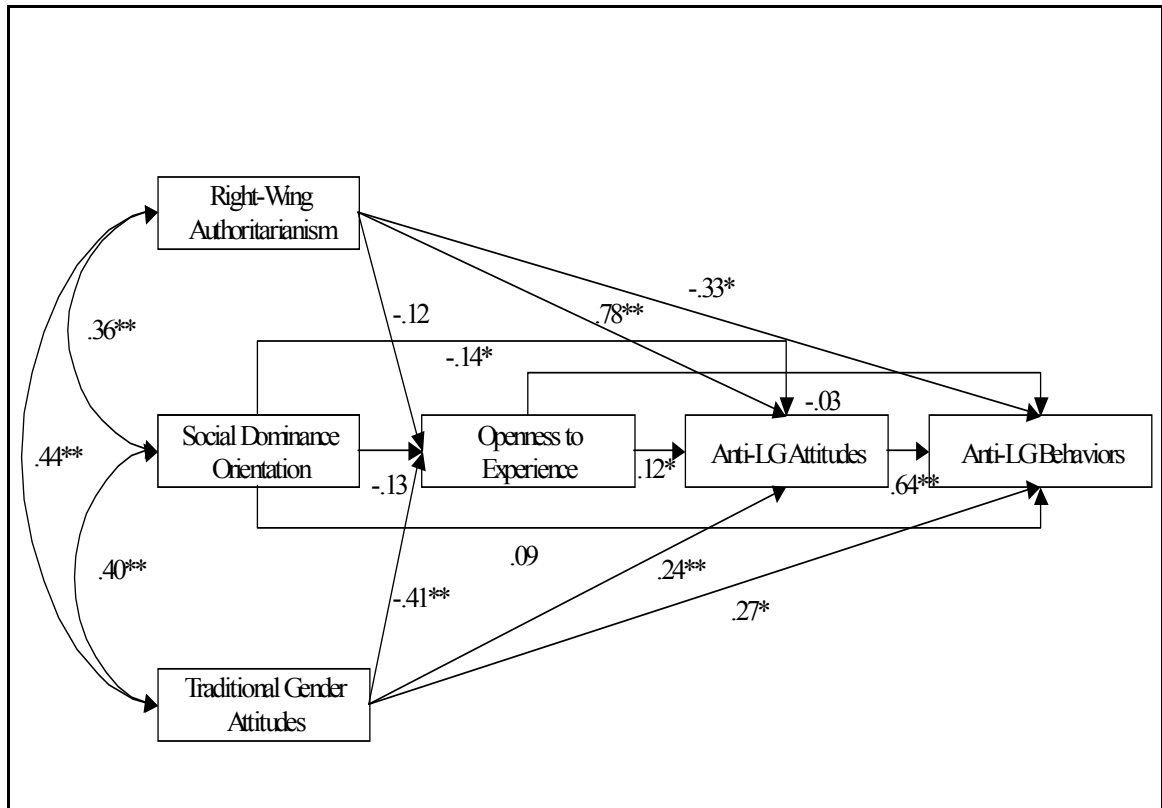


Figure 1. Fully saturated model depicting relationships among variables of interest for women. Values reflect standardized coefficients. * $p < .05$. ** $p < .001$.

Hypothesis 3 proposed that anti-LG attitudes would fully or partially mediate the links of RWA, SDO, traditional gender role attitudes, and openness to anti-LG behaviors. The preconditions for mediation were satisfied for the role of anti-LG attitudes as a mediator of the links of RWA, SDO, and traditional gender role attitudes to anti-LG behaviors, but not for anti-LG attitudes as a mediator of openness to anti-LG behaviors (see Figure 1 for path coefficients). That is, zero order correlations indicated that RWA, SDO, and traditional gender role attitudes, but not openness (predictor variables) were correlated significantly with anti-LG behaviors (criterion). Furthermore, the path model indicated that RWA, SDO and traditional gender role attitudes (predictor variables) were related significantly and uniquely to anti-LG attitudes (potential mediator), which in turn was related to anti-LG behaviors (criterion).

