Gender Role Attitudes and Religiosity Across Generations and Decades:
A Research Report on an Ongoing Project

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Cultural attitudes in the United States are changing. Less than half a century ago, most Americans held conservative views on premarital sex, gay rights, and gender roles. Today, premarital sex is widely accepted (Harding and Jencks 2003), gay lifestyles are increasingly embraced (Brewer and Wilcox 2005), and support for women’s rights is widespread (Brewster and Padavic 2000; Brooks and Bolzendahl 2004). The project that we discuss in this paper is part of a broader effort to investigate cultural change in the United States. This effort was begun last year by two of the present authors as we sought to investigate the changing “mood” of the country at the aggregate level on issues of public morality such as gay rights, abortion rights, women’s rights, and the like (Mulligan and Grant 2007). Drawing from Stimson’s (1999) notion of policy mood, we found that in recent decades the cultural policy mood (CPM) of the U.S. has moved increasingly and nearly monotonically in a liberal direction. We found, moreover, that aggregate-level CPM is inversely associated with aggregate-level religiousness in the U.S., or macro religiosity, which itself has been on the decline for several decades (see Grant 2008).

The present study is a first step toward extending this analysis of CPM and religiosity from the aggregate level to families and individuals. Specifically, we look at attitudes toward the role of women in American society and religiosity among four generations of families who took part in four waves of the Longitudinal Study of Generations, a panel study conducted between 1971 and 1997. We investigate over this period the effects of gender role attitudes on religiosity, the effects of religiosity on gender role attitudes, and whether changing attitudes toward gender roles and religiosity at the individual level are influenced by generational effects, period effects, or both. For this paper we had hoped to disentangle the
possible reciprocal effects between gender role attitudes and religiosity at the individual level by estimating a multilevel cross-lagged autoregressive covariance structure model. As it happened (and we discuss below), we have not successfully estimated this model as yet. Even so, the individual-level results we do report support our previous aggregate level analysis, showing a negative association between gender role attitudes and religiosity over the twenty-six year period we investigated in this preliminary study. Moreover, the results we present below extend the previous aggregate analysis by showing that increasingly feminist gender role attitudes result from both generational effects and period effects while declining religiosity is a function of generational effects but offset slightly by countervailing period effects.

Cultural Policy Mood and Macro-Religiosity

The previous work that motivated the current study (Mulligan and Grant 2007) took as its starting point James Stimson’s notion of policy mood (1999). Stimson stipulated that we as social scientists can tap into the ideology of the country at the aggregate level by aggregating together survey marginals—the percentage of people who take liberal and conservative stands on policy questions in public opinion polls. Aggregating marginals from many different surveys on many different topics within a specific year yields the coefficient of policy mood for that year. Doing this year by year, for several years, yields the measure of policy mood—a yearly coefficient that shows the relative liberal–conservative ideology of the country across time. Stimson’s estimation algorithm for policy mood is similar to factor analysis, and as with factor analysis, some items fit the policy mood dimension better than others. The components of policy mood include especially survey questions about taxes and
spending on a range of issues, including health care, education, welfare, and the environment. Stimson interprets his measure of policy mood as reflecting “support for more or less government. (1999, 70). It has been used in many studies of American politics over the past fifteen years or so.

We applied the concept of policy mood to the domain of cultural policy. We defined CPM conceptually in terms of public morality, or the regulation of private behaviors that proponents contend have public consequences. Some of these, such as mandatory seat belt laws, and laws governing recreational drugs, find support on both sides of the ideological spectrum. But we suggest that most of them—involving restrictions on abortion, gay rights, women’s rights, pornography, and the like—tend to find greatest support on the cultural right and greatest opposition on the cultural left. Our measure of cultural policy mood is designed to tap into the left-right cultural values divide in American politics in the aggregate, at the national level. The standardized measure of CPM is presented in Figure 1. Higher values reflect cultural policy liberalism. The measure of CPM shows that since the early 1970’s CPM in the U.S. has moved consistently in a liberal direction.

