

THE POLITICAL ECONOMY OF BELIEFS:  
WHY FISCAL AND SOCIAL CONSERVATIVES COME HAND-IN-HAND

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**Abstract** We show that religious groups with greater within-group charitable giving are more opposed to the welfare state, unless they are members of a state church. Increases in church-state separation precede increases in the correlation between fiscal and social conservatism. Countries sustain high church-state separation, high religiosity, and low welfare state, or vice versa. We propose an explanation for the economic ideology of religious movements: As elites gain access to credit markets, elites increase church-state separation to create a constituency for lower taxes if religious voters exceed non-religious voters, otherwise, elites decrease church-state separation to curb tax preferences of non-religious voters.

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## INTRODUCTION

Social surveys such as the General Social Survey indicate that individuals who attend religious services more frequently are less supportive of the welfare state and more fundamentalist. In a matrix of fiscal and social attitudes, no obvious theory explains political alignment along one diagonal versus another, nor why religious groups often emphasize individual responsibility at the expense of the welfare state. We build a model to explain: 1) why fiscal and social conservatism align in some countries, 2) why fiscal and social conservatism did not align together in the past or in some countries today, and 3) why some countries sustain high religiosity, a minimal welfare state, and high church-state separation, while others sustain low religiosity, a larger welfare state, and low church-state separation. We present empirical tests of the causal effects of church-state separation.

Our explanation begins with the observation that religion offers social insurance (Iannaccone 1998; Berman 2000; Dehejia et al. 2005; Chen 2010). In the U.S., religious participation smooths 35% of income shocks, thus the religious right may be against government welfare when it competes to provide services to the same constituency. Several studies find that government welfare crowds out church participation and charitable provision (Gill and Lundsgaarde 2004; Hungerman 2005; Gruber and Hungerman 2007). Moreover, it is well-documented that countries with high religiosity have low levels of welfare-state spending and vice versa (Gill and Lundsgaarde 2004; Scheve and Stasavage 2006; Cavanaugh 2005). But church-state separation mediates the relationship between religiosity and welfare support across countries (Huber and Stanig 2011). Welfare does not compete against religious groups when government funding can be distributed to religious groups.

To explain multiple steady states, we build a model where elites desiring low taxes prefer to separate church and state when the relative weight of religious constituencies is large. In brief, this causes religious constituencies to shift to fiscal conservatism (i.e., favoring low taxes and low government expenditures), which then reduces the size of the welfare state. This generates positive feedback, increasing religious constituencies. At the other extreme,

elites prefer a state church when the relative weight of non-religious constituencies is large. This causes non-religious constituencies to align with fiscal conservatism, which then creates pressure for a smaller welfare state. This generates negative feedback as a smaller welfare state increases religious constituencies. These multiple steady states are consistent with the fact that countries with high levels of religiosity tend not to have a state religion (and vice versa) (Finke and Stark 1992; Iannaccone 1998; Barro and McCleary 2005). The degree to which religiosity differs is reflected in the fact that 96% of Americans believe in God (Marshall 2002), while 51% of EU citizens believe in God, ranging from 79% in Poland to 18% in Sweden in Eurobarometer polls.

Our empirical analysis focuses on establishing the causal linkages for multiple steady states of the impact of church-state separation. Before doing so, we review the evidence on fiscal and social conservatism and liberalism coming hand-in-hand at the individual level within countries. Next, we offer empirical support for the well-established theoretical link between social conservatism and insurance—risk-sharing mechanisms are self-sustaining if defecting agents are punished with permanent autarky (Coate and Ravallion 1993; Kocherlakota 1996; Alvarez and Jermann 2000; Krueger and Perri 2002; Genicot and Ray 2003), and risk-sharing is more necessary without alternative forms of social insurance. Social conservatism being necessary to sustain ex-post insurance is consistent with conservative groups having stronger social sanctions to make mutual insurance more self-sustaining in relation to social groups without strong social sanctions amid volatility. Individual guilt (norms), nurtured through religious and family education, can work as self-enforcement mechanisms for social insurance (Fafchamps 2004; Ellsworth 1989). More socially conservative religious groups levy more sanctions against out-groups. Indeed, the provision of within-group social insurance varies substantially across religious groups and is positively correlated with conservatism (Wuthnow 2004). We present quantitative evidence that religious groups with greater within-group charitable giving and within-group insurance are more socially conservative.

The main stylized fact we unveil is that political alignment reverses (social conservatives

become fiscal liberals) for members of a state church at the individual level. This reversal is unlikely to be driven by omitted environmental variables: increases in church-state separation precede increases in the alliance between fiscal and social conservatism. Huber and Stanig (2011) do not exploit within-country membership in the state church nor within-country changes in church-state separation. Our main empirical contributions are: 1) the alignment between religious attendance and fiscal conservatism disappears in countries with a state church and the alignment *reverses*—religious attendance predicts increasing support for welfare—if the individual is a *member* of the state church, even controlling for fixed differences across countries and controlling flexibly for individual-level characteristics. The findings are not due to nonlinearities in the relationships and are robust to dropping those who claim no religion. Notably, the documented patterns on welfare attitudes are specific to attitudes towards government *redistribution*, rather than attitudes towards *inequality* more generally. Moreover, the shifts in alignment are mediated specifically through government regulation and *financial support* for specific religions, rather than social regulation and *non-financial* support for religion. We then exploit plausibly exogenous shifts in church-state separation and find that 2) in the U.S., legal precedents that separated church and state preceded fundamentalists identifying strongly as Republican. This is true whether we exploit increases in church-state separation in U.S. Supreme Court jurisprudence or we exploit random variation from the assignment of U.S. Courts of Appeals judges. Our final analysis leverages a unique opportunity to follow a panel of Scandinavian voters before and after 3) Sweden abolished the state church in 2000, after which religious Swedes became more fiscally conservative relative to religious Norwegians, whose state church remained government financed.

Our empirical framework for analyzing the panel of Scandinavian voters is a differences-in-differences-in-differences design. Notably, as with the cross-country individual-level analysis in 1), we find that the documented patterns on welfare attitudes are, again, specific to government *redistribution*, rather than *inequality* more generally. This survey lacks a measure of

fundamentalism or religious attendance. We therefore regress on the only available measure of religiosity, a belief that “we should promote a society where Christian values are more prominent”. Prior work has shown that religious attendance, within-group insurance, donations, and fundamentalism are all highly related (Iannaccone 1998). In the appendix we also provide evidence that these are highly related when multiple measures are available within the same survey. Overall, we draw on multiple sources of data: Panel Survey of Income Dynamics (PSID), General Social Survey (GSS), World Value Survey (WVS), U.S. State Department reports, World Christian Encyclopedia, U.S. Supreme Court and Circuit Courts legal precedents, and the Scandinavian voter panel. Where possible, we make our indicators consistent across datasets and present results using all available indicators in the appendix.

Our paper contributes to a literature on institutional and cultural change that considers the economic incentives behind “why did the West extend the franchise” (Acemoglu and Robinson 2000), “why democracies, where a relatively poor majority holds the political power, do not engage in large-scale expropriation and redistribution” (Bénabou and Ok 2001), and “why have women become left-wing” (Edlund and Pande 2002). Our paper addresses two analogous questions, “why do countries separate church and state” and “why have religious individuals become right-wing”. The lack of a positive relationship between pre-tax inequality and redistribution predicted by standard models has been a puzzle to the political economy of redistribution (Romer 1975; Meltzer and Richard 1983) and social insurance (Moene and Wallerstein 2001, 2003; Lind 2005). Glaeser et al. (2005) models why religion is salient in politics and DeMarzo et al. (2003) models why political positions should map along a single axis, but neither formalize why Republicans and Democrats divide along religious issues the way that they do nor why the divide would change across time and space. Fiorina et al. (2011) and Layman (2001) present general discussions of cultural and religious divides. Jost et al. (2003) proposes that uncertainty aversion explains why fiscal and social conservatism come together (uncertainty aversion is related to risk aversion), but do not explain why they do not come together in some countries or time periods. Roemer (1998) argues that

religion distorts the vote of the poor away from high taxes but does not consider church-state separation as an important mediator. Scheve and Stasavage (2006) reject explanations for the alignment between fiscal and social conservatism involving denominational differences, altruism, differences in the making of inferences, issue-bundling, and spurious correlation, which leaves unanswered questions that this paper addresses.

Our paper also contributes to a theoretical literature on the state church, which has primarily been modeled as impeding a market for religious ideas (Finke and Stark 1992; Iannaccone 1998; and Barro and McCleary 2005). Earlier accounts of church-state separation tended to be descriptive and focused on single factors. For example, the hypothesis that richer countries are less likely to have a state religion fails to explain European countries becoming richer but not dismantling their state religions. The hypothesis that having a state church is due to the statist nature of countries (van Bijsterveld 2000) fails to explain changes within countries. The hypothesis that religiously homogenous countries are more likely to have a state church (Kuru 2007), formalized by Barro and McCleary (2005) with a Hotelling model, does not explain why some European countries have large Muslim minorities and have not separated church and state. Instead, our paper considers a model for the integral role of a state church in social insurance. Huber and Stanig (2011) also propose that church-state separation affects redistributive preferences. Unlike their model, our model endogenizes and renders multiple steady states in church-state separation. Finally, in parallel work, Bénabou et al. (2015) have recently modeled the redistribution that emerges when a religious state taxes all residents but provides services only to the religious.

We also contribute to explaining the changing nature of religious movements. Prior work has been descriptive (Carter 1956; Bateman 1998; Hood et al. 2005; Woodberry and Smith 1998; Hubbard 1991; Midgley 1990). The descriptions tend to focus on another factor co-varying over time: religious pluralism, acceptance of scientific findings, urbanization, new media, legalized abortion via *Roe v. Wade*, the Cold War, the World Wars, and Prohibition. The difficulty these explanations face as general theories is that non-U.S. countries also ex-

perienced many of the same societal changes, yet their religious groups are still pro-welfare. Similarly, some of these factors, like *Roe v. Wade*, are missing in countries where fiscal and social conservatism align. Our theory provides an explanation more unifying than prior explanations. It allows for heterogeneity *within* and across countries. The seemingly stable shift in religious movements is consistent with a *shift* from one steady-state basin of attraction to another.

The remainder of the paper is organized as follows. Section 2 presents our theory. Section 3 establishes the alignment between fiscal and social conservatism/liberalism and its relation to insurance. Section 4 presents cross-country evidence for the alignment between fiscal and social conservatism/liberalism and its relationship to church-state separation. Section 5 presents within-country evidence from U.S. Establishment Clause jurisprudence. Section 6 presents within-individual evidence from Sweden’s separation of church and state. Section 7 concludes.

## THEORY

### *Background on Church-State Separation*

While the U.S. was founded on the notion of religious practice free from state interference, early Americans did not seek a complete disconnection between church and state, even if their calls for disestablishment lay the groundwork for what would later become calls for separation. Government support for the poor was in fact largely distributed through religious organizations. Early Americans followed English poor laws in allowing parish officials the authority to raise taxes as needed and use the funds to build and manage almshouses; to supply food and sustenance in their own homes for the aged and the handicapped; and to purchase materials necessary to put the able-bodied to work (Hansan 2011). Church-state separation, as it is understood today in its fiscal dimensions, was neither sought nor intended by the founding generation and did not become an American ideal until late 19th century and 20th century (Feldman 2005).

Faith-based organizations today supply social services to over 70 million Americans each year (Johnson et al. 2002). Direct government funding of religious organizations remains controversial, but tax expenditures are less contested. For example, tax deductions apply to donations to religious organizations while church property, buildings, and clerical salaries and housing are tax exempt, amounting to billions of dollars every year. Tax expenditures amount to \$700 billion per year or about 6% of GDP in aggregate. For comparison, aggregate government spending is around 25% of GDP (Burman et al. 2008). No direct numbers on tax expenditures specifically for religion exist, but it continues to be litigated under Establishment Clause jurisprudence. Religious exemptions appear in many parts of the tax code and many levels of government have fiscal capacity. In our empirical analysis, we will focus on court-made laws that make it harder or easier for governments to authorize fiscal and tax expenditures for religious purposes.

Church-state separation is a continuum. With a state church, government typically finances building fees and clergy salaries. In the U.S., the average yearly salary of clergy was \$47,540 in 2013 according to the Bureau of Labor Statistics. The average congregation had 75 regular participants and an annual budget of \$90,000 (the average attendee worshipped in a congregation with 400 regular participants and annual budget of \$280,000) (Chaves et al. 2009). Clergy salaries and building fees can therefore be a significant contribution to the church budget when there is a state church. Furthermore, Hamburger (2002) and Feldman (2005) note that some of the early debates in the U.S. surrounding the separation of church and state involved schooling. About 40% of local governments spending goes towards primary and secondary education and 15% of all government spending goes towards education (Glaeser 2013). Details of the Swedish church-state separation are in Section 6.



### *Intuition*

We present a model that incorporates social sanctions (conservatism), makes ex-post insurance mechanisms, like religion, self-sustaining and yields the predictions below. At date 0, religiosity and church-state separation are set. At date 1, individuals choose a per-unit income tax  $\tau$ . Then income is realized and taxes are paid to the state. In addition, individuals donate proportion  $d$  of their income, where  $d$  is interpreted as the individual's level of religiosity. Income is stochastic with mean  $\mu$  and variance  $\sigma^2$ . An individual's expected utility, gross of tax, and religious donations is  $\mu - \frac{1}{2}\sigma^2$ , which can be generated by CARA preferences and income shocks are normally distributed. Risk aversion means that there is a desire for risk sharing, which can occur through redistribution both by the state and by religious groups. Optimal  $\tau$  is lower when individuals are more religious (high  $d$ ). The reason is that shocks to income are already smoothed by  $d$ , so the marginal benefit of taxation and redistribution is lower when  $d$  is high. When a state church exists, proportion  $\gamma$  taxation is redistributed through the religious organization. As  $\gamma$  rises, the optimal taxation increases for individuals who are more religious relative to those who are less religious. Welfare is less competitive against religious groups when government funding can be distributed to religious groups, which explains (1) why fiscal and social conservatism align together in most countries (evidence of which we discuss below) and (2) why fiscal and social conservatism did not align together in the past or in some countries today. With a state church, the elasticity of tax preferences with respect to religious intensity depends on being a member of the state church. Individuals can receive insurance from religious groups or from government, but government support reinforces religious insurance.

Religious intensity and tax preferences are inversely related when there is separation between church and state but religious intensity and tax preferences are positively related when there is no separation. The predictions can be summarized in a simple diagram:

Now suppose there are elites that influence tax policy and who desire a lower tax burden. Their preferences on church-state separation arguably depend on the relative weight of reli-

gious and non-religious constituencies. Elites plausibly desire a lower tax burden (Acemoglu and Robinson 2000) and have the power to choose (or judicate) church-state separation (Bickel 1986). Building on that idea, we endogenize religiosity and church-state separation to explain (3) why some countries sustain high religiosity, high church-state separation, and a minimal welfare state while others sustain low religiosity, low church-state separation, and a more maximal welfare state. Elites prefer to separate church and state when the relative number of *religious* voters is large because religious voters will be more fiscally conservative and supportive of low tax rates. A smaller welfare state increases the religious share of the population, since government welfare crowds out religiosity. Countries with many religious voters increase church-state separation and shrink the welfare state, which induces marginal members seeking insurance to become more religious, creating a positive feedback loop. At the other extreme, when the relative number of *non-religious* voters is large, then elites *prefer* a state church so that non-religious voters will be more fiscally conservative. But a smaller welfare state would induce marginal members seeking insurance to become more religious, creating a negative feedback loop, reducing the initial incentive to decrease church-state separation and stabilizing countries with low initial religious population at low religiosity, low church-state separation, and a more maximal welfare state. The model is detailed fully in the appendix and summarized in Figure 2.

