# Collective religiosity and the gender gap in attitudes towards economic redistribution in 86 countries, 1990-2008 

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#### Abstract

What is the relationship between gender and the demand for redistribution? Because, on average, women face more economic deprivation than men, in many countries women favor redistribution more than men. However, this is not the case in a number of other countries, where women do not support redistribution more than men. To explain this cross-national paradox, we stress the role of collective religiosity. In many religions, theological principles both militate against public policies designed to redistribute income, and also promote traditionally gendered patterns of work and family involvement. Hence, we hypothesize that, in those countries where religion remains influential either through closer church-state ties or an intensely religious population, men and women should differ less in their attitudes towards redistribution. Drawing upon the World Values Survey, we estimate three-level regression models that test our religiosity-based approach and two alternative explanations in 86 countries and 175 country-years. The results are consistent with our hypothesis. Moreover, in further support of our theoretical approach, societal religiosity undermines pro-redistribution preferences more among women than men. Our findings suggest that collective religiosity matters more to the gender gap in redistributive attitudes than traditional political and labor force factors.


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## 1. Introduction

Recent scholarship on attitudes toward economic redistribution has revealed a link between gender and redistributive attitudes. In studies where many countries are pooled in the analysis, women support redistribution more than men (Dallinger, 2010; Finseraas, 2009; Stegmueller et al., 2012). At the same time, however, studies of single countries indicate that the size of the gender gap varies cross-nationally, with substantal pro-redistribution gender gaps in some countries but only negligible gaps in others (Linos and West, 2003; Svallfors, 1997). In part because scholars, historically, have prioritized individual-level factors in explaining economic and political gender gaps, little attention has been paid to cross-national variation in the gender gap in redistributive attitudes. As Rehm $(2007,54)$ writes, "that there are systematic attitudinal

[^0]differences between the two genders [in pro-redistribution attitudes] is a very consistent and poorly understood phenomenon" (for similar views, see Svallfors, 2007).

The existence of substantial, cross-national variation in the pro-redistribution gender gap constitutes an important puzzle. In practical terms, this gap has potentially important implications for socioeconomic policy-making, especially in light of women's rising rates of political participation (Norris, 2002; Paxton et al., 2007). But the gap also raises important theoretical questions. Across the globe, women tend to have fewer economic resources than men, which should predispose the average woman, all things being equal, to favor redistributive policies more than the average man (Sidanius and Pratto, 1999). This is indeed the case in a number of countries, and is consistent with studies finding greater support for welfare states among women (Blekesaune and Quadagno, 2003; Gingrich and Ansell, 2012; Hasenfeld and Rafferty, 1989). Yet we know that, in other countries, gender does not structure the demand for redistribution (e.g. Jæger, 2006a; Linos and West, 2003). This crossnational variation is therefore unexpected, and creates a unique opportunity to investigate how cultural, economic, and institutional conditions mediate between women's economic disadvantage and gender differences in policy preferences.

In this article, we address this puzzle by examining support for economic redistribution among men and women in 86 countries between 1990 and 2008. To maximize the generalizability of the results, we analyze the World Values Survey (WVS), which offers the broadest geographical scope of all comparative survey programs. The WVS further enables us to examine both developed and developing countries, overcoming limitations of previous studies that examine only developed countries. We use three-level linear models that include 175 country-year surveys, representing $87 \%$ of the world population. By conducting the first systematic examination of the extent and causes of gender differences in support for redistribution across a broad sample of countries, we fill the existing void in the literature on political attitudes, and develop a novel argument that opens new directions for future research on gender and political attitudes.

Although the existing literature on the gender gap in redistribution attitudes is limited, the related literature on the gender gap in voting (e.g., Giger, 2009; Inglehart and Norris, 2003; Iversen and Rosenbluth, 2006) suggests two possible explanations for cross-national variations in the pro-redistribution gender gap: one that emphasizes the role of female labor force participation, and another that highlights women's involvement in politics. We test these explanations against a novel alternative: collective religiosity. To a greater or lesser extent, most major religions prescribe distinct roles for men and women and promote theologies that discourage state-based economic redistribution as a matter of public policy. Therefore, in nation-states where religion is strongly influential - either institutionally, through close church-state ties (i.e., institutional religiosity), or socially, as a highly salient moral community (i.e., societal religiosity) - , we should observe smaller proredistribution gender gaps, as women refrain from demanding more redistribution. Results show that the level of societal religiosity is the strongest determinant of gender differences in the support for economic redistribution. Countries with higher than average religious orientations display significantly smaller pro-redistribution divides between men and women.

## 2. Theoretical background

This section develops our main argument linking collective religiosity and the gender gap in pro-redistribution attitudes. We first review how gender structures differences in political attitudes. We then review a set of factors, drawn from the literature on the gender gap in voting, which might explain the gender gap in redistributive attitudes. Finally, we turn to the literature on religion and redistributive attitudes, and present a set of alternative hypotheses based on the causal mechanisms identified in that literature.

### 2.1. Gender and political cleavages

Since the late 1980s, gender differences in political behavior have become an important focus of social scientific research. This interest is most clearly visible in a wave of studies investigating gender differences in voting patterns, especially in preferences for leftwing parties (Edlund and Pande, 2002; Giger, 2009; Inglehart and Norris, 2003; Iversen and Rosenbluth, 2006; Manza and Brooks, 1998). In contrast, gender gap research on policy preferences - especially economic redistribution has been more limited and focused on very few countries (Jelen et al., 1994; Norrander and Wilcox, 2008; Svallfors, 1997). This represents a substantial lacuna in the literature, because there are indeed compelling structural reasons why women and men should differ in their demand for redistribution.