Multiplication of appropriate standardized path coefficients and Sobel's formula indicated that consistent with Hypothesis 3, through anti-LG attitudes, a significant indirect link of .50 (.78 x .64; $z = 5.00, p < .001$) was obtained from RWA to anti-LG behaviors. Since there was also a significant direct relationship between RWA and anti-LG behaviors, anti-LG attitudes acted as a partial mediator. Additionally, through anti-LG attitudes, a significant indirect link of -.09 (-.14 x .64; $z = -2.25, p < .05$) was obtained from SDO to anti-LG behaviors. Since there was not a significant direct relationship between SDO and anti-LG behaviors, anti-LG attitudes acted as a full mediator. Also, through anti-LG attitudes, a significant indirect link of .15 (.24 x .64; $z = 3.04, p < .01$) was obtained from traditional gender role attitudes to anti-LG behaviors. Since there was a significant direct relationship between traditional gender role attitudes and anti-LG behaviors, anti-LG attitudes acted as a partial mediator. Therefore, Hypothesis 3 was partially supported in that anti-LG attitudes partially mediated the links of RWA and traditional gender role attitudes to anti-LG behaviors and fully mediated the links of SDO to anti-LG behaviors, but anti-LG attitudes did not mediate the link of openness to anti-LG behaviors.

In the model for women, there were three significant unique links that were in the unexpected directions. There was a positive significant unique link from openness to anti-LG attitudes ($\beta = .12, p < .05$), a significant negative unique link from SDO to anti-LG attitudes ($\beta = -.14, p < .05$), and a significant negative unique link from RWA to anti-LG behaviors ($\beta = -.33, p < .01$).

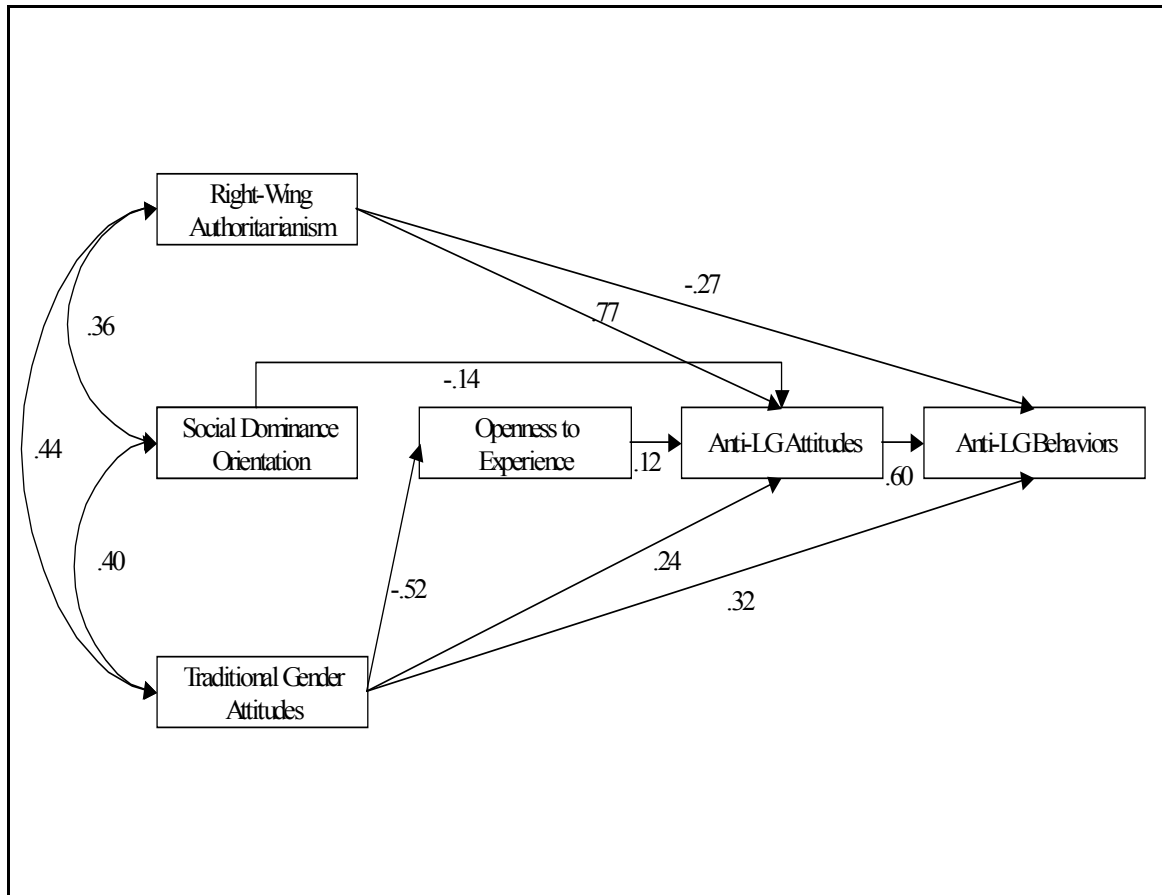


Figure 2. Trimmed model depicting relationships among variables of interest for women. Values reflect standardized coefficients. All paths depicted are significant at $p < .05$.