FIGURE 1.— Summary of Model

	$\gamma = 0$		$\gamma = 1$	
	High $\tau$	Low $\tau$	High $\tau$	Low $\tau$
High $d$		Religious Right	Social Gospel	
Low $d$	Secular Left			Libertarian

*Individual evidence*

We begin with regression analyses of measures of welfare support and social conservatism using the GSS, an annual survey of randomly sampled U.S. residents for their religious attendance, political support for welfare spending, identification with the Republican party, and demographic characteristics such as income, education, and race (1972–2012). We present a single coefficient using the average effect size approach of Kling et al. (2004) and Clingingsmith et al. (2009). The AES averages the normalized effects obtained from a seemingly unrelated regression in which each dependent variable is a question in the index. Normalization is based on the control group, which is no attendance. Results remain qualitatively unchanged if we run regressions on the principal components of the variables. The advantage of the AES approach is that we do not have to impute missing values.

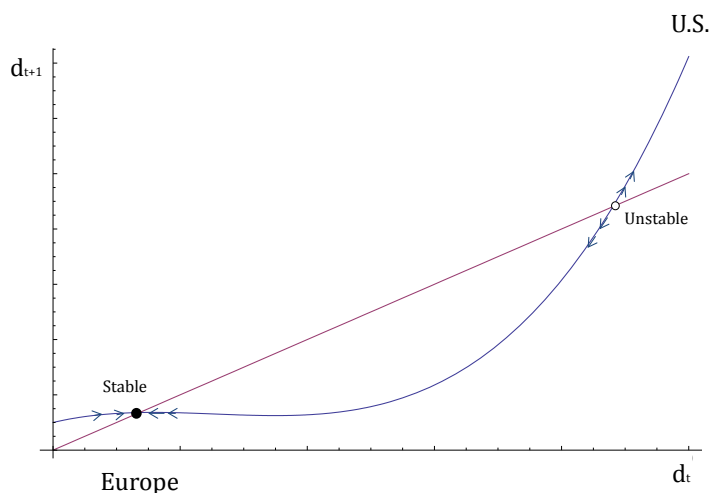
Table I reports regressions of the form:

$$FiscalConservatism_i = \beta_0 Religion_i + \beta_1 Fundamentalist_i + \alpha' \mathbf{Controls}_i + \varepsilon_i$$

$$MoralConservatism_i = \beta_0 Religion_i + \beta_1 Fundamentalist_i + \alpha' \mathbf{Controls}_i + \varepsilon_i$$

$Religion_i$  measures religious attendance and  $Fundamentalist_i$  measures whether the respondent is fundamentalist.  $FiscalConservatism_i$  and  $MoralConservatism_i$  are attitudes

FIGURE 2.— Multiple Steady States



classified by Ansolabehere et al. (2006) as measuring whether the respondent is fiscally conservative (i.e., favoring low taxes and low government expenditures) and morally conservative (i.e., favoring restrictions on abortion and related issues). Summary statistics are displayed in Appendix Table I. The data appendix discusses variable definitions.

All regressions include regional fixed effects to control for omitted environmental variables that may influence the way political support differs across space. They also include dummies for year, race, gender, and controls for log of income, age, age-squared, and years of completed schooling. This baseline specification controls for demographic characteristics that we use across all datasets where possible. When controls are missing, we dummy them out. Except where otherwise noted, all estimates are marginal effects from probit models evaluated at sample means, OLS estimates, or average effect size estimates (Kling et al. 2004). Standard errors are adjusted for correlation within region of residence, which is state in the GSS. All responses have been normalized to have unit standard deviation.

Table I indicates that increasing eight categories of religious attendance from “never attend” to “several times a week” yields an increase in 11% of a standard deviation in fiscal conservatism and 72% of a standard deviation in moral conservatism. Appendix Figure 1 displays the raw data without any controls and indicates that there are no dramatic nonlinearities. In other words, only 20% of respondents support more welfare; moving eight categories of religious attendance decreases welfare support by 6 percentage points, which is roughly one-third of the baseline. Only 9.4% of respondents identify strongly as Republican; moving eight categories of religious attendance increases strong Republican identification by 4.4 percentage points, almost half of the baseline. Fundamentalists are 5% of a standard deviation more fiscally conservative and 28% of a standard deviation more morally conservative. Figure 3 presents the individual regressions used in calculating the average effect size and Appendix Table IX presents the detailed estimates. Each point represents a coefficient from a separate regression of one question regarding fiscal or moral conservatism regressed on religious attendance and including the same controls as in Table I. Religious attendance has

TABLE I  
FISCAL AND SOCIAL CONSERVATISM/LIBERALISM IN THE U.S.—AVERAGE EFFECT SIZES

	Fiscal conservative			Moral conservative		
(1r)2-4 (1r)5-7	(1)	(2)	(3)	(4)	(5)	(6)
Religious attendance	0.0140*** (0.00195)		0.0129*** (0.00198)	0.0904*** (0.00351)		0.0859*** (0.00310)
Fundamentalist		0.0466*** (0.0104)	0.0325*** (0.0109)		0.277*** (0.0249)	0.200*** (0.0118)
Observations	54541	52971	52585	56170	54593	54197

*Notes:*

1. Data are from General Social Survey cumulative file, 1972-2012. All estimates are average effect size estimates. Standard errors in parentheses are adjusted for correlation within region of residence. \*, \*\* and \*\*\* denote significance at the 10, 5 and 1% level.
2. All specifications include dummies for region of residence, marital status, year, race, and gender, and controls for the log of income, age, age-squared, and years of completed schooling.
3. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.

a positive and significant predictive association with most outcomes. The associations are quantitatively larger for moral conservatism than for fiscal conservatism. These associations are a bit larger among White Americans and weaker among Black Americans (Appendix Table VIII).

Outside the U.S., religious attendance also predicts fiscal conservatism at the individual-level, but (previewing the relevance of church-state separation) not in countries with a state church (Column 2 of Table III). The regressions are analogous using the WVS Waves 2-5, but the coefficients are not strictly comparable because the questions differ. However, religious attendance still predicts social conservatism around the world.

### *U.S. Denominations*

We find that denominations that provide more mutual insurance are more socially and fiscally conservative. Data on philanthropic giving come from the 2001 Center on Philanthropy Panel Study portion of the Panel Study of Income Dynamics. We merge this data with the GSS. The degree of within-group giving varies widely across denominations (Smith 2004). Mormons give 91% of their charitable giving to religion, Evangelical Protestants 82%, Mainline

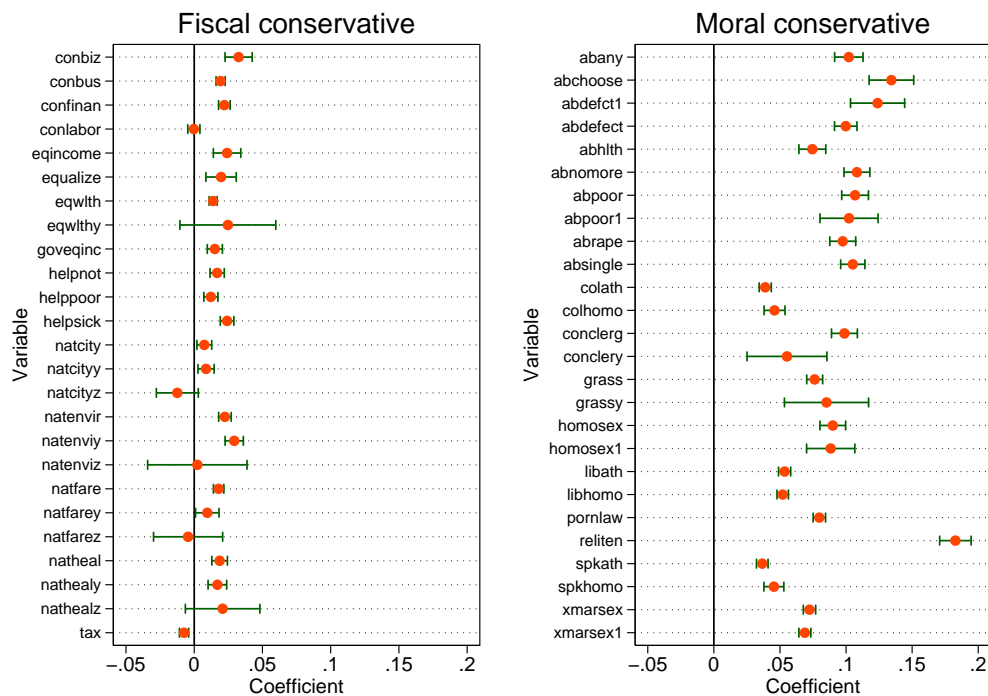
Protestants 62%, Catholics 51%, Other Religions 51%, Jewish 40%, and None 40% (Appendix Table XV). The percentage of overall income given to religion also roughly corresponds with the same ordering. Members of denominations with higher degrees of within-denomination giving also attend religious services more frequently than others.

Figure 4 reports the coefficients on denomination fixed effects from the following regression:

$$WelfareSupport_i = \beta Denomination_i + \alpha' \mathbf{Controls}_i + \varepsilon_i$$

For each fiscal or social attitude, individuals who are members of more conservative denominations report more conservative positions. Groups with greater within-group giving, such as Mormons and Evangelical Protestants, are more socially conservative. Appendix Table X

FIGURE 3.— Fiscal and Social Conservatism/Liberalism in the U.S.—All estimates



*Notes: The graphs display all the estimated coefficients and their 95% confidence intervals from individual regressions of fiscal/moral conservative attitudes on religious attendance, taking one question at a time. Estimated coefficients are from OLS regressions controlling for the same variables as in Table I. Variable names are those used by GSS and disabbreviated in Appendix Table I. Standard errors are clustered at the region of residence.*

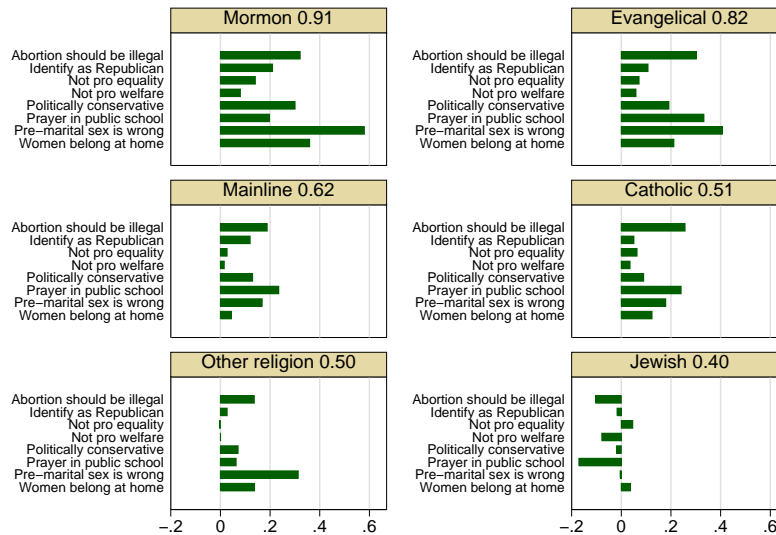
reports regressions of the form:

$$WelfareSupport_i = \beta WithinGroupGiving_i + \alpha' \mathbf{Controls}_i + \varepsilon_i$$

As one moves 50 percentage points of within-group giving from the lowest (40%) to the highest (91%), 20% of a standard deviation in fiscal conservative attitudes and 50% of a standard deviation in moral conservative attitudes are shifted.

Next, we document that members of more conservative denominations, such as Evangelical Protestants, are significantly more likely to receive a great deal of help if ill (57% would), than are members of less conservative denominations (only 33% would). This suggests the degree of mutual insurance provided by religious groups is associated with social and fiscal conservatism. The available question of interest in the GSS is "If you were ill, how much would people in your congregation help you out?" and we code the answer "a great deal" as 1, as opposed to "some," "a little," or "none" (Appendix Table XII).

FIGURE 4.— Fiscal and Social Conservatism/Liberalism in the U.S.—All estimates



### *World Denominations*

Since we lack individual-level data on charitable contributions in different countries, we employ a different methodology to assess these patterns across countries. We report that religious attendance insures individuals from adverse life shocks, such as unemployment, divorce, or widowhood in the WVS (Table II Column 1). Our specification differs as we implement a regression model more akin to the one in Dehejia et al. (2005) but differs in lacking a fiscal measure of insurance. Regressions are of the form:

$$\begin{aligned} Satisfied_i = & \beta_0 Attendance_i + \beta_1 Attendance_i \times LifeEvent_i \\ & + \beta_2 LifeEvent_i + \alpha' \mathbf{Controls}_i + \varepsilon_i \end{aligned}$$

Table II Column 1 shows that adverse life events reduce satisfaction by 0.46 on a scale from 1-10 (roughly 18% of a standard deviation in life satisfaction). Moving 6 categories of religious attendance from “practically never” to “more than once a week” mitigates about 50% of the effect of a negative shock.

Next, we rerun the specification but estimate a separate degree of insurance for religious attendance in each denomination. Insurance degree is computed as the negative of the ratio of the coefficient on the interaction between attendance and life event and the coefficient on the life event. The final list of denominations and insurance degree is: Catholic (0.088), Muslim (0.12), Protestant (0.035), Hindu (0.078), Orthodox (0.065), and Jewish (-0.060). Moving 6 categories of religious attendance yields mitigation ranging from 21% (Protestant) to 74% (Muslim).

Next, we examine the correlation between degree of religious insurance and welfare support and between religious insurance and abortion support. Columns 2 and 3 report regressions



of the form:

$$WelfareSupport_{ij} = \beta ReligiousInsurance_j + \alpha' \mathbf{Controls}_{ij} + \varepsilon_{ij}$$

Individuals who belong to religious denominations with a high degree of insurance are more fiscally and socially conservative. Moving from a denomination that does not insure to one that completely insures decreases support for welfare by roughly 40% of a standard deviation and decreases support for abortion by roughly 30% of a standard deviation.

TABLE II  
ATTENDANCE, RELIGIOUS INSURANCE, FISCAL AND SOCIAL CONSERVATISM/LIBERALISM ACROSS COUNTRIES

	Satisfied (1)	Gov. responsibility (2)	Justifiable: abortion (3)
Attendance	0.0465*** (0.00675)		
Attendance×Life Event	0.0367*** (0.00793)		
Life Event	-0.455*** (0.0610)		
Insurance Degree		-1.274** (0.624)	-0.862*** (0.325)
Observations	231009	164662	160804

Notes:

1. Data are from World Values Survey cumulative file, waves 2-5. All estimates are OLS estimates. Standard errors in parentheses are adjusted for correlation within country of residence. \*, \*\* and \*\*\* denote significance at the 10, 5 and 1% level.
2. The question for the Government responsibility variable is “People should take more responsibility to provide for themselves (1) vs. The government should take more responsibility to ensure that everyone is provided for (10).” It is measured on a 1-10 scale. The question for the Abortion justifiable variable refers to “Please tell me whether you think abortion can always be justified (10), never be justified (1), or something in between”. It is measured on a 1-10 scale.
3. Life Event is defined as being unemployed, divorced, or widowed. Insurance Degree is defined as the denomination-specific coefficient on the interaction of Attendance and Life Event from a specification of Column 1 using only data from that denomination.
4. All specifications include dummies for country of residence, survey wave, gender, marital status, and educational attainment category and controls for income, age, and age squared.
5. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.

## CHURCH-STATE SEPARATION ACROSS COUNTRIES

This section presents evidence that a state church affects the alignment between social conservatives and fiscal conservatism. We bring together all useable data sources on church-state separation. The ideal measure would be a continuous quantity of fiscal expenditures, tax expenditures, and in-kind expenditures from the state to the church. Instead, we use a binary indicator for this quantity in our cross-country analyses.

Cross-country data come from two sources: (1) the World Christian Encyclopedia, which is the source for Barro and McCleary (2005), and (2) the U.S. State Department’s International Religious Freedom Reports, which is aggregated by Finke and Grim (2006). See Appendix Table XVIII for the list of countries. Descriptive statistics of these indices are shown in Appendix Table IV. We see that there is high consistency between the two data sources as Finke and Grim’s (2006) indices are significantly larger for countries coded with a state church according to the World Christian Encyclopedia.

