



Research Report

Shawn F. Dorius and Duane F. Alwin

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Egalitarian Beliefs—A Decomposition
of Trends in the Nature and Structure
of Gender Ideology

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Shawn F. Dorius

Population Studies Center, University of Michigan

Duane F. Alwin

Professor of Sociology and Demography, Pennsylvania State University

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Direct correspondence to Shawn F. Dorius, Population Studies Center, University of Michigan, 426 Thompson St, Ann Arbor, MI 48106. Email: sdorius@umich.edu

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ABSTRACT

This research investigates aggregate change in gender attitudes from the mid-1990s to the mid-2000s for an unbalanced panel of 75 countries representing over 70 percent of the world's people. The use of modern techniques of factor analysis suggests that gender belief systems exhibit a high degree of uniformity across countries and have been converging around a decidedly postmodern ideological structure in recent years. Multi-level models confirm that the individual-level correlates of gender attitudes developed in the study of wealthy, Western countries are similarly predictive of attitudes in worldwide models. Regression decompositions find that cohort effects, with recent birth cohorts espousing more progressive beliefs about the extra-familial role of women than earlier-born cohorts, are a near-universal source of secular change in gender attitudes and are robust to the introduction of individual and country-level control variables.

INTRODUCTION

A large body of research affirms a clear trend toward increasingly egalitarian attitudes and beliefs about gender and a steady erosion of traditional ideas toward gender roles in the United States and much of Europe over the last decades of the 20th century. The trend has been pervasive, affecting all social groups, including the old and young, rich and poor, black and white, educated and uneducated, parents and the childless. Although changes in the structure of society and demographic trends have both played important roles in this essentially cross-national sea change, a number of studies demonstrate that cohort replacement effects are a primary proximate source of aggregate change in gender beliefs and attitudes in the U.S. (see, for example, Mason and Lu, 1988; Alwin and Scott, 1996; Scott Alwin, and Braun 1996; Brewster and Padavic 2000; Brookes and Bolzendahl 2004; Ciabattari 2001). That is, the replacement of earlier-born, more traditional cohorts with later-born, relatively progressive cohorts is most directly responsible for the secular decline in traditional beliefs about gender. In Western European nations (including Australia), the remarkably similar progressive gender attitude trend is also due in large part to the effect of cohort replacement (Evans 1995; Neve 1995; Scott, Alwin and Braun 1996). This, despite the observation that period effects associated with the transition from planned to market economies appear to be responsible for much of the secular decline in traditional values in selected Eastern European nations (Lee, Alwin and Tufiş 2007). Attitude change among affluent nations therefore suggests a broadly similar secular trend, but with important inter-country variation in the mechanisms of change in ideas about gender.¹

We still know little about the mechanisms of attitude change in non-Western, and poor societies because, to date, cohort studies have focused almost exclusively on late twentieth-century Western industrial societies (see Braun, Scott, and Alwin 1994). Yet from an historical and comparative perspective, the Western sample of nations studied in gender attitude cohort studies have recently undergone, or currently are undergoing, unprecedented social, cultural, and economic change associated with what has been referred to as “the second demographic transition” (Lesthaeghe and Neidert 2006). The limited amount of research to take up the question of gender attitudes at a global scale (see, for example, Inglehart and Norris 2003) finds evidence of birth cohort differences in gender beliefs across a range of attitude items, but only in the cross-section, and so we still do not understand in longitudinal perspective how the

mechanisms of social change operate outside the industrialized world. In a rare study of a non-Western industrialized nation, Lee, Tufiş, and Alwin (2009) found that from 1994-2002, cohort replacement actually contributed to a *decline* in gender egalitarian beliefs for certain items in their study of Japanese women and men (using ISSP data), suggesting that cohort effects might not be as ‘universal’ as is suggested by studies of rich, Western populations. While we do know that there are “large and pervasive differences between the worldviews of people in rich and poor societies” (Inglehart, Norris, and Welzel 2002:332), the notable absence of non-Western and poor countries from the literature dealing with the mechanisms of social change raises the question as to whether or not cohort effects are merely a by-product (or a convergent condition) of modernity. It is an open question as to whether or not cohort replacement has the same effect in poor and non-Western societies as we have seen in wealthy, Western nations.

But even before we can begin to make assertions about trends in gender ideology and the causes of attitude change, we need to more fully understand whether or not attitude and belief systems are uniformly organized across the vastly different societies of the world. It may be that the notion of an organized and coherent set of beliefs around something like ‘gender equality’ or ‘gender roles’ is the product of industrialization, postmodernism, or other processes intrinsic to highly developed societies and is therefore an irrelevant line of inquiry among low-income and non-Western nations. Indeed, Inglehart and Baker (2000) argue that a postmodern value orientation, including beliefs about gender equality, is an outgrowth of processes associated with what is often referred to as modernization.²

In this research, we leverage the repeated cross-sectional design of the World Values Survey to assess gender ideologies for respondents from 75 countries representing more than 70 percent of the world’s population. When we talk about a gender ideology, we are referring to the organization of attitudes and beliefs about gender, rather than valence on a specific set of survey items. We measure the internal consistency and temporal stability of people’s beliefs about a range of gender items by country and in models that pool countries into income classes. We then document the secular trend in gender attitudes and decompose it by its proximate determinants, cohort replacement and intra-cohort change.

Our goal in this research is to answering the following four research questions: (1) Is gender ideology a global phenomenon? In other words, are beliefs about gender similarly

organized across countries that vary on level of development, cultural traditions, and spatial distribution? (2) Do gender belief structures exhibit temporal stability? (3) Are cohort effects ‘universal’ in the sense that they contribute to social change across a broad range of societies? And if so, is the direction uniform? And (4) Are cohort effects robust to the presence of individual and country-level controls? In the next section, we discuss the nature of gender belief systems and then review research relevant to our study. We then describe our data and methods and discuss the results of our analysis.

THEORETICAL BACKGROUND

Belief Structures

Previous research suggests that gender ideology, by which we mean the interconnection of attitudes, values, and beliefs about gender, is complex, multi-faceted, and even contradictory (Mason et al 1976; Mason 1986; Bradley and Khor 1993). By definition, attitudes are “latent predispositions to respond or behave in particular ways toward attitude objects” (Alwin and Scott 1996:77) and have a cognitive, affective, and behavioral component (Rokeach 1970). Attitudes thus represent our subjective evaluation of an object (in this case, the object of interest is egalitarian gender roles) and these evaluations can be positive or negative (Ajzen 2001; Fishbein and Ajzen 1975). Individuals acquire their attitudes and values and develop belief systems from a range of sources, perhaps best illustrated by Bronfenbrenner’s (1979) ecological model of human development (see Alwin, 2001, 2005). In this model of development, individuals are located within a nested set of environments, including micro, meso, and macro-systems. While each of the nested environments influences the hierarchical ordering of values and the structure of individual belief systems, the macro-system takes center stage in cross-national perspective because this is the system where broad cultural norms and values are created and maintained. It is at the macro-level that we expect to find the largest disagreement in attitudes about gender.