It is well known that a structural, economic inequality exists between men and women. In the more than 120 countries considered in the Global Gender Gap Report 2012, the average woman earns lower wages and less income than the average man (Hausmann et al., 2012). Women also generally accumulate less wealth than men, in large part because they are overrepresented in the informal economy and less prestigious occupations (see also Gregory, 2009). Hence, like other economically disadvantaged groups, women on average should benefit more from economic redistribution, and should therefore generally have more pro-redistributive attitudes than men (Hasenfeld and Rafferty, 1989).

Consistent with this expectation, many analyses that pool many countries do indeed reveal a stronger redistributive demand among women than men. Utilizing different cross-national datasets, this research indicates a consistent and significant "modern" gender gap in the support for reducing income inequalities, with women favoring redistribution more than men (Dallinger, 2010; Finseraas, 2009; Jæger, 2006b; Rehm, 2009; Stegmueller et al., 2012). For instance, in a recent study considering 52 different countries, Dion and Birchfield (2010) show that women support redistribution significantly more than men.

However, while there is evidence for an overall gender gap in pro-redistribution attitudes, studies of single countries and/ or regions indicate that this gap is not consistent cross-nationally. A gender gap exists, for example, in Australia and Germany (Svallfors, 1997), the United States (Eagly et al., 2004; Svallfors, 1997), Norway (Edlund, 1999; Linos and West, 2003; Svallfors, 1997), and Eastern Europe as a whole (Murthi and Tiongson, 2009); but, by contrast, no consistent pro-redistribution gap exists in Benin (Wantchekon, 2003), 41 pooled developing countries (Haggard et al., 2010), Latin America (Blofield and Luna, 2011), Muslim-majority countries (Pepinsky and Welborne, 2011), or Russia (Ravallion and Lokshin, 2000). Given that in all countries women are more likely to be economically deprived than men, this cross-national variation in the proredistribution gender gap is striking.

### 2.2. Existing approaches

Although comparative research on the pro-redistribution gender gap remains relatively underdeveloped, there is a substantial existing literature on the gender gap in voting behavior that suggests potential explanations. There are some striking similarities across and connections between the two kinds of gender gaps. For one thing, in some countries, the gender gaps in both voting behavior and in redistributive attitudes tend in a similar direction (viz., toward left-wing parties and greater government intervention in the economy; see Edlund and Pande, 2005; Inglehart and Norris, 2003). Further, some key studies of the gender gap in voting behavior actually examine attitudinal measures (such as electoral or party preferences) rather than actual votes cast (e.g., Emmenegger and Manow, 2014), suggesting the possibility that the voting gender gap and the pro-redistribution gender gap might be shaped by similar factors. These structural and attitudinal affinities suggest the possibility that similar arguments would apply to the gender gap in redistribution.

There are two major explanations for cross-national variations in the voting gender gap - labor force participation and politics. The labor force participation approach - which dominates the current literature on the gender gap in voting patterns - argues that, through increased engagement in paid work, women become more aware of their effective subordination in the labor market and realize the advantages of economic autonomy. Similarly, paid employment increases women's awareness of their economic potential and makes them question their traditional domestic roles (Carroll, 1988; Klein, 1984). Accordingly, countries with higher levels of female labor force participation should have larger gender gaps in attitudes as women's demand for redistribution increases. Recent studies of affluent democracies that find a positive association between the voting gender gap and female labor participation support this approach (Giger, 2009; Iversen and Rosenbluth, 2006; Manza and Brooks, 1998).

By contrast, a political explanation addresses the role of women in formal politics. It argues that as women's representation among policy-makers increases, they can champion policies that undercut women's relative economic deprivation (Bolzendahl and Brooks, 2007; Bolzendahl, 2010; Svallfors, 2007). These two approaches ultimately emphasize the importance of social modernization, whereby as societies modernize economically and politically, the gender gap should increase.

### 2.3. Religion and redistributive attitudes

In contrast to these fundamentally economic and political explanations, we suggest an alternative explanation that focuses on the role of collective religiosity. One reason why redistributive attitudes may not directly align with perceived economic interests is that people's policy preferences are also shaped by their values. Religion is an important source of such values, and - as we demonstrate below - an important contributor to the gender gap in redistributive attitudes. Before proceeding, however, a caveat is in order. Though we will refer to "religion" in broad terms below, we must bear in mind that "religion" is neither a unified nor internally consistent category. Religious principles can suggest multiple policy scripts; even a strong religious obligation to help the poor, like Islam's zakat, does not necessarily translate straightforwardly into support for statesponsored redistribution (Dean and Khan, 1997). Similarly, religion has at times served as a resource for women's resistance and empowerment (e.g. Avishai, 2008; Braude, 2001 [1989]; Gallagher, 2003). For this reason, the ultimate relationships among religion, gender, and inequality are always mediated by political and cultural struggles, and as a result are more historically and culturally contingent than a broad, global-level analysis can reveal. In seeking to generalize, we will necessarily obscure aspects of this more complicated reality.

Nevertheless, the existing social science evidence tells a largely consistent story about how religion relates to gender and welfare. Paradoxically, although charity and poor relief are common themes in most religions, religion is consistently linked to opposition to state-sponsored redistribution. Scheve and Stasavage (2006), in a study of cross-national public opinion data, found that religiosity negatively correlated with support for social spending. Similarly, Stegmueller and colleagues (Stegmueller et al., 2012; Stegmueller, 2013), drawing on the European Social Survey (ESS), observed that both religious affiliation and attendance predicted opposition to redistribution and lower support for pro-redistribution political parties. Finally, Jordan (2014), also using the ESS, found that religiosity generally reduced support for redistribution, more dramatically in Protestant than in Catholic countries.