We regress stated welfare support on religious attendance and attendance interacted with a dummy if the respondent’s country has a state church. Regressions are of the form:

$$\begin{aligned} WelfareSupport_{ij} = & \beta_0 Attendance_{ij} + \beta_1 Attendance_{ij} \times StateChurch_j \\ & + \beta_2 StateChurch_j + \alpha' \mathbf{Controls}_{ij} + \varepsilon_{ij} \end{aligned}$$

The results are shown in Table III. Column 1 simply runs the specification from Table I but for the WVS rather than the GSS. In general, increased church attendance is associated with lower support for government-provided welfare, but the negative relationship is only statistically significant for countries without a state church (Column 2).

Religious attendance is strongly related to less welfare support for most countries of the

TABLE III.—Fiscal Conservatism and Church-State Separation Across the World

	Gov. responsibility			Reduce inequality		
	(1)	(2)	(3)	(4)	(5)	(6)
Attendance	-0.00883 (0.00534)	-0.0216*** (0.00562)	-0.0181*** (0.00575)	0.00382 (0.00652)	0.00480 (0.00897)	0.00352 (0.00766)
Attendance×Has State Church		0.0309*** (0.0114)			-0.00244 (0.0134)	
Attendance×Belong to State Church			0.0420** (0.0161)			-0.00327 (0.0131)
Belong to State Church			-0.304* (0.163)			0.119 (0.117)
Observations	220001	220001	220001	215304	215304	215304

Notes:

1. Data are from World Values Survey cumulative file, waves 2-5. All estimates are OLS estimates. Standard errors in parentheses are adjusted for correlation within country of residence. \*, \*\*, and \*\*\* denote significance at the 10, 5 and 1% level.
2. The question for the Government responsibility variable is "People should take more responsibility to provide for themselves vs. The government should take more responsibility to ensure that everyone is provided for." The question for the Reduce inequality variable is "Incomes should be made more equal vs. We need larger income differences as incentives." Both are measured on a 1-10 scale.
3. All specifications include dummies for country of residence (which absorbs the Has State Church dummy indicator), survey wave, gender, marital status, and educational attainment category and controls for income, age, and age squared.
4. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.
5. Data on church-state separation are from Barro and McCleary (2005), which is based on Barrett (1982) and Barrett et al. (2001).

world, confirming that our proposition holds across a wide range of countries. Strikingly, Figure 5 shows that welfare support declines with religious attendance in most countries for which we have data. The bars indicate the coefficient between religious attendance and welfare support for each country in the World Values Survey. Countries that have a negative association between religious attendance and welfare support are primarily those without a state church (labeled in blue). Countries that have a positive association between religious attendance and welfare support are more often those with a state church (labeled in red).

Our theory emphasizes the importance of democratization in particular, showing that elites cannot disregard the voting preferences of the poor. This is assumed, and the important role of democratization is strikingly consistent with the data. The upper-half of Figure 4 is not uniformly blue nor the lower-half red. Looking more closely at Figure 5 reveals that almost all of the exceptions in the lower-half are formerly Communist countries, where the lack of democratic governance meant their elites could disregard the voting preferences of the poor.

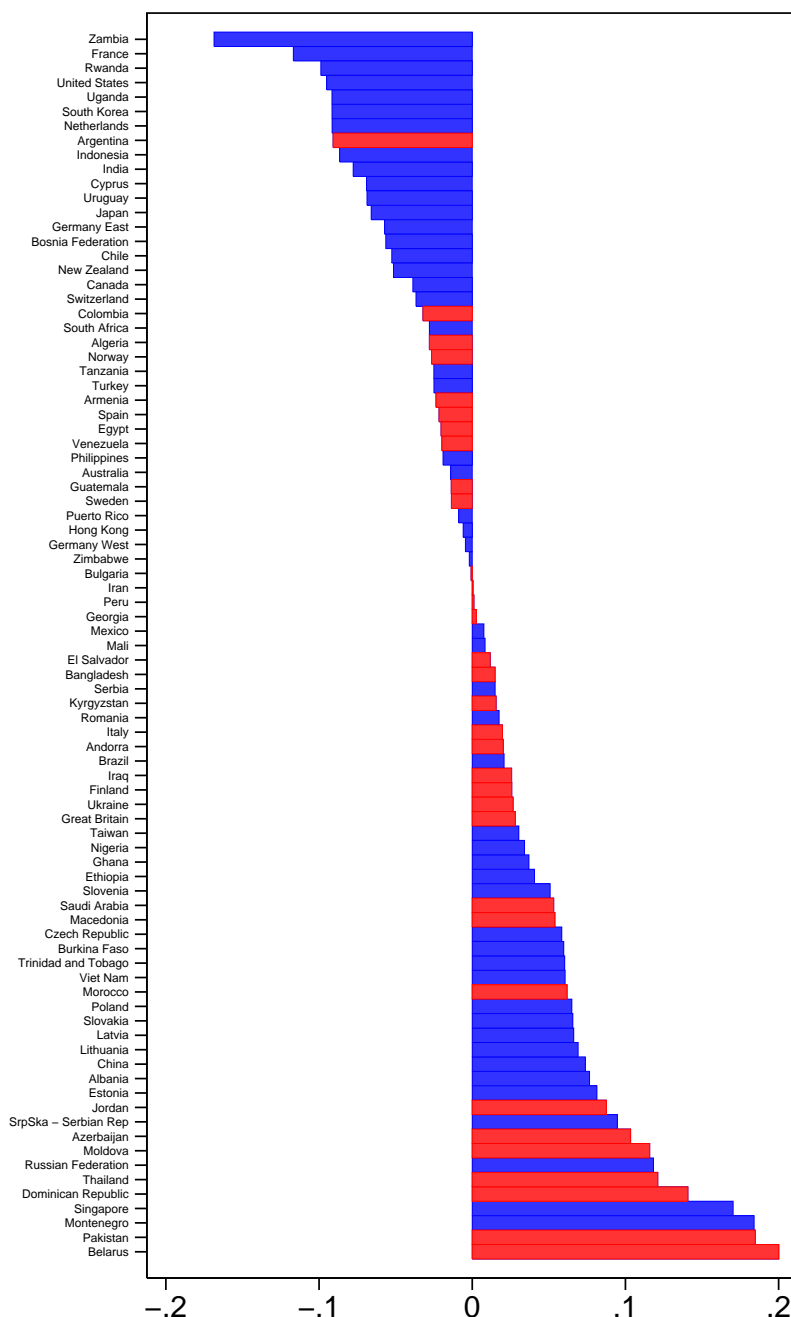
Of main interest is whether a state church reduces the negative correlation between religion and welfare support. Column 2 of Table III shows that in countries with a state church, the correlation is about zero. In Column 3, we interact the attendance variable with an indicator for whether the respondent belongs to the denomination of the state church in his or her country:

$$\begin{aligned} WelfareSupport_{ij} = & \beta_0 Attendance_{ij} + \beta_1 Attendance_{ij} \times BelongToStateChurch_{ij} \\ & + \beta_2 BelongToStateChurch_{ij} + \alpha' \mathbf{Controls}_{ijt} + \varepsilon_{ij} \end{aligned}$$

where  $BelongToStateChurch_{ij}$  is an indicator of individual  $i$  lives in a country  $j$  with a state church and belongs to it. Now we see that for members of the state church, attendance is actually associated with more positive attitudes to government welfare. One concern could be that it is not attitudes towards the welfare state, but attitudes towards inequality that drive

these opinions. To test this, we examine opinions on economic inequality. Religious attendance has no significant relationship with attitudes towards economic inequality (Columns

FIGURE 5.— Welfare Attitudes and Religious Attendance Across the World

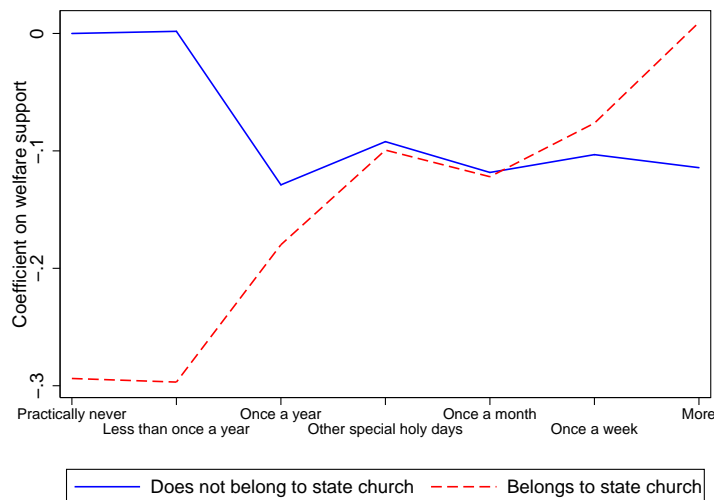


Notes: Bars show the magnitude of the association between religious attendance and welfare support. Blue bars indicate countries without a state church and red bars indicate countries with a state church.

4 to 6 of Table III), and this applies to countries both with and without a state church. This suggests that our measure of attitudes towards the welfare state is capturing the government action element more than inequality.

The regressions thus far restrict the marginal effect of going from one category of church attendance to another to be the same across all categories. To consider possible nonlinearities, Figure 6 displays the conditional correlations between welfare support and dummies for each level of religious attendance (the omitted category is no attendance). This figure corroborates the findings above. In addition, we can drop individuals who claim no religion and do not attend services and the results are identical.

FIGURE 6.— Welfare Attitudes and Church-State Separation Across the World



*Notes: The solid line indicates the relationship between welfare support and religious attendance for individuals who belong to the state church and the dashed line indicates the relationship for individuals who do not belong to the state church. The regression specification is similar to that of Column 3 in Table III. The category “Only on special holy days/Christmas/Easter days” was only mentioned in Wave 2 and has been merged with the category “Only on special holy days”.*

Next, we analyze the association between religious attendance and welfare attitudes mediated through different forms of church-state regulation: government regulation, social regulation, and government favoritism. Finke and Grim (2006) considers government regulation as the most visible form of regulation and the one that receives the most scholarly attention. In contrast, social regulation refers to the restrictions placed by other religious groups and

is not dependent on the state's action. Government favoritism also involves state action and frequently works in tandem with government regulation. We find that each measure appears individually significant in interaction with religious attendance in Table IV.

We also extract a specific question from the Finke and Grim (2006) index that refers to the fiscal dimension of church-state separation: "Government financial support or other privileges for specific religious group". Column 5 displays a significant interaction slightly larger than the interaction in Column 2, suggesting that government financial support is an important mediator for the effect of church-state separation. However, when all interactions are included together in Column 6, government regulation is the most statistically significant mediator and close in magnitude to the mediation from government financial support. When government regulation reaches 5 (roughly the mean value for countries with a state church according to Barrett et al. (2001)) on the 0-10 index (with 10 being the most regulated), religious attendance predicts more welfare support.

TABLE IV  
WELFARE ATTITUDES AND CHURCH-STATE SEPARATION ACROSS THE WORLD

	(1)	(2)	(3)	(4)	(5)	(6)
Attendance	-0.00883 (0.00534)	-0.0330*** (0.00718)	-0.0251** (0.00982)	-0.0275** (0.0105)	-0.0338*** (0.00837)	-0.0144 (0.0119)
Government Regulation×Attendance		0.00668*** (0.00182)				0.0102*** (0.00310)
Social Regulation×Attendance			0.00353* (0.00186)			-0.00560* (0.00287)
Government Favoritism×Attendance				0.00347* (0.00193)		-0.00543 (0.00380)
Government Financial Support×Attendance					0.00787*** (0.00257)	0.00816 (0.00539)
Observations	220001	214282	214282	214282	214282	214282

Notes:

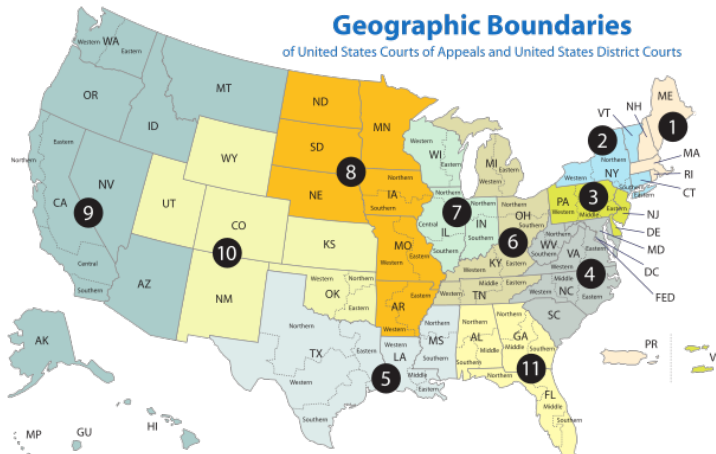
1. Outcome variable is "People should take more responsibility to provide for themselves vs The government should take more responsibility to ensure that everyone is provided for."
2. Explanatory variables are Government Regulation Index, Social Regulation Index, Government Favoritism Index, and Government Financial Support (or other privileges for specific religious group).
3. Controls are as in Table III.
4. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.
5. Standard errors in parentheses are adjusted for correlation within country of residence. \*, \*\*, and \*\*\* denote significance at the 10, 5 and 1% level.

## U.S. ESTABLISHMENT CLAUSE AND FEDERAL COURTS

Our quasi-experiment leverages the U.S. common law system where decisions become precedent for future cases in the same jurisdiction. Appendix Table XIX lists all the cases where the Supreme Court either made a decision or let stand a Courts of Appeals decision on church-state separation in public schools. Appendix Figure 3 shows substantial variation in the net number of decisions each year that increased or decreased separation of church and state. In the federal appellate courts (also known as Circuit Courts), judges are randomly assigned. Moreover, decisions are binding precedent for future cases within the Circuit (there are 12 Circuits, each in charge of a geographic region comprising 4 to 9 U.S. states as seen in Figure 7; cases originate from one of the 94 District courts, numbering 1 to 4 per state). Less than 2% of Circuit cases reach the U.S. Supreme Court, so the Circuit decisions comprise the majority of precedents. Judges are randomly assigned to each case in a panel of three, and the composition of these panels varies by case.

Newspapers, advocates, and community organizers publicize the change in legal landscape or issue cues after Courts of Appeals decisions (Pastor 2007; Eagle 2007; Sandefur 2005). Since judges follow precedent (Chen et al. 2017) and markets respond to decisions both in Courts of Appeals (Araiza et al. 2014) and the Supreme Court (Katz et al. 2015), we might expect to see an effect of both sets of decisions on social outcomes.

FIGURE 7.—





We begin with a simple OLS regression of Supreme Court decisions:

$$\Delta StrongRepublican\_Fundamentalism_t = \beta_o \Delta ChurchStateSeparation_t + \varepsilon_t$$

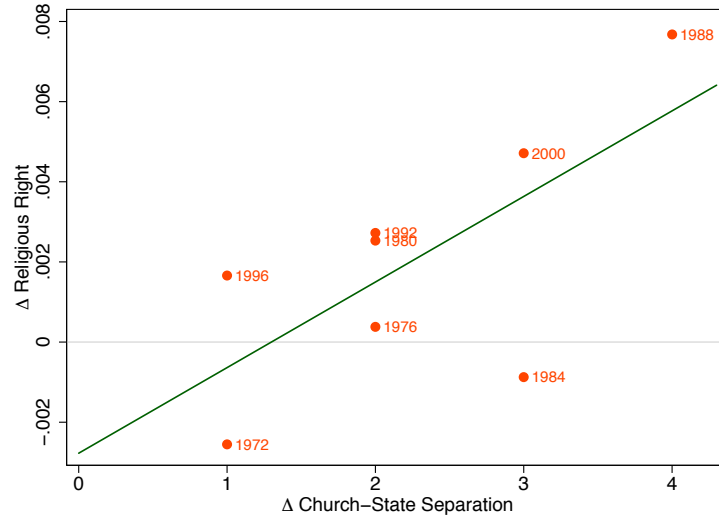
which examines the alignment between religious fundamentalism and identifying strongly as Republican. We find that changes in church-state separation in one electoral cycle precede changes in the relationship between fundamentalism and Republican identification in the next election cycle.  $\beta_0$  is estimated to be 0.0021(0.0009) and is statistically significant at the 10% level. We replicate this pattern when examining the correlation between religious attendance and voting for the Republican party presidential candidate. Figure 8 indicates that outliers do not drive this finding. In terms of magnitudes, roughly 10 Supreme Court decisions would be equivalent to 0.02 in correlation between fundamentalism and identifying strongly as Republican, or roughly the entire change from 1972 to 2004. Figure 9 displays, for each election, the coefficients from regressions of Republican identification on fundamentalism. This confirms Fogel’s (2000) description of a shift in the alliance between fiscal and social conservatism and assuages concerns that Figure 8 is statistical noise.