When a collection of attitudes, beliefs and values come to be associated, or constrained, by one another so that knowing an individual’s opinion on a particular issue provides a high degree of certainty about their position on related issues (Sniderman and Tetlock 1986), an “ideology” is formed. Ideologies, then, reflect the interconnection between certain beliefs and underlying values and indicate the formal organization of a subset of beliefs into a belief system

(Converse 1964). The formation of an ideology reflects awareness of the issues, though not necessarily agreement. Social scientists empirically assess the presence of, and level of constraint in, a belief system by querying subjects' attitudes on a set of interrelated items using opinion surveys, and then examine the degree of inter-relationship or "constraint" among the set of beliefs and attitudes.

In their cross-national study of occupational sex segregation, Charles and Grusky (2004) posit that cultural norms and attitudes about gender are organized along two axes, 'male primacy' and 'gender essentialism'. Male primacy centers around the belief that men are inherently better than women (in methodological parlance, gender is an ordinal scale) while gender essentialism (Ridgeway 2006) posits that men and women are just different (gender as a nominal scale). With gender essentialism, gender differences are innate; women are seen as being better equipped to perform nurturing tasks and men better suited to leadership and physically demand tasks. Attitudes and beliefs appear to be loosely grouped around the distinction between gender equality and gender roles (Brooks and Bolzendahl 2004; Ciabattari 2001; Mason, Czajka, and Arber 1976; Mason and Bumpass 1975; Thornton 1989; Thornton Alwin and Camburn 1983; Thornton and Freedman 1976). In our view, 'male primacy' is equivalent to the notion of gender inequality, while 'gender essentialism' is similar to what some refer to as *gender roles*.

In the range of attitudes people have about gender, a second important distinction is between the public and private spheres (Bradley and Khor 1993). The most progressive attitudes tend to be those dealing with the public sphere, including the educational domain and the workplace, while the most traditional attitudes deal with private-sphere gender roles such as child-rearing and household chores (Mason, Czajka, and Arber 1976; Treas and Widmer 2000; Brewster and Padavic 2000). McDonald (2006) suggests the reason the public sphere is more egalitarian than the private sphere is because many public institutions, such as the school and the workplace, deal with people as individuals, rather than members of families. This fits well with neo-institutionalist claims of an expanding global civil society that embodies progressive norms such as equality, tolerance, and justice (Meyer et al. 1997; Boli and Thomas 1997). One of the primary mechanisms for the diffusion of these global norms is the school system (Meyer et al. 1992), which has spread around the world even to the poorest of countries (Benavot and Riddle 1988).

Previous Research

As noted, several studies on US samples have explicitly addressed the question of macro-change in gender ideology via the proximate sources of individual and cohort change (Artis and Pavalko 2003; Brewster and Padavic 2000; Ciabattari 2001; Firebaugh 1992; Mason and Lu 1988; Misra and Panigrahi 1995; Wilkie 1993), while others have analyzed the causes and consequences of change in US gender ideology (Cherlin and Walters 1981; Mason and Bumpass 1975; Mason, Czajka, and Arber 1976; Pagnini and Rindfuss 1993; Rindfuss, Brewster, and Kavee 1996; Thornton 1989; Thornton, Alwin, and Camburn 1983; Thornton and Freedman 1979). Historically, the 1970s witnessed a significant shift toward more egalitarian gender attitudes, followed by some flattening of the trend in the 1980s, and then positive gains again in the 1990s. The contribution of individual and cohort change to the secular decline in traditional gender attitudes has been roughly equal, though with some variation by decade. For example, Brooks and Bolzendahl (2004) estimate that cohort replacement was responsible for 55 percent of the change in gender role attitudes in the US from 1985-1998, and 57 percent of the secular trend from 1977-1998. Brewster and Padavic (2000) found that cohort replacement was responsible for only about 30 percent of the secular decline in traditional gender attitudes in the US from 1977-1985, but then accounted for about half the decline from 1977-1996. Of course, the proportion of secular trends attributable to cohort replacement depends upon the time period during which trends are assessed. For example, using data from the GSS, Alwin and Scott (1996) found that during the “profeminist” period from the mid-1970s to mid-1980s *intra-cohort change* was twice the magnitude of *cohort replacement*, whereas during the “backlash” period from the mid-1980s to mid-1990s they found the reverse, cohort replacement dominated the components of change. They argued that cohort replacement presents itself as a relatively gradual, but regular source of change, whereas within-cohort change is episodic and tied to periods in which social movements propel historical change via within-person change (1996:92). Thus, in some periods individuals seem to be changing more than society as a whole, but the reverse is true at other times (see Firebaugh 1992).

Characteristics associated with more egalitarian attitudes include education, which is positively correlated with egalitarian gender attitudes, female employment (or being married to a working woman) and being raised in a home where the parents, and particularly the father, hold

progressive views about gender. Being male, Hispanic, poor or working class, from the U.S. South, a self-described evangelical Protestant, childless, or raised in a home where traditional gender roles were espoused are all associated with a more traditional gender ideology. Contextual factors also influence peoples beliefs about gender (Moore and Vanemann 2003; Rindfuss, Brewster, and Kavee 1996).

From the limited number of studies that focus explicitly on beliefs about gender in cross-national perspective, the emerging pattern suggests that gender ideology is relatively uniform across a wide range of industrialized nations and cohort replacement is a significant determinant of secular decline in traditional gender role ideologies (see for example, Baxter 1997; Braun, Scott, and Alwin 1994; Alwin, Braun, and Scott 1992; Lee, Tufiş, and Alwin 2007; Nordenmark 2004; Sunstrom 1999).

Recent cross-sectional work that included poor and non-Western countries supports the assertion that there is at least some level of global agreement in the structure of gender belief systems across a broad range of countries. Using data spanning the years 1995-2001, Inglehart and Norris (2003:30-33) pooled surveys from 61 countries into a five-item factor analytic model of gender attitudes. Their model yielded a Cronbach's alpha of .54 and factor loadings ranging from .395 to .710, but because they pooled all of the countries together into a single model, we do not know the extent of cross-nation or temporal variation in the structure of gender attitudes. It is possible that variation around the mean loadings is associated both with historical time and with between-country differences in levels of economic development and cultural heritage. In their latent class analysis of gender attitude items on representative samples in Taiwan and coastal China, Tu and Liao (2005) find broad agreement in the correlates of gender attitudes between Chinese and Taiwanese societies. Inglehart and Norris (2003) find large differences in gender attitudes by birth cohort among postindustrial and industrial societies, but a much smaller cohort difference in agrarian societies. National context, including social institutions and national policies, influence gender ideologies (Orloff 1993; Baxter and Kane 1995; Nordenmark 2004; Scott 1999; Treas and Widmer 2000; Tu and Liao 2005). Significant cross-national variation in indicators such as level of development, cultural traditions, and education levels, leaves it an open question as to whether attitude and belief systems are similarly organized across countries.