[FIGURE 1 ABOUT HERE]

We also applied the concept of policy mood to aggregate-level religiosity or macro religiosity. We defined macro religiosity conceptually in terms of aggregate-level indicators of religious commitment, devotion, belief, and behavior. We measured it using items that reflect these and similar indicators of aggregate religiosity, including survey marginals, church attendance, and church membership (see Grant 2008). The standardized measure of
macro religiosity is presented along with CPM in Figure 1. For ease of comparison between the two, here higher values reflect greater secularization while lower values reflect greater religiosity. The measure of macro religiosity is highly correlated with CPM. Using a VAR time series model, in our previous analysis we investigated the association between them. We found that macro religiosity Granger causes CPM but not the reverse—CPM does not Granger cause macro religiosity. Clearly, CPM and macro religiosity are changing and related in the aggregate. At the aggregate level, the U.S. is becoming more secular, more culturally liberal, and these two things are related.

**Changing Cultural-Political Attitudes and Religiosity**

A logical next step is to address how these changes are occurring at the level of individuals. For this analysis we test the reciprocal effects of cultural-political attitudes on religiosity and religiosity on cultural political attitudes. At the same time, we account for other factors that might drive changes in cultural-political attitudes and religiosity including generational effects, period effects, age, sex, and education. We discuss each of these in turn.

*Generational Effects*

People who were born around the same time, grew up in the same culture, and entered adulthood together may be said to constitute a birth cohort or generation (Mannheim 1952). Members of a generation are often thought to have similar experiences growing up in terms of education, entertainment media, economic and social conditions, and historical events. When these shared life experiences of a birth cohort leave an imprint on its members’ social, cultural, and political outlooks it constitutes a generational effect. Theories of generational
effects often point to late adolescence and early adulthood as “impressionable years” during which young people are especially open to influence (Easton and Dennis 1969; Greensteen 1965). As young people come of age politically they are subject to the political and social culture of the time in which they live. People who entered early adulthood in the late 1960’s may have experienced life differently than people who entered adulthood in the 1980’s who, in turn, may have had different experiences than those who are coming of age in the 2000’s and beyond. Political, social, cultural, demographic, and economic trends, wars and terrorist attacks, and any number of other shared experiences may leave a mark on a generation. When they do, they reflect a generational effect.

Most theories of generational effects postulate that society leaves its mark during the impressionable years and that mark is retained by the generation throughout life. Attitudes, beliefs, and values are formed in late adolescence and early adulthood and thereafter remain essentially unchanged. Newcomb’s (1943) study of young women who entered Bennington College in the 1930’s is the classic example. He found that these mostly conservative young ladies from largely conservative families tended to leave Bennington more liberal than when they came in. Follow up studies showed that these women retained their college-bred liberalism a quarter century later (Newcomb, Koenig, Flacks, and Warwick 1967) and into old age (Alwin, Cohen, and Newcomb 1991). Generational theories postulate that an imprint is left on an age cohort early in life but remains thereafter throughout the adult years.

In the study of cultural and religious change, generational effects are manifest through generational replacement over the course of decades. As generations grow old and pass away, new generations come of age and take their place. The newer generations have different
socializing experiences and, as a result, different values, attitudes, and outlooks. As older
generations are replaced by newer ones, the views of the newer generations become the norm.
Over time, generational replacement results in social change.

*Period Effects*

Sometimes social, economic, cultural, and political conditions and events may
influence people of all age cohorts, not just the youngest generation. When the Zeitgeist
influences people of all age groups it constitutes a period effect. Theories of period effects
are more likely to emphasize “lifelong openness” and “change at all ages” (Sears 1990, 7; see
also Sears 1981) than impressionable years followed by attitude stability. Period effects
provide an alternative account for both individual-level and aggregate-level change. Period
effects suggest that attitude change within individuals across time, rather than generational
replacement, drives social change.