Finally, the fit of a fully saturated model was compared to that of an alternative trimmed model that eliminated the non-significant direct paths (a) from RWA to openness, (b) from SDO to openness, (c) from SDO to anti-LG behaviors, and (d) from openness to anti-LG behaviors (see Figure 2 for the trimmed model). The goodness of fit indices for this model were above the acceptable cut offs and nearly identical to those obtained from the original model (GFI = .98; IFI = .99; CFI = .99; NFI = .98). The trimmed model explained 68% of the variance in anti-LG attitudes, 38% of the variance in anti-LG behaviors, and 27% of the variance in openness. As indicated in Figures 1 and 2, the amounts of variance accounted for in endogenous variables as well as significance

decisions and magnitudes of paths coefficients were similar across the fully saturated and trimmed models. Specifically, in the trimmed model the paths from traditional gender role attitudes to openness increased from $-.41$ to $-.52$, from RWA to anti-LG attitudes decreased from $.78$ to $.77$, from traditional gender role attitudes to anti-LG behaviors increased from $.27$ to $.32$, and from RWA to anti-LG behaviors decreased from $-.33$ to $-.27$. Thus, compared with the fully saturated model, the trimmed model appears to be more parsimonious but equally appropriate in explaining the relationships among the variables of interest.

Tests of mediation with men. To test the mediations proposed in Hypotheses 2 and 3 for men in the sample, Baron and Kenny's (1986)'s procedures, multiplication of appropriate standard path coefficients and Sobel's formula were used as outlined above. Hypothesis 2 stated that openness to experience would either partially or fully mediate the relationships of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes. The precondition that openness (potential mediator) must be uniquely related to anti-LG attitudes (criterion) was not met (see Figure 3), thus Hypothesis 2 was not supported.

With regard to Hypothesis 3, preconditions for mediation were satisfied for the role of anti-LG attitudes as a mediator of the links of RWA, and traditional gender role attitudes to anti-LG behaviors, but not for anti-LG attitudes as a mediator of SDO and openness to anti-LG behaviors (see Figure 1 for path coefficients). That is, zero order correlations indicated that RWA and traditional gender role attitudes (predictor variables) were correlated significantly with anti-LG behaviors (criterion). Furthermore, the path model indicated that RWA and traditional gender role attitudes, but not SDO or openness (predictor variables) were related significantly and uniquely to anti-LG attitudes

(potential mediator), which in turn was related significantly and uniquely with anti-LG behaviors (criterion).