DATA AND MEASUREMENT

Data

The World Values Survey (WVS) currently represents the most extensive publicly available, cross-cultural opinion data and as such, offers perhaps the best opportunity to study the mechanisms of broad social change in comparative perspective. To model the proximate sources of social change, we need repeated cross-sectional surveys following the same cohorts over time for a wide range of nations (Firebaugh 1989). Although other cross-national attitude surveys exist (see, for example, the ISSP), the WVS stands out for its extensive coverage of low and middle-income countries. Face-to-face interviews were carried out in local languages and stratified, multi-stage random sampling was the modal sampling method, with quota sampling used in a minority of countries.³ The WVS is conducted in successive waves, where a wave is comprised of approximately four to five calendar years, though data for most nations surveyed in a given wave are concentrated in the same one or two calendar years.

Beginning with the second wave (1989-1993), representation of non-western and low-income nations expanded considerably, allowing researchers to make comparisons across a much wider range of country-level predictors. After listwise deletion of cases with missing individual-level data, the final sample used in our analysis includes 75 nations and 149,032 individuals.⁴ Table 1 provides summary data of the sample used for most of the reported results and provides comparisons between our sample and the world as a whole.⁵ Of the 186 countries for which the United Nations has extensive country-level data, just over 50 percent are classified by the World Bank as low or lower-middle-income, and another 32 and 27 percent are classified as Middle-income and OECD, respectively. As illustrated in Table 1, our panel of countries is slightly over-representative of lower-income nations, moderately more Christian than the world panel, and over-represents Europe and European ‘offshoot’ nations such as the United States and Australia at the expense of sub-Saharan African nations. Taken as a whole however, the 75 nations we analyze contain over 70 percent of the world’s people (including 28 of the world’s 30 most populous nations) and roughly approximate the global distribution of countries on income, religion, and spatial dispersion.

Measurement

Seven items in the WVS deal with gender attitudes and warranted consideration for our study, yet none of the items was asked of every country or in every survey wave (see Table 2) and so we had to test different measurement models separately by survey year. We ultimately settled on a single scale using three items that consistently loaded on the same latent factor, one that was similar to previous WVS research (Paxton and Kunovich 2003).⁶ The three items, which we refer to by the mnemonics, JOBS, POLITICS, and UNIVERSITY, skirt private domain gender roles such as childbearing, child rearing, and housework and instead ask respondents to make gender-based determinations about men versus women in the public domain. For example JOBS states that “Men should have more right to a job than women when jobs are scarce” and UNIVERSITY states “University is more important for a boy than for a girl”. Common to all three items is the notion of gender equality, where respondents were asked to agree or disagree with statements about women and men in the paid labor force, politics, and in education using Likert-type scales. We see the first three items as reflecting people’s attitudes about public domain gender equality (hereafter refer to as gender equality), whereas the latter four items have a clear focus on the private domain and approximate Ridgeway’s (2006) ‘gender difference’ and Charles and Grusky’s (2004) ‘gender essentialism’.

RESULTS

The first goal of our research is to assess the extent to which beliefs about gender are similarly organized across countries varying on level of development, cultural traditions, and spatial distribution. This is not to say that we don’t expect attitudes about gender equality to cross-nationally vary in magnitude; we do. What we are interested in is whether or not beliefs on a range of survey items about gender tend to correlate with each other to such a degree that they indicate a universally shared belief system, *regardless of whether those beliefs are traditional or progressive*. To account for the ordinal scaling of our three gender items, we estimated a series of polychoric factor models using *Mplus* (Muthén 1989; Muthén and Muthén 2002). In Table 3, we report factor loadings, measures of internal consistency, and explained variance by survey wave and income classification for the unbalanced panel of 75 countries. POLITICS and JOBS were uniformly rank ordered in seven of nine models, while the polychoric factor loadings for

UNIVERSITY were uniformly rank ordered in five of nine models. The measurement model explained more than 50 percent of the total variance in all nine models and more than 60 percent in six of the nine models.

Perhaps the most interesting finding is the temporal trend across country-groups. The two measures of inter-item correlation reported in Table 3, Cronbach's alpha and factor determinacy scores (ranging from 0 to 1, with larger values indicating stronger correlations) both point to convergence across countries in the structure of gender beliefs. Within the rich, OECD country group, eigenvalues, alpha levels, and factor determinacy scores were almost unchanged over the three waves and suggest that people in wealthy societies have a clearly defined and stable gender ideology. Among low and middle-income countries, measures of internal consistency were lower than those of OECD countries, but over the following two waves, Cronbach's alpha increased from .545 to .612 among low-income countries, and increased from .518 to .605 among middle-income countries. Eigenvalues among low and middle-income countries similarly rose over the three waves. By wave 5, eigenvalues and measures of inter-item correlation were much more similar among people from the three income classes than they were in wave 3.⁷ The temporal trends in Table 3 do not suggest that attitudes among people in low and middle-income countries are converging on the attitudes held by people in high-income nations, but rather that the organization of belief systems among less developed countries is converging around a Western belief structure.

We next ran a series of alternate model specifications to gauge the robustness of our results and to test for factorial invariance. Our goal was to confirm that differences in loadings and inter-item correlation across survey waves were indeed significant (Horn and McArdle 1992). Table 4 reports result of our tests of factorial invariance using a number of model fit statistics and the chi-squared difference test. In Model 1, we constrained the factor loadings to be equal across survey waves, and in Model 2, we removed the equality constraint and allowed the loadings to take on unique values over time. We did this separately for each of the three country groupings. The models reject the equality constraint and confirm that the convergence trends are significant. The chi-squared difference test was significant, and as expected the CFI and RMSEA model fit statistics (both of which correct for the large sample size weakness of the chi-squared fit statistic) report a slight improvement in model fit when the factor loadings were allowed to vary across survey waves.

Finally, we conducted an additional test of temporal trends in the structure of gender beliefs by modeling change for individual countries, rather than the country-groupings used in Tables 3 and 4. In Table 5, we report the results of two common measures of inter-item correlation, Cronbach's alpha and the Loewinger H coefficient. We did this separately for ten countries that collectively contain more than half of the world's people and span low, middle and high-income nations, as well as diverse cultural heritages. The results are unequivocal. Inter-item scale consistency increased from the mid-1990s to the mid-2000's for nine of the ten countries (Turkey being the exception), and the observed increase in scale consistency was greatest among countries with the lowest inter-item ratings in Wave 3. To be sure, internal scale consistency increased in the Western, industrial nations of Germany and the US, but gains were even larger for populous but less-developed nations like Mexico, India, and China.

