A rich literature in social psychology (e.g., Eagly, 1987, Eagly & Karau, 2002) and sociology (e.g., Biddle, 1986) proposes that social roles, or the shared expectations and norms for how individuals should behave, are based on individual’s social identifications (e.g., gender, race/ethnicity, sexual orientation). Gender is proposed as one type of social identification with associated “gender roles,” described by scholars as attitudes about acceptable qualities and behaviors of men and women (e.g., Eagly, 1987; Eagly & Crowley, 1986). A large body of research has examined attitudes about gender roles across life domains such as employment, education, leadership, household division of labour, and childrearing (e.g., Eagly & Crowley, 1986; Fields, Swan, & Kloos, 2010; Larsen & Long, 1988; McHugh & Frieze, 1997). Often attitudes about gender roles are construed as more “traditional” versus “egalitarian.” The traditional attitude assumes specific roles based on gender (e.g., men should be the financial provider and women responsible for childcare) and egalitarian assumes roles should be chosen based on preference rather than gender (Larsen & Long, 1988; McHugh & Frieze, 1997).

Adhering to traditional gender roles limits women’s and men’s choices and has been linked to gender segregation in academic majors and career fields (Frehill, 2012; Sax & Bryant, 2006), lower pay for women (Judge & Livingston, 2008), unequal distribution of household labor (van Hooff,
2011), and emotional distress in men (Houle, Mishara, & Chagnon, 2008). Feminist community psychologists have asserted the need to better understand predictors and consequences of gender role attitudes in efforts to then expand choices for women and men (e.g., Bond & Mulvey, 2000; Wasco & Bond, 2010). To contribute to this literature, we examine links between religious conservatism and gender role attitudes with a focus on religious settings.

In this study we examine college students who attend a particular type of religious setting, Christian campus-ministry groups. Similar to religious congregations (Chaves, 2004) but focused on college students, these groups constitute a social setting where weekly gatherings are held for students to practice their religious faith and rituals. These groups typically are headed by a formal adult leader and often are linked to a sponsoring congregation or religious denomination (Mankowski & Thomas, 2000; Schmalzbauer, 2013). Determining the exact number of Christian campus-ministry groups in the U.S. and their members is challenging, but Schmalzbauer (2013) estimates such groups are present on almost every campus. Also, he estimates that in 2012 there were over 250,000 students attending just Evangelical protestant groups. When that figure is combined with an estimated 1,350 Catholic campus-ministry groups, and over 2,800 Mainline Protestant campus-ministry groups, each with hundreds of thousands of their own members, it is safe to conclude that such groups are a relevant religious setting on college campuses. Understanding the impact of such groups on students is of great interest to community psychologists, religious leaders, and educators because college is a developmental period where young people make major life decisions such as career choice. Greater understanding can help these professionals work with religious individuals to help navigate the delicate balance of synthesising religious and gender role attitudes in a way that challenges sexism and promotes the full potential of women.

A central focus of this study is how aspects of a religious context, in this case of a campus-ministry group, may be linked to student gender role attitudes (Henry, Cartland, Ruchcross, & Monahan, 2004; Ridgeway & Correll, 2004; Tseng & Seidman, 2007). We thus examine how religious conservatism, both of individuals and of the group, may predict a student’s gender role attitudes. In addition to direct effects, we explore the cross-level interactive effects for student (a) religious commitment and (b) religious conservatism with the religious conservatism of the group to understand how individual characteristics may be stronger or weaker predictors of gender role attitudes depending on the conservatism of the campus-ministry group. This focus on a religious social setting extends prior research demonstrating how religious peers may shape traditional gender role attitudes (Bryant, 2003; Denton, 2004; Peek, Lowe, & Williams, 2012) by examining peers and leaders within a particular setting. To develop the rationale for the study hypotheses, we now discuss gender role attitudes, religious conservatism, and campus-ministry groups as social settings.

**Gender Role Attitudes**

There are various ways to conceptualise gender role attitudes (Eagly, 1987; Fields, Swan, & Kloos, 2010; McHugh & Frieze, 1997; Osmond & Martin, 1975). One common approach, which we follow in this study, is to define gender role attitudes along a continuum stretching from “traditional” to “egalitarian” (Bryant, 2003; Larsen & Long, 1988). “Traditional” gender role attitudes reflect the belief that men and women are intrinsically different and as a result are suited for gender-specific roles (Eagly & Crowley, 1986). These attitudes are predicated on the assumption that men are competent, assertive, independent, and ambitious (yet cold) and thus more suited to be the financial provider, leader, and protector (Livingston & Judge, 2008). Women are viewed as warm, sociable, interdependent, and relational (yet incompetent and weak) and thus assumed more suited for domestic and childcare roles (Colaner & Giles, 2007; Jost & Kay, 2005).
In contrast, the “egalitarian” perspective asserts that gender roles are not innately determined, and that men and women are equally suited for household labour, childrearing, and work outside the home (Livingston & Judge, 2008). Thus, traditional gender role attitudes assume that men and women should assume roles and behave in ways that align with assumed gender differences (Eagly & Crowley, 1986), whereas the egalitarian perspective asserts all social roles and behaviours should be open to both genders.