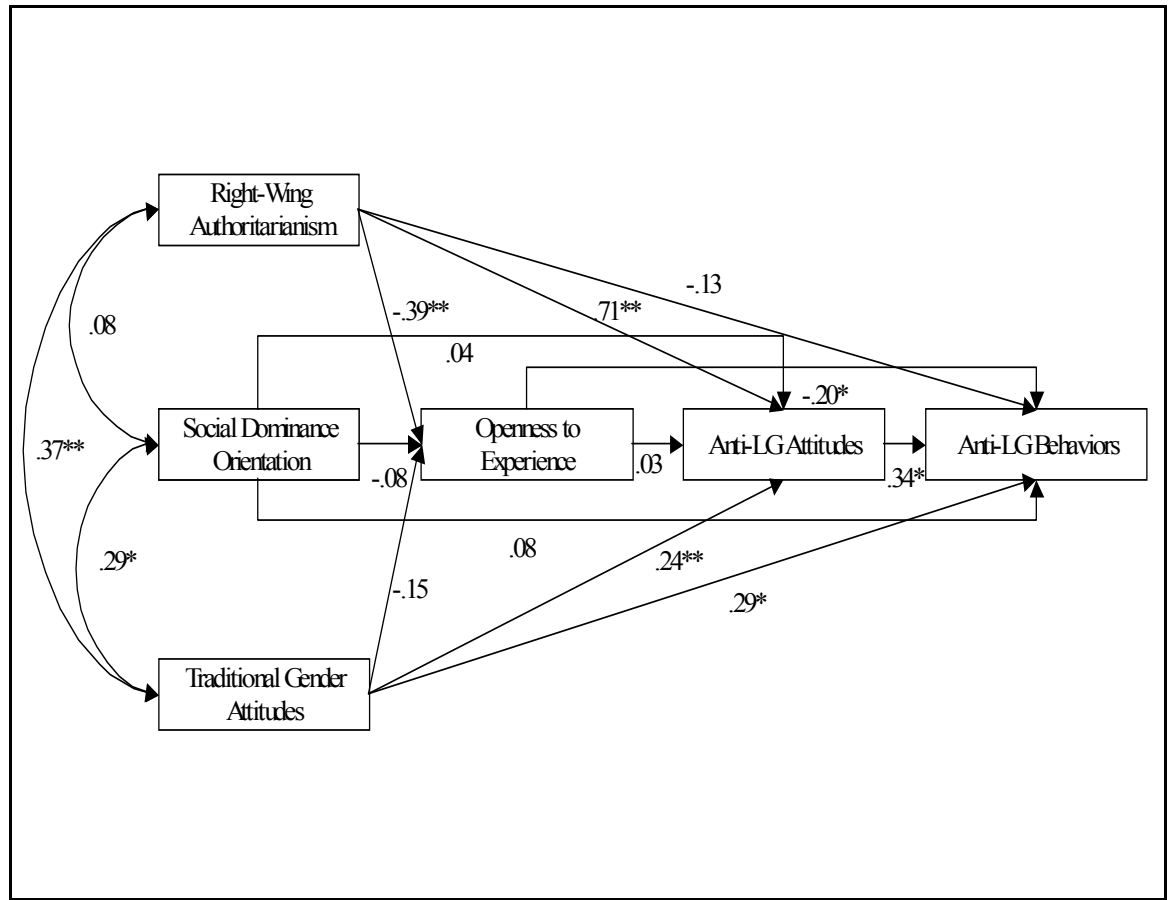


Figure 3. Fully saturated model depicting relationships among variables of interest for men. Values reflect standardized coefficients. * $p < .05$. ** $p < .001$.

Consistent with Hypothesis 3, through anti-LG attitudes, a significant indirect link of .24 (.71 x .34; $z = 2.31$, $p < .05$) was obtained between RWA and anti-LG behaviors. Because no significant direct link existed between reported RWA and anti-LG behaviors, anti-LG attitudes acted as a full mediator of this link. However, through anti-LG attitudes there was not a significant indirect link between traditional gender role attitudes or openness and anti-LG behaviors. Therefore, Hypothesis 3 was partially supported in that

anti-LG attitudes fully mediated the link of RWA to anti-LG behaviors, but not the links of SDO, traditional gender role attitudes, or openness to anti-LG behaviors.

Finally, the fit of the fully saturated model was compared to that of an alternative trimmed model that eliminated the non-significant direct paths (a) from SDO and traditional gender role attitudes to openness, (b) from SDO and openness to anti-LG attitudes, and (c) from RWA and SDO to anti-LG behaviors (see Figure 4 for the trimmed model). The goodness of fit indices for this model were above the acceptable cut offs and nearly identical to those obtained from the original model (GFI = .98; IFI = 1.00; CFI = 1.00; NFI = .97). The trimmed model explained 67% of the variance in anti-LG attitudes, 33% of the variance in anti-LG behaviors, and 20% of the variance in openness. As indicated in Figures 3 and 4, the amounts of variance accounted for in endogenous variables as well as significance decisions and magnitudes of paths coefficients were similar across the fully saturated and trimmed models. Specifically, in the trimmed model the paths from RWA to openness increased from -.39 to -.45, from traditional gender role attitudes to anti-LG attitudes increased from .24 to .25, from RWA to anti-LG attitudes decreased from .71 to .70, from traditional gender role attitudes to anti-LG behaviors increased from .29 to .32, from openness to anti-LG behaviors decreased from -.20 to -.17, and from anti-LG attitudes to anti-LG behaviors decreased from .34 to .25. Thus, compared with the fully saturated model, the trimmed model appears to be more parsimonious, but equally appropriate in explaining the relationships among the variables of interest.