The consistency in the ordering of the items across time and country groupings (we tested other classifications systems, such as religious groupings, and found similar results), as well as the temporal trend for individual countries, offers clear support for the worldwide diffusion of a global gender belief system.⁸ What is more, the temporal trend for country-groups and for individual countries indicate that cross-national differences in the structure of gender ideologies are declining because low-income and non-Western countries are converging on industrialized and Western nations in the sense that the observed increase in internal scale consistency was greatest among those countries with the lowest initial ratings.

Cohort Effects

Now that we have established the existence of a gender belief system that is worldwide in scope and converging, we can turn to the question of cohort effects. In Tables 6a-6c we created three balanced panels of countries using a subset of our 75-nation unbalanced panel to ascertain the pervasiveness of cohort effects. While the panel in Table 6a covers a relatively large time interval (approximately 10 years), it is over-representative of high-income, Christian nations. We therefore supplement Table 6a with two additional panels that are over-representative of non-Christian and lower-income countries (7 of 8 countries in Table 6c are Muslim majority). Although Tables 6b and 6c offer improved cross-national diversity, they also cover a shorter time interval (about 4 and 6 years, respectively). Taken together, however, the three panels offer valuable insights into the nature of secular change in gender ideology over recent years for a globally diverse collection of countries.

The first three columns in each table report means and observed change in the gender ideology scale by country.⁹ In all, nearly three quarters of the nations (27 of 39) trended toward more progressive gender attitudes, but of the 12 nations that trended toward more traditional attitudes, 6 were Muslim nations. Fully 60 percent of surveyed Muslim nations experienced a mean decline in gender ideologies, compared to a secular decline in only 40 percent of Eastern religious majority nations and 15 percent of Christian majority nations. It appears that a cultural divide with regard to gender ideology is widening, but a longer time interval is needed to be certain of this conclusion.

Columns 4 and 5 in each table report unadjusted metric coefficients where gender ideology was regressed on interval measures of birth cohort and survey year. Column 7 reports the estimated percentage change in gender ideology due to cohort replacement, which is derived from the linear regression decomposition method described by Firebaugh (1989).¹⁰ In short, the column 4 and 5 coefficients are adjusted by the change in the mean birth cohort from time 1 to time 2 and by the number of survey years from time 1 to time 2. The adjusted coefficients were then used to estimate the percentage of change due to cohort replacement. The difference between the observed change in mean gender ideology and the change predicted by the linear regression indicates the level of precision in our estimates. The models had perfect or near perfect prediction for twenty-six of 39 countries and deviated by less than 10 percent for an additional 5 countries.

The results are striking in their consistency. Fully 95 percent of the surveyed nations (37 of 39) reported a positive cohort replacement effect and in the case of the two outlier nations, Indonesia and Nigeria (incidentally, both Muslim majority nations), the cohort coefficient was not significant. There was considerable cross-national variation in the *magnitude* of the positive cohort effect, from a low of two percent in Romania to a high of 59 percent in Turkey (see column 7), but almost total agreement on the *direction* of the cohort effect. There was no clear trend in the magnitude of the cohort effect among countries when cohort and period coefficients were of the same sign, though the magnitude of the cohort effect was somewhat smaller in Latin American and low-income nations. The relatively weaker cohort effect in poor countries may be due to the shorter time interval for many of these nations—cohort effects generally accrue more slowly over time than period effects—and so we are not able to say with certainty whether the magnitude of cohort effects cross-nationally vary by national income or cultural heritage.

In 12 of the 39 countries we analyzed (31 percent) the secular trend in gender attitudes was negative, meaning that beliefs about gender were less egalitarian at second measurement than at first measurement. Since the cohort effect was always positive (or insignificant), intra-cohort change is the proximate source of secular *decline* in gender ideology. This means that either life course transitions associated with aging or historical conditions (e.g. the transition from planned to market economies) have contributed to a decline in gender egalitarian attitudes in select countries. Alwin and Scott (1996) suggest that while cohort effects are a constant source of social change, the effect of period influences tend to be quite variable because of the nature of the historical conditions. Their observation would help to explain the greater level of variability in the effect of intra-cohort change relative to the cohort replacement component, with some countries trending progressive and others trending more traditional.

As a final step in our analysis, we nested individuals within countries to estimate a series of conditional, fixed effects regression models with random intercepts and randomly varying cohort and period slopes in order to test the robustness of the observed cohort effects to the presence of control variables.¹¹ A pair of dummy variables captures the time-trend in gender ideology, and because we centered the independent variables at their grand means, the intercept is the mean score on the gender inequality scale in wave 3 and the two dummy variables reflect change in mean gender ideology from wave 3 to waves 4 and 5. The results from Model 1 are similar to the models reported in Tables 3 and 4, except that we fitted a single model for the entire 75 countries and allowed period and cohort coefficients to vary randomly. Model 1 results are the total effects and Model 2 results, where we include a set of covariates that control for structural factors, are the direct effects. Control variables include a 10-category measure of income, two dummy variables for employment status (full-time and part-time), a categorical measure of educational attainment, sex, marital status, number of children, and a categorical measure of religiosity that asks respondents to rate the importance of God in their life. In Model 3, we add in a series of country-level control variables and Model 4 reports standardized coefficients for Model 3 variables.

In the baseline, unconditional model, there was a moderate trend toward more egalitarian gender attitudes from wave 3 to wave 4, but then a leveling off in attitudes from Wave 4 to Wave 5. When we controlled for individual-level characteristics in Model 2, the growth curve became noticeably steeper and statistically significant across all waves, suggesting that if not for individual-level variation in structural position, the worldwide trend in gender attitudes would have been more egalitarian than the observed trend. The inclusion of individual-level controls reduced between-country variation in growth rates, but only modestly (see Wave 4 and Wave 5 variance components). Individual-level determinants of gender attitudes were all significant and in the expected direction: Women hold considerably more progressive attitudes about gender equality than men, education and income are positively correlated with a progressive gender ideology, workers have more progressive views about gender equality than non-workers, and married respondents reported more traditional attitudes than other marital statuses. The big effects, according to the standardized results from Model 4, include a dummy variable for being female and educational attainment. This finding is important because it indicates that the usual suspects from previous research on industrialized nations, such as work status and educational attainment, have a similar, positive effect in worldwide models.