Feminist scholars assert that traditional gender role attitudes are a manifestation of sexism, defined as “the systematic inequitable treatment of girls and women by men and by the society as a whole” (Bearman, Korobov, & Thorne 2009, p. 11; Bond & Mulvey, 2000). Glick and Fiske (1996, 2001) further posit that sexism also stems from paternalism and gender differentiation. Gender differentiation emphasises biological differences between the two sexes that justify confining women to domestic roles (Glick & Fiske, 2001). Paternalism is the assertion that women require the help and protection of men in order to survive, which legitimises male privilege and oppressive actions by disguising them as caring for the “weaker sex” (Sidanius, Pratto, & Bobo, 1994). However, research shows that being the recipient of paternalistic protection creates a sense of inferiority (Nadler & Halabi, 2006), increases a woman’s acceptance of behavioural restrictions created by men (Moya, Glick, Expósito, de Lemus, & Hart, 2007), and has a negative impact on women’s workplace performance (Vescio, Gervais, Snyder, & Hoover, 2005). Clearly, traditional gender role attitudes both rely on and perpetuate sexism, gender differentiation, and paternalism. Understanding how campus-ministry groups may further such gender role attitudes resonates with community psychology’s interest in promoting greater egalitarianism. Research is thus needed to understand how religious beliefs, and campus-ministry groups, may perpetuate more traditional or egalitarian gender role attitudes.

Stemming from values of equality and justice, community psychologists may be interesting in promoting more egalitarian gender role attitudes given the vast literature documenting the impact of gender role attitudes on men and women (Bond & Mulvey, 2000; Fields et al., 2010; McHugh & Frieze, 1997; Osmond & Martin, 1975). For women, adherence to traditional gender role attitudes often results in women providing the bulk of care giving for children and elderly parents (Szinovacz & Davey, 2008). Research further indicates that when women embrace traditional gender role attitudes they get married younger (Colaner & Giles, 2007), spend more time on domestic labour (Greenstein, 1995), and lower their career aspirations in comparison to women who adhere to more egalitarian gender role attitudes (Colaner & Warner, 2005). Traditional gender role attitudes are a strong predictor of economic inequality because they tend to limit the career options of women (Colaner & Giles, 2007; Frehill, 2012; Sax & Bryant, 2006). In fact, for women, endorsing traditional gender role attitudes correlate with lower salaries (Judge & Livingston, 2008) and predicts traditionally feminine college majors and subsequently lower-paying jobs (Karpia, Buchanan, Hosey, & Smith, 2007). Although women are disadvantaged, men also suffer negative repercussions in health and emotional well-being, including increased rates of depression and risks of suicidal behaviour (Good & Mintz, 1990; Good et al., 1995; Houle et al., 2008; Kimmel, 2004). Although men may benefit financially from traditional gender role attitudes, they may pay an emotional price.

Gender role attitudes are not static and change across the lifespan. For example, children and adolescents’ gender role attitudes tend to match that of their parents (Lottes & Kuriloff, 1992). College also is a critical time in the development of gender role attitudes such that students tend to become more egalitarian; however, this shift is less pronounced among religious students (Lottes & Kuriloff, 1992). Although many
social forces shape gender role attitudes (Cobb & Boettcher, 2007; Swim, Aikin, Hall, & Hunter, 1995), research shows religious conservatism (Colaner & Giles, 2007) and interacting with religious peers (Bryant, 2003) predict more traditional gender role attitudes. The current study extends this research by examining students within a particular religious setting, a campus-ministry group, to understand the interplay among students and settings in predicting gender role attitudes.

**Religious Conservatism**

In general, the location of Christian individuals and groups on a continuum from religiously conservative to more liberal is typically determined by self-identification, denominational affiliation, and specific beliefs such as biblical literalism (Kellstedt & Smidt, 1993; Steensland et al., 2000; Woodberry & Smith, 1998; Wuthnow, 1996). Steensland and colleagues (2000) note three broad religious traditions within Christianity of Mainline Protestant, Evangelical Protestant, and Catholic, with Evangelical and Catholic traditions tending toward greater conservatism (with Evangelical traditions being the most conservative) and Mainline Protestant toward greater liberalism, though there is variation within each tradition (Steensland et al., 2000). Additionally, scholars note liberal-conservative diversity within Catholicism (Starks, 2013). In fact, research confirms significant differences among these religious traditions on a number of political issues including opposition to abortion, gay marriage, contraception, and support for the Equal Rights Amendment (Gonsoulin & Leboeuf, 2010), with Evangelical Protestants holding the most conservative attitudes. For example, at the individual level, religious conservatism predicts opposition to gay marriage, abortion, and lack of willingness to recognise or remedy societal inequalities that impact racial minorities (Edgell & Tranby, 2007; Todd & Ong, 2012; Wilcox, DeBell, & Sigelman, 1999).

Traditional gender role attitudes are woven into the fabric of religious conservatism. For example, religious conservatives, especially Evangelical Protestants, rely on religious scripture such as, “Wives, submit yourselves to your own husbands as you do to the Lord” (Ephesians 5:22; NIV) to justify why women should submit to their husbands and interpret verses such as, “the head of every woman is man…” (First Corinthians 11:3; NIV) to explain why there should exist a hierarchical order in the family with a woman’s position being below that of a man (Colaner & Warner, 2005). Evangelical Protestants also place emphasis on traditional gender roles as evidenced through the many books, articles, workshops, and sermons that teach the man is the head of the family and deserving respect and obedience (Colaner & Giles, 2007; Gallagher & Smith, 1999). This emphasis on complementary roles may seem innocuous, but as noted by Glick and Fiske (2001), gender differentiation is one of the key drivers of sexism (i.e., the inequitable treatment of women; Bearman, Korobov, & Thorne 2009). In contrast, Mainline Protestants have historically been more supportive of feminist movements and inclusion of women in leadership positions (Braude, 2012). They interpret the Bible differently, emphasising such scriptures as, “There is neither male nor female, for you are all one in Christ Jesus” (Galatians 3:28, NIV) with the interpretation focusing on both genders being equal partners in church, home, and career (Colaner & Giles, 2007). Because there appears to be differences in gender role attitudes among religious liberals and conservatives, we hypothesise that student religious conservatism will predict less egalitarian (more traditional) gender role attitudes.