The answer to this apparent paradox lies in the fact that charity and state redistribution draw upon very different moral and theological assumptions, which may lead religious people to support charity while opposing state-based redistribution. To begin, the idea of publicly-provided welfare benefits may run counter to important theological principles (Kahl, 2005). The Catholic principle of subsidiarity, for example, argues that the state should not do what lower-level units (e.g., the family or charities) can do instead (Ekstrand, 2011). Scholars have noted that the belief that the welfare state is usurping religion's (or
the family's) role appears linked to church opposition to the welfare state throughout the Christian West (Stegmueller et al., 2012).

Additionally, religious theodicies -i.e., justifications for suffering and inequality-may undercut efforts to redistribute incomes. In his classic formulation, Weber (1946 [1915], 271-74) argued that religion provides two kinds of theodicies-a "theodicy of good fortune" that legitimates the successful, and a "theodicy of suffering" that explains misfortune (typically as $\sin )$ and sets out a promise of salvation therefrom. These theodicies both make misfortune more subjectively tolerable and provide explanations that justify inequality. By providing positive justifications for the status quo, in other words, theodicies militate against attempts to rectify inequalities through redistribution. Reformed Protestantism, for example, explained both poverty and wealth in terms of predestination, leading Reformed societies to emphasize personal charity and voluntarism over state provision (Kahl, 2005). ${ }^{1}$ Because these two forms of poor relief have different moral implications, religious individuals may be highly supportive of charitable giving (Brooks, 2004) while opposing state involvement in social matters (Scheve and Stasavage, 2006).

### 2.3.1. Religion and support for redistribution: collective mechanisms

Although these studies have done much to establish that religion appears to have a negative effect on support for redistributive policies, they have tended to focus on religiosity as an individual-level attribute. But religion operates at both an individual and a collective level: its influence is exerted through collective structures such as institutions, organizations, and culture; and religion's collective obligations are not necessarily the same as its individual ones. Several studies have demonstrated that the contextual effects of collective religiosity can shape individual moral opinions (Finke and Adamczyk, 2008), influence patterns of volunteering (Lim and MacGregor, 2012), and promote more conservative gender attitudes (Moore and Vanneman, 2003). The lack of attention to the collective dimension of religiosity in the existing literature on redistributive attitudes is thus potentially problematic.

In fact, some recent scholarship suggests that religion's collective dimension matters to redistributive attitudes. Support for redistribution appears to vary depending on the country's dominant religious tradition, for instance; people in predominantly Catholic nations tend to be more supportive of redistributive policies (Jordan, 2014; VanHeuvelen, 2014). By contrast, religious fractionalization appears to reduce support for redistribution (Stegmueller et al., 2012; VanHeuvelen, 2014). Despite these intriguing findings, however, we still know very little about how the overall level of societal religiosity might affect redistributive attitudes, and virtually nothing at all about how it might affect the gender gap in those attitudes. ${ }^{2}$ Our study thus builds upon this emerging body of knowledge by placing religion's collective, contextual dimension at the heart of our analysis, and by looking specifically at its effect on the gender gap in redistributive preferences.

Social scientists have argued that religion's contextual effects operate through at least two mechanisms (e.g., Brooks and Prysby, 1988). First, religion exerts collective force through "institutional learning" (Rohrschneider, 1996). As Banaszak (2006, 33) summarizes it, "citizens internalize values by participating in political systems that emphasize and reflect those values." In this regard, schools and other political institutions are important contexts in which cultural identity and norms are shaped and transmitted (Finke and Adamczyk, 2008). The extent to which public institutions may act to diffuse religious values and ideals, however, is variable. In particular, when church and state are fused, it is easier for established religious ideas to be transmitted through public institutional vehicles (Gill, 2008). By contrast, institutional secularization ${ }^{3}$-understood here as the differentiation of the political and religious spheres such that the state becomes autonomous from religious control (Casanova 1994; Gorski 2000)—may reduce the efficacy of this mechanism. In line with the institutional learning hypothesis, we therefore argue:
H1. Countries with greater institutional secularization (i.e., where church and state are separated) display higher proredistribution demand.

Second, religion also operates at the collective level by creating a supportive environment that affirms religious ideas and beliefs. This insight is at the core of the "moral communities" thesis, popularized by Stark $(1996)$. As Stark $(1996,164)$ puts it, "what counts is not only whether a particular person is religious, but whether this religiousness is, or is not, ratified by the social environment." Religious values may be reinforced through direct social interactions with religious individuals (Brooks and Prysby, 1988; Ruiter and De Graaf, 2006), but the moral communities effect may also operate through more indirect controls (Lim and MacGregor, 2012). In particular, more religious societies may feature a more religious national culture that facilitates religious socialization through vehicles like the mass media, public discourse, and the myriad organs of civil society (Kelley and De Graaf, 1997; Lim and MacGregor, 2012). As the number of religious individuals in a society declines, the power of these cultural controls may also wane (Moore and Vanneman, 2003). Accordingly, declines in the overall proportion of

[^1]religious people (i.e., societal secularization) may weaken this "moral community" effect, because these cultural and interpersonal supports for religious ideas would also decrease.

At the same time, secularization should not simply be thought of as a "subtraction story" (Taylor, 2007), but also as a generator of new, positive content. The weakening of religious influence provides space for new ideas, practices, and movements to develop that challenge traditional religious ideals about charity and domesticity. The declining collective force of religion hence goes hand in hand with increasing collective force for new, secular ideas. Importantly, many of these new secular ideas simultaneously suggest new secular theodicies (Simko, 2012). Socialism, social democracy, and feminism, for instance, explain inequality and suffering in terms that favor redistributive policies. Thus, secularization at the collective level may undermine the power of religious ideas, and enhance the power of non-religious ideas and secular theodicies, to work through cultural and interpersonal channels. In line with the moral communities thesis, we therefore hypothesize:
H2. Countries with greater societal secularization display higher pro-redistribution demands.