The unconditional cohort effect for the unbalanced, 75-nation panel was .016 and significant ($P < .001$), but the inclusion of individual-level controls reduced the cohort slope to a minuscule .003. The sizable drop in the cohort slope that accompanied the addition of control variables does not provide a major challenge to cohort replacement theory, but articulates what it is about cohort differences that mediate the overall effect of cohort experiences. Recall that cohort replacement theory posits that cohort effects occur because significant and historically dependent social, economic, or cultural change leads to differential cohort imprinting that is manifest in birth cohorts (Ryder 1965). That the control variables were able to explain virtually all of the cohort effect indicates that it is the expected aspects of historically dependent change (e.g. increased schooling levels) that leads to cohort differences in attitudes about gender equality, at least at the global scale. Thus, variation in structural position and demographic characteristics, such as education, income, and marital status, that is contributing to cohort differences in gender attitudes, rather than the kind of 'cultural ethos' that is often the residual explanation for cohort change. By way of comparison, Brooks and Bolzendahl (2004) inclusion

of nearly identical control variables in their US gender attitude decomposition models to those included in our conditional models explained less than half the cohort effect. And in their comparative study of gender ideology trends in East and West Germany, Lee, Alwin, and Tufiş (2007) were only able to explain a fraction of the cohort effect with control variables.¹²

DISCUSSION AND CONCLUSION

This research provides strong evidence that recent years have witnessed a worldwide convergence in the structure of beliefs about gender toward a decidedly Western gender ideology. This finding is significant for at least three reasons. First, it provides clear support for significant vertical diffusion (Poole and Zeigler 1981) of a gender egalitarian belief system. Prior research has documented the horizontal diffusion of progressive beliefs about gender across upper income, Western nations, but our results indicate that progressive gender attitudes are also diffusing down the income strata to even low-income nations. Second, the worldwide scope of convergence in the structure of gender beliefs suggests that factors exogenous to national development, such as the expansion of the world polity, are a likely cause of recent convergence. Though we did not explicitly test World Polity/World Society Theory, our findings provide ‘sideways’ support for proponents of global culture when they argue that postmodern values of equality and universal human rights are diffusing through a host of global mechanisms including non-governmental organizations, transnational institutions, and mass education systems (Meyer et al. 1997; Boli and Thomas 1997; Benavot and Riddle 1988). And third, our results suggest that efforts to comprehensively improve the status of women such as the United Nations Millennium Development Goal to promote gender equality and empower women are likely to be facilitated by global agreement in the structure of gender beliefs. Because people the world over increasingly associate gender equality in say, schooling, with gender equality in the workplace means that objective gains for women in one domain are likely to be followed by gains in other domains. At the least, because beliefs about gender equality in one domain are becoming more strongly correlated with beliefs about gender equality in other domains, attitudes are less likely than ever to slow the worldwide gender egalitarian trends of recent decades (see Dorius and Firebaugh, forthcoming).

A second goal of this research was to gauge the extent to which cohort replacement theory applies to poor and non-Western countries. In his seminal statement on birth cohorts, Norman Ryder (1965) observed that “the *potential* for change is concentrated in the cohorts of young adults who are old enough to participate directly in the movements impelled by change, but not old enough to have become committed to an occupation, a residence, a family of procreation, or a way of life,...but without specification of its content or direction” (Ryder 1965: 848, 850). Cohort replacement theory posits that changing economic, social, and cultural conditions work together to create a normative and behavioral ‘toolkit’ for socializing the current crop of impressionable youth that is different than the socialization toolkit available to older cohorts. In 37 of 39 countries that collectively account for a majority of the world’s people, we found that the replacement of older cohorts with younger cohorts was positively associated with progressive gender attitudes. Such a high level of agreement among such a diverse collection of countries provides strong evidence for a ‘universal cohort effect’, at least with regard to attitudes about gender equality.

The conditional models offer a more complex picture of the relationship between birth cohorts and gender attitudes in comparative perspective. In cohort studies focused on wealthy nations, much of the cohort replacement effect is left unexplained by a comprehensive set of control variables, yet in our worldwide models, control variables explain virtually all of the cohort effect. This would suggest that in non-Western and lower-income nations, it is not historically dependent change that leads to cohort differences in attitudes about gender equality, but rather, variation in structural position and demographic characteristics, such as education, income, and marital status. One reason this may be the case is because universal education and working conditions associated with modernity have, in most instances, been common to industrialized nations for generations. In many less developed countries, universal education has yet to be achieved, and pre-industrial, agricultural employment is still wide spread. The ‘newness’ of mass education and industrial working conditions, where people are exposed to new and often more progressive ideas and policies regarding women and men, appear to be trumping the strength of other cohort differences.

This research primarily focused on the structure of gender belief systems and the universality of cohort effects, but we would be remiss in not briefly discussing the global secular trends in gender ideology. Unconditionally, gender attitudes are, as Charles and Grusky (2004) predict, trending away from patriarchal primacy and toward a more egalitarian view of women and men. Conditional models support an optimistic counterfactual world, where we can expect even more progressive gender attitudes in the coming years as an increasing share of the world's people interact with modern institutions such as Western-style school systems, family arrangements (including dual earner households, delayed marriage, fewer children, and rising cohabitation), and industrial employment. Insofar as the trend toward a more egalitarian view of women and men documented in Table 7 is due to a general rise in rights-based ideology of tolerance and choice (Brooks and Bozendahl 2004) and a heightened value of the individual and self-expression (Inglehart and Norris 2003; Inglehart and Baker 2005), then this would explain why the level and change in beliefs about gender equality is higher in Western countries than in other countries. Revisionist modernization theorists' claim that economic development leads to more egalitarian gender attitudes, with notable, culturally conditioned, path dependence (Inglehart and Norris 2003). Our findings are broadly supportive of their claim insofar as we find that higher incomes and levels of education are associated with more egalitarian gender ideologies. But while we document global convergence in the structure of gender belief systems, we also find tacit support for global divergence in attitudes about gender equality. Islamic nations have recently been trending toward more traditional views of gender, while much of the rest of the world is adopting more progressive gender attitudes. And it appears that among a range of Western attitudes, including views supportive of democracy, capitalism, gender equality, and tolerance, to name a few, gender is the major point of global cleavage (Norris and Inglehart 2002). While Huntington's talk of a 'Class of Civilizations' (Huntington 1996) may be overly pessimistic, it does speak to the limited divergence that we find.

In sum, our findings should offer encouragement to proponents of gender equality. The world over, people are adopting a Western-style belief structure that associates gender equality in one domain with gender equality in other domains. This means, for example, that as people come to reject gender inequality in the education system, they are less likely to support gender inequality in the workplace. Beyond convergence in the structure of gender belief systems, people in a majority of the countries we analyzed are adopting more egalitarian gender attitudes.

If current trends hold, the worldwide expansion of mass education and the steady replacement of earlier-born birth cohorts with later-born cohorts should only facilitate the egalitarian trend.

There is much work to be done if the world's women are to enjoy the same rights and opportunities as the world's men, but a critic ingredient—believing in gender equality—appears to be on the rise throughout the world.

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ENDNOTES

¹ Throughout, we use the term "Western" to refer to developed European countries and their offshoots (US, Canada, Australia, and New Zealand) as well as Eastern Europe and the former Soviet Union. While the term is problematic for any number of reasons and clearly masks considerable between-nation variation, as a heuristic tool, the term effectively captures a primary line of demarcation among the world's nations. Most importantly, it closely approximates the boundary line for gender attitude research in cross-national perspective, where little research has been done on gender attitude change in non-western countries.