**Campus-Ministry Groups as Social Settings**

Campus-ministry groups provide a social setting where students gather to practice their religious beliefs and rituals (Mankowski & Thomas, 2000). Scholars assert that within social settings, social processes (i.e., the consistent interactions among people within a setting) are key in shaping attitudes and behaviour (Seidman, 2012; Tseng & Seidman, 2007). In campus-ministry groups, social processes may be
interactions with peers or leaders (Mankowski & Thomas, 2000). These social processes may help to establish or reinforce group norms (i.e., the expected behaviours and beliefs within a setting) through approval or disapproval from others in the group (Bearman et al., 2009; Henry et al., 2004; Tseng & Seidman, 2007). Other research on peer groups shows that peer attitudes predict an individual’s racist and homophobic attitudes, over-and-above one’s personal attitudes (Poteat & Spanierman, 2010; Sechrist & Stangor, 2001). This demonstrates the power of peers in shaping individual attitudes. Also, interacting with religious peers lessens the shift toward endorsing egalitarian gender role attitudes that tends to occur for men and women in college (Bryant, 2003; Lottes & Kuriloff, 1992). Thus, we hypothesise that group religious conservatism, as defined by the mean student religious conservatism within each group, will be negatively associated with egalitarian gender role attitudes, even after controlling for student religious conservatism. This type of between-group effect would indicate that campus-ministry groups with higher average levels of conservatism also have lower average levels of egalitarian gender role attitudes; showing how an effect may operate at the group level.

In addition to direct effects, social settings theory also proposes that social processes may interact when predicting outcomes (Tseng & Seidman, 2007). Conceptually, this question of moderation asks “when” or “for whom” a predictor is more strongly related to an outcome (Frazier, Tix, & Baron, 2004); however, for social settings the question is “in what type of social setting” is an effect stronger, weaker, or in a different direction. For example, in social settings research, scholars have examined interactions between characteristics of teachers and peers in predicting student outcomes (Chang, 2003) and peer groups and family characteristics in predicting student outcomes (Criss, Pettit, Bates, Dodge, & Lapp, 2002). Across this research, characteristics of the social setting moderated other associations. Moreover, a context with greater religious conservatism may exert a stronger press for individuals to conform to group norms (Iannaccone, 1994). Thus, we explore two cross-level interactions to examine how the religious conservatism of the group may moderate individual-level associations among (a) religious commitment and (b) religious conservatism with gender role attitudes. Although exploratory, we expect stronger associations in more conservative campus-ministry groups.

Present Study

Understanding how student religious attitudes and religious settings on college campuses may contribute to gender role attitudes will help community psychologists and educators better work with religious students to promote the full potential of women. In this study, we use multilevel modeling to examine the individual, group, and cross-level interactive effects of religious conservatism in predicting gender role attitudes for students attending a Christian campus-ministry group at a public university. We recruited from public (rather than religious) universities to minimise possible confounding effects due to religious differences between universities and because some religious universities may sponsor campus-ministry groups. We extend previous research by examining a specific social setting (i.e., campus-ministry groups) at multiple levels of analysis to understand how individual and group religious conservatism may directly or interactively predict gender role attitudes. We control for demographic variables such as religious commitment, religious tradition (Mainline, Evangelical, or Catholic), and gender since previous research shows each to be associated with gender role attitudes (Gonsoulin & LeBoeuf, 2010; Judge & Livingston, 2008). We also examine the gender of the leader who completed the survey as an indication of a possible role model in the group. Gender role attitudes vary by region, with the Southern U.S. tending to be more traditional than areas like the Northeast (Carter & Borch, 2005), thus we also control for geographic region. Findings hold promise to further an understanding of how religion may shape
gender role attitudes with implications for community psychologists and educators working with religious college students.

**Method**

**Recruitment and Participants**

Participants were 324 students recruited through 32 Christian campus-ministry groups at public universities in the U.S. We recruited participants from campus-ministry groups that identified as Evangelical Protestant, Mainline Protestant, or Catholic (following Steensland et al.’s (2000) classification of religious tradition). Specifically, we identified groups associated with the following Mainline Protestant denominations: United Methodist, Evangelical Lutheran, United Church of Christ, Presbyterian Church USA, and Episcopal. We identified groups that self-identified as Evangelical, were associated with Evangelical denominations as defined by Steensland et al. (2000), or have been described as Evangelical by other scholars (Schmalzbauer, 2013). This resulted in the identification of Evangelical groups including Intervarsity, Campus Crusade for Christ, Young Life, National Baptist Collegiate Ministry, and Navigators. We identified Catholic groups including The Newman Center, FOCUS, and Catholic Connection. To increase geographic representation, we recruited groups from the West, Midwest, South, and Northeast U.S. (U.S. Census Bureau, 2010).

Guided by these criteria, we identified Christian campus-ministry groups at public universities in the U.S. through online searches of university club/organisation sites and national religious organisations’ directories of campus-ministry groups. Once identified, we attempted to contact a group leader via email or phone and asked the leader to distribute information about the study and a link to an online survey to students who participated in their group. We attempted to contact over 1,200 groups. However, we had no response from many of these groups, which is likely due to outdated contact information or because some campus-ministry groups may no longer have been in existence. Of the groups we attempted to contact, 11% had at least one student or leader participate. Because multilevel modeling requires multiple students per group, we examined groups that had one leader and at least 5 students participate per group.