*Age*

The simple process of getting older may have implications for political and cultural
views. On average, older people tend to take more conservative stands on many social and
cultural issues (Erikson and Tedin 2007) and are more religious (McCullough, Enders, Brion,
and Jain 2005) than younger people. At a conceptual level, age is not easily differentiated
from generational replacement as an explanation for cultural and religious change. Moreover,
it is difficult to differentiate empirically among age, generation, and period effects in
longitudinal studies of attitudes and behavior. The reason for this is that the three are linearly
dependent. Assuming linear effects of age, generation, and period on cultural-political
attitudes, for example, the effect of any one is a linear combination of the other two (Menard 1991; Harding and Jencks 2003), as expressed in the simple equation

\[ A = G + P \]

Where

- \( A \) = Respondent’s age, measured as years since birth
- \( G \) = Generation, measured as series of birth cohorts
- \( P \) = Period, measured as the year in which the survey was conducted

For the present analysis, and any longitudinal study of the effects of time, the problem with the linear dependence of age, generation, and period is that it creates collinearity among the predictors in regression analysis. In the current study, we think that generation and period provide theoretically sound explanations for changing cultural-political attitudes and values in the United States. Given the estimation problem, we include generation and period as predictors but exclude age in the analysis presented below.

**Sex and Education**

We control for both.

**Data and Method**

The goal of this study is to test for the reciprocal effects of cultural-political attitudes and religiosity while controlling for generation, period, sex, and education. For this we need a survey that meets four criteria. First, it must be longitudinal and ask the same (or nearly the same) questions about cultural-political attitudes and religiosity across multiple waves. While many longitudinal studies exist, few include questions about both across time. Second, the
time series must be fairly long. If it lasts only a few years we cannot really account for period
effects. Third, it must include the same participants at multiple waves. This is the most
difficult criteria since few adequate panel studies exist. A panel study is necessary if we are
to account reliably for the possibility of changing attitudes within individuals. Finally, it must
include multiple generations of respondents in order to account for generational effects.

One possibility is the General Social Survey (GSS) time series, which has been used in
several studies of cultural-political attitude change. Harding and Jencks (2003), for example,
used GSS data to try to pick apart generational, period, and aging effects on the massive
liberalization of attitudes toward premarital sex in the U.S. since the 1960’s and 1970’s.
Brewster and Padavic (2000), Brooks and Bolzendahl (2004), and Mason and Lu (1988) used
GSS data in their studies of the similarly dramatic liberal trend in attitudes toward the role of
women in recent decades. However, the GSS is a series of cross sectional surveys, not a
longitudinal panel study, and so we cannot glean from these studies how individuals’ attitudes
toward these issues might have changed over time.

Another possibility is the ANES panel studies. These include the three wave 1992-94-
96 and 2000-02-04 panels, among others. Some of these NES panels include the requisite
survey items, which would allow us to discern individual-level change over time. However,
they were all conducted over a period of less than a decade, making it impossible to discern
genuine period effects.

A third possibility is the panel study of Jennings and his colleagues (e.g., Jennings and
Niemi 1968; 1981). This panel has been going on since the 1960s and includes multiple
generations. However, the earliest surveys lacked religion questions beyond the simplest
“Protestant, Catholic, Jewish” denominational affiliation question, making a long-term longitudinal analysis of religiosity problematic.

*The Longitudinal Study of Generations*

One study that meets all four criteria is the Longitudinal Study of Generations (LSG) conducted by researchers at the University of Southern California. The LSG began as a cross-sectional study of 300 three-generation families living in California in 1971. It became a panel study with subsequent waves in 1985, 1988, 1991, 1994, 1997, and 2001—a total of seven waves conducted over 30 years to date. The survey is mixed mode, including both face-to-face and mail surveys. Data are currently available for waves one to six (1971-1997). The population from which respondents were sampled included the then 870,000 members of the Kaiser HMO. The original (1971) random sample of 2,044 individuals from this population included grandparents who were then in their 60’s, their children, who were then in their 40’s, and grandchildren, who were then in their late teens and early 20’s. In subsequent waves, as the families changed, the study added new spouses, children, grandchildren, and (beginning with the 1994 wave) great-grandchildren of the wave one grandparents.