² By modernization, we refer to the bundle of social transformations, such as the spread of universal education urbanization, declining fertility and mortality, and the transition from

agricultural to industrial production, that generally mark a significant break from the historical norms of traditional, agrarian life.

³ Samples in some low-income countries indicate overrepresentation of urban and educated respondents. Given the expected positive relationship between progressive gender attitudes among metropolitan dwellers and education, the reported results should be considered 'best-case' for the included countries.

⁴ Missing FDI values for Iraq were replaced with the mean for Muslim countries over the sample period. The 75 country, unbalanced panel was used to estimate the multi-level regressions, though a slightly larger sample was used to estimate the measurement models and model fit statistics in Tables 3 and 4. The smaller sample size is reported here is because of missing individual or country-level missing data. East and West Germany, Northern Ireland and Ireland, and Serbia and Montenegro were analyzed as three, rather than six, countries. IGO data was only available to 2000, so the model estimates are based on an 8 year lag, while GDP and FDI estimates were similarly lagged, but only by a single year. INGO data were missing for 5 countries in the year corresponding to the WVS, but each of the 5 countries had INGO data for adjacent years. Linear imputation was used to fill the missing value for these countries. Because TFR, life expectancy, and population data were only available in five year intervals, we use linear imputation to fill the inter year missing data.

⁵ When small, mostly island nations with populations under 1 million inhabitants are removed (and for whom only limited country level data is available), the United Nations offers extensive country-level data for 186 nations. These 186 nations contain over 99 percent of the world's people and vary considerably by economic development, demographic composition, and cultural norms and traditions.

⁶ We estimated several different polychoric measurement models that tested a range of country grouping schemes such as income class and religious traditions and found that the item loadings were sufficiently stable across country grouping schemes to merit further analysis.

⁷ We tested a similar series of models on various balanced panels of countries for different data collection waves and found broadly similar results, that the structure of belief systems is becoming more similar.

⁸ In unreported model fit tests, we used different country grouping schemes, excluded Muslim majority countries, and removed the equality constraint from single waves, rather than all waves simultaneously, as in Model 2. The results we generally consistent with the results we report in Table 4, though we did find that the exclusion of Muslim majority countries resulted in a significant decrease in the chi-squared model fit statistic, compared to models that included these countries.

⁹ To simplify the interpretation of our results, we elected to convert the three gender attitude items into a weighted additive scale. After calibrating the lower-bound to 0, the upper-bound score is 8.6, with a mean of 4.72 and a standard deviation of 2.25 in wave 3 and a mean and

standard deviation of 4.73 and 2.40 in wave 5. This additive scale correlated with the polychoric factor scale at .993, confirming that the scale and factor scores were interchangeably appropriate for our analysis.

¹⁰ Because it is not possible to estimate all three (APC) simultaneously with repeated cross-sections—age and birth cohort are perfectly confounded within a survey year (Firebaugh 1989, 1992)—researchers must carefully determine which concepts best inform their research and make certain assumptions regarding the omitted effect. A common approach for getting around the confounding influences of age, period, and cohorts is to simply model change occurring within cohorts (intracohort change captured in the survey year coefficient) and between cohorts (cohort replacement). We refer to the first source of change as the cohort effect (mean differences in Y by birth cohorts) and the second source as individual, or intracohort change (either due to aging or period influences). The linear regression decomposition formula is straightforward.

$$Y_i = \beta_0i + \beta_1i(\text{Survey Year}) + \beta_2i(\text{Cohort}) + e_i \quad (1)$$

where Y is the gender ideology scale, β_1 is the within-cohort component, and β_2 is the between-cohort component. The survey year coefficient is then adjusted by multiplying β_1 by the number of years between the first and year surveyed (for regionally aggregated data, we used the average number of years), and the cohort coefficient is then adjusted by multiplying β_2 by the change in the mean birth cohort from the first to the last year surveyed (Firebaugh and Davis, 1988). For this analysis, a statistically significant survey year coefficient, when adjusted as described, indicates the magnitude of the period component of change and a statistically significant cohort coefficient, when adjusted, indicates the magnitude of the cohort replacement component. We do not need to impose the unrealistic assumption that aging = 0, so long as we are comfortable saying that it is not age, per se, that changes attitudes, but life course events, such as getting married, having children, getting a job, retiring, etc. In so far as we have controlled for many of the important life course events associated with mean differences in gender attitudes, then we can relax the aging=0 assumption.

¹¹ We also tested a 3-level model that nested nations within geographic regions, but after controlling for individual and national variables, regional differences were not significant, so region was not included in the reported models.

¹² They estimated models separately for women and men and only accounted for a limited number of control variables, including schooling and education.

Table 1. Sample Representativeness

	World N (%)	World Values Survey Sample N (%)
Countries	186	75
Population Share	99.9	71.6
<i>Income Class</i>		
Low-income	100 (54)	35 (47)
Middle-income	59 (32)	22 (29)
OECD	27 (15)	18 (24)
<i>Majority Religion</i>		
Christian	94 (54)	47 (63)
Muslim	52 (30)	19 (25)
Eastern/Other	27 (16)	9 (12)
<i>Geographic Region</i>		
Europe, Offshoots, & Russia	43 (23)	30 (40)
Latin America & Caribbean	32 (17)	11 (15)
Asia & Pacific Islands	27 (15)	10 (13)
Sub-Saharan Africa	46 (25)	11 (15)
Middle East and North Africa	38 (20)	13 (17)

NOTES: Countries labeled 'Low' include the World Bank 'Low' and 'Lower-Middle-income' categories and countries labeled 'Middle' includes 'Upper-Middle' and 'non-OECD High-income' nations. Countries coded as 'Christian' include Roman Catholic, Orthodox, and Protestant majority countries. While there are currently 229 sovereign nations recognized by the United Nations, country-level data for a number of very small, largely island nations is limited. We therefore use a slightly reduced set of 186 countries to represent the 'World', but the 43 excluded nations comprise less than 1 half of 1 percent of the world's people. Percentages may not sum to 100 due to rounding.

Table 2. Gender Attitude Items, Question Wording, and Survey Coverage

Item	Question Wording (Scale)	Wave 2	Wave 3	Wave 4	Wave 5
		1989-1993	1994-1998	1999-2004	2005-2008
<i>POLITICS</i>	<i>Men make better political leaders than women do (1=SA, 4=SD)</i>	N	Y	Y	Y
<i>UNIVERSITY</i>	<i>University is more important for a boy than for a girl (1=SA, 4=SD)</i>	N	Y	Y	Y
<i>JOBS</i>	<i>Men should have more right to a job than women when jobs are scarce (1=Agree, 3=Disagree)</i>	Y	Y	Y	Y
FULFILL	A woman has to have children to be fulfilled (0=needs children, 1=not necessary)	Y	Y	Y	N
HOUSEWIFE	Being a housewife just as fulfilling as working for pay (1=SD, 4=SA)	Y	Y	Y	Y
BOTHINC	Husband and wife should both contribute to income (1=SD, 4=SA)	Y	Y	Y	N
WARMREL	A working mother can establish just as warm and secure a relationship with her children as a mother who does not work (1=SD, 4=SA)	Y	Y	Y	N

NOTES: Items in italics loaded to a single latent construct (Gender Equality). It is these three items that are used in all analysis throughout this research.