This recruitment strategy resulted in 324 student participants from 32 different groups. There were a few additional respondents over 25 years of age; because these students may have different life experiences impacting gender role attitudes, we dropped the students over 25 years of age to focus on a college-aged sample. The mean number of student participants from each group was 10.13 ($SD = 9.20$), ranging from 5 to 48. Also, each group had one leader participate. Demographic information for students and leaders is presented in Table 1.

**Measures**

**Gender role attitudes** We used the Traditional Egalitarian Sex Role scale to assess gender role attitudes (i.e., traditional versus egalitarian; Larsen & Long, 1988). This scale uses a Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree) with higher scores indicating more egalitarian and lower scores more traditional gender role attitudes. The scale includes items that relate to the education of women (e.g., “it is just as important to educate daughters as it is to educate sons”); women’s employment (e.g., “having a job is just as important for a wife as it is for her husband”); type of employment (e.g., “the role of teaching in the elementary schools belongs to women” reverse coded); women in leadership (e.g., “men make better leaders” reverse coded); man’s authority (e.g., “as head of the household, the father should have the final authority over the children” reverse coded); and gender-prescribed attitudes towards appearance (e.g., “women should be more concerned with clothing and appearance than men” reverse coded). The internal consistency for the scale in previous research is $\alpha = .85$ (Larsen & Long, 1988; Livingston & Judge, 2008). Previous research demonstrates evidence of construct validity as traditional gender attitudes correlates with religious orthodoxy.
Table 1: Demographic Information for student and Leaders

<table>
<thead>
<tr>
<th>Variable</th>
<th>Students (n = 324)</th>
<th>Leaders (n = 32)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)  n (%)</td>
<td>Mean (SD)  n (%)</td>
</tr>
<tr>
<td>Age</td>
<td>20.32 (1.73)</td>
<td>36.00 (13.33)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>228 (70%)</td>
<td>16 (50%)</td>
</tr>
<tr>
<td>Men</td>
<td>96 (30%)</td>
<td>16 (50%)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>283 (88%)</td>
<td>28 (90%)</td>
</tr>
<tr>
<td>African American/Black</td>
<td>5 (2%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Asian/Pacific/Islander</td>
<td>13 (4%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>Hispanic/Latino/a</td>
<td>9 (3%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Native American</td>
<td>2 (0.6%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>Biracial/Multiracial</td>
<td>8 (2%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (0.9%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Did Not Report</td>
<td>1 (0.3%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>Political Affiliation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republican</td>
<td>165 (51%)</td>
<td>15 (47%)</td>
</tr>
<tr>
<td>Democrat</td>
<td>64 (20%)</td>
<td>12 (38%)</td>
</tr>
<tr>
<td>Independent</td>
<td>61 (19%)</td>
<td>5 (16%)</td>
</tr>
<tr>
<td>Other/Did Not Report</td>
<td>34 (10%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Religious Tradition of Campus-Ministry Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evangelical Protestant</td>
<td>155 (48%)</td>
<td>12 (38%)</td>
</tr>
<tr>
<td>Mainline Protestant</td>
<td>62 (19%)</td>
<td>10 (31%)</td>
</tr>
<tr>
<td>Catholic</td>
<td>107 (33%)</td>
<td>10 (31%)</td>
</tr>
<tr>
<td>Year in School for Students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>88 (27%)</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>61 (19%)</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td>82 (26%)</td>
<td></td>
</tr>
<tr>
<td>Fourth</td>
<td>50 (16%)</td>
<td></td>
</tr>
<tr>
<td>Fifth</td>
<td>40 (12%)</td>
<td></td>
</tr>
</tbody>
</table>
(r = .31), authoritarianism (r = .36), and women score significantly higher in the direction of egalitarian attitudes than men (Larsen & Long, 1988). In the current study the internal consistency of the scale was adequate with \( \alpha = .90 \).

**Religious commitment** We used the Religious Commitment Inventory to assess religious commitment (Worthington et al., 2003). This scale uses a Likert-type scale ranging from 1 (not at all true of me) to 5 (totally true of me) where participants report agreement with items such as, “My religious beliefs lie behind my whole approach to life.” Higher scores indicate greater religious commitment. Worthington and colleagues (2003) provide evidence for construct validity through correlations with other religious commitment scales. Estimates of internal consistency range from .87 - .96 and demonstrate test-retest reliability. In the current study the internal consistency of the scale was adequate with \( \alpha = .90 \).

**Religious conservatism** To measure student religious conservatism, we followed common practice in the psychology and sociology of religion and used attitudes toward biblical interpretation with a more literal interpretation indicating greater religious conservatism (Green, Guth, Smidt, & Kellstedt, 1996; Kellstedt & Smidt, 1993; Woodberry & Smith, 1998). Unfortunately, validated scales of religious conservatism tend to be outdated or include many different theological beliefs (e.g., Hunsberger, 1989; Stellway, 1973). However, scholars assert that biblical literalism (i.e., the tendency to interpret the bible in a literal manner) continues to be a key indicator of religious conservatism (Green et al., 1996; Woodberry & Smith, 1998). Kellstedt and Smidt (1993) note that biblical literalism often is assessed with only one item, and that measurement would be strengthened by including multiple items about biblical literalism. Thus, for a specific measure of biblical literalism to assess religious conservatism, we used 5 items focused on literal interpretation and the importance of the Bible in guiding one’s life. The five items were as follows: “The Bible is literally true in all its parts,” “The Bible does not contain all the important truths about life (reverse coded),” “The Bible is the inspired word of God,” “All the miracles in the Bible are probably not true (reverse coded),” and “The Bible guides how I live my life.” This scale uses a Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree) with higher scores indicating greater biblical literalism. In the current study, internal consistency was adequate with \( \alpha = .75 \). Exploratory factor analysis of these items indicated a single factor (analyses available upon request).