*Measures*

*Feminism* We operationalized cultural-political attitudes using an index of four items that are each good indicators of gender-role attitudes or, more succinctly, the construct feminism. Respondents answered each of these Likert questions by placing the statement presented in the question on a four-point scale that runs from “strongly agree to “strongly
disagree.” The first one asked participants to respond to the statement “The women's liberation ideas make a lot of sense to me.” The second stated “Some equality in marriage is a good thing, but by and large, the husband ought to have the main say in family matters.” The third one stated “It goes against nature to place women in positions of authority over men.” The fourth one was “Women who want to remove the word ‘obey’ from the marriage service don't understand what it means to be a good wife.”

These four items were asked on the 1971, 1988, 1994, and 1997 waves. For this reason, these four waves are the only waves use in this analysis. The four items correlate well in each wave and have adequate Chronbach’s Alpha coefficients. In each wave we coded each of the four items to range from 0 to 1 where higher values reflect more feminist responses. In each available wave, for each participant, we averaged together the scores for the four items. This creates a single measure of gender role attitudes—feminism—for each respondent in each of the four waves.

**Religiosity**  The measure of religiosity included two items. The first one asked whether respondents consider themselves to be “not at all religious,” “somewhat religious,” “moderately religious,” or “very religious.” The second one asked how often respondents attend religious services. In each of the four waves the two items were highly correlated. We scaled both items to range from 0 to 1 where higher values reflect greater religiosity. To create the index of religiosity, for each year and each respondent we averaged the two items together. This creates a single measure of religiosity for each respondent in each of the four waves.
Generations  The measures of generations include four indicators (dummy variables) for each of the four generations in the LSG—the eldest pre-war generation of grandparents, their World War II generation children, the post-war Baby Boomer grandchildren, and Generation X great-grandchildren.

Periods  The measures of period effects include four indicators for each of the four waves of the panel study—1971, 1988, 1994, and 1997.

Sex  Here measured 1 = female, 0 = male

Education  Higher values reflect higher levels of formal education.

Method

In order to test the reciprocal effects of gender role attitudes and religiosity we must account for the multilevel or nested nature of the data. The observations of gender role attitudes and religiosity are nested within respondents and respondents are themselves nested within families. We must account for the hierarchical structure of the data to obtain valid results. We sought to do this by estimating a multilevel cross-lagged Markov autoregressive covariance structure model in LISREL. This model allows us to test simultaneously the reciprocal effects of gender role attitudes and religiosity while accounting for the autoregressive effects of religiosity and feminism as well as the multilevel data structure. These models are generally estimated using maximum likelihood (ML) and achieving convergence is notoriously difficult (Hox 2002). We followed the three-step strategy of du Toit and du Toit (2001). First, we estimated the restricted model. Second, we treated the variance/covariance matrix recovered from the restricted model as if it were the sample variance/covariance matrix and estimated the hypothesized cross-lagged Markov model.
Third, we used the resulting coefficients from step two as starting values in the final full-information ML (FIML) cross-lagged Markov model. However, as of this writing we have not yet been able to achieve convergence of this final, step three, model. As it happens, the step two estimates are generally very similar to the final FIML results. And in our preliminary analysis they support the supposition of reciprocal effects. Even so, rather than present those (potentially rough) estimates, we will continue to work on this analysis until we are able to achieve more precise estimates. For the analysis presented here, we pursued a slightly different estimation strategy.