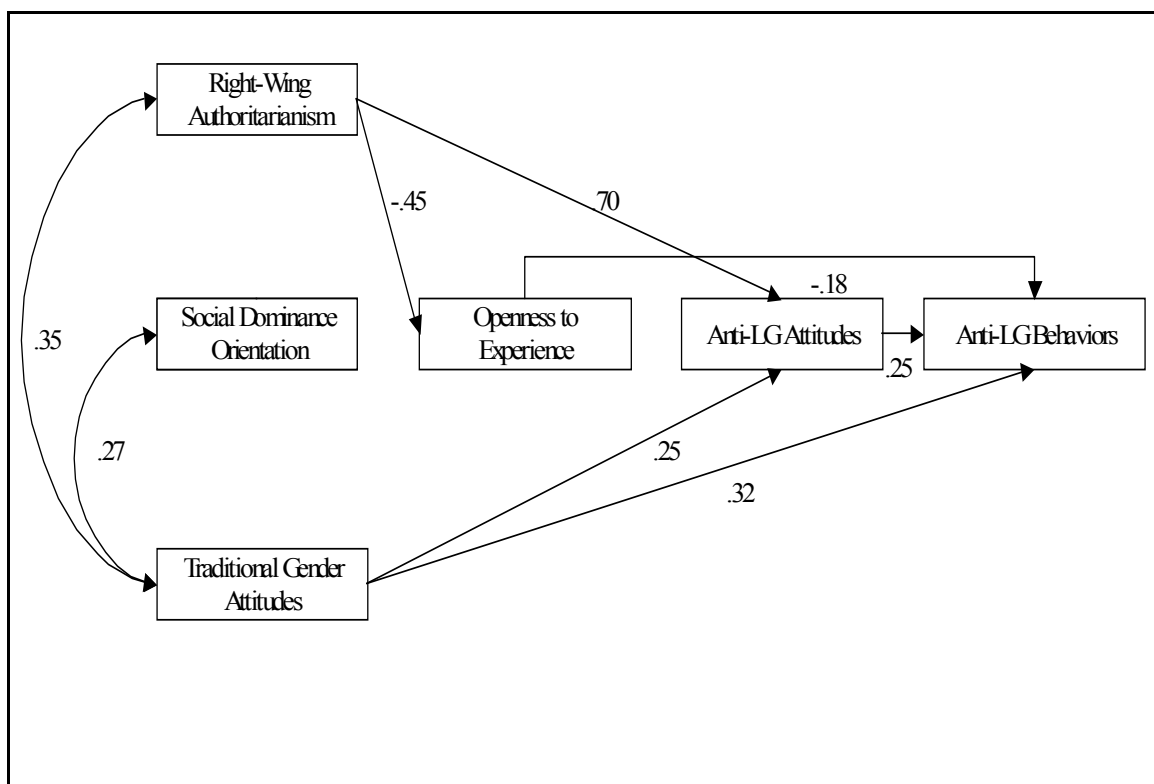


Figure 4. Trimmed model depicting relationships among variables of interest for men. Values reflect standardized coefficients. All paths depicted are significant at $p < .05$.

CHAPTER 5 DISCUSSION

Numerous studies have examined separately the relations of right-wing authoritarianism (RWA), social dominance orientation (SDO), traditional gender role attitudes, and openness to experience with anti-lesbian and gay (LG) attitudes. However, no empirical study has examined this set of variables together to determine the relative strength of their associations with anti-LG attitudes. The present study addressed this gap and also extended the literature by examining the relations of this set of variables with self-reported anti-LG behaviors in addition to anti-LG attitudes. Furthermore, this study provided the first test of openness to experience as a potential mediator of the links of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes, and the first test of anti-LG attitudes as a mediator of the links of RWA, SDO, traditional gender role attitudes, and openness to anti-LG behaviors. By examining concomitantly the relations among RWA, SDO, traditional gender role attitudes, openness, anti-LG attitudes, and anti-LG behaviors, the present findings build on prior research to identify the strongest correlates (among individual difference variables) of anti-LG attitudes and behaviors. Identifying the most critical correlates will be important in informing future research and interventions that aim to reduce anti-LG attitudes and behaviors.

In order to reduce anti-LG attitudes and behaviors, it is important to identify the variables that are most strongly related to these constructs. Of the individual difference variables examined in the present study, RWA emerged as the strongest unique correlate of anti-LG attitudes for women and men and also had a substantial relation with anti-LG

behaviors. More specifically, RWA had large zero-order correlations with anti-LG attitudes ($r = .79$) for both women and men. Furthermore, in path models, once interrelations among all exogenous variables were accounted for, RWA again had the strongest relation with anti-LG attitudes for both women ($\beta = .78$) and men ($\beta = .71$). Additionally, RWA had a significant indirect relation to anti-LG behaviors through anti-LG attitudes for both women and men. For men, anti-LG attitudes fully mediated the link of RWA to anti-LG behaviors. That is through anti-LG attitudes, a significant indirect link of .24 was obtained between RWA and anti-LG behaviors. For women, anti-LG attitudes partially mediated the link of RWA to anti-LG behaviors. That is, through anti-LG attitudes, a significant indirect link of .50 was obtained between RWA and anti-LG behaviors.