### 2.3.2. Religion and redistributive attitudes: differential effects by gender?

Even granting the above, one might well ask why these dynamics should lead to changes in the gap in attitudes between men and women. But there are reasons to believe that religion may have a greater influence on women's attitudes toward redistribution than men's. In particular, religion has a deep relationship to the gender order that might lead its effects to differ for men and women. Religion has long legitimated traditional gender roles, including a subordinate position for women in the social hierarchy, and - to varying degrees - this remains true of most major religions (Adamczyk, 2013; McGuire, 2002; Peek et al., 1991). Formalized in catechisms, norms, symbols, and sanctions, religions tend to encourage traditionally gendered behavior. Although recent studies expose the complexities of gender relations within religions, they also "explicitly acknowledge a continuing patriarchal bias in the communities under investigation" (Woodhead, 2001, 70; see also King, 2005).

Most importantly for the purposes of this study, most major religions emphasize women's roles as wives and mothers and encourage women to focus their attention on duties in the private sphere through pro-nuptial and pro-natalist messages (Edgell, 2006; Mahoney, 2010). Thus, thanks to the close ties between religion and familism, traditional gender roles, labor force participation, and religion all mutually reinforce one another (Woodhead, 2005). Research consistently shows that religion is linked to support for a traditionally-gendered work-family divide (Davis and Greenstein, 2009; Voicu, 2009) and to traditional attitudes toward gender and family (Banaszak, 2006; Hayes and Hornsby-Smith, 1994).

We expect that declines in religious influence may have stronger effects on women's attitudes towards redistribution because they undermine a key support for traditional gender roles and domesticity. To the extent that a decline in religion is linked to declines in women's acceptance of housekeeping and child-rearing as their primary duties, this may alter women's perceptions about the relative benefits of redistributive and other welfare policies. In other words, women's demand for redistributive policies may increase as societies become less religious and pressures to conform to traditional gender roles and a domestic ideal decline.

In line with this argument, we hypothesize that institutional and societal religiosity should have divergent collective effects on attitudes toward redistribution among men and women. Public institutions are important carriers of religious norms whose influence on younger generations can be profound (Berger et al., 2008). If public institutions no longer promote these norms, we should expect a corresponding decline in the collective influence of religion:

H3. Countries where church and state are separated display a larger pro-redistribution gender gap.
Similarly, societal secularization should also affect men's and women's attitudes differently. As Inglehart and Norris note, "traditional religious values and religious laws have played an important role in reinforcing social norms of a separate and subordinate role for women as homemakers and mothers, and a role for men as patriarchs within the family and primary breadwinners in the paid workforce" (2003: 68; cf. Brown, 2001; Voicu et al., 2009; Woodhead, 2005). Thus, as religious norms and beliefs become less prevalent in society, social pressures for women to adhere to traditional domestic roles may correspondingly decrease. Alternately (or perhaps additionally), the waning of collective religiosity may open a discursive space for alternative sociopolitical arguments that emphasize the social and economic disadvantages faced by women (Taylor, 2007). This in turn may contribute to changes in women's perceptions of redistributive policies, leading to a larger gender gap in pro-redistribution attitudes.

H4. Countries with more societal secularization display a larger pro-redistribution gender gap.
Finally, as the logic above suggests, the effects of declining collective religiosity-whether institutional or societal-on pro-redistribution attitudes should be felt more strongly among women than among men, since secularization undermines a key support for traditional gender roles among women. We therefore hypothesize:

H5. The level of societal secularization has a stronger, positive association with the pro-redistribution attitudes of women than with the pro-redistribution attitudes of men.

## 3. Data and methods

### 3.1. Data

Since very few studies have analyzed redistributive preferences in the non-industrialized world, we use the WVS (World Values Survey Association, 2010), which covers a wider array of developed and developing countries than other comparative survey programs. The WVS consolidated dataset has several waves of the key variables used in this study, allowing us to pool the data for estimating our models. Our final sample includes about 210,000 individuals, four time points (1989-1993, 1994-1999, 1999-2004 and 2005-2008), 86 different countries, and 175 country-years. ${ }^{4}$

Regarding our dependent variable (distributive preferences), interviewees were asked to locate themselves on a 10-point scale in which 1 means "Incomes should be made more equal" and 10 means "We need larger income differences as incentives." For easier interpretation, however, we invert the scale so that higher values indicate more support for redistribution. This item has frequently been used as a measure of "economic policy" attitudes (Davis and Robinson, 2006, 177; see also Blekesaune, 2007; Mehrtens, 2004). ${ }^{5}$ Additionally, as an indicator of economic egalitarianism, it predicts the effective growth level of government spending (Pickering and Rockey, 2010).

As for independent variables, we test our religion-based account through two indicators. The "moral communities" hypothesis is measured through a societal religiosity indicator based on the importance of God in respondents' lives. We draw on a WVS individual-level questionnaire item that asks "How important is God in your life?", with a response range from 1 ("not important at all") to 10 ("very important"). Based on that indicator, societal religiosity represents specifically the average country-year value in this continuous variable. Hence the higher the value in the country-level societal religiosity, the more closely knit is a moral community. We draw on this indicator because it is a common indicator in the sociology of religion (e.g., Stark, 2001; Xiao, 2000); it has been available in all WVS waves considered in this study; and, unlike other factors (such as attendance rates), it is less affected by differences in practice across religious traditions. ${ }^{6}$

By contrast, we measure the "institutional learning" hypothesis through a measure of church-state integration. This measure originates from the "Religion and State Project" dataset (Fox, 2013). This variable represents an index measuring 51 dimensions of state legislation or programs established according to religious beliefs (e.g. state funding of religious organizations or religious schools; restrictions on birth control, homosexual practice, food consumption or public dress; mandatory religious holidays; and religion stated in identity card). ${ }^{7}$ A higher value in this index indicates less church-state separation.