In the analysis presented below, we estimated two multilevel linear regression models. In the first model we regressed religiosity on gender role attitudes (feminism), generations, period, sex, and education. In this model we allowed both the intercept and slope to vary at random across both respondents and families.\(^1\) In the second model we regressed feminism on religiosity and, otherwise, the same set of other predictors.\(^2\) The fixed effects coefficients that we report may be interpreted like OLS coefficients. Although these two models do not allow us to test simultaneously the reciprocal effects of feminism and religiosity in a cross-lagged setup, they nonetheless provide a good sense of the association between them.

\(^1\) This accounts for any unobserved respondent- and family-specific heterogeneity not accounted for in the fixed effects coefficients that we report in this paper.

\(^2\) For both models we tested the overall fit of the model against the nested and more restrictive random intercepts-only (no random slopes) model and in both cases found the random coefficients (random intercepts and slopes) model had a statistically-significant better fit.
Results

Religiosity Model

The results of the religiosity model are presented on the left side of Table 1. The first coefficient, which relates to feminism, is negative and statistically significant. It indicates that as feminism increases within individuals over time, religiosity decreases. The next three variables relate to generational effects. The pre-WWII generation of grandparents, who were in their 60’s in 1971, is the excluded category. The coefficients on the three generation variables indicate whether each of these other three generations is more or less religious than the pre-WWII generation. The coefficient on the WWII generation is not significant, which indicates that members of this generation do not differ significantly from their parents when it comes to religiosity. The coefficients on the other two generation indicators, however, show that Baby Boomers and, especially, Generation X’ers are significantly less religious than their grandparents and great-grandparents, respectively.

[TABLE 1 ABOUT HERE]

The next three indicators relate to period effects. The first wave (in 1971) is the excluded category. The coefficients on these three variables indicate whether each of these periods is more or less religious than in 1971. They show that, on average, the late 1980’s and through the 1990’s respondents were somewhat more (not less) religious than in 1971. Although succeeding generations have become more secular, the 1980’s and 1990’s were, on average, periods of slightly greater religiosity for society more generally. The last two variables in the model account for sex and education. They show that across this period
women and people with higher levels of formal education were somewhat more religious than men and people with less formal education.

Feminism Model

The results of the feminism model are presented on the right side of Table 1. The coefficient on religiosity is negative and statistically significant. It suggests that in recent decades, as individuals have become more secular over time, this diminishing of religiosity has increased support for more feminist gender roles. The next three variables show strong generational effects. Compared to the elder generation, the WWII generation, Baby Boomers, and Generation X have each been more favorable toward liberal gender roles. The period effects are even stronger. The three coefficients that relate to period effects show that, on average, the late 1980’s and the 1990’s were periods of liberalization across society when it comes to gender role attitudes. The women’s movement of the late 1960’s and early 1970’s appears to have come to fruition in the succeeding decades. The final two variables in the model show that women and people with higher levels of education are more feminist than men and people with lower levels of education.

Discussion

Since the late 1960’s the United States has undergone enormous social and cultural change. Research by two of the present authors shows this to be especially evident with respect to macro religiosity and cultural policy mood. In the aggregate, the country has grown increasingly secular and, at the same time, liberal on cultural political issues. In the present study, we sought to bring this analysis of aggregate religiosity and cultural policy mood to the
level of individuals. Using data from the Longitudinal Study of Generations collected between 1971 and 1997 we found a negative association between religiosity and feminist gender role attitudes. Over this period, individuals who became more secular in their religious outlook also tended to become more feminist in their views of women’s roles. We showed, moreover, that declining religiosity and increasing feminism within individuals is driven in part by generation effects. Relative to the eldest generation that came of age prior to WWII, the younger generations are increasingly less religious and more feminist. We also showed significant period effects, particularly with respect to gender role attitudes. Controlling for generational effects, the late 1980’s and the 1990’s were more pro-feminist than the early 1970’s. With respect to religiosity, this period was actually slightly more religious than the early ‘70’s, indicting countervailing effects between generation and period with respect to religiosity.