Thus, overall, the role of RWA was strong and as expected. An unexpected relation also was found, however, between RWA and anti-LG behaviors for women. Although there was a significant positive zero-order correlation between RWA and anti-LG behaviors ($r = .34$), a significant negative unique relation ($\beta = -.33$) emerged between RWA and anti-LG behaviors when all variables of interest were entered into the path model. Since anti-LG attitudes partially mediated the link of RWA to anti-LG behaviors, a portion of the positive link of RWA to anti-LG behaviors occurred through anti-LG attitudes, but the additional unique direct link of RWA to anti-LG behaviors was negative for women.

One possible explanation for the negative unique link of RWA with anti-LG behaviors (after other variables were accounted for) emerges from the theoretical conceptualization of RWA. Theoretically, RWA is comprised of three attitudinal clusters

including authoritarian submission, authoritarian aggression, and conventionalism (Altemeyer, 1981). Altemeyer (1981) theorized that aggression is manifested as the predisposition to inflict physical, psychological, economic, or social harm. However, most studies of RWA have examined its link with prejudicial attitudes but not with prejudicial aggressive behaviors (e.g., Altemeyer, 1998, 2001; Heaven & St. Quintin, 2002; Whitley, 1999). Therefore, there is a lack of clarity about the link between RWA and aggressive behaviors, although such a link would be consistent with the conceptualization of the second attitudinal cluster of authoritarian aggression. Additional empirical research is needed to determine the degree to which persons with high levels of RWA are also aggressive. Attention should be paid to the type of aggression exhibited by persons high in RWA, and the range of situational variables that can impact aggressive behaviors. The present study suggests that after accounting for the indirect link of RWA to anti-LG behaviors through anti-LG attitudes, for women, RWA negatively relates to anti-LG behaviors. Perhaps this is because RWA also reflects an adherence to authorities and conventionalism that does not coincide with aggressive or even criminal behaviors such as writing graffiti, yelling insulting comments, and hitting an LG person. Furthermore, the significant negative relationship with anti-LG behaviors was only found with women and not men. Perhaps there are gender differences in the expression of high RWA, with women acting less physically aggressive than men because physical aggression may contradict the conventional view of women, and adherence to conventional roles is an important part of RWA. Thus, future empirical research is needed to examine potential gender differences in the expression of the aggressive component of RWA.

The second variable that was demonstrated to have an important relation with both anti-LG attitudes and behaviors was traditional gender role attitudes. Next to RWA, this variable had the strongest links with anti-LG attitudes in both zero order correlations for women ($r = .46$) and men ($r = .50$) and in the path model ($\beta = .24$) for both women and men. Furthermore, traditional gender role attitudes had the strongest links with anti-LG behaviors for both women and men. More specifically, traditional gender role attitudes had large zero order correlations with anti-LG behaviors for both women ($r = .47$) and men ($r = .50$). Furthermore, for women, traditional gender role attitudes had a significant indirect link (through the partial mediating role of anti-LG attitudes) of .15 and additional unique direct link of .27 with anti-LG behaviors. For men, there was no significant mediation through anti-LG attitudes, but traditional gender role attitudes had a unique direct link of .29 with anti-LG behaviors. Thus, overall, traditional gender role attitudes emerged as having significant unique relations with anti-LG attitudes and behaviors for both women and men. These findings point to the important unique role of traditional gender role attitudes in shaping anti-LG attitudes and behaviors.

In addition to the role of RWA and traditional gender role attitudes in anti-LG attitudes and behaviors, the present findings provide further support for the connection between anti-LG attitudes and behaviors. More specifically, the path analysis showed that the relation between anti-LG attitudes and self-reported behaviors was strong for women ($\beta = .64$) and moderate for men ($\beta = .34$). Perhaps situational variables play a larger role in shaping men's anti-LG behaviors, whereas attitudes seem fairly strongly related to self-reported behaviors for women. Also, Franklin (2000) found that the gender gap in anti-LG behaviors grew wider as the specific behaviors became more violent, with

women reporting much lower levels of more violent behaviors than men. Perhaps as anti-LG behaviors become more violent, the relation between anti-LG attitudes and behaviors decreases, particularly for men because other individual difference and situational variables play a more important role in shaping violent behavior. Future research could explore if the relation between anti-LG attitudes and behaviors is different for persons engaging in non-violent versus violent anti-LG behaviors. Future research could also examine the magnitude of gender difference in the relation of anti-LG attitudes across various levels of violence of those behaviors.