Eight other country-level variables address our two alternative theories and provide a set of controls. The female labor force participation approach is measured by the percentage of women 15 or older who are either working or looking for work (World Bank, 2012a). Representing the political approach, women in parliament measures the percentage of parliamentary seats held by women (Paxton et al., 2008; World Bank, 2012a). Because economic prosperity could affect both the demand for redistribution (Dion and Birchfield, 2010) and a country's level of religiosity (Norris and Inglehart, 2004), we also include a control variable for the GDP per capita in real PPP (purchasing power parity) dollars (World Bank, 2012a). Due to the gender bias in public employment, public expenditure could also affect the gender divide in pro-redistribution attitudes (EspingAndersen, 1990). Finally, because recent studies have shown that redistributive attitudes may vary by dominant religious tradition (Jordan, 2014; VanHeuvelen, 2014), we include the dichotomous variables Catholic country, Muslim country, Orthodox country and Protestant country (with Other country as the reference category) to capture variations by religious tradition at the country level. Data are from Inglehart and Norris (2003) and Alesina et al. (2003). Due to their substantial right-hand skew, church-state integration, women in parliament, and GDP per capita have been logged.

Since our main interest lies in contextual effects on the gender-gap in pro-redistribution preferences, we include individual-level variables (apart from female) mainly to minimize the risk of country-level variables absorbing compositional effects. Specifically, the multilevel models control for those variables that have proven significant in previous research on redistributive preferences: age, position in the labor market (unemployed and inactive) (Owens and Pedulla, 2014), and income (Dallinger, 2010; Jæger, 2006b). As an indicator of income, we use income deciles. Individual religiosity represents the

[^2]individual-level value of our societal religiosity indicator (importance of God) after country-year centering. This variable allows us to ensure that our societal religiosity measure does not simply capture the compounded effect of individual-level religiosity. We also control for the major levels of education (middle education and upper education, with lower education as the reference category) and the number of children, which are expected to predict stronger pro-redistributive attitudes (Jæger, 2006a). ${ }^{8}$ Table B2 in the Appendix includes descriptive statistics of all variables.

### 3.2. Methods

Since we have a multi-wave and cross-national dataset, our data is nested in three levels. At the first level, we have individuals; at the second, country-years; and at the third, countries. Given this multilevel structure and the continuous nature of our dependent variable, we use linear multilevel models with three-level nesting. The main advantage of using multilevel models in comparative research is that they account for variance in the response across different levels of analysis and enable us to estimate the effect of aggregate-level variables on individual responses. We estimate random-slopes models (Snijders and Bosker, 2011), in which the gender variable female is interacted with all relevant country-year variables. In order to facilitate the interpretation of interaction effects, all continuous country-level variables have been grand-centered. We include a random slope for female at the country and country-year levels and a random-intercept at both country-year and


Note: Hollow markers indicate non-significant differences and filled markers significant differences (95\% threshold). Estimates obtained from 175 linear regression models. All models include female, age, years of education, number of children, individual religiosity and income.

Fig. 1. Absolute gender gap (women-men) in the average support for more economic redistribution in 86 countries, 1990-2008.
country levels. This allows us to model variation in the effect of gender as a function of country-year characteristics. The other eight individual-level variables have fixed effects on the dependent variable. All models include a linear time trend as a fixed effect to rule out the possibility of significant effects that are due merely to common trending between dependent and independent variables. Finally, since not all WVS samples are simple random samples, we use weights within country-years

[^3]samples. In the context of multilevel analysis, weights provided by WVS represent conditional inclusion probabilities (i.e., the conditional probability of entering the sample for an individual after one particular country-year has been selected). ${ }^{9}$

## 4. Findings

We begin by examining descriptive evidence regarding the attitudinal gender gap. Fig. 1 depicts the absolute difference between women and men in the scale of pro-redistribution attitudes in all 86 countries. The values were estimated through 175 single-level OLS regressions (each including the eight control variables) for each country-year. Because the values represent the women's estimate of the dependent variable minus the men's estimate (net of controls), a positive value indicates the existence of a "modern" gender gap - i.e., a higher propensity to support redistribution among women than men. Consistent with prior research, women hold more pro-redistributive attitudes than men in most country-years. The gender gap is positive and significant ( $\mathrm{p}<.05$ ) in 49 country-years, and negative and significant in only four country-years.

How can we account for this variation in the gender gap? In particular, can we observe a simple bivariate relationship between cross-national levels of societal and institutional religiosity and the pro-redistribution gender gap? If, as the theoretical discussion predicts, these two factors have a moderating effect on pro-redistribution gender differences, the coefficients of female (or, gender gap) depicted in Fig. 1 should be inversely related to societal religiosity and church-state integration. To assess this, Fig. 2 plots both indices against the female coefficient. Consistent with Hypothesis 2, societal religiosity and the pro-redistribution gender gap have a negative and significant relationship ( $\mathrm{p}<.001$ ). Church-state integration is negatively related to the gender gap, yet, contrary to Hypothesis 1, the relationship is not significant ( $\mathrm{p}>.10$ ) We now examine the robustness of these findings by considering multivariate results.