We now turn to the U.S. Courts of Appeals with regional variation and random assignment of judges. To illustrate the identification strategy, Figure 10 shows that excess variation in Democrat judges appears random. Figure 11 shows that there is a strong first stage relationship—Democrats, who are generally more secular and prefer to separate church and state, are less likely to make conservative decisions in Establishment Clause cases. We also employed LASSO to select instruments among biographical characteristics (Belloni et al. 2012).

Our regression specification examines whether church-state separation causes an increase in the alignment between fundamentalism and Republican identification:

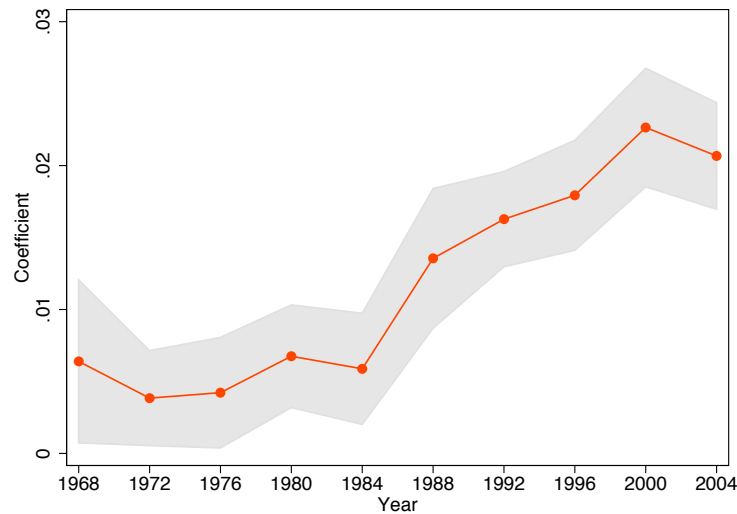
$$Y_{ict} = \beta_0 + \sum_n \beta_{1n} Law_{c(t-n)} + \sum_n \beta_{2n} \mathbf{1}[M_{c(t-n)} > 0] + \sum_n \beta_{3n} Law_{c(t-n)} * F_{ict} + \sum_n \beta_{4n} \mathbf{1}[M_{c(t-n)} > 0] * F_{ict} +$$

FIGURE 8.— Church-State Separation and Alignment



Notes: The x-axis displays the net number of judicial decisions that increase or decrease church-state separation in the four years prior to an election year. The y-axis displays the change in the coefficient on the relationship between fundamentalism and identifying strongly as Republican in the next election cycle.

FIGURE 9.— Alignment Over Time

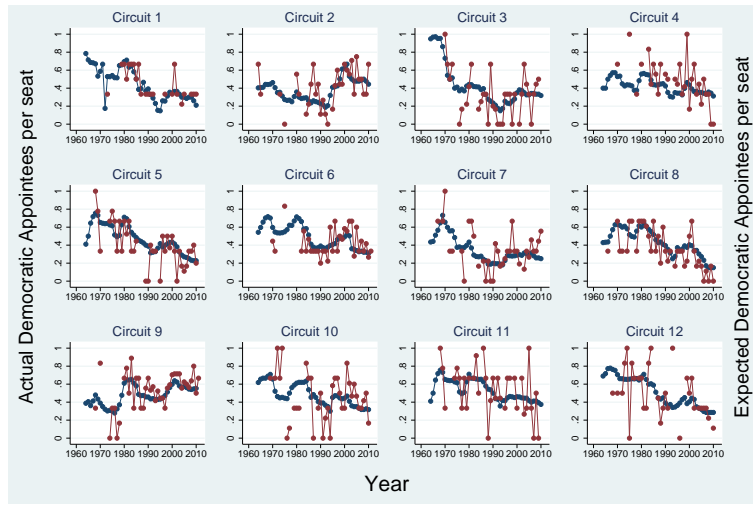


Notes: The graph shows for each election year the correlation between fundamentalism and identifying strongly as Republican. The shaded area indicate 95% confidence intervals.

$$\beta_5 C_c + \beta_6 T_t + \beta_7 C_c * Time + \sum_n \beta_8 W_{c(t-n)} + \beta_9 X_{ict} + \varepsilon_{ict}$$

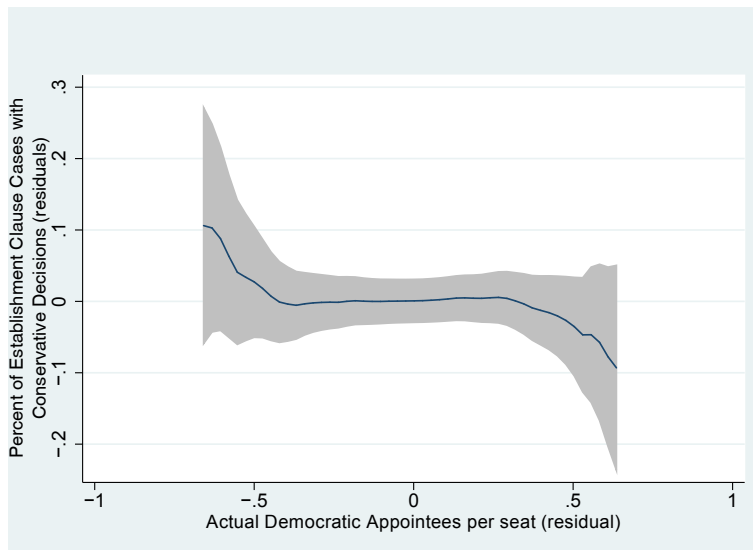
$F_{ict}$  represents a dummy indicator for fundamentalism. Identifying strongly as Republican is the dependent variable,  $Y_{ict}$  for individual  $i$  in Circuit  $c$  and year  $t$ . Controls are:

FIGURE 10.— Random Variation by Circuit



Notes: For each Circuit, the expected proportion of judge seats that would be assigned to Democrats is displayed in blue. The actual proportion of judge seats assigned to Democrats is displayed in red.

FIGURE 11.— Proportion of Establishment Clause Cases with Conservative Decisions



- Circuit-fixed effects,  $C_c$ , and time-fixed effects,  $T_t$ ;
- Circuit-specific time trends,  $C_c * Time$ , to allow different Circuits to be on different trajectories with respect to outcomes;
- a vector of observable unit characteristics,  $X_{ict}$ , such as age, gender, educational attainment, and race, which each enter as dummies with the exception of age;
- and time-varying Circuit-level controls,  $W_{c(t-n)}$ , such as the characteristics of the pool of judges available to be assigned in Circuit  $c$  and time  $t - n$ .

We estimate a distributed lag effects of  $Law_{ct}$ , which is the percentage of cases in a Circuit-year that voted to separate church and state. Many Circuit-years do not have decisions, so we define  $Law_{ct}$  to be 0 when there are no cases and introduce a dummy,  $\mathbf{1}[M_{ct} > 0]$ , for presence of an appeal. We then interact  $Law_{c(t-n)}$  and  $\mathbf{1}[M_{c(t-n)} > 0]$  with fundamentalism, so we can observe whether church-state separation precedent is followed by fundamentalists more strongly self-identifying as Republican. We report  $\frac{\sum_n \beta_{3n}}{n}$  and joint significance of the lag interaction coefficients.

Results are reported in Table V. Both the OLS and IV estimates indicate that after legal precedent separating church and state, fundamentalists began identifying more strongly as Republican in the four years after a decision relative to non-fundamentalists. The lead coefficients are statistically insignificant. In terms of magnitudes, the coefficient of 0.009 is a little under half the size of the coefficient of 0.0021 in the Supreme Court regression. Thus, 2 Circuit Court decisions (in every Circuit)—or 24 Courts of Appeals decisions—is equivalent to 1 Supreme Court decision. 20 Circuit Court decisions in every Circuit—240 Courts of Appeals decisions—or 10 Supreme Court decisions would be equivalent to the entire change in the correlation between fundamentalism and identifying strongly as a Republican from 1972 to 2000.

#### SWEDISH SEPARATION OF CHURCH AND STATE

In Sweden and Norway, governments have funded state churches and appointed their bish-

ops since at least the Reformation. On January 1, 2000, Sweden separated church and state. This separation had two main fiscal effects. First, the church was required to cut its \$1.68 billion annual budget, most of which was collected through state taxes. Second, individuals outside the Church of Sweden were no longer required to pay church taxes (Ekström 2003, 214) and children of members of the Church of Sweden no longer automatically became members. Approximately 2% of the Swedish population regularly attends Sunday services, whose church activities and insurance functions are effectively funded by the payment of taxes (from the entire population before 2000 and from only church members afterwards). In 2000, 83% of the population were church members. Thus, the 2000 separation meant that the 17% of the population who were outside the Church of Sweden no longer subsidized the 2%.

Our final analysis examines the impact of Sweden’s church-state separation on the relationship between religiosity and redistributive preferences in a panel of voters followed before and after the separation. Table VI reports differences-in-differences-in-differences regressions where the control group is Norway, whose church is still state-financed (Thorkildsen 2012). We compare Norway and Sweden because they are culturally similar. We are interested in the two available measures of redistributive preferences: 1) should taxes on high incomes be reduced and 2) should income differences be reduced? The former captures government

TABLE V  
FISCAL AND SOCIAL CONSERVATISM/LIBERALISM AND CHURCH-STATE SEPARATION WITHIN THE U.S.

		Dependent			
<i>Panel A</i>		OLS	LASSO IV	Obs	Variable
<i>Average Interaction Lag Effect</i>		(1)	(2)	(3)	(4)
(lr)2-5	Identify as Strong Republican	0.004	0.009	42837	0.098
Joint P-value		0.057	0.000		
<i>Panel B</i>					
<i>Average Interaction Lead Effect</i>					
	Identify as Strong Republican	0.006	0.024	42837	0.098
Joint P-value		0.260	0.291		

*Notes: Interaction with fundamentalism. Regressions include level effects, circuit fixed effects, year fixed effects, circuit-specific time trends, a dummy for whether there were no cases in that circuit-year, and individual demographic controls.*

involvement while the latter does not, so it serves as a placebo, as in our WVS analysis. The available religiosity measure is: “we should promote a society where Christian values are more prominent”. This question was only asked in the Norwegian data from 1997 onwards, preventing us from doing the usual check for pre-trends and reducing the length of the Norwegian part of the panel.

We find that church-state separation reduced the correlation between Christian values and redistributive preferences. Religiosity and redistributive preferences are only weakly correlated in general (Column 1). However, religious Swedes after church-state separation became more fiscally conservative relative to religious Norwegians (Column 2). One standard deviation in Christian values corresponds to 12% of a standard deviation in support for taxes. Our findings are robust to exploiting the panel aspect of the data: including individual fixed effects yields similar inferences (Columns 3 and 4). Our results are also robust to using only data just before and just after the 2000 abolition. Column 5 regresses post-abolition redistributive preferences on pre-abolition Christian values interacted with being Swedish, controlling for pre-abolition redistributive preferences. In sum, Swedes with strong Christian values became more fiscally conservative after abolition.

Using the placebo question, we find that church-state separation reduced the correlation between Christian values and redistributive preferences only when government is involved. Religious Swedes after church-state separation became less accepting of income differences relative to religious Norwegians (Column 7), which is robust to the inclusion of individual fixed effects (Column 9). We can reject significant increases among religious Swedes in Column 10. This analysis of Sweden’s separation of church and state is consistent with our WVS cross-country analysis.

## CONCLUSION

Religious intensity as social insurance may explain why fiscal and social conservatives and fiscal and social liberals tend to come hand-in-hand. We present evidence consistent with this hypothesis. Fiscal and social conservatism and fiscal and social liberalism are correlated at

the individual level within countries. Religious groups with greater within-group giving are more opposed to the welfare state and more socially conservative. The relationship between fiscal and social attitudes is reversed for members of the state church: religious intensity predicts welfare support if the individual is a member of the state church. Increases in church-state separation precede increases in the political alliance between religiosity and Republican voting.

Countries can also permanently shift from one steady state to another with shifts in volatility. For example, if elites gain better access to credit markets (Hirschman 1982; Banerjee et al. 2006), they may desire a lower tax burden and have incentives to increase church-state separation, which creates a larger voting constituency for lower taxes. On the other hand, if elites are restricted from international capital markets and lose access to alternative social insurance, economic sanctions may increase theocratic tendencies in countries with large religious populations. In this policy scenario, the story reverses: elites decrease church-state separation if religious voters exceed non-religious ones. Preferences for redistribution are high and social insurance by religious groups completes a missing market for credit. Indeed, economic sanctions are usually ineffective (Naghavi and Pignataro 2015; Hufbauer et al. 2007). Future research may shed light on the dynamics of credit market access, theocracy, and fundamentalism in developing countries or in historical settings such as those studied by Ager and Ciccone (2014) and Bentzen (2015) on volatility and religiosity.

TABLE VI.— Preferences and State Church: Sweden vs. Norway

	Reduce taxes				Accept income differences					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(lr)2-6(lr)7-11	0.0242	0.0452	-0.00501	0.111**		0.0264***	-0.0309*	0.0232	-0.0356	
Christian values	(0.0177)	(0.0299)	(0.0199)	(0.0462)		(0.00775)	(0.0167)	(0.0222)	(0.0473)	
Christian values×Sweden		0.0373		-0.0755			0.0966***		0.0665	
		(0.0338)		(0.0536)			(0.0216)		(0.0558)	
Christian values×After 2000		-0.124***		-0.174***			0.0663***		0.0883*	
		(0.0240)		(0.0466)			(0.0203)		(0.0481)	
After 2000×Sweden		-0.844***		-0.952***			0.376***		0.453**	
		(0.0951)		(0.201)			(0.111)		(0.209)	
Christian values×After 2000×Sweden		0.121***		0.138**			-0.141***		-0.132**	
		(0.0299)		(0.0543)			(0.0310)		(0.0580)	
Cut taxes (lagged)					0.374***					
					(0.0360)					
Accept income differences (lagged)										0.327***
										(0.0232)
Christian values (lagged)					-0.124***					0.0363
					(0.0254)					(0.0282)
Christian values (lagged)×Sweden					0.141***					-0.0309
					(0.0289)					(0.0192)
FE	No	No	Yes	Yes	No	No	No	Yes	Yes	No
Observations	16009	16009	16009	16009	1312	15988	15988	15988	15988	1322

Notes:

1. The outcome variable in Columns 1 to 5 is the index of favoring tax cuts, in Columns 6 to 10, the index of accepting income differentials. Both indices take values between 1 and 5.

2. Christian values is an index between 1 and 5 measuring whether “we should promote a society where Christian values are more prominent”.

3. All specifications include period and country dummies. Specifications (3), (4), (8), and (9) also include individual fixed effects. Specifications (5) and (10) are regressions of opinions next period, conditioning on opinions this period. Data covers the Swedish elections in 1991, 1994, 1998, 2002, and 2006 and the Norwegian elections in 1997, 2001, and 2005.

4. Standard errors in parentheses are adjusted for correlation within region of residence. \*, \*\*, and \*\*\* denote significance at the 10, 5 and 1% level.



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For Online Publication

## Web Appendix:

### Table of Contents

1. Model, p. 1
2. Summary Statistics, p. 10
3. Robustness analysis of fiscal and social conservatism/liberalism in the U.S,  
p. 13
4. Analyses of within-group giving, fiscal and social conservatism, and social  
insurance, p. 16
5. Correlation between religious attendance and the principal components of  
fiscal and social attitudes, p. 21
6. Robustness analyses of fiscal and social attitudes around the world, p. 22

Survey questions and variable definitions are available in the General Social Survey, World Value Survey, Barro and McCleary (2005), Panel Study of Income Dynamics, and Oscarsson and Holmberg (2009). Church-state separation cases come from Hall (1999) and Alley (1988; 1999). Excerpts of the surveys are available on the author's website.