**Individual and Group Demographics** Demographic questions were included in both leader and student surveys, such as race/ethnicity, gender, and age in years. Based on information from the group regarding religious tradition and geographic location, students were coded as attending a particular type of campus-ministry group (Evangelical Protestant, Mainline Protestant, or Catholic) from a particular geographic region (West, Midwest, Northeast, or South). Effect coded variables were formed for gender (men as base group), religious tradition (Catholic as base group), geographic location (Northeast as reference group), and race/ethnicity (students of colour as the base group; Cohen, Cohen, West, & Aiken, 2003).

**Procedures** We administered the online survey via Qualtrics (Qualtrics Labs Inc., Provo, UT). Leaders and students completed separate surveys; we linked responses to the same group with a unique code. All participants read an informed consent document, indicated consent by proceeding, and then completed the measures described above and other measures about abortion, gay marriage, and religious attitudes as part of a larger study conducted in 2012-2013. After completing the survey and distributing the link to students, leaders were given a gift card. Students who completed the survey were entered into a random drawing for a gift card.

**Analytic Strategy: Multilevel Modeling** We used multilevel modeling to examine study hypotheses. In general,
multilevel modeling allows for the separation and simultaneous testing of Level 1 (i.e., individual, in this study student) and Level 2 (i.e., group, in this study campus-ministry group) effects for nested data structures. In the current study, students were nested within Christian campus-ministry groups. Furthermore, multilevel modeling accounts for dependence in the data that may be present due to this nested data structure and accurately estimates standard errors (Raudenbush & Bryk, 2002; Snijders & Bosker, 1999). Also, simulation studies show that having at least 5 participants per group helps to minimise bias when using multilevel modeling (McNeish, 2014), thus we used groups with 5 or more students.

In the current study, student self-report comprised Level 1 variables. We group-mean centered the two continuous student variables of religious commitment and religious conservatism. This method of centering removes the influence of groups, allows for comparison and disaggregation of within- and between-group effects, and conceptually represents student’s deviation from the mean of their group (e.g., a “frog pond” effect; Enders & Tofighi, 2007; Shinn & Rapkin, 2000). Higher scores indicate that a student is above the mean of their group whereas a lower scores indicates a student is below the mean of their group; thus scores reflect the relative position of a student in their group. We formed one group level variable for group religious conservatism by taking the mean religious conservatism of all students in the same group. This Level 2 variable was then mean-centered. Models were fit to the data by maximum likelihood estimation and used sandwich (robust) standard errors with the between-within method of degrees of freedom (Snijders & Bosker, 1999). Analyses were conducted using SAS PROC MIXED version 9.3 with descriptive statistics presented in Table 2.

To test study hypotheses we examined a series of models (see Table 3). In Model 1 we tested how demographic variables predicted gender role attitudes. Categorical demographic variables were effect coded so that significant parameters indicate a significant difference relative to the grand-mean across groups. For example, a significant effect for Mainline indicates that Mainline groups had higher average egalitarian gender role attitudes than the mean across all groups. Also, effect coding allows for more general interpretations of other parameter estimates in the model, such as the average association between religious conservatism and gender role attitudes across levels of the categorical variables (Cohen et al., 2013; Frazier et al., 2004). In Model 2 we tested the within-group effects of how student religious commitment and conservatism predicted gender role attitudes while controlling for demographic variables. In Model 3 we tested the between-group effect of religious conservatism, over-and-above student demographic and religious variables. In Model 4 we tested the cross-level interactions among individual (a) religious commitment and (b) religious conservatism with the average group religious conservatism. This model tested if group religious conservatism (Level 2) moderated how religious commitment and conservatism predict gender role attitudes at the individual level. For significant interactions, we followed Preacher, Curran, and Bauer (2006) to calculate simple slopes at one $SD$ above or below the mean. We followed Snijders and Bosker (1999) to calculate the proportion of explained variance (i.e., $R^2$) at Level 1 and Level 2, relative to the null model.

Results
Descrptive statistics for study variables are presented in Table 2. We used $t$-tests and one-way Analysis of Variance (ANOVA) and found no gender, race, or regional differences for religious conservatism or commitment ($p > .05$). However, the ANOVAs for religious tradition were significant for both religious commitment ($F(2, 320) = 13.85, p < .05$) and conservatism ($F(2, 316) = 57.97, p < .05$). We conducted follow-up $t$-tests using Tukey’s method to control for Type I error (Toothaker, 1993) and found that students attending Evangelical Protestant groups had significant higher levels of religious
commitment ($M = 4.05, SD = 0.68$) and conservatism ($M = 5.29, SD = 0.80$) than students in either Mainline Protestant ($M = 3.60, SD = 0.92$; $M = 4.08, SD = 1.12$, respectively) or Catholic ($M = 3.56, SD = 0.88$; $M = 4.33, SD = 0.83$, respectively) groups, with no significant differences between Mainline or Catholic students. To determine the proportion of variance that was accounted for by the group level (i.e., the campus-ministry group), we computed the intra-class correlation using the components of the random intercept null model (i.e., a model with no independent variables). The result indicated that 29% of the variance in student gender role attitudes was accounted for at the level of the campus-ministry group; thus, we used multilevel modeling (Snijders & Bosker, 1999). We also examined individual and group level correlations (see Table 2) and found strong correlations among religious commitment, conservatism, and gender role attitudes at both levels of analysis.