### 4.1. Overall religiosity and the gender gap

As mentioned above, to predict the demand for redistribution, we estimate three-level multilevel models with female as the only individual-level, random variable, and eight individual controls as fixed effects. The results are depicted in Fig. 3, which facilitates comparisons of the effects. In particular, Fig. 3 represents the estimated effect of one standard deviation


Fig. 2. Linear relationship (and 95\% confidence interval) between the absolute gender gap in redistribution attitudes and the level of religiosity in 86 countries, 1990-2008.

[^4]

Note: Hollow (filled) markers indicate non-significant (significant) effects. The variables unemployed, female, middle education, upper education, inactive, Muslim country, Orthodox country, Protestant country, and Other country are dichotomous

Fig. 3. Estimated effects (and 95\% confidence intervals) of a one standard deviation increase (continuous variables) and the change from one category to another (dichotomous variables) in multilevel slopes-as-outcomes models with the female variable as random.
increase for all continuous variables and a change from one category to another for all dichotomous variables (the original Table B3 is available in the Technical Appendix). Model 1 includes all nine individual-level covariates, as well as the year variable, to control for common trending between dependent and independent variables. Model 2 adds an interaction term between female and societal religiosity and the controls for religious culture and prosperity. Model 3 adds an interaction term between female and church-state integration. Model 4 includes all individual- and country-level variables without interactions. Finally, the full Model 5 includes all individual- and country-level variables.

After controlling for individual religiosity, age, working status, income, education, and number of children, Model 1 indicates that, on average, women tend to demand more redistribution than men. In addition, gender has a substantial effect. The impact of gender on the demand for redistribution (.150) is nearly equivalent to the effect of being unemployed (.176). Compared to income, gender differences are also substantial. The impact of gender is also equivalent to $52.42 \%$ of the impact produced by a standard deviation in the income level $\left(-.118^{*} 2.425=-.286\right)$. The variance of the female effect is also significant, indicating the presence of substantial differences in impact across country-years, and warranting an explication of these differences. Also interestingly, individual religiosity is negative and significant; the impact of a standard deviation change in individual religiosity $\left(-.033^{*} 2.472=-.082\right)$ is equivalent to $28.51 \%$ of the impact produced by a standard deviation in the income level.

How do levels of collective religiosity shape the effect of gender? Models 2 and 3 provide initial indications by interacting female with societal religiosity and church-state integration. ${ }^{10}$ First, societal religiosity is negative and non-significant for men. More importantly, and in line with Hypothesis 4, the effect of female remains positive, and the interaction term female*societal religiosity is negative and highly significant ( $\mathrm{p}<.001$ ). By contrast, in Model 3 neither the effect of church-state integration nor the interaction with female is significant, indicating that, contrary to Hypothesis 3, institutional secularization is statistically unrelated to the gender-gap in attitudes toward redistribution. The gender gap, therefore, is only related to societal religiosity, not to institutional religiosity. A close examination of the interaction female*societal religiosity allows us to ascertain the moderating influence of societal religiosity on the gender gap. Based on Model 2 (and because all continuous variables are centered), a standard deviation increase in societal religiosity reduces the net effect of female by $97.33 \%$. In addition, the variance of female falls from .033 to .007 , which implies that societal religiosity explains $78.79 \%$ of the cross-national variation in the effect of female. The finding that more intensely religious countries display a smaller pro-redistribution gender gap is consistent with our claim that collective religiosity affects the gender gap in redistributive attitudes. Models 4 and 5,

[^5]furthermore, show that the only country-level variable that shapes the pro-redistribution attitudes of men and women is GDP per capita.

These results could be affected by considering alternative explanations for the gender gap. Hence, Model 5 (in Fig. 3) includes all six country-level variables and their interaction terms with female. Regarding individual covariates - and due to grand-centering- Model 5 reveals no substantial differences with respect to Model 2. Females are still significantly more likely to demand more redistribution, as are unemployed, economically inactive, less affluent, less educated, and less religious individuals. With respect to the non-interacted country-level covariates, two findings emerge. Female labor participation and women in parliament are not significant. A higher female labor participation rate and a higher female representation in policymaking are not significantly related to men's demand for redistribution. More importantly, once controlling for five other country-level variables, the level of societal religiosity does not affect men's pro-redistributive attitudes.

Regarding the cross-level interactions in Model 5 (Fig. 3), which address the central objective of our article - i.e., identifying the determinants of the pro-redistribution gender gap - two main results should be underlined. First, neither the politics-based alternative explanation nor the economic explanation is supported: Female*women in parliament and fema$l e^{*}$ female labor force participation are not significant. Second, after controlling for all other factors, female*societal religiosity remains negative and significant. In fact, despite the inclusion of three additional variables, its coefficient falls only modestly with respect to Model 2 and is still a strongly significant moderator of the effect of gender ( $\mathrm{p}<.001$ ). In Model 5, a standard deviation increase in societal religiosity is associated with an $81.83 \%$ reduction in the net effect of female. By contrast, fema$l e^{*}$ church-state integration remains not significant. Model 5 also reveals that the country's dominant religious tradition does not affect the demand for redistribution, but that the level of prosperity has a positive impact-a finding in line with Dion and Birchfield (2010).

Although Fig. 3 clearly indicates that the gender gap diminishes under conditions of higher societal religiosity, it does not clarify at which level of societal religiosity the gender gap is significant. Fig. 4 further facilitates the interpretation of the interaction terms discussed above. The first row depicts the female coefficient - i.e., the difference in the estimated means of women and men - at different standardized values of the six variables. The second row depicts the estimated values in the pro-redistribution index for women and men at different standardized values of the six variables. A comparison of the four plots in the second row makes clear that societal religiosity has the strongest moderating impact on female, far stronger than all competing hypotheses, including female labor force participation. Societal religiosity has such a strong moderating influence in gender differences that it renders female not significant at one standard deviation above the mean.