These results add to our understanding of social change in the United States but are not without limitations. Of course the unrepresentative nature of the LSG sample may make it problematic in extending inferences from this study to Americans everywhere. The original sample came from a population of three-generation families who belonged to a an HMO in California rather than some larger, more general, population. Moreover, the population from which the sample was drawn has been found to under-represent racial minorities, childless couples, and single people, and over-represent union members (Bengston, Biblarz, and Roberts 2002). Because the sampling design did not include a random sample of some larger population, we cannot make inferences from the sample marginals—say, the percentage who are strongly feminist or not at all religious—to some larger population.
Even so, we do not see this as necessarily problematic for the current analysis because we emphasize that we do not make inferences in this study about the amount of change in religiosity or gender role attitudes in some larger population but rather the mechanisms by which these changes have occurred. Extensive analysis of the representativeness of the LSG sample shows that it is similar to other panel studies that are representative of the population of the U.S. on a variety of psychological measures (see Bengston, Biblarz, and Roberts 2002). We suggest that there is no reason to expect that the mechanism by which religiosity is associated with gender role attitudes, or the generational and period effects experienced by members of the study population, are different fundamentally from people outside the study population. We do not make inferences about how much change has occurred in society at large, only how this change has occurred. Even so, as we move forward with this project we hope to triangulate the results of this study with more representative samples including (the somewhat limited) Jennings et al. generations panel.

A second limitation is that we did not fully exploit the families represented in the sample. Respondents to the LGS are nested within families. We can test empirically the socializing influences of family members on each other. We should be able to test, for example, the influence of parents on children, including indirect effects, such as whether the religiosity of respondents’ mothers effects the gender role attitudes of their children. In future work we will account for these potential family influences more directly (rather than simply control for them as we did here with random effects).

A third limitation is our inability in the present analysis to show the direction of causality between religiosity and gender role attitudes. The previous aggregate level analysis
suggests that feminism drives religiosity but not the reverse. Given the panel data at hand, we ought to be able to put this to the test directly at the individual level. As discussed, we had intended to present the results of our model to test this directly but faced estimation problems that we could not work out in time for the writing of this paper. We look forward to overcoming these obstacles and reporting the results of this analysis in the future.

A fourth limitation is that we do not specify how the generational and period effects influenced religiosity and gender role attitudes. For the generations, was it differences in upbringing, education, media, or something else that have made recent generations more secular and more feminist than the eldest generation? For periods, what about the 1980’s and 1990’s caused society to be more liberal in its gender role attitudes? We cannot answer either questions directly. In this respect, generational and period effects are blunt instruments.

These limitations notwithstanding, we suggest that the central findings of this study hold: Since the early 1970’s the rise of feminist attitudes toward gender roles has coincided with a decline of religiosity at the individual level, that these two phenomena are theoretically and empirically related, that each are driven in part by generation effects, and that feminism especially is driven by period effects. Younger generations are more secular and culturally liberal than their forebears. As new generations replace old ones, society itself becomes more secular, more culturally liberal.
References


New York: Teachers College Press.
Cultural Policy Mood and Macro Religiosity in the United States (Standardized) 1972-2005

Note: Higher values reflect greater secularism and cultural policy liberalism.
### Tables

Table 1  HLM’s Predicting Religiosity and Feminism (1971-1997)

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Notes: Hierarchical linear models (with random intercepts and slopes) predicting religiosity (Model 1) and feminism (Model 2). The models include 1263 respondents nested in 290 families. Entries are fixed effects coefficients. Excluded generation is the pre-WWII generation. Excluded Wave is 1971. Standard deviations (and standard errors) for random respondent- and family-specific intercepts and slopes not shown (but are statistically significant in every case and available from the first author upon request). Data Source: Longitudinal Study of Generations, 1971-1997.