We then examined the four models, as reported in Table 3. The first model with demographics showed that women and students from Mainline groups had significantly higher levels of egalitarian gender role attitudes than the average student. Students in groups with a woman leader reported marginally significant ($p < .08$) higher levels of egalitarian gender role attitudes. Students in Evangelical groups reported significantly lower levels of egalitarian gender role attitudes. Unexpectedly, groups in the Western U.S. also reported lower levels of egalitarian gender role attitudes, though this may have been driven by only having two groups from this region where one of the groups was Evangelical (also, study findings remain the same if these two groups are dropped from analysis). Significant differences were not present for age, South, Midwest, or student race/ethnicity. Overall, this model explained 29% of the variance at Level 1 and 66% of the variance at Level 2, relative to the null model.

Model 2 added student religious commitment and religious conservatism as predictors of gender role attitudes while controlling for demographics. Results showed significant negative associations for both variables, indicating that students who are more committed or more religiously conservative relative than others in their group also tend to have less egalitarian (i.e., more traditional) gender role attitudes, even after controlling for other variables in the model. Model 2 explained 34% of the variance at Level 1 and 67% at Level 2, relative to the null model.

To examine between-group effects (i.e., if groups with higher average religious conservatism have lower average egalitarian gender role attitudes), in Model 3 we added Level 2 group conservatism. Results showed a significant and negative within- and between-group effect such that greater individual religious conservatism and greater average group religious conservatism predicted lower average egalitarian gender role attitudes. This shows that both individual and group effects were significant and in the same direction. This model explained 37% at Level 1 and 75% at Level 2, relative to the null model.

Model 4 added two cross-level interactions; the first between student religious commitment and group conservatism and the second between student religious conservatism and group conservatism. The religious commitment interaction was significant whereas the religious conservatism interaction was not. The model explained 38% of the variance at Level 1 and 75% at Level 2. To understand the nature of the significant interaction, we followed Preacher and colleagues (2006) and examined simple slopes at 1 SD above and below the mean of group conservatism. We found the association between individual religious commitment and egalitarian gender role attitudes was not significant at lower levels of group religious conservatism (i.e., more religiously liberal groups, $b = -0.03, SE = 0.04, t(276) = -0.72, p = .48$) but was significant at higher levels of group religious conservatism (i.e., more religiously conservative groups, $b = -0.15, SE = 0.05, t(276) = -2.70, p < .05$). As displayed in...
### Table 2 Means, Standard Deviations, and Inter-correlations at the Individual and Group Level

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student Egalitarian Gender Role Attitudes</td>
<td>-0.30*</td>
<td>-0.43</td>
<td>3.92</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td>2. Student Religious Commitment</td>
<td>-0.44*</td>
<td>-0.59*</td>
<td>3.80</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>3. Student Religious Conservatism</td>
<td>-0.80*</td>
<td>0.70*</td>
<td>4.75</td>
<td>1.02</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>3.98</td>
<td>3.83</td>
<td>4.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.41</td>
<td>0.42</td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. * p < .05. Intercorrelations for the individual level are presented above the diagonal, and intercorrelations for the group level are presented below the diagonal. Means and standard deviations for the individual level are presented in the vertical columns, and means and standard deviations for the group level are presented in the horizontal rows.

### Table 3 Multilevel Modelling of Egalitarian Gender Role Attitudes

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>3.84* (0.05) [3.73, 3.96]</td>
<td>3.84* (0.6) [3.72, 3.96]</td>
<td>3.83* (0.07) [3.68, 3.97]</td>
<td>3.82* (0.43) [2.62, 3.17]</td>
</tr>
<tr>
<td>West&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.18* (0.08) [-0.35, -0.01]</td>
<td>-0.18* (0.08) [-0.35, -0.02]</td>
<td>-0.21* (0.09) [-0.39, -0.02]</td>
<td>-0.21* (0.09) [-0.39, -0.02]</td>
</tr>
<tr>
<td>South&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.06 (0.06) [-0.06, 0.19]</td>
<td>0.06 (0.06) [-0.06, 0.18]</td>
<td>0.10* (0.06) [-0.01, 0.22]</td>
<td>0.10* (0.06) [-0.01, 0.22]</td>
</tr>
<tr>
<td>Midwest&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.10 (0.07) [-0.04, 0.23]</td>
<td>0.09 (0.07) [-0.04, 0.23]</td>
<td>0.13* (0.05) [0.03, 0.23]</td>
<td>0.13* (0.05) [0.03, 0.23]</td>
</tr>
<tr>
<td>Mainline&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.31* (0.06) [0.18, 0.44]</td>
<td>0.31* (0.06) [0.18, 0.44]</td>
<td>0.16* (0.08) [0.00, 0.32]</td>
<td>0.16* (0.08) [0.00, 0.32]</td>
</tr>
<tr>
<td>Evangelical&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-0.31* (0.06) [-0.44, -0.19]</td>
<td>-0.30* (0.06) [-0.42, -0.18]</td>
<td>-0.08 (0.09) [-0.26, 0.09]</td>
<td>-0.08 (0.09) [-0.26, 0.10]</td>
</tr>
<tr>
<td>Age</td>
<td>-0.01 (0.02) [-0.05, 0.04]</td>
<td>-0.01 (0.02) [-0.06, 0.04]</td>
<td>-0.01 (0.02) [-0.06, 0.04]</td>
<td>0.00 (0.02) [-0.04, 0.04]</td>
</tr>
<tr>
<td>Race/Ethnicity&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.07 (0.05) [-0.03, 0.16]</td>
<td>0.06 (0.05) [-0.04, 0.16]</td>
<td>0.05 (0.05) [-0.06, 0.15]</td>
<td>0.05 (0.05) [-0.06, 0.15]</td>
</tr>
<tr>
<td>Student Gender Women&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.15* (0.04) [0.07, 0.22]</td>
<td>0.15* (0.04) [0.08, 0.22]</td>
<td>0.14* (0.03) [0.07, 0.21]</td>
<td>0.14* (0.03) [0.08, 0.21]</td>
</tr>
<tr>
<td>Leader Gender Women&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.08* (0.04) [-0.01, 0.17]</td>
<td>0.08* (0.04) [-0.00, 0.17]</td>
<td>0.06* (0.04) [-0.01, 0.14]</td>
<td>0.06* (0.04) [-0.01, 0.14]</td>
</tr>
<tr>
<td>Religious Commitment&lt;sup&gt;WG&lt;/sup&gt;</td>
<td>-</td>
<td>-0.09* (0.05) [-0.18, -0.00]</td>
<td>-0.09* (0.05) [-0.18, -0.03]</td>
<td>-0.09* (0.04) [-0.17, -0.01]</td>
</tr>
<tr>
<td>Religious Conservatism&lt;sup&gt;WG&lt;/sup&gt;</td>
<td>-</td>
<td>-0.11* (0.04) [-0.18, -0.03]</td>
<td>-0.10* (0.04) [-0.18, -0.03]</td>
<td>-0.12* (0.04) [-0.19, -0.04]</td>
</tr>
<tr>
<td>Group Religious Conservatism&lt;sup&gt;BG&lt;/sup&gt;</td>
<td>-</td>
<td>-</td>
<td>-0.32* (0.08) [-0.49, -0.16]</td>
<td>-0.32* (0.08) [-0.49, -0.16]</td>
</tr>
<tr>
<td>Religious Commitment&lt;sup&gt;WG&lt;/sup&gt;*GRC</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-1.4* (0.06) [-2.62, -0.02]</td>
</tr>
<tr>
<td>Religious Conservatism&lt;sup&gt;WG&lt;/sup&gt;*GRC</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.03 (0.06) [-0.08, 0.15]</td>
</tr>
<tr>
<td>$R^2_G$</td>
<td>0.29</td>
<td>0.34</td>
<td>0.37</td>
<td>0.38</td>
</tr>
<tr>
<td>$R^2_0$</td>
<td>0.66</td>
<td>0.67</td>
<td>0.75</td>
<td>0.75</td>
</tr>
</tbody>
</table>