The role of anti-LG attitudes in shaping the links of individual difference variables to anti-LG behaviors was supported. More specifically, for women, anti-LG attitudes partially mediated the links of RWA (indirect link of .49) and traditional gender role attitudes (indirect link of .14) to anti-LG behaviors and fully mediated the link of SDO (indirect link of -.09) to anti-LG behaviors. Similarly, for men, anti-LG attitudes fully mediated the link of RWA (indirect link of .25) to anti-LG behaviors. This shows that the strongest correlates of anti-LG behaviors had indirect links to anti-LG behaviors through anti-LG attitudes. This pattern of findings demonstrates the importance of anti-LG attitudes in understanding anti-LG behaviors. Longitudinal and experimental studies can build on the present findings and evaluate the direction and causal role of anti-LG attitudes in shaping anti-LG behaviors. Future research is needed to examine whether lowering anti-LG attitudes does indeed lead to a reduction of anti-LG behaviors.

One important pattern in the present findings is the apparent minimal role of openness to experience in anti-LG attitudes and behaviors. In relation to anti-LG attitudes and behaviors, openness had small zero-order correlations for women with anti-LG

attitudes ($r = -.23$) and anti-LG behaviors ($r = -.23$) and moderate zero-order correlations for men with anti-LG attitudes ($r = -.37$) and anti-LG behaviors ($r = -.37$). However, once all predictor variables were entered into the path model, the relation of openness to anti-LG attitudes was not significant for men, and was minimal and in the opposite direction than expected for women ($\beta = .12$). Perhaps, once the shared variance of openness with the other variables is taken into account, the positive relation with anti-LG attitudes could reflect a greater openness and willingness to report negative attitudes. Similarly, in the path model, openness was not significantly uniquely related with anti-LG behaviors for women, but was uniquely related to anti-LG behaviors ($\beta = -.20$) for men (in the expected direction). Finally, the role of openness as a mediator of the relations of RWA, SDO, and traditional gender role attitudes to anti-LG attitudes was not supported. In fact, not only did openness not act as a mediator, after accounting for the roles of RWA, SDO, and traditional gender role attitudes, the links of openness to anti-LG attitudes and behaviors was non-significant or minimal for both women and men. Thus, in the context of the other individual difference variables examined in the present study, openness to experience did not appear to play an important unique role in anti-LG attitudes or behaviors.

Similar to openness, after accounting for the role of RWA and traditional gender role attitudes, the links of SDO to anti-LG attitudes and behaviors was minimal. For men there was no significant zero-order correlation between SDO and anti-LG attitudes and there was a small positive relation between SDO and anti-LG behaviors ($r = .24$). This small relation disappeared, however, once all of the variables were entered into the path model. For women, there were small significant zero-order correlations between SDO

and anti-LG attitudes ($r = .19$) and behaviors ($r = .22$). Once in the path model, SDO and anti-LG attitudes ($\beta = -.14$) had a small relation in the unexpected direction. Additionally, for women, anti-LG attitudes mediated the relation between SDO and anti-LG behaviors and a small indirect effect of $-.09$ was found (in an unexpected direction). It was expected that persons with high levels of SDO would report greater anti-LG attitudes and behaviors because they would view LG persons as an out-group. These relations were indeed demonstrated through the positive zero order correlations. In the context of variance accounted for in anti-LG attitudes and behaviors by RWA, traditional gender role attitudes, and openness, however, SDO was related negatively to the remaining variance in anti-LG attitudes and behaviors. Perhaps, the observed positive correlations of SDO with anti-LG attitudes and behavior, in part, reflected the correlation with SDO with RWA, traditional gender role attitudes, and openness. Overall, the link of SDO with anti-LG attitudes and behaviors was minimal, especially when other individual difference variables were considered. Thus, the present findings suggest that future empirical research and interventions should be aimed at RWA and traditional gender role attitudes, which demonstrated the strongest and most consistent relations with anti-LG attitudes and behaviors.

An additional important pattern in the present findings is that there were some differences in the pattern and magnitude of intercorrelations and mediational relations for women and men. Previous research has consistently found gender differences in the levels of anti-LG attitudes and behaviors; with men holding more negative attitudes and reporting more negative behaviors than do women (e.g., Herek, 2002; Kite, 1984). In addition, Basow and Johnson (2000) found a different pattern in relations among

predictors of anti-LG attitudes for their sample of college women than was found by Theodore and Basow (2000) for their sample of college men. Furthermore, Whitley and Egisdóttir (2000) found that gender of participants had a unique link to anti-LG attitudes in their path model that also examined RWA, SDO, and attitudes toward women.