## MODEL OF INSURANCE WITH SANCTIONS

Strong social sanctions facilitate provision of ex-post social insurance. In a crisis, religious organizations can help individuals after they experience negative income shocks. Social sanctions overcome the individual rationality constraints that would otherwise prevent ex post insurance groups from forming because they encourage people who receive positive shocks to participate. Group-based insurance/identity without strong social sanctions would be vulnerable to external pressure.

### *Religious Insurance*

Agents receive a shock ( $L < H$ ),  $x = \begin{cases} H & \text{with probability } \frac{1}{2} \\ L & \text{with probability } \frac{1}{2} \end{cases}$ . There is a continuum of agents of unit measure. Members of religious organizations smooth their shocks through their religious community. An agent with religious attendance  $\alpha \in [0, 1]$ , chosen after the shock  $x$  is realized, shares a fraction  $\alpha$  of his income with the religious group and keeps  $1 - \alpha$  of his income separate from the risk-sharing pool. Agents divide the group budget in a manner proportionate to their relative religious intensity, which is  $\alpha/\bar{\alpha}$  where  $\bar{\alpha}$  denotes average religious intensity. Note that agents do not receive the same amount they put in: agents who receive negative shocks will get money from agents who receive positive shocks even if their religious intensity is the same.

Since agents who receive positive shocks would otherwise not participate, social sanctions  $S(\cdot)$  ensure the stability of religious insurance.<sup>1</sup> These agents suffer social sanctions, which is captured by  $rS(\alpha/\bar{\alpha})$ , where  $r$  is a measure of an agent's vulnerability to social sanctions. The parameter  $r$  can also be thought of as capturing social conservativeness—the more socially conservative, the more sanctioning of non-group members. The cost function  $S(\cdot)$  is decreasing in  $\alpha/\bar{\alpha}$  and convex, so  $S' < 0$  and  $S'' \geq 0$ . Social sanctions facilitate the insurance provision by religious groups. If  $r$  were 0, no insurance can be sustained as  $H$  agents all choose 0 participation.

Utility  $u(\cdot)$  is a standard increasing concave function of income. Let  $\alpha_x$  denote the choice of religious intensity, where  $x$  can be  $H$  or  $L$ . Let  $\bar{\mu}$  be the religious budget. The payoff to an agent who realizes  $x$  is  $U_x = u[(1 - \alpha_x)x + \frac{\alpha_x}{\bar{\alpha}}\bar{\mu}] - rS(\frac{\alpha_x}{\bar{\alpha}})$ . From the setup it follows that the religious budget is  $\bar{\mu} = \frac{1}{2}(H\alpha_H + L\alpha_L)$  and average religious intensity is  $\bar{\alpha} = \frac{1}{2}(\alpha_H + \alpha_L)$ . For shorthand, we will call an agent who receives a high shock by  $H$  and an agent who receives a low shock by  $L$ . Agents take into account how the decision of others affects the budget  $\bar{\mu}$  and optimize their religious intensity by equating marginal benefits to marginal costs.

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<sup>1</sup>More precisely, this is a stylized model of ex-post insurance, where agents choose participation after information is revealed. A model of ex-ante insurance would also give a trade-off between religious and government insurance. See, for example, Boodman (2005) regarding faith-based alternatives to health insurance where individuals contribute a monthly share and face sanctions for ignoring Christian doctrine or using secular courts to settle disputes.

It can be immediately observed that agent  $L$  chooses a higher level of religious intensity than agent  $H$ ,  $\alpha_L^* > \alpha_H^*$ . The intuition is simply that the higher is  $\alpha_H$  the less agent  $H$  gets, whereas for agent  $L$ , the higher is  $\alpha_L$  the more he gets. It is important to observe that  $H$ 's religious intensity is, in a sense, complementary for  $L$ 's religious intensity: those who are more religiously intense prefer others to be religiously intense as well in order to appropriate their high income draw: this captures the local public goods aspect of club goods theory (Buchanan 1965). Therefore, for  $L$ , there are positive externalities from others' participation. However, those who are less religiously intense prefer others to be less religiously intense to prevent appropriation of their high income draw. So for  $H$ , there are negative externalities from others' participation.

### *Government*

We now introduce government transfers with tax rate  $\tau$  and  $T(\tau)\bar{Y}$  the amount of lump sum redistribution received from the government. The timing is such that agents, knowing their  $r$ , choose a preferred  $\tau \in [0, 1]$ , before realizing shock  $x$  and choosing to contribute a fraction  $\alpha$  of their shock to the budget of their religious group  $\bar{\mu}_r$  (the timeline:  $r - \tau - x - \alpha$ ). Now the payoff to an agent who realizes  $x$  is:  $U_x = u \left[ (1 - \tau) \left( (1 - \alpha_x)x + \frac{\alpha_x}{\alpha} \bar{\mu}_r \right) + T(\tau)\bar{Y} \right] - rS\left(\frac{\alpha_x}{\alpha}\right)$ .

Each religious group (or denomination) has their own  $r$  degree of social conservatism and separate budget, and will be able to sustain a corresponding level of mutual insurance. The optimal choice of  $\alpha_x$  equates marginal benefits to marginal costs and satisfies:  $(1 - \tau)u' \left[ (1 - \tau) \left( (1 - \alpha_x)x + \frac{\alpha_x}{\alpha} \bar{\mu}_r \right) + T(\tau)\bar{Y} \right] \left( \frac{\bar{\mu}_r}{\alpha} - x \right) -$

$$\begin{aligned} &\leq 0 \quad \text{if } \alpha_x = 0 \\ \frac{r}{\alpha} S' \left( \frac{\alpha_x}{\alpha} \right) &= 0 \quad \text{if } \alpha_x \in (0, 1) \text{ , and this provides religious intensity functions } \alpha_L(r) \text{ and } \alpha_H(r) \text{ as functions} \\ &\geq 0 \quad \text{if } \alpha_x = 1 \end{aligned}$$

of vulnerability to social sanctions. As the sanction function  $S$  is convex, it can be seen that  $\alpha'_x \geq 0$  with strict inequality for  $\alpha_x < 1$ . This formalizes the intuition that religious intensity increases with social sanctions. For  $L$ , optimal  $\alpha_L^* = 1$ . Since  $\bar{\mu} = \frac{1}{2}(H\alpha_H + L\alpha_L)$  and average religious intensity is  $\bar{\alpha} = \frac{1}{2}(\alpha_H + \alpha_L)$ ,  $\frac{\bar{\mu}_r}{\bar{\alpha}} - L > 0$ , so the marginal benefit is always positive.

Pre-tax income for  $L$  and  $H$  with religious intensity  $\alpha_L$  and  $\alpha_H$  can now be written as:

$$(1) \quad Y_L = (1 - \alpha_L(r))L + \frac{\alpha_L(r)}{\bar{\alpha}(r)}\bar{\mu}_r = L + \frac{\alpha_H(r)}{1 + \alpha_H(r)}(H - L)$$

$$(2) \quad Y_H = (1 - \alpha_H(r))H + \frac{\alpha_H(r)}{\bar{\alpha}(r)}\bar{\mu}_r = H - \frac{\alpha_H(r)}{1 + \alpha_H(r)}(H - L)$$

Since  $\alpha_H$  is increasing in  $r$ , it can be seen that increasing social conservativeness works as a mean-preserving contraction of the spread between  $H$  and  $L$  as in the case without taxation. Agents have tax preferences satisfying the first-order condition:  $\sum_{x \in \{L, H\}} \frac{1}{2} u' \left( (1 - \tau^*) Y_x + T(\tau^*) \bar{Y} \right) [T'(\tau^*) \bar{Y} - Y_x] = 0$ . Since  $Y_H - Y_L$  decreases in  $r$ , it can be shown that the optimal tax rate  $\tau^*$  is decreasing in  $r$  as well if  $T''(\tau) < 0$ .

When utility is increasing and concave ( $u'(x) > 0$  and  $u''(x) < 0$ ) and taxation induces deadweight loss ( $T'(\tau) < 1$  and  $T''(\tau) < 0$ ), agents' preferred tax rate is decreasing in  $r$ .

The proof follows from re-arranging the first-order condition above and deriving:

$$T'(\tau^*) = \frac{u'((1-\tau^*)Y_L + T(\tau^*)\bar{Y})Y_L + u'((1-\tau^*)Y_H + T(\tau^*)\bar{Y})Y_H}{[u'((1-\tau^*)Y_L + T(\tau^*)\bar{Y}) + u'((1-\tau^*)Y_H + T(\tau^*)\bar{Y})]\bar{Y}}.$$

The fraction increases and approaches 1 as  $Y_H - Y_L$  decreases. This can be seen by observing that if the spread  $Y_H - Y_L$  increases, the denominator increases faster than the numerator increases and so the overall fraction falls.

The intuition behind the result is that as  $r$  rises, the optimal  $\alpha_H^*$  will rise as well as those who receive relative positive shocks feel more obliged to contribute due to rising social sanctions  $rS(\cdot)$ . For simplicity, optimal  $\alpha_L^* = 1$  in this specification. More generally, with a cost of religious attendance such that optimal is less than 1, then the optimal  $\alpha_L^*$  will rise with  $r$  as well because the budget of the religious group has expanded and because average religious intensity  $\bar{\alpha}$  has risen, they must increase their religious intensity as well to keep the same share of the budget. With higher average religious intensity  $\bar{\alpha}$ , agents with high  $r$  can expect to have more smoothing provided by their religious group. Under standard assumptions ( $T' < 1$ ,  $T'' < 0$ , i.e. deadweight losses from taxation), those who face less volatility will need and prefer less government insurance.

Thus, fiscal and social conservatives (high  $r$  and low  $\tau$ ) and fiscal and social liberals (low  $r$  and high  $\tau$ ) tend to come hand-in-hand and religious groups with greater within-group charitable giving are more against the welfare state (high  $\alpha$  and low  $\tau$ ).

### *Separation Between Church and State*

Accordingly, we introduce a state church by allowing a fraction  $\gamma$  of government budget  $T(\tau)\bar{Y}$  to be apportioned directly for religious groups. The simple way to do this is to put  $\gamma T(\tau)\bar{Y}$  directly inside the religious budget as follows:  $U_x = u[(1-\tau)((1-\alpha_x)x + \frac{\alpha_x}{\bar{\alpha}}(\bar{\mu}_r + \gamma T(\tau)\bar{Y})) + (1-\gamma)T(\tau)\bar{Y}] - rS(\frac{\alpha_x}{\bar{\alpha}})$ .

and it can be seen that those with higher  $\alpha$ , and who receive a higher share of the religious budget, will now be less inclined to be against the welfare state. More technically, we introduce  $\xi_r$ , the fraction of government funds for religious activity that goes to groups with social conservatism  $r$ . The payoff to agent  $x$  can be written as:  $U_x = u[(1-\tau)((1-\alpha_x)x + \frac{\alpha_x}{\bar{\alpha}}\bar{\mu}_r) + (\gamma\xi_r\frac{\alpha_x}{\bar{\alpha}} + (1-\gamma))T(\tau)\bar{Y}] - rS(\frac{\alpha_x}{\bar{\alpha}})$ .

State funding provided to religious groups is exempt from taxation. This assumption is reasonable—state funding of religious buildings, insurance programs, or faith-based initiatives should not appear as taxable income. In reality, state funding of religious budgets is fungible with agents' own charitable contributions and could appear as taxable income. For considering religious agents' tax preferences, this effect is second-order, but for welfare considerations, this fungibility effect should be included. Even symbolic support of

religious institutions may influence the population's vulnerability  $r$  to social sanctions. We focus on agents' tax preferences instead of welfare.

This formulation allows both the case where some religious groups are eligible for state funds but others are not (this more closely resembles the European case) as well as the case where any religious group is eligible to receive state funding (this more closely resembles the contemporary U.S. case). The U.S. was more like Europe even in the recent past—reading Protestant Bibles and disallowing Catholic Bibles in public schools was considered a form of double taxation on Catholics who also had to fund their own schools.

There exists a fraction  $\gamma^*$  and function  $\xi_r$  such that the preferred tax rate of members of the state church is increasing with religious intensity iff  $\gamma > \gamma^*$  and the preferred tax rate is below unity.

Consider the extreme case of  $\gamma = 1$ . Then the income of agent  $x$  is:  $Z_x = (1 - \tau) Y_x + \xi_r \frac{\alpha_x}{\alpha} T(\tau) \bar{Y}$ , where  $Y_x$  is defined in (1) and (2). Then  $\frac{\partial Z_x}{\partial \tau} = \xi_r \frac{\alpha_x}{\alpha} T'(\tau) \bar{Y} - Y_x$ , so tax preferences satisfy the following expression:  $T'(\tau^*) = \frac{1}{\xi_r} \frac{u'(Z_L)Y_L + u'(Z_H)Y_H}{[\frac{\alpha_L}{\alpha} u'(Z_L) + \frac{\alpha_H}{\alpha} u'(Z_H)] \bar{Y}}$ . Similar to the case without a state church, the fraction on the right increases with  $r$ , which reduces the spread between  $H$  and  $L$  agents. However, if  $\xi_r$  increases with  $r$  sufficiently fast, the overall fraction will decline with  $r$ . Consequently, members of the state church have a preferred tax rate that is increasing with religiosity. For religious groups outside the state church or ineligible for state funding,  $\xi_r$  is constant (if government transfers are distributed randomly in the population, groups receive government largess as a share of the population but this largess is divided over their population share), so their preferred tax rate is decreasing with religiosity.

### *Dynamic Model*

In this section, we develop our model of the political economy of beliefs, which is simplified for tractability. Risk-sharing is still at the core of the model. Agents would like to insure themselves against income shocks. They make an insurance decision today in anticipation of income  $y$  in the next period that is distributed with mean  $\mu$  and variance  $\sigma^2$ , and they prefer higher expected value and lower variance in income:<sup>2</sup>  $\mu - \frac{1}{2}\sigma^2$ .

The model's time sequence is as follows: at time  $t = 0$ , both the level of religiosity and the level of church-state separation are set (both of these will be endogenized later). At time  $t = 1$ , the agents choose the level of taxes for income realizations at time  $t = 2$ .

### *Taxes*

Consider agents' choice of taxes first. Agents vote for a level of taxation ( $\tau$ ) that provides a form of insurance. With taxation, income next period will be:  $(1 - \tau)y + R(\tau)\mu$ . This expression has the state collecting  $\tau$ , a portion of income from each citizen, and then giving back the average of collected incomes,

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<sup>2</sup>This could be seen as a reduced form of agents with CARA preferences and normally distributed shocks or agents with quadratic preferences, and is also in line with standard portfolio theory.

$\mu$ . In addition, the function  $R(\tau)$  reflects deadweight losses associated with taxation (e.g., due to the state keeping a portion of the taxes).

When  $R(\tau) = \tau$  there are no deadweight losses, so agents choose perfect insurance ( $\tau = 1$ ) — people with high income will give more in taxes and get back less ( $\mu$ ), while agents with low income will give less in taxes and get back more. With distortions, the agents balance insurance considerations against the distortive effects of taxation. To see this, assume a standard concave function:  $R(0) = 0$ ,  $R' > 0$ ,  $R'' < 0$ , and  $0 < R'(0) \leq 1$ . The assumptions capture the fact that deadweight loss to taxes is 0 when taxes are 0 and increases with taxation.<sup>3</sup>

The distribution of income with taxation will have mean  $[(1 - \tau) + R(\tau)]\mu$  and variance  $(1 - \tau)^2\sigma^2$ . Thus, in choosing the tax rate, agents will maximize:  $[(1 - \tau) + R(\tau)]\mu - \frac{1}{2}(1 - \tau)^2\sigma^2$ .

The FOC yields:  $[-1 + R'(\tau)]\mu + (1 - \tau)\sigma^2 = 0$ , or,  $\frac{\mu}{\sigma^2} = \frac{1 - \tau}{1 - R'(\tau)}$ .

The right-hand side is a decreasing function of  $\tau$ , so the agent balances the inherent randomness of income next period with the distortionary effects of taxation: the higher the income variation next period (bigger  $\sigma^2$  relative to  $\mu$ ), the higher the agent's preferred tax rate.