Moreover, Fig. 5 (and Table A1 in the Technical Appendix) shows that alternative measures of religiosity (self-identified religious, importance of religion, and religious practice) return the same results. The Technical Appendix provides further details about this and other additional robustness checks for households where men are the bread-winners (thereby eliminating intra-household differences in incomes; Table A2, Model 1), excluding potentially influential outlier country-years (Table A2, Model 2), controlling for missing data in the income variable (Table A2, Model 3), disaggregating countries based on their


Note: Predicted values obtained from Model 5 in Figure 3.
Fig. 4. Female coefficient and predicted values of women and men at different standardized values of Societal religiosity, church-state integration log, GDP per capita log, female labor force participation, women in parliament, and public expenditure.


Note: Predicted values obtained from Models 1, 2 and 3 in Table A1.
Fig. 5. Predicted female coefficient and values of women and men at different standardized values of self-identified religious, religion is important, and religious practices.
predominant religion (FigA1) and controlling for the level of religious fractionalization and the mean years of education in the country. All these analyses also indicate that societal religiosity is negatively related to the pro-redistribution gender gap.

The results, thus far, suggest that societal religiosity has a negative association with the pro-redistribution gender gap. However, religious value orientations could shape women and men's preferences in several possible directions. Our specific prediction (Hypothesis 5) is that societal religiosity induces lower redistributive demands among both genders, but especially among women. To assess this prediction, the second row of plots in Fig. 4 depicts the estimated demand by women and men for redistribution at different standardized values for each of the six country-level variables. As shown in the second and fourth plots, given the relatively weak moderating effect of church-state integration and women in parliament, the estimated values for women and men do not fully converge or diverge from minimum to maximum values in the country-level variable. In fact, the estimated values for men and women remain largely parallel at different values in these three control variables. More importantly, as shown in the first plot, this is not the case with regard to societal religiosity. Consistent with Hypothesis 5 , countries with stronger societal religiosity levels display lower demands for redistribution among men and, especially, among women. In a country two standard deviations below the mean in societal religiosity, women have an $8.09 \%$ higher value in the demand for redistribution than men. In contrast, in a country two standard deviations above the mean in societal religiosity, women have a $2.26 \%$ lower value in the demand for redistribution than men. In other words, as societal religiosity increases, we observe a stronger decline in pro-redistribution attitudes among women than men.

## 5. Conclusions

Three main results emerge from the analysis. First, descriptive results confirm the presence of a "modern" proredistribution gender gap. Consistent with the expectation that women's structural position shapes their political values, in a large number of country-years, net of other factors, women demand more redistribution than men. Nevertheless, despite this overall pattern, countries differ substantially in the extent of this gender gap. We find that country characteristics in fact affect the differences between men and women in their attitudes toward inequality.

Second, the substantial cross-national variation in the pro-redistribution gender gap is not satisfactorily accounted for by standard political or labor market explanations. Women's political power does not affect the difference between women and men in their support for economic egalitarianism. Nor, despite research showing that women's paid employment affects the voting gender gap, does female labor force participation appear to shape the pro-redistribution gender gap. In light of our
findings, it appears that traditional political and economic explanations are less consequential in explaining redistributive attitudes than cultural factors such as religion. Cultural factors matter more in shaping attitudes toward redistribution than they are often given credit for, and future research should more explicitly engage with cultural and religion-based hypotheses.

Third, and most significantly, we find that the pro-redistribution gender gap is best accounted for by religious factors. Our study confirms previous findings that religious individuals tend to be less supportive of redistributive policies than their more secular counterparts (Jordan, 2014; Scheve and Stasavage, 2006; Stegmueller, 2013; Stegmueller et al., 2012), while demonstrating that this relationship extends well beyond the secular, Western European settings that previous research has focused on. However, we also find that religion has an important effect on policy attitudes at the societal level that is not reducible to these individual effects, and which is a more robust predictor of the pro-redistribution gender gap than traditional economic and political factors.

Further, we tested two competing hypotheses regarding collective religiosity: a moral communities hypothesis, which emphasizes the importance of supportive national cultures and interpersonal encounters in validating religious beliefs; and an institutional learning hypothesis, which emphasizes the role of political institutions in disseminating religious beliefs and values. The evidence does not support the institutional learning hypothesis. Contrary to our expectation that institutional secularization (i.e. the separation of church activity from political activity) should strengthen demands for economic redistribution, we find that church-state separation has no effect on the gap in redistributive preferences between men and women. By contrast, we find strong support for the moral communities hypothesis. Societal religiosity is the most important, robust moderator of the pro-redistribution gender gap. Countries with higher average levels of religiosity display smaller gender differences in attitudes towards redistribution. In relation to attitudes towards redistributive policy, secularization matters, therefore, primarily because it makes it more difficult for religious claims to be corroborated by collectives or individuals that act as significant others.

Although our article makes important contributions in identifying collective religiosity as the dominant factor shaping the gender gap in redistributive attitudes, and in revealing that the moral communities hypothesis provides a better explanation for this finding than the institutional learning hypothesis, it nevertheless leaves some important questions unanswered due to limitations of the dataset. For instance, we cannot conclusively determine whether the moral communities effect operates primarily through interpersonal interactions or a supportive national religious culture - though this is surely an important potential avenue for future research.