However, studies that have examined anti-LG attitudes and behaviors typically have not reported their findings separately by gender (e.g., Roderick et al., 1998; Whitley & Lee, 2000). Thus, it is not clear whether the gender differences in the pattern of interrelations found in the present study also existed in previous samples. Future researchers should explicitly explore the pattern of interrelations by gender and report their findings separately for women and men in order to evaluate the replicability of the present findings and ultimately tailor interventions most appropriately to each gender if needed.

The present findings must be interpreted in light of a number of limitations. For example, the current sample consisted of students, most of whom were in their first year of college, White, and identified as middle or upper middle class. Thus, results from the present study may not generalize to the general population, which includes greater diversity in terms of age, level of education, and social class. Furthermore, given that the present sample did not target convicted criminals, the results may not generalize to persons who have been convicted of hate crimes against LG persons. Therefore, future research is needed to examine the replicability of the present results in a variety of samples in order to capture the broader diversity of the general population. Such research can also explore the extent to which the pattern of gender differences in interrelations found in the present study will generalize to other samples.

Another limitation of the present study reflects needs for advancement in the state of the art of measuring anti-LG behaviors. Although the present study utilized the most appropriate measure of anti-LG behaviors available in the literature, such measurement can be improved by addressing a number of limitations. First, although SRBS-R scores were not correlated significantly with social desirability, it is possible that participants did not report the full extent of negative behaviors that they have engaged in, or that they are not consciously aware of all of their negative behaviors. For example, a person could act rudely to an LG person by creating more personal distance or avoiding eye contact, yet not be conscious of such actions. In addition, the fact that the SRBS-R assessed only overt negative behaviors and crimes (e.g., verbal harassment, writing graffiti, hitting) may have contributed to the restriction in range and floor effect of SRBS-R scores (see Tables 3 and 4), with women scoring a mean of 1.28 and men scoring a mean of 1.42, when the scale midpoint is 2.50. One way to address these limitations is to integrate assessment of a continuum of behaviors from overtly negative to overtly positive (which might include items assessing helpful behaviors such as attending a pride parade, befriending an LG person, and supporting legislation for increased LG rights). Using a more inclusive measure of hostile and affirming behaviors would allow for a fuller exploration of the links of RWA, SDO, traditional gender role attitudes, openness, and anti-LG attitudes to behaviors toward LG persons.

Another important area for advancing understanding of behaviors toward LG persons is to build on the present findings regarding the roles of individual difference variables by integrating attention to situational variables, such as contact with LG persons and youthful thrill seeking, which also have been linked to anti-LG behaviors (Franklin,

1998; Schope, 2000). In the present study, individual difference variables accounted for a much greater percentage of the variance of anti-LG attitudes than behaviors. Thus, attention to other potential correlates of anti-LG behaviors is warranted and data from such studies can inform the development and evaluation of interventions aimed at reducing anti-LG behaviors.

By advancing scientific understanding of the predictors of negative attitudes and behaviors towards LG persons, the present study can serve as groundwork for developing theoretically and empirically based interventions that aim to reduce anti-LG attitudes and behaviors. This study points to the importance of RWA and traditional gender role attitudes in predicting anti-LG attitudes and behaviors of college women and men. The present data raise questions, however, about the roles of SDO and openness in anti-LG attitudes and behaviors. Based on these results, interventions aiming to prevent anti-LG attitudes and behaviors could focus limited time and resources specifically on modifying RWA and traditional gender role attitudes. Since persons with high levels of RWA are very submissive to authority figures, a possible intervention could involve legitimate authority figures (e.g., university presidents, religious leaders, and elected officials) voicing affirming-LG attitudes and behaviors. Additionally, to combat traditional gender role attitudes, interventions could focus on explaining the range of possible gender expressions and restrictions that traditional gender role attitudes place on individuals. If these interventions are successful at lowering RWA and traditional gender role attitudes, then it can also be assessed if anti-LG attitudes and behaviors are also reduced. Evaluating the impact of such interventions would also test the causal direction of relations among RWA, traditional gender role attitudes, anti-LG attitudes, and anti-LG

behaviors. Thus, the present findings can provide the basis for such research and ultimately inform prevention and educational interventions aimed at reducing anti-LG attitudes and behaviors.

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BIOGRAPHICAL SKETCH

I was born and raised in Silver Spring, Maryland. I graduated magna cum laude with a Bachelor of Science in psychology from the University of Maryland in 2002. After graduating I spent a year working with autistic children and traveling overseas. In August 2003 I moved to Gainesville to enter into University of Florida's Counseling Psychology program. I am currently in my third year of the doctoral program and hope to earn my Ph.D. in a few years.