Variance Components

| $\sigma^2$                                              | 0.28 (0.02) | 0.26 (0.02) | 0.26 (0.02) | 0.26 (0.02) |
| $\tau_{00}$                                             | 0.02 (0.01) | 0.02 (0.01) | 0.004 (0.01) | 0.004 (0.01) |

Selected fit statistics

- 2 log likelihood                                     | 511.7    | 485.1    | 475.0    | 470.8  |
Akaike Information Criterion                           | 535.7    | 513.1    | 505.0    | 504.8  |

Figure 1, this shows the association between student religious commitment and egalitarian gender role attitudes was stronger and more negative when groups were more religiously conservative.

**Discussion**

This study examined 324 students attending 32 Christian campus-ministry groups in the U.S. to gain insight into how individual and group religious conservatism predicted gender role attitudes. Using multilevel modeling, we found that individual and group religious conservatism negatively predicted egalitarian gender role attitudes. This shows that students’ conservatism, relative to other members of their group, predicted more traditional gender role attitudes and that groups with greater average conservatism also tended to exhibit greater average traditional gender role attitudes. We also found that student religious commitment, relative to other group members, also predicted more traditional gender role attitudes and that this effect was stronger in more conservative groups. These are important findings since gender role attitudes predict a host of social, educational, and economic outcomes that may contribute to gender disparities.

The finding that religious conservatism negatively predicted egalitarian gender role attitudes is consistent with prior research findings (Colaner & Giles, 2007; Lottes & Kuriloff, 1992), but extends this research by illuminating how involvement in a campus-ministry group may buffer (if conservative)

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**Figure 1.** Predicting egalitarian gender role attitudes. Simple slopes were calculated at ± 1 SD around the mean on all variables.
or contribute (if liberal) to the liberalising impact of college on gender role attitudes (Lottes & Kuriloff, 1992). This shows that considering diversity among religious traditions, such as in religious conservatism, may be important to understand not only how, but also for whom religious participation helps to increase or decrease egalitarian gender role attitudes.

Understanding factors that predict gender role attitudes in college is valuable because college is a developmental period where young people make many important decisions, academically, professionally, and personally. For example, if a woman comes from a moderately conservative religious home environment, goes to college and joins a conservative rather than liberal religious group, experiences in this group may shift her path to endorse more traditional gender roles, influencing her choice of career (Frehill, 2012; Gonsoulin & LeBoeuf, 2010), family planning (Colaner & Giles, 2007), and ultimate financial trajectory (Judge & Livingston, 2008). Results also provide insight into how religiously conservative students may maintain traditional gender role attitudes, even when in a “liberal” college environment.

The results of this study also suggest that both relative position within a group and the group’s overall religious conservatism may be part of how religious conservatism contributes to gender role attitudes. This expands prior research that shows religious peers to be influential upon gender role attitudes (Bryant, 2003) by locating these religious peers in campus-ministry groups and showing both within- and between-group effects. Though it is likely that students self-selected into a campus-ministry group that reflected their attitudes, these results show that even when controlling for individual religious conservatism, the effect operated at the level of the group. Also, relative position within the group showed significant effects. Future research should examine this process longitudinally in more detail to see how friendship patterns and interactions with leaders shape gender role attitudes over time, especially for students who join a campus-ministry group that is similar or different from their previous experience.