The equation above can be rewritten as:  $(1 - \tau)\sigma^2 = (1 - R'(\tau))\mu$ , which provides the intuition for the basic setup. The left-hand side is the marginal benefit of increasing taxes: with higher taxes, the agent reduces the variance of income shocks. The right-hand side is the marginal cost of taxes: it is the deadweight loss that comes from taxation. At the optimum, the agent equates marginal benefit to marginal cost.

### *Religiosity*

Now suppose the agent chooses taxation, having already observed their level of religiosity. Religiosity provides a source of insurance of in-kind or material benefits through the church. It works much like government taxation: agents give donations  $d$  as a portion of their income, which the church redistributes back as  $P(d)\mu$ , where the function  $P(d)$  has similar first- and second-order derivative properties as the government's tax revenue function. The value  $d$  can be interpreted in two ways.  $d$  is the level of insurance that the agents insure through the church and it is also an indicator of their level of religiosity (the higher the level of religiosity, the more the agents are willing to donate to the church, and the church rewards the more devoted with higher payments).<sup>4</sup>

With both religiosity and taxation, the agents' income next period will be:  $(1 - \tau - d)y + R(\tau)\mu + P(d)\mu$ , which means that the agents choosing the tax rate will maximize at time  $t = 1$ :  $[(1 - \tau - d) + R(\tau) + P(d)]\mu - \frac{1}{2}(1 - \tau - d)^2\sigma^2$ .

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<sup>3</sup>These assumptions guarantee that the deadweight loss is never so high that less is available for redistribution when there are higher taxes.

<sup>4</sup>For now,  $d$  is not voluntary and is set by the church.

The FOC with respect to  $\tau$ , treating  $d$  as given, will be:  $\frac{\mu}{\sigma^2} = \frac{1-\tau-d}{1-R'(\tau)}$ . The first implication is that, if  $R'(0)$  is 1 or very close to 1, the agent will surely use the state to insure, even if there is already church insurance. By the implicit function theorem:  $-R''(\tau)\frac{\partial\tau}{\partial d}\frac{\mu}{\sigma^2} = -\frac{\partial\tau}{\partial d} - 1$ , or,  $\frac{\partial\tau}{\partial d} = \frac{1}{-1+R''(\tau)\frac{\mu}{\sigma^2}}$ . So,  $\frac{\partial\tau}{\partial d} < 0$ .

The preceding comparative statics indicate that religiosity is negatively associated with preferred tax rate as the marginal benefit of additional taxation is  $(1-\tau-d)\sigma^2$ , which is decreasing in  $d$ . With a higher level of  $d$ , the marginal benefit of insurance decreases for the agent, thus in equilibrium, the marginal cost of tax distortions will also decrease, which is done by lowering  $\tau$ .

Note that the insurance participation is interpreted as the individual's level of religiosity. This is a simplifying assumption, but in one national survey of working Americans, 4% claimed to have received financial help from a religious organization within the past year, and among these recipients, 80% were themselves church or synagogue members (compared to 56% of non-recipients) and 61% belonged to religious fellowship groups (compared to 18% among non-recipients). The recipients were disproportionately those who had been laid off from work or experienced pay cuts and had trouble paying their bills (Wuthnow 1994).<sup>5</sup>

### *State Religion*

In the model, suppose the religion could be a state religion. The role of the state religion in redistributing to religious group members is parametrized by  $\gamma \in [0, 1]$ . In the model,  $\gamma = 0$  is the case of no-state religion (complete separation of church-state) and examined in the previous sub-section. The degree of state religion increases with  $\gamma$  all the way up to 1.  $\gamma = 1$  would correspond to the case where the church owns the state, and all the state revenues go to the church. The church gets  $\gamma$  share of the government revenue with the government retaining  $1-\gamma$ . The church's handling of resources is subject to a similar deadweight loss as tax redistribution, and transferred to members according to their level of religiosity. Then, the agents' income realization next period will be:  $(1-\tau-d)y + (1-\gamma)R(\tau)\mu + P(d)(1+\gamma R(\tau))\mu$ . This would imply the agents' optimization will be:  $[1-\tau-d + (1-\gamma)R(\tau) + P(d)(1+\gamma R(\tau))]\mu - \frac{1}{2}(1-\tau-d)^2\sigma^2$ , or  $[1-\tau-d + R(\tau) + P(d) - (1-P(d))\gamma R(\tau)]\mu - \frac{1}{2}(1-\tau-d)^2\sigma^2$ .

First, for a given level of  $\tau$ , and  $d$ , the agent gets less insurance income. However, the larger share of government revenue going to religion,  $\gamma$ , introduces increased payoff to having higher tax preferences, since the church will also have access to part of the state tax revenues.

The FOC of the new maximization problem will be:  $[-1 + R'(\tau) - \gamma(1-P(d))R'(\tau)]\mu + (1-\tau-d)\sigma^2 = 0$ , or,  $\frac{\mu}{\sigma^2} = \frac{1-\tau-d}{1-R'(\tau)+\gamma(1-P(d))R'(\tau)}$ .

The FOC then implies:  $[R''(\tau)\frac{\partial\tau}{\partial\gamma} - (1-P(d))R'(\tau) - \gamma(1-P(d))R''(\tau)\frac{\partial\tau}{\partial\gamma}]\mu - \frac{\partial\tau}{\partial\gamma}\sigma^2 = 0$ , or,  $[R''(\tau)(1 -$

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<sup>5</sup>Also, note here religiosity is exogenous. For example, one can imagine a cultural or genetic component to religiosity. The deadweight loss of redistribution can also be thought of as some cost to finding out who is deserving or who experienced an actual loss, rather than deadweight loss of collection, since weekly collection is usually straightforward.

$\gamma(1 - P(d)) - \sigma^2] \frac{\partial \tau}{\partial \gamma} = (1 - P(d))R'(\tau)$ , or,  $\frac{\partial \tau}{\partial \gamma} = -\frac{(1-P(d))R'(\tau)}{(-R''(\tau))(1-\gamma(1-P(d)))+\sigma^2}$ . Since both the numerator and the denominator of the expression are positive, we have that,  $\frac{\partial \tau}{\partial \gamma} < 0$ .

But as  $d$  increases, the numerator decreases, while the denominator increases, which implies that:  $\frac{\partial^2 \tau}{\partial \gamma \partial d} > 0$ .

If we assume the functions are continuous, then we also have that:  $\frac{\partial^2 \tau}{\partial d \partial \gamma} = \frac{\partial^2 \tau}{\partial \gamma \partial d} > 0$ .

The negative relationship between religiosity and tax preferences is reduced when there is a state church because part of the benefits of government redistribution is received through the state church.

When  $\gamma$  is endogenously determined, the agents expect the state to set a certain level of church-state separation ( $\gamma^e$ ), and in the rational expectations equilibrium, those expectations will hold true:  $\gamma = \gamma^e$ .

### *Elite Preferences On Church-State Separation*

We have shown religious intensity and tax preferences are inversely related when there is separation between church and state but religious intensity and tax preferences are positively related when there is no separation. The predictions of the model can be summarized in a simple diagram:

	$\gamma = 0$		$\gamma = 1$	
	High $\tau$	Low $\tau$	High $\tau$	Low $\tau$
High $d$	Religious Right		Social Gospel	
Low $d$	Secular Left		Libertarian	

Without a state church ( $\gamma = 0$ ), the highly religious prefer low taxes (religious right) and the less religious prefer high taxes (secular left). With a state church ( $\gamma = 1$ ), the highly religious prefer high taxes (social gospel) while the less religious prefer low taxes (libertarian).

Suppose there are elites who desire a lower tax burden. Their preferences on church-state separation arguably depend on the relative weight of religious and non-religious constituencies. Elites plausibly desire a lower tax burden (Acemoglu and Robinson 2000) and have the power to choose (or judicate) church-state separation (Bickel 1986). It is reasonable to view the elites as choosing  $\gamma$  given the literature on the counter-majoritarian difficulty whereby judicial review of legislative laws allows unelected judges to overrule the lawmaking of elected representatives and countermand the will of the majority. Religious individuals tax non-religious individuals through a state church. Elites judicate increasing church-state separation, which creates a larger voting constituency for lower taxes. This holds only if religious voters exceed non-religious voters. Otherwise, elites prefer a state church to curb the secular left's preference for a larger welfare state.<sup>6</sup>

<sup>6</sup>For simplicity, we can see this by limiting attention to a case with two groups, high  $d$  and low  $d$  in fractions  $f$  and  $1 - f$ . In a society where  $f$  is large, elites prefer low  $\gamma$  to curb the tax preferences of the religious voters. In a society where  $f$  is small, elites prefer high  $\gamma$  to curb the tax preferences of the secular voters. If  $f$  is high, elites prefer low  $\gamma$ ; if  $f$  is low, elites prefer high  $\gamma$ . Consider a simple model where taxes are determined by probabilistic voting between two parties (Lindbeck and Weibull 1987), where all voters have the same distribution for their individual party-specific taste shifters. Then both parties will commit

## Multiple Steady States

Define  $d_t$  as the share of religious people in the society at time  $t$ ;  $\gamma_t$  is the amount of tax revenues that is given to the church (i.e., the higher is  $\gamma_t$ , the lower the degree of separation between church and state);  $w_t$  is the level of the welfare state in the economy. Each equation below relates the motion of one of the variables to another.

The first equation governing the process will be:  $\gamma_t = \alpha - \beta d_t$ .

This equation means that a high level of religiosity is associated with greater separation of church and state. It is the equation that sets up the elites' behavior, who curb the tax preferences of the religious left when there are many religious individuals by separating church and state, or do the opposite when the population is mostly secular.

The second equation of the process will be:  $w_t = \alpha_\gamma - \beta_\gamma \gamma + \alpha_d - \beta_d d + \beta_{\gamma d} \gamma d$ .

The equation is derived from the equilibrium outcome of the interplay between government and church insurance in the diagram above. Elites curb tax preferences of the population by separating church and state when there are many religious individuals.<sup>7</sup> When there are few religious individuals, elites curb tax preferences by keeping a large state church.<sup>8</sup> Thus, the second partial with respect to  $\gamma$  and  $d$  is positive. Each of  $\beta$ ,  $\beta_d$ , and  $\beta_\gamma$  are also positive. The second equation can be rewritten as:  $w_t = (\alpha_\gamma - \beta_\gamma \alpha + \alpha_d) + (\beta_\gamma \beta - \beta_d + \alpha \beta_{\gamma d}) d_t - \beta_{\gamma d} \beta d_t^2$ , or,  $w_t = b_1 + b_2 d - b_3 d^2$ .

Finally, many empirical studies document that government welfare crowds out religious participation and charitable provision (Gruber and Hungerman 2007; Hungerman 2005; Gill and Lundsgaarde 2004; Cnaan et al. 2002). We model this crowd-out by assuming that as the welfare state increases, the marginal person seeking insurance will turn to the welfare state instead of religion, so average religiosity declines:  $n_t = \frac{1}{\phi w_t} = \frac{1}{a_1 + a_2 d_t - a_3 d_t^2}$ .

The evolution of  $d_t$  is as follows: at each subsequent period, the stock of religiosity decays by a constant fraction  $\delta$ . However, it gets supplemented by the average new religiosity, as described in equation (24). Then, the dynamics of religiosity will follow as:  $d_{t+1} = d_t(1 - \delta) + n_t$ .

Therefore, the steady state would satisfy:  $d = d(1 - \delta) + \frac{1}{a_1 + a_2 d - a_3 d^2}$ . Or,  $\delta a_3 d^3 - \delta a_2 d^2 - \delta a_1 d + 1 = 0$ .

This equation has three roots. If all are real,  $d(1 - \delta) + \frac{1}{a_1 + a_2 d - a_3 d^2}$  will intersect the 45° line at three places. Even though all three points represent steady states, we can characterize them as follows: Since  $a_3$

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to platforms maximizing a utilitarian social welfare function,  $W(\tau) = f U_{hi\_d}(\tau) + (1 - f) U_{lo\_d}(\tau)$ , which in this case involves putting the population weight  $f$  on the high  $r$  agents and weight  $(1 - f)$  on the low  $r$  agents. If  $f = 0$ , voters prefer a low tax rate if  $\gamma = 1$ ; if  $f = 1$ , voters prefer a low tax rate if  $\gamma = 0$ . The proposition then follows by continuity.

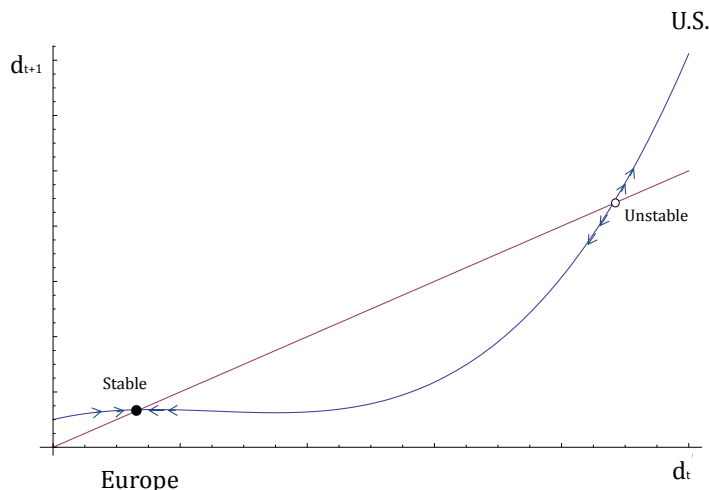
<sup>7</sup>As  $\gamma$  goes to 0, the relationship between  $w_t$  and  $d$  is negative.

<sup>8</sup>As  $d$  goes to 0, the relationship between  $w_t$  and  $\gamma$  is negative.



is positive as is the constant term 1, at most two of the roots are positive. Second,  $a_3 > 0$  implies that the two endpoints are unstable while the middle root is stable. In this case, the two stable equilibria are the middle root and  $d = 1$ , where Europe and the U.S., respectively, are located in Figure 2. In cases where the equation has one real and two complex roots, the unstable steady state is the only interior steady state. In this case, the two stable equilibria are  $d = 0$  and  $d = 1$ .

FIGURE 12.— Multiple Steady States



The model aligns with the intuition that when there are many religious individuals, the elites separate church and state, curbing tax preferences of the religious left, which reduces the welfare state. This, in turn, increases subsequent religiosity for the marginal person, creating a positive feedback. However, when there are few religious individuals, elites keep a large state church, attempting to curb the tax preferences of the secular left. This would tend to reduce the welfare state, which also increases subsequent religiosity, undermining the initial condition. This force creates a negative feedback, maintaining the large welfare state, and a stable steady state.