Similarly, we cannot adjudicate between two possible interpretations of the "moral community effect." On the one hand, religious theodicies of suffering and ideas about gender and family might effectively discourage women from acting in line with their economic interests. Since mainstream religious doctrines commonly dictate traditional gender roles, and these principles are reinforced in dense networks of believers, intense national religiosity constitutes a normalizing platform that minimizes attitudinal differences between men and women. As societies become less religious, the persuasiveness of these religious ideas declines and women may find them less compelling as explanations for their economic position. As a result, their support for redistributive policies increases, generating a gender gap in pro-redistribution attitudes.

On the other hand, an alternative interpretation, following Taylor (2007), would focus less on the decline in religious ideas and more on the increasing influence of secular ideas and content in less religious societies. From this perspective, the declining influence of the religious moral community is primarily important for the space it creates for new, critical visions to emerge. As religious understandings start to recede, social justice and feminist movements, among others, have greater space to advance alternative understandings of inequality and suffering that cast social inequalities as contingent, avoidable, and immoral. As pressure to accept religious interpretations declines, women may find themselves increasingly drawn to more egalitarian ideas and alternative secular theodicies. These new secular ideas may even generate their own "moral communities" - such as feminist and other movements - that build support for pro-redistributive policies. As a result, women's support for redistribution may grow, leading to a larger gender gap in redistributive attitudes. Although our article cannot resolve whether the "moral community effect" operates more powerfully through weaker religious ideas or stronger secular ones (or, perhaps, some combination of both), it does suggest one particularly promising avenue for future research into the relationship between religion, gender, and political attitudes.

Finally, our article suggests that scholars of politics and political attitudes should pay closer attention to the role societal religiosity might play in other important aspects of social life. It could affect the persistent gender gap in labor force participation, for instance (World Bank, 2012b). This study's theoretical model would predict that, in the face of societal secularization, women might also feel more encouraged to participate in paid employment, thus reducing this persistent gender gap. Furthermore, the moderating influence of societal religiosity on attitudinal differences between dominant and dominated groups could apply to other social cleavages such as class, income, or education. To the extent that dominated classes find meaning and community in religion, societal religiosity should also reduce divides in support for a range of contemporary public policies. Ultimately, systematic attention to the influence of supra-individual cultural orders - such as collective religiosity - on group conflicts promises to illuminate both the processes by which policies are formed, and by which inequalities are reproduced, in complex modern societies.

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## Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.ssresearch.2016.01.009.

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[^1]:    ${ }^{1}$ Kahl (2005) argues that, among the Christian churches, only Lutheranism developed a view of public aid as desirable, which helps to explain the robust and popular welfare states in the Nordic countries.
    ${ }^{2}$ VanHeuvelen (2014) provides a possible exception.
    ${ }^{3}$ We define secularization here, following Chaves (1994), as a decline in religious authority. As we indicate below, and in line with our analysis of religion's collective effects, this authority has both institutional and societal dimensions. "Institutional secularization," as we use it, thus refers to declines in religious authority within public institutions, whereas "societal secularization" refers to declines in the average rate of individual piety.

[^2]:    ${ }^{4}$ Table B1 in the Appendix includes all the countries and years under analysis. The first WVS wave (1981-1984) was not used in the analysis because it lacked a question regarding attitudes towards redistribution. The average effective sample size is 1205 individuals per country-year, although sample sizes vary considerably across country-years, ranging from 306 to 4055 . Nevertheless, sample size is above 500 for almost every country-year (172) and every sample is still representative of the national population. The effective sample size is obtained after eliminating the cases containing missing data for any of the variables under analysis, since the computational burden of the multilevel models prevents the use of multiple imputation techniques. All the multivariate models have been estimated using listwise deletion of missing data. Yet, missing data does not severely affect our dataset. The proportion of missing cases is very low for work status (1.07\%), education level ( $1.90 \%$ ) and importance of God ( $2.31 \%$ ), while it is only slightly higher for the dependent variable (3.81\%), and number of children (3.95\%). The only variable having a substantial, albeit moderate, proportion of missing cases is income (11.47\%). For this reason, we ran an additional robustness check in which we included a dichotomous variable indicating whether income data is missing. However, estimates remained almost unchanged.
    ${ }^{5}$ Although the question does not specifically mention the state as the exclusive agent of redistribution, in all waves of the WVS, the question was positioned within a battery of items on political values and the relative importance of government versus markets. Thus the survey questionnaire primed interviewees to consider the question in terms of state-based redistribution. Accordingly, it is highly unlikely that interviewees interpreted the question as encompassing non-state-based forms of redistribution (e.g., charity).
    ${ }^{6}$ In robustness checks (discussed below), we show that alternative measures of religiosity produce equivalent results.
    ${ }^{7}$ Following a personal communication with Jonathan Fox, we use the " lx " variable in the Religion and State Project (RAS).

[^3]:    ${ }^{8}$ To maximize the number of country-years, we construct two dichotomous variables based on either the categorical level of education or the years of education. Middle education includes individuals with between 15 and 20 years of education or Secondary education. Upper education includes individuals with 21 or more years of education or University with or without degree.

[^4]:    ${ }^{9}$ As caution is needed when using weights with multilevel analysis (StataCorp, 2013,323), we re-estimated all the multilevel models without weighting as an additional robustness check. However, no relevant differences were found between the two sets of estimates.

[^5]:    ${ }^{10}$ We do not center female in the models using cross-level interactions because it is a dichotomous variable. Nevertheless, since Raudenbush and Bryk (2002: 34) acknowledge the possibility of centering dichotomous variables, as an additional robustness check, we re-estimated Models 2 and 3 using group centering for female at country-year level. This ensures that we avoid any possible confounding of cross-level interactions (between individual gender and societal religiosity) with higher level interactions (between the proportion of women and societal religiosity). However, the effect and significance of country-year centered female and its interaction with societal religiosity remain almost unchanged, while the interaction between country-year average female and societal religiosity is far from significant.