Religious commitment also emerged as an individual level predictor of more traditional gender role attitudes (i.e., students who were more committed relative to others in their group tended to have more traditional gender role attitudes). However, this effect was moderated by the religious conservatism of the group with the effect being more pronounced in more conservative groups. This may be due to more conservative groups being more insular, having denser social networks, or exerting a stronger press to adhere to group norms than less conservative groups (Iannaccone, 1994; Scheitle & Adamczyk, 2009). In the language of social processes (Tseng & Seidman, 2007), perhaps such conservatism creates a particular set of norms about gender roles and appropriate gender behaviour. Future research is needed to better understand how religious conservatism functions as a group norm in and of itself, and how religious conservatism creates or maintains other types of norms (e.g., more rigidity in how students are expected to hold beliefs, other norms about gender) and how such norms shape relationships within the group. Examining these more specific aspects of campus-ministry groups may yield a deeper understanding of how these groups may shape the development, reinforcement, or alteration of gender role attitudes.

Limitations

The current study is not without limitations. First, the study was conducted with campus-ministry groups from Christian traditions in the U.S., leaving out the voice and perspective of other religious groups and other countries. Although Christianity continues to be the dominant religion in the U.S. (Pew, 2008), other religious traditions may have unique beliefs that translate into gender role attitudes, a rich question for future research. Second, participants were predominantly White, limiting generalisability to religious groups of different racial and ethnic compositions. Third, although we had groups from across the U.S., findings should be generalised with
caution since our sample was not random or representative, and we had a relatively low participation rate. In fact, it is possible that due to the nature of some of the study questions (about gender roles, and gay marriage), the voices of some individuals or groups may have been underrepresented in the findings. Future qualitative interviews or a more focused survey on gender role attitudes may capture these other views. Fourth, the measure of gender role attitudes may be slightly dated and may miss more contemporary gender role attitudes (Larson & Long, 1988); though we did observe variability among individuals and groups. Also, more data is needed as to how endorsement of gender role attitudes translates into actual behavior. Fifth, students were surveyed at one point in time, limiting our ability to study change over time. Future longitudinal research would be helpful to understand students in a larger context, including their parents’ religious beliefs, pre-college religious beliefs, and evolution of beliefs across time. Finally, although we found effects using within-group centering, future research is needed to assess how students self-select into campus-ministry groups and how such patterns of selection may change or reinforce student gender role attitudes.

**Implications for Working with Christian Students**

Findings from this study have practical implications for community psychologists and other professionals working with college students (e.g., diversity educators, counselors, psychologists, educators, administrators, religious leaders) to combat sexism. If students deny the existence of gender disparities or limit their personal or professional options based on traditional gender role attitudes (e.g., a woman student who feels she cannot take on a leadership position over men), it is beneficial to consider what social settings and group processes may be operating to maintain traditional gender role attitudes, such as involvement in a conservative campus-ministry group. Qualitative research has found that students who question the norms and beliefs taught in campus-ministry groups may pay a social penalty, which can be difficult if the group is their “home away from home” (Mankowski & Thomas, 2000). Thus, care may need to be taken when understanding students as embedded within social settings that may encourage or discourage more egalitarian gender role attitudes and the potential social consequences for attempting to educate or change student attitudes.

When engaging with students who cite religious beliefs as the reason for maintaining traditional gender role attitudes or sexist behaviors, it can be challenging to address the harmful attitudes while being sensitive to religious beliefs (Anton, 2008). The current study considers this dilemma by looking across a range of Christian traditions, rather than viewing Christianity as a homogeneous group. By examining differences among groups from different religious traditions, it appears that Mainline Protestant groups may promote more egalitarian gender role attitudes. Therefore, when working with a Christian student, it may be helpful to connect them to a Mainline Protestant group, especially if they are not finding a good fit in more conservative groups but still desire to explore and practice their religious beliefs. Qualitative research has shown that students often belong to groups that are not the same religious tradition they grew up in, but may choose groups based on their evolving beliefs, convenience, or other group characteristics (Mankowski & Thomas, 2000).

Moreover, participation in certain Christian campus-ministry groups may have the effect of socialising students into more egalitarian gender role attitudes, if a student joins a group that is more egalitarian than their religious home of origin. Some Mainline Protestant denominations, such as the Presbyterians (U.S.A.) and the United Church of Christ, have a history of supporting feminist policies and women in leadership (Braude, 2012). A woman student in such a group may have leadership and mentoring opportunities not otherwise available. Additionally, students are
impacted by their peers, which can be beneficial to students, if the norms being transmitted by those peers are beneficial (Poteat & Spanierman, 2010; Sechrist & Stangor, 2001). Thus, connecting with the leaders of these more liberal and feminist religious groups and promoting involvement for religious students may be one way of honoring religious beliefs while combating sexism and its detrimental impact on students. Perhaps working with and connecting students to religious leaders in more liberal groups also may provide religious models and mentors to help discuss questions surrounding religious beliefs.

Better understanding how religion and other social forces shape gender role attitudes for college students is important because the choices made in college have a lasting impact on students. Campus-ministry groups are a unique setting since they may be the first religious setting students occupy outside of the religious congregation they likely grew up attending. Understanding the social processes (i.e., norms and relationships) that exist in campus-ministry groups in the U.S. may help college professionals unfamiliar with the religious context to understand how individuals, particularly women, are socialised to make decisions that may impede their own success or financial security. Women of all ages show higher levels of religious commitment than men and thus norms in these groups may hold particular importance to women (Collett & Lizardo 2009; Miller & Hoffman 1995; Putnam, 2001). Examining the impact of these religious groups can help community psychologists, in collaboration with feminist religious leaders, work with religious individuals to help navigate the delicate balance of synthesising religious and gender role attitudes in a way that challenges sexism and promotes the full potential of women.

References


Religious Conservatism and Gender Role Attitudes


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