# APPENDIX TABLE I

## OUTCOME VARIABLES IN THE U.S. DATA

Variable	GSS name	Range	Mean	Obs
<i>Fiscal variables</i>				
Confidence: Business (ii)	conbiz	1-5	2.99	3814
Confidence: Business (i)	conbus	1-3	2.09	37175
Confidence: Financial inst	confinan	1-3	2.08	35053
Confidence: Organized labor	conlabor	1-3	2.20	36504
Equalize incomes (i)	eqincome	1-5	3.14	1867
Equalize incomes (ii)	equalize	1-4	2.58	6764
Equalize wealth (i)	eqwlth	1-7	3.72	28600
Equalize wealth (ii)	eqwlthy	1-7	3.67	749
Equalize incomes (iii)	goveqinc	1-5	3.21	10242
Gov. help general	helpnot	1-5	3.04	26920
Gov. help poor	helppoor	1-5	2.89	27570
Gov. help sick	helpsick	1-5	2.46	27646
Help cities (i)	natcity	1-3	1.65	29096
Help cities (ii)	natcityy	1-3	2.12	17090
Help cities (iii)	natcityz	1-3	1.63	427
Pro environment (i)	natenvir	1-3	1.48	31614
Pro environment (ii)	natenviy	1-3	1.43	19105
Pro environment (iii)	natenviz	1-3	1.49	465
Pro welfare (i)	natfare	1-3	2.28	31758
Pro welfare (ii)	natfarey	1-3	1.45	19447
Pro welfare (iii)	natfarez	1-3	1.38	473
Pro health (i)	natheal	1-3	1.40	32081
Pro health (ii)	nathealy	1-3	1.41	19441
Pro health (iii)	nathealz	1-3	1.46	465
Cut taxes	tax	1-3	2.62	30008
<i>Moral variables</i>				
Abortion: Any reason (i)	abany	1-2	1.59	31807
Abortion: Any reason (ii)	abchoose	1-5	3.04	1332
Abortion: Defect (ii)	abdefct1	1-4	1.65	1262
Abortion: Defect (i)	abdefect	1-2	1.20	39216
Abortion: Mother's health	abhlth	1-2	1.10	39384
Abortion: Preference	abnomore	1-2	1.56	39093
Abortion: Family poor (i)	abpoor	1-2	1.53	39028
Abortion: Family poor (ii)	abpoor1	1-4	2.36	1219
Abortion: Rape	abrape	1-2	1.18	38981
Abortion: Mother single	absingle	1-2	1.56	39020
Teacher: Atheist	colath	1-2	1.48	34823
Teacher: Homosexual	colhomo	1-2	1.32	33283
Conf. in org. religion (i)	conclerg	1-3	2.08	37362
Conf. in org. religion (ii)	conclery	1-7	4.54	464
Legalize marijuana (i)	grass	1-2	1.73	32682
Legalize marijuana (ii)	grassy	1-2	1.67	743
Homosexual relations (i)	homosex	1-4	3.15	32707
Homosexual relations (ii)	homosex1	1-4	3.14	4903
Book in library: Atheist	libath	1-2	1.32	35156
Book in library: Homosexual	libhomo	1-2	1.33	33487
Pornography laws	pornlaw	1-3	2.34	33953
Religiosity	reliten	1-4	3.05	52101
Free speech: Atheist	spkath	1-2	1.29	35732
Free speech: Homosexual	spkhomo	1-2	1.24	33516
Extramarital relation (i)	xmarsex	1-4	3.63	34019
Extramarital relation (ii)	xmarsex1	1-4	3.69	5235

APPENDIX TABLE II  
OTHER VARIABLES IN THE U.S. DATA

	Mean	Std dev	Min	Max	Obs
Religious attendance	3.83	2.71	0.00	8.00	56512
Social conservatism	0.36	0.38	0.00	1.00	56171
Within-group giving	0.61	0.16	0.40	0.91	43996
Log income	9.95	1.01	5.50	12.00	51231
Age	45.70	17.47	18.00	89.00	56859
Highest year of school completed	12.75	3.18	0.00	20.00	56897
Gender	1.56	0.50	1.00	2.00	57061
Fundamentalist	0.31	0.46	0.00	1.00	54907
Religion: Evangelical protestant	0.31	0.46	0.00	1.00	43996
Religion: Mormon	0.14	0.35	0.00	1.00	43996
Religion: Catholic	0.32	0.47	0.00	1.00	43996
Religion: Jewish	0.03	0.16	0.00	1.00	43996
Religion: Other	0.05	0.22	0.00	1.00	43996
Religion: No religion	0.14	0.35	0.00	1.00	43996
Race: White	0.81	0.39	0.00	1.00	57061
Race: Black	0.14	0.35	0.00	1.00	57061
Race: Other	0.05	0.22	0.00	1.00	57061
Marital status: Married	0.54	0.50	0.00	1.00	57041
Marital status: Widowed	0.10	0.30	0.00	1.00	57041
Marital status: Divorced	0.12	0.33	0.00	1.00	57041
Marital status: Separated	0.03	0.18	0.00	1.00	57041
Marital status: Never married	0.20	0.40	0.00	1.00	57041

APPENDIX TABLE III  
VARIABLES IN THE WORLDWIDE DATA

	Mean	Std dev	Min	Max	Obs
Government responsibility	6.22	3.02	1.00	10.00	234148
Income equality	5.93	3.02	1.00	10.00	230171
Attendance	3.62	2.58	0.00	7.00	238981
Lives in country with SC	0.39	0.49	0.00	1.00	257612
Belongs to SC	0.26	0.44	0.00	1.00	257612
Income level	4.51	2.39	1.00	10.00	226003
Age	40.31	15.91	14.00	99.00	247978
Female	0.52	0.50	0.00	1.00	252941
Education: Less than elementary	0.14	0.35	0.00	1.00	230283
Education: Elementary	0.15	0.35	0.00	1.00	230283
Education: Incomplete secondary	0.07	0.26	0.00	1.00	230283
Education: Intermediate vocational secondary	0.17	0.38	0.00	1.00	230283
Education: Intermediate general secondary	0.09	0.28	0.00	1.00	230283
Education: Full secondary	0.16	0.37	0.00	1.00	230283
Education: Some university w/o degree	0.07	0.26	0.00	1.00	230283
Education: University with degree	0.14	0.35	0.00	1.00	230283
Marital status: Married	0.58	0.49	0.00	1.00	253001
Marital status: Cohabitation	0.06	0.24	0.00	1.00	253001
Marital status: Divorced	0.03	0.17	0.00	1.00	253001
Marital status: Separated	0.02	0.13	0.00	1.00	253001
Marital status: Widowed	0.06	0.24	0.00	1.00	253001
Marital status: Never married	0.25	0.43	0.00	1.00	253001
Marital status: Divorced, Separated or Widow	0.00	0.02	0.00	1.00	253001
Marital status: Living apart but steady relation	0.00	0.01	0.00	1.00	253001

APPENDIX TABLE IV  
THE FINKE/GRIM DATA

Variable	Overall mean	With state church	Without state church	Difference
Government Regulation index (GRI)	3.58 (2.91)	4.75 (3.01)	2.76 (2.55)	1.99 [0.00]
Social Regulation Index (SRI)	4.32 (2.90)	5.33 (3.07)	3.61 (2.56)	1.72 [0.01]
Government Favoritism Index (GFI)	5.61 (2.45)	6.96 (1.87)	4.66 (2.38)	2.30 [0.00]
Government favoritism for specific group	3.26 (1.83)	4.46 (1.47)	2.41 (1.56)	2.05 [0.00]

*Notes: The table shows country averages of the variables from Finke and Grim (2006) used in the paper, broken down by Barro and McCleary's (2005) state church classification. Standard deviations in parentheses, and p-values from a t-test using Satterthwaite's degrees of freedom correction in square brackets.*

APPENDIX TABLE V  
VARIABLES IN THE SWEDISH AND NORWEGIAN SAMPLE

	Mean	Std dev	Min	Max	Obs
Taxes on high incomes should be reduced	2.62	1.42	1.00	5.00	20607
It is not important to reduce income differences	2.44	1.28	1.00	5.00	20456
Preserving Christian values is important	2.78	1.31	1.00	5.00	16207
Period	3.03	1.44	1.00	5.00	28095
Sweden	0.63	0.48	0.00	1.00	28095

APPENDIX TABLE VI  
FISCAL AND SOCIAL CONSERVATISM/LIBERALISM IN THE U.S.—INTERACTIONS  
Fiscal conservative    Moral conservative

	(1)	(2)
Religious attendance	0.0114*** (0.00249)	0.0871*** (0.00199)
Fundamentalist	0.0133 (0.0131)	0.217*** (0.0104)
Attendance × Fundamentalist	0.00435 (0.00396)	-0.00384 (0.00322)
Observations	52585	54197

*Notes:*

1. Data are from General Social Survey cumulative file, 1972-2012. All estimates are average effect size estimates. Standard errors in parentheses are adjusted for correlation within region of residence.
2. All specifications include dummies for region of residence, marital status, year, race, and gender, and controls for the log of income, age, age-squared, and years of completed schooling.
3. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.

APPENDIX TABLE VII  
FISCAL AND SOCIAL CONSERVATISM/LIBERALISM IN THE U.S.—ALTERNATIVE VARIABLE DEFINITION

	Fiscal conservative			Moral conservative		
(lr)2-4 (lr)5-7	(1)	(2)	(3)	(4)	(5)	(6)
Religious attendance	0.0140*** (0.00195)		0.0118*** (0.00176)	0.0904*** (0.00351)		0.0796*** (0.00263)
Social conservatism		0.0868*** (0.0111)	0.0647*** (0.00995)		0.483*** (0.0307)	0.357*** (0.0160)
Observations	54541	54166	53728	56170	55821	55373

*Notes:*

1. Data are from General Social Survey cumulative file, 1972-2012. All estimates are average effect size estimates. Standard errors in parentheses are adjusted for correlation within region of residence.
2. All specifications include dummies for region of residence, marital status, year, race, and gender, and controls for the log of income, age, age-squared, and years of completed schooling.
3. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.
4. Social Conservatism is a 0-1 index summing up values on Prayer in Public School, Women Belong at Home, Premarital Sex is Wrong, and Identify as Fundamentalist.

APPENDIX TABLE VIII  
FISCAL AND SOCIAL CONSERVATISM/LIBERALISM IN THE U.S.—BY RACIAL GROUP  
A. White

	Fiscal conservative			Moral conservative		
(lr)2-4 (lr)5-7	(1)	(2)	(3)	(4)	(5)	(6)
Religious attendance	0.0189*** (0.00180)		0.0174*** (0.00189)	0.0978*** (0.00306)		0.0919*** (0.00247)
Fundamentalist		0.0647*** (0.0163)	0.0464*** (0.0138)		0.327*** (0.0263)	0.238*** (0.0118)
Observations	44330	43311	43003	45690	44661	44345

B. Black

	Fiscal conservative			Moral conservative		
(lr)2-4 (lr)5-7	(1)	(2)	(3)	(4)	(5)	(6)
Religious attendance	-0.0000616 (0.00393)		0.000932 (0.00385)	0.0597*** (0.00469)		0.0586*** (0.00512)
Fundamentalist		-0.0184 (0.0127)	-0.0182 (0.0159)		0.118*** (0.0144)	0.0809*** (0.0184)
Observations	7482	7265	7200	7746	7527	7460

*Notes:*

1. Data are from General Social Survey cumulative file, 1972-2012. All estimates are average effect size estimates. Standard errors in parentheses are adjusted for correlation within region of residence.
2. All specifications include dummies for region of residence, marital status, year, race, and gender, and controls for the log of income, age, age-squared, and years of completed schooling.
3. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.

# APPENDIX TABLE IX

## FISCAL AND SOCIAL CONSERVATISM/LIBERALISM IN THE U.S.—DETAILED ESTIMATES

	(1)		(2)		(3)				Obs.
(lr)2-3 (lr)4-5 (lr)6-9	Relig. attendance		Socially conservative		Relig. attendance		Socially conservative		
<i>Fiscal conservative</i>									
Confidence: Business (ii)	0.0264***	(0.0041)	-0.0369	(0.0350)	0.0297***	(0.0047)	-0.0908**	(0.0355)	3691
Confidence: Business (i)	0.0120***	(0.0011)	-0.0169	(0.0122)	0.0136***	(0.0011)	-0.0403**	(0.0129)	36086
Confidence: Financial inst	0.0146***	(0.0014)	0.0151	(0.0083)	0.0151***	(0.0014)	-0.0084	(0.0093)	33974
Confidence: Organized labor	-0.0002	(0.0014)	0.0437***	(0.0076)	-0.0017	(0.0013)	0.0467***	(0.0082)	35452
Equalize incomes (i)	0.0291***	(0.0062)	0.0500	(0.0860)	0.0295***	(0.0053)	0.0077	(0.0791)	1821
Equalize incomes (ii)	0.0213***	(0.0061)	0.0666	(0.0429)	0.0206**	(0.0065)	0.0329	(0.0425)	6519
Equalize wealth (i)	0.0274***	(0.0029)	0.1039	(0.0620)	0.0246***	(0.0030)	0.0667	(0.0602)	27619
Equalize wealth (ii)	0.0469	(0.0340)	0.3331*	(0.1784)	0.0389	(0.0371)	0.2579	(0.2111)	737
Equalize incomes (iii)	0.0184***	(0.0034)	0.1051*	(0.0483)	0.0156***	(0.0028)	0.0734	(0.0485)	9877
Gov. help general	0.0207***	(0.0033)	0.1103***	(0.0322)	0.0186***	(0.0036)	0.0758*	(0.0334)	26026
Gov. help poor	0.0145***	(0.0031)	0.1277***	(0.0352)	0.0114**	(0.0037)	0.1090**	(0.0375)	26646
Gov. help sick	0.0296***	(0.0031)	0.2092***	(0.0324)	0.0246***	(0.0037)	0.1701***	(0.0344)	26728
Help cities (i)	0.0055**	(0.0021)	0.0739**	(0.0246)	0.0032*	(0.0015)	0.0671**	(0.0213)	28352
Help cities (ii)	0.0065**	(0.0023)	0.1142***	(0.0191)	0.0030	(0.0021)	0.1065***	(0.0180)	16552
Help cities (iii)	-0.0088	(0.0056)	-0.0405	(0.0878)	-0.0041	(0.0089)	-0.0599	(0.0937)	412
Pro environment (i)	0.0147***	(0.0015)	0.1332***	(0.0153)	0.0110***	(0.0013)	0.1130***	(0.0153)	30799
Pro environment (ii)	0.0187***	(0.0022)	0.1472***	(0.0269)	0.0147***	(0.0019)	0.1203***	(0.0253)	18490
Pro environment (iii)	0.0015	(0.0122)	0.0980	(0.0886)	-0.0015	(0.0128)	0.0897	(0.0972)	449
Pro welfare (i)	0.0140***	(0.0015)	0.0941***	(0.0165)	0.0117***	(0.0017)	0.0749***	(0.0164)	30944
Pro welfare (ii)	0.0065*	(0.0030)	0.0598**	(0.0228)	0.0049	(0.0030)	0.0496**	(0.0214)	18815
Pro welfare (iii)	-0.0028	(0.0080)	0.0701	(0.0611)	-0.0052	(0.0091)	0.0782	(0.0652)	457
Pro health (i)	0.0112***	(0.0018)	0.0545***	(0.0119)	0.0099***	(0.0017)	0.0387***	(0.0103)	31259
Pro health (ii)	0.0111***	(0.0023)	0.0614**	(0.0211)	0.0096***	(0.0022)	0.0450*	(0.0196)	18813
Pro health (iii)	0.0123	(0.0082)	0.0102	(0.0724)	0.0075	(0.0091)	0.0082	(0.0747)	448
Cut taxes	-0.0038***	(0.0009)	0.0421***	(0.0072)	-0.0055***	(0.0008)	0.0495***	(0.0070)	29037
<i>Moral conservative</i>									
Abortion: Any reason (i)	0.0501***	(0.0027)	0.2363***	(0.0190)	0.0450***	(0.0024)	0.1617***	(0.0094)	30826
Abortion: Any reason (ii)	0.1987***	(0.0127)	1.0409***	(0.0773)	0.1759***	(0.0123)	0.7661***	(0.0460)	1282
Abortion: Defect( ii)	0.1263***	(0.0106)	0.6813***	(0.1427)	0.1106***	(0.0086)	0.5385***	(0.1208)	1227
Abortion: Defect (i)	0.0398***	(0.0017)	0.1701***	(0.0125)	0.0365***	(0.0015)	0.1110***	(0.0082)	38096
Abortion: Mother's health	0.0227***	(0.0016)	0.0866***	(0.0101)	0.0210***	(0.0014)	0.0532***	(0.0079)	38267
Abortion: Preference	0.0537***	(0.0025)	0.2463***	(0.0190)	0.0487***	(0.0022)	0.1668***	(0.0101)	37987
Abortion: Family poor (i)	0.0533***	(0.0026)	0.2463***	(0.0192)	0.0482***	(0.0024)	0.1685***	(0.0103)	37916
Abortion: Family poor (ii)	0.1309***	(0.0143)	0.8836***	(0.1212)	0.1077***	(0.0113)	0.7438***	(0.1290)	1184
Abortion: Rape	0.0377***	(0.0019)	0.1598***	(0.0174)	0.0345***	(0.0018)	0.1041***	(0.0138)	37867
Abortion: Mother single	0.0522***	(0.0023)	0.2404***	(0.0169)	0.0472***	(0.0023)	0.1645***	(0.0093)	37917
Teacher: Atheist	0.0194***	(0.0012)	0.1518***	(0.0083)	0.0154***	(0.0010)	0.1275***	(0.0095)	33726
Teacher: Homosexual	0.0215***	(0.0019)	0.1980***	(0.0143)	0.0160***	(0.0013)	0.1733***	(0.0134)	32213
Conf. in org. religion (i)	0.0689***	(0.0035)	0.1415***	(0.0181)	0.0683***	(0.0034)	0.0290**	(0.0105)	36254
Conf. in org. religion (ii)	0.1011***	(0.0282)	0.2214	(0.1487)	0.1049***	(0.0275)	0.1206	(0.1366)	449
Legalize marijuana (i)	0.0340***	(0.0014)	0.1370***	(0.0141)	0.0310***	(0.0010)	0.0892***	(0.0103)	31620
Legalize marijuana (ii)	0.0400***	(0.0076)	0.3889***	(0.0599)	0.0293***	(0.0065)	0.3265***	(0.0523)	732
Homosexual relations (i)	0.1138***	(0.0063)	0.7147***	(0.0537)	0.0961***	(0.0044)	0.5659***	(0.0381)	31681
Homosexual relations (ii)	0.1123***	(0.0118)	0.8991***	(0.0932)	0.0882***	(0.0110)	0.7564***	(0.0757)	4726
Book in library: Atheist	0.0250***	(0.0011)	0.1868***	(0.0100)	0.0203***	(0.0008)	0.1549***	(0.0104)	34053
Book in library: Homosexual	0.0246***	(0.0010)	0.2009***	(0.0132)	0.0194***	(0.0006)	0.1702***	(0.0127)	32412
Pornography laws	0.0454***	(0.0014)	0.2267***	(0.0182)	0.0404***	(0.0007)	0.1648***	(0.0144)	32855
Religiosity	0.1769***	(0.0059)	0.6578***	(0.0477)	0.1669***	(0.0054)	0.3550***	(0.0189)	50894
Free speech: Atheist	0.0166***	(0.0010)	0.1298***	(0.0144)	0.0133***	(0.0008)	0.1087***	(0.0148)	34594
Free speech: Homosexual	0.0194***	(0.0016)	0.1700***	(0.0130)	0.0148***	(0.0010)	0.1480***	(0.0119)	32439
Extramarital relation (i)	0.0531***	(0.0018)	0.2418***	(0.0188)	0.0480***	(0.0020)	0.1669***	(0.0162)	32926
Extramarital relation (ii)	0.0457***	(0.0015)	0.2603***	(0.0387)	0.0403***	(0.0020)	0.1898***	(0.0377)	5050