Table 3. Gender Ideology Factor Loadings by Income Class and Survey Wave

	<i>Low-Lower Middle Income Countries</i>			<i>Upper Middle/High Income non-OECD Countries</i>			<i>High Income, OECD Countries</i>		
	<i>Wave 3</i>	<i>Wave 4</i>	<i>Wave 5</i>	<i>Wave 3</i>	<i>Wave</i>	<i>Wave</i>	<i>Wave 3</i>	<i>Wave</i>	<i>Wave</i>
					<i>4</i>	<i>5</i>		<i>4</i>	<i>5</i>
Factor Loadings									
POLITICS	.697	.768	.823	.607	.739	.739	.776	.783	.795
UNIVERSITY	.606	.518	.467	.605	.621	.647	.731	.806	.811
JOBS	.477	.552	.689	.478	.548	.558	.654	.607	.578
Eigenvalue	1.70	1.74	1.86	1.63	1.81	1.83	2.04	2.07	2.05
Explained Variance	57%	58%	62%	54%	60%	61%	68%	69%	68%
Sample n	22361	34360	33846	22273	13608	19556	14632	7668	12833
(# of countries)	(16)	(23)	(18)	(18)	(8)	(13)	(13)	(7)	(12)
Internal Consistency									
Factor Determinancies	.80	.83	.88	.77	.83	.84	.88	.90	.89
Cronbachs α	.545	.553	.612	.518	.592	.605	.682	.685	.681

NOTES: Factor loadings, eigenvalues, and factor determinancies were obtained by estimating 9 separate models (1 for each wave and country group) using *Mplus* version 5.2. Factor loadings for a range of other model specification, including those reported in Table 4, produced similar results and are available upon request. Factor determinancies range from 0-1, with values closer to 1 indicating stronger scale reliability. Wave 3 covers the years 1994-1999, Wave 4 covers the years 2000-2004, and Wave 5 covers the years 2005-2008. QUESTION WORDING: (JOBS) Men should have more right to a job than women when jobs are scarce. (POLITICS) Men make better political leaders than women do. (UNIVERSITY) University is more important for a boy than for a girl. Income classifications are based on the 2009 World Bank Atlas method and are derived from 2007 Per Capita Gross National Income in current US dollars. Sample of countries represent over 70% of the world's people and include the 10 most populous countries in the world. Unbalanced panel design.

Table 4. Factorial Invariance and Model Fit Statistics using a Three-Class Country Coding Scheme

	Low & Lower-Middle-income Countries		Upper-Middle & High-Income non-OECD Countries		OECD Countries	
	Model (1)	Model (2)	Model (1)	Model (2)	Model (1)	Model (2)
	Constrained Loadings	Unconstrained Loadings	Constrained Loadings	Unconstrained Loadings	Constrained Loadings	Unconstrained Loadings
χ^2 (df)	2502 (10)	1582 (6)	414 (10)	245 (7)	112 (10)	39 (8)
χ^2 diff test (M1-M2)	--	920 (4)	--	169 (3)	--	73 (2)
CFI	.938	.960	.983	.990	.997	.999
RMSEA	.091	.093	.047	.043	.030	.018
N	90,567	90,567	55,437	55,437	35,133	35,133

NOTES: In Model 1, the factor loadings were constrained to be equal across waves, while the factor loadings in Model 2 were allowed to temporally vary. Table results were obtained by estimating 6 separate models (Models 1 and 2 were estimated separately within each of the three country-groupings) using a CFA in *Mplus* version 5.2. χ^2 difference tests confirm that the change in factor loading across survey waves was significant in all models.

Table 5. Change in Inter-item Scale Consistency for Select Nations using World Values Survey Waves 3 and 5

2000 Population Share in Parenthesis	Cronbach's Alpha			Loevinger H Coefficient		
	Wave 3	Wave 5	W3 to W5 Change	Wave 3	Wave 5	W3 to W5 Change
Mexico (.016)	.41	.63	.22	.24	.43	.19
Russian Federation (.024)	.42	.57	.16	.24	.37	.13
India (.171)	.54	.69	.15	.35	.50	.16
China (.207)	.41	.50	.09	.25	.36	.11
South Africa (.007)	.48	.56	.09	.28	.35	.07
Germany (.013)	.62	.70	.08	.46	.50	.04
Brazil (.028)	.56	.61	.05	.42	.46	.04
Japan (.021)	.64	.67	.03	.45	.49	.03
United States (.047)	.63	.64	.01	.45	.49	.04
Turkey (.011)	.58	.49	-.09	.38	.30	-.08
Average	.54	.62	.08	.36	.44	.08

NOTES: Countries are rank ordered according to observed change in alpha reliability. Listed countries contain over half of the world's people and represent low, medium, and high-income nations, as well as Buddhist, Hindu, Muslim, and Christian majority nations.

Table 6a. Decomposition of the Proximate Determinants of Secular Change in Gender Ideology using a 22 Nation, Cross-Nationally Balanced Panel: World Values Survey Waves 3 and 5

	Mean Gender Ideology Score			Regression Decomposition			
	Wave 3	Wave 5	Observed Change	Cohort Replacement	Intra-Cohort Change	% Agreement (Obs/Pred)	% Change Due to Cohort Replacement
Brazil	4.70	5.80	1.10	.103	.995	1.000	9%
Bulgaria	4.66	5.94	1.29	.086	1.099	.920	7%
Chile	5.18	4.94	-.24	.173	-.466	1.243	Offset
China	4.56	4.48	-.08	.096	-.184	1.144	Offset
Finland	6.80	6.55	-.25	.055	-.303	1.000	Offset
Germany	6.27	6.38	.11	.055	.057	1.002	49%
India	4.53	4.42	-.11	.047	-.125	.685	Offset
Japan	4.10	4.66	.56	.212	.354	1.010	38%
South Korea	4.00	4.61	.61	.341	.297	1.040	53%
Mexico	4.42	5.62	1.20	.065	1.155	1.015	5%
Moldova	3.88	4.76	.88	.095	.792	1.005	11%
Peru	5.27	5.94	.68	.074	.529	.892	12%
Poland	4.24	5.18	.94	.317	.621	1.000	34%
Romania	3.73	5.16	1.44	.030	1.406	1.000	2%
Russian Federation	4.06	4.40	.34	.072	.265	1.000	21%
Slovenia	5.25	6.16	.91	.216	.690	1.000	24%
South Africa	5.06	5.16	.10	.144	-.066	.778	Offset
Spain	5.71	6.73	1.02	.294	.704	.973	29%
Sweden	7.42	7.37	-.06	.088	-.168	1.383	Offset
Turkey	4.20	4.55	.35	.208	.147	1.004	59%
Ukraine	4.28	4.69	.41	.070	.339	1.000	17%
United States	5.73	6.18	.45	.291	.104	.871	74%
<i>Average</i>	<i>4.91</i>	<i>5.44</i>	<i>.53</i>	<i>.142</i>	<i>.375</i>	<i>.998</i>	<i>--</i>

NOTES: The panel includes 5 low-income nations, 10 middle-income nations, and 7 OECD nations. Panel includes 4 'Eastern' majority religions, 1 Muslim nation, and 22 Christian majority nations. **Bold** coefficients were not significant. The coefficients reported in columns 4 and 5 are based on the decomposition method described by Firebaugh (1989). The first three columns report means and observed change in the gender ideology scale by country. Columns 4 and 5 report adjusted period and cohort regression coefficients, column 6 is the ratio of the observed to predicted change in gender ideology, and column 7 indicates the magnitude of the cohort effect. 'Offset' indicates that the within and between cohort effects are in opposite direction, though the two effects do not necessarily perfectly offset.

Table 6b. Nine-Nation, Balanced Panel: World Values Survey Waves 3 and 4

	Mean Gender Ideology Score			Regression Decomposition			
	Wave 3	Wave 4	Observed Change	Cohort Replacement	Intra-Cohort Change	% Agreement (Obs/Pred)	% Change Due to Cohort Replacement
Albania	4.75	4.79	.05	.135	-.088	1.00	Offset
Argentina	5.58	5.72	.14	.050	.091	1.00	36%
Bangladesh	3.72	2.98	-.74	.125	-.862	1.00	Offset
Macedonia	4.87	5.21	.34	.050	.287	1.00	15%
New Zealand	6.20	6.53	.33	.148	.182	1.00	45%
Nigeria	3.54	3.20	-.34	-.007	-.333	1.00	2%
Pakistan	3.30	4.00	.70	.189	.512	1.00	27%
Philippines	4.01	3.48	-.53	.028	-.554	1.00	Offset
Venezuela	5.37	5.79	.43	.035	.392	1.00	8%
<i>Average</i>	<i>4.93</i>	<i>5.18</i>	<i>.24</i>	<i>.130</i>	<i>.103</i>	<i>1.00</i>	<i>--</i>

NOTES: Panel includes 6 low-income nations, 2 middle-income nations, and 1 OECD nation, 4 Muslim nations, and 5 Christian nations.

Table 6c. Eight Nation, Balanced Panel: World Values Survey Waves 4 and 5

	Mean Gender Ideology Score			Regression Decomposition			
	Wave 4	Wave 5	Observed Change	Cohort Replacement	Intra-Cohort Change	% Agreement (Obs/Pred)	% Change Due to Cohort Replacement
Egypt	2.67	2.32	-.35	.041	-.395	1.00	Offset
Indonesia	4.52	4.27	-.25	.046	-.297	1.00	Offset
Iran	3.44	3.08	-.36	.116	-.478	1.00	Offset
Iraq	2.49	2.39	-.10	.015	-.113	1.00	Offset
Jordan	2.64	2.82	.18	.028	.148	1.00	16%
Morocco	3.01	4.28	1.27	.049	1.219	1.00	4%
Vietnam	4.38	4.69	.30	.079	.224	1.00	26%
<i>Average</i>	<i>3.31</i>	<i>3.41</i>	<i>.10</i>	<i>.053</i>	<i>.044</i>	<i>1.00</i>	<i>--</i>

NOTES: Panel includes 7 low-income nations, 6 Muslim nations, and 1 'Eastern' religious majority nation.

Table 7. Conditional Secular Change in Gender Ideology with Random Intercepts and Random Cohort Effects

	<i>Baseline (Mod 1)</i>	<i>Individual (Mod 2)</i>	<i>Indiv. + Country (Mod 3)</i>	<i>Standardized β (Mod 4)</i>
Gender Ideology (Intercept)	4.742***	4.635***	4.553***	--
<u>Individual-Level Effects</u>				
Wave 4	.208*	.288***	.254*	.117*
Wave 5	.203	.322**	0.219	0.106
Cohort	.016***	.003*	.003*	.055*
Income (decile)		.042***	.042***	.098***
Full-time Work		.114***	.115***	.054***
Part-time Work		.058**	.057**	.015**
Other Work Status		(refcat)	(refcat)	(refcat)
Education (categorical)		.143***	.143***	.335***
Female		.865***	.865***	.432***
Married		-.102***	-.101***	-.048***
Number of children		-.041***	-.041***	-.077***
Religiosity		.149***	.149***	.152***
<u>Variance Components:</u>				
Cohort (Slope)	.012 ***	.011 ***	.011 ***	--
Wave 4 (Slope)	.474 ***	.434 ***	.639 ***	--
Wave 5 (Slope)	.734 ***	.716 ***	.980 ***	--
Gender Ideology (Intercept)	1.165 ***	1.077 ***	.718 ***	--
Residual	1.978 ***	1.902 ***	1.902 ***	--
<u>Model Statistics</u>				
N (75 countries)	149,032	149,032	149,032	--
aic	627059	615436	615372	--
bic	627207	615664	615719	--

* p<.05, ** p<.01, *** p<.001 (two-tailed)

NOTES: Models are derived from an unbalanced panel of countries. All variables grand mean centered. Variance components are reported in standard deviations. 'Otherwork' includes students, housewife, unemployed, etc. Model 7 reports standardized effects for Model 6 variables. Unreported country-level effects include dummies for majority religious traditions, log of GDP per capita, % female labor force participation, female and male mean educational attainment, life expectancy and total fertility rates, foreign direct investment as a percentage of GDP, INGO penetration, and a measure of the level of democracy. **COUNTRIES:** Albania, Algeria, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Cyprus, Czech Republic, Dominican Republic, Egypt, El Salvador, Estonia, Ethiopia, Finland, France, Germany, Ghana, Great Britain, India, Indonesia, Iran, Iraq, Italy, Japan, Jordan, South Korea, Kyrgyzstan, Latvia, Lithuania, Macedonia, Malaysia, Mali, Mexico, Moldova, Morocco, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Peru, Philippines, Poland, Romania, Russia, Rwanda, Saudi Arabia, Slovakia, Slovenia, Singapore, South Africa, Spain, Sweden, Switzerland, Tanzania, Thailand, Trinidad and Tobago, Turkey, Uganda, Ukraine, United States, Uruguay, Venezuela, Vietnam, Zambia, Zimbabwe.



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Population Studies Center
University of Michigan
Institute for Social Research
PO Box 1248, Ann Arbor, MI 48106-1248 USA
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