### Notes:

1. The table shows all the estimated coefficients on religious attendance and socially conservative for outcomes on fiscal and moral conservativeness. Specification (1) includes attendance and controls, specification (2) socially conservative and controls, and specification (3) attendance, socially conservative, and controls.

2. Estimated coefficients are from OLS regressions controlling for the same variables as Table I. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.

15

3. Standard errors are clustered at the region of residence. Number of observations is the minimum number of observations, taken from specification (3).

4. Social Conservatism is a 0-1 index summing up values on Prayer in Public School, Women Belong at Home, Premarital Sex is Wrong, and Identify as Fundamentalist.

APPENDIX TABLE X  
WITHIN-GROUP GIVING AND FISCAL/SOCIAL CONSERVATISM IN THE U.S.

	Fiscal conservative (1)	Moral conservative (2)
Within-group giving	0.421*** (0.0373)	1.055*** (0.0828)
Observations	42545	43727

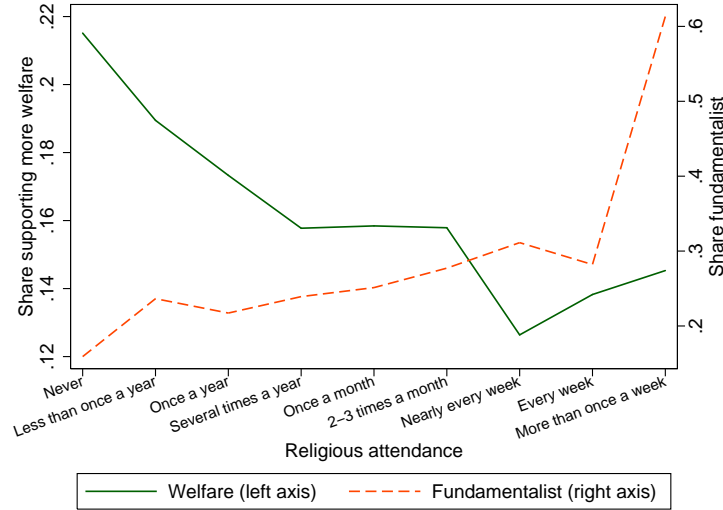
Notes:

1. Data are from General Social Survey cumulative file, 1972-2012. All estimates are average effect sizes. Dependent variables are as in Table I. Standard errors in parentheses are adjusted for correlation within region of residence. \*, \*\* and \*\*\* denote significance at the 10, 5 and 1% level.

2. All specifications include dummies for region of residence, marital status, year, race, and gender, and controls for the log of income, age, age-squared, and years of completed schooling.

3. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.

APPENDIX FIGURE 1.— Welfare Attitudes and Fundamentalism in the U.S.



Notes: Data are from the General Social Survey cumulative file, 1972-2012. 31% of Americans are fundamentalist according to the General Social Survey. Religious attendance and fundamentalism are recorded directly in the General Social Survey. Respondents are classified as supporting welfare if they answer that we are spending too little on welfare. Sample is the white population.



APPENDIX TABLE XI  
WITHIN-GROUP GIVING AND FISCAL/SOCIAL CONSERVATISM IN THE U.S.—DETAILED ESTIMATES

	Within-group giving		Obs
<i>Fiscal conservative</i>			
Confidence: Business (ii)	0.3524***	(0.0708)	3004
Confidence: Business (i)	0.1579**	(0.0482)	28251
Confidence: Financial inst	0.2022***	(0.0310)	26771
Confidence: Organized labor	0.0961***	(0.0222)	27713
Equalize incomes (i)	0.4886**	(0.1767)	1425
Equalize incomes (ii)	0.2955**	(0.1220)	5307
Equalize wealth (i)	0.7074***	(0.1486)	22254
Equalize wealth (ii)	2.0101**	(0.6007)	54
Equalize incomes (iii)	0.4586**	(0.1539)	8124
Gov. help general	0.4843***	(0.0689)	20920
Gov. help poor	0.4622***	(0.0814)	21469
Gov. help sick	0.6974***	(0.0561)	21510
Help cities (i)	0.2315***	(0.0354)	22051
Help cities (ii)	0.4225***	(0.0647)	13462
Help cities (iii)	0.0646	(0.1823)	318
Pro environment (i)	0.3393***	(0.0511)	23876
Pro environment (ii)	0.3577***	(0.0689)	15027
Pro environment (iii)	0.7141**	(0.2356)	344
Pro welfare (i)	0.3183***	(0.0281)	23969
Pro welfare (ii)	0.2061***	(0.0602)	15336
Pro welfare (iii)	0.5037*	(0.2210)	352
Pro health (i)	0.2059***	(0.0311)	24284
Pro health (ii)	0.1743**	(0.0581)	15311
Pro health (iii)	0.1969	(0.3097)	345
Cut taxes	0.0877**	(0.0345)	23148
<i>Moral conservative</i>			
Abortion: Any reason (i)	0.5501***	(0.0556)	24546
Abortion: Any reason (ii)	1.7613***	(0.2383)	1046
Abortion: Defect (ii)	0.7076**	(0.2688)	992
Abortion: Defect (i)	0.2446***	(0.0439)	29695
Abortion: Mother's health	0.0553**	(0.0228)	29803
Abortion: Preference	0.5421***	(0.0617)	29710
Abortion: Family poor (i)	0.5304***	(0.0612)	29643
Abortion: Family poor (ii)	1.3374**	(0.4190)	953
Abortion: Rape	0.2186***	(0.0433)	29489
Abortion: Mother single	0.5295***	(0.0595)	29661
Teacher: Atheist	0.4020***	(0.0353)	26584
Teacher: Homosexual	0.4603***	(0.0350)	25538
Conf. in org. religion (i)	0.6764***	(0.0782)	28402
Conf. in org. religion (ii)	0.2125	(0.6244)	346
Legalize marijuana (i)	0.4460***	(0.0395)	25058
Legalize marijuana (ii)	0.8091***	(0.1238)	542
Homosexual relations (i)	2.0739***	(0.1339)	25144
Homosexual relations (ii)	2.1003***	(0.1370)	3873
Book in library: Atheist	0.4353***	(0.0510)	26821
Book in library: Homosexual	0.4681***	(0.0402)	25651
Pornography laws	0.6030***	(0.0340)	26022
Religiosity	2.9723***	(0.1512)	40473
Free speech: Atheist	0.2958***	(0.0438)	27271
Free speech: Homosexual	0.3632***	(0.0400)	25690
Extramarital relation (i)	0.7588***	(0.0720)	26059
Extramarital relation (ii)	0.6757***	(0.0730)	4112

*Notes:*

1. The table shows all the estimated coefficients on the fraction of the respondent's charitable giving going to the religious group for outcomes on fiscal and moral conservativeness underlying Table I.
2. Estimated coefficients are from OLS regressions controlling for the same variables as Table I. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.
3. Standard errors are clustered at the region of residence.

APPENDIX TABLE XII  
SOCIAL INSURANCE AND RELIGION

	Congregation helps you a great deal if ill		
	(1)	(2)	(3)
Religious attendance	0.0838*** (0.00961)		
Evangelical protestant (d)		0.378** (0.157)	0.570*** (0.0419)
Mainline protestant (d)		0.280* (0.163)	0.462*** (0.0594)
Catholic (d)		0.0998 (0.138)	0.273*** (0.0383)
Other religion (d)		0.482*** (0.0778)	0.718*** (0.0720)
Jewish (d)		0.0996 (0.165)	0.333*** (0.0947)
No religion			0.143 (0.0972)
Observations	802	628	632

Notes:

1. Data are from General Social Survey cumulative file, 1998. Estimates (1) and (2) are marginal effects from probit models evaluated at sample means. Specification (3) is an OLS with no controls or intercept, so coefficients can be interpreted as group averages.
2. Specifications (1) and (2) include dummies for region of residence, marital status, year, race, and gender, and controls for the log of income, age, age-squared, and years of completed schooling.
3. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.
4. Standard errors in parentheses are adjusted for correlation within region of residence.
5. Sample size is smaller than in other tables because this question is only asked in 1998. Column 2, the omitted category is no religion.

APPENDIX TABLE XIII

## ALTERNATIVE OUTCOMES

	Military			Schools		
(lr)2-4 (lr)5-7	(1)	(2)	(3)	(4)	(5)	(6)
Religious attendance	0.0144*** (0.00251)		0.00783*** (0.00205)	-0.0111*** (0.00128)		-0.00855*** (0.00165)
Social conservatism		0.238*** (0.0224)	0.225*** (0.0239)		-0.0827*** (0.0113)	-0.0657*** (0.0125)
R <sup>2</sup>	0.101	0.105	0.106	0.0756	0.0757	0.0762
Observations	31022	30838	30624	31828	31648	31421

Notes:

1. Data are from General Social Survey cumulative file, 1972-2012. All estimates are from OLS estimations. Standard errors in parentheses are adjusted for correlation within region of residence.
2. Outcomes are answers to questions of the type “We are faced with many problems in this country, none of which can be solved easily or inexpensively. I’m going to name some of these problems, and for each one I’d like you to tell me whether you think we’re spending too much money on it, too little money, or about the right amount.” The problems mentioned are “Are we spending too much, too little, or about the right amount on the military, armaments, and defense?” and “Are we spending too much, too little, or about the right amount on improving the nation’s education system?”, both on scales from 1-3. Outcomes are standardized.
3. All specifications include dummies for region of residence, marital status, year, race, and gender, and controls for the log of income, age, age-squared, and years of completed schooling.
4. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.
5. Social Conservatism is a 0-1 index summing up values on Prayer in Public School, Women Belong at Home, Premarital Sex is Wrong, and Identify as Fundamentalist.

# APPENDIX TABLE XIV.— Within-Group Giving and Fiscal/Social Conservatism in the U.S.

	(1r)2-3 (1r)4-5 (1r)6-7 (1r)8-9 (1r)10-11 (1r)12-13	(1)		(2)	(3)	(4)	(5)	(6)	
		Mormon		Evangelical protestant	Mainline protestant	Catholic	Other religion	Jewish	Obs
<i>Fiscal conservative</i>									
Confidence: Business (i)	0.3796***	(0.1070)	0.2618***	(0.0631)	0.1169*	(0.0624)	0.3127***	(0.0725)	3004
Confidence: Business (ii)	0.1621***	(0.0214)	0.1261***	(0.0233)	0.1337***	(0.0158)	0.0265*	(0.0205)	28251
Confidence: Financial inst	0.1333**	(0.0422)	0.1279***	(0.0148)	0.1322***	(0.0137)	0.1075***	(0.0167)	26771
Confidence: Organized labor	-0.0034	(0.0403)	0.0033	(0.0179)	-0.0109	(0.0275)	-0.0765***	(0.0189)	27713
Egalize incomes (i)	0.1491	(0.2500)	0.2175	(0.1827)	0.0159	(0.1584)	0.0790	(0.1715)	1425
Egalize incomes (ii)	0.2457***	(0.0982)	0.1394***	(0.0528)	0.0251	(0.0658)	0.0896	(0.0458)	5307
Egalize wealth (i)	0.8253***	(0.1167)	0.3220***	(0.0527)	0.0676	(0.0689)	0.2004***	(0.0235)	22254
Egalize wealth (ii)	0.8900**	(0.2669)	0.5301	(0.3989)	0.1868	(0.4894)	-0.1868	(0.3817)	545
Egalize wealth (iii)	0.5851***	(0.0922)	0.1893***	(0.0551)	0.1125	(0.0630)	0.1112***	(0.0153)	8124
Gov. help general	0.3547***	(0.0316)	0.1459***	(0.0302)	0.0560	(0.0483)	0.1017	(0.0153)	20920
Gov. help poor	0.3816***	(0.0831)	0.1710***	(0.0373)	0.0649	(0.0391)	-0.0835	(0.0153)	21469
Gov. help sick	0.5262***	(0.0959)	0.2568***	(0.0339)	0.1256**	(0.0543)	0.0455*	(0.0363)	21510
Help cities (i)	0.0286	(0.0292)	0.0760***	(0.0198)	0.0320	(0.0180)	0.0130	(0.0206)	22051
Help cities (ii)	0.1946***	(0.0464)	0.1397***	(0.0267)	0.0531	(0.0319)	0.0233	(0.0185)	13462
Help cities (iii)	0.2720	(0.2814)	-0.0420	(0.1243)	-0.0530	(0.2077)	-0.0035	(0.1295)	318
Pro environment (i)	0.2623***	(0.0350)	0.1437***	(0.0171)	0.0818**	(0.0147)	0.0688***	(0.0122)	23576
Pro environment (ii)	0.2587***	(0.0633)	0.1500***	(0.0365)	0.0501*	(0.0230)	0.0732**	(0.0265)	15027
Pro environment (iii)	0.3349	(0.1971)	0.2140	(0.1455)	-0.1235	(0.2054)	0.0213	(0.1528)	344
Pro welfare (i)	0.1606**	(0.0549)	0.1379***	(0.0162)	0.0370	(0.0239)	0.0756***	(0.0210)	23969
Pro welfare (ii)	0.2134***	(0.0301)	0.0553*	(0.0271)	-0.0354	(0.0284)	-0.0134	(0.0142)	15336
Pro welfare (iii)	0.0518	(0.0940)	0.1859	(0.1012)	-0.0494	(0.1361)	-0.0085	(0.1279)	352
Pro health (i)	0.1513***	(0.0239)	0.0723***	(0.0140)	0.0491*	(0.0230)	0.0154	(0.0136)	24284
Pro health (ii)	0.1950***	(0.0355)	0.0696**	(0.0241)	0.0389	(0.0246)	0.0375	(0.0212)	15311
Pro health (iii)	-0.0665	(0.1257)	0.0169	(0.1449)	-0.1569	(0.1601)	-0.0444	(0.1355)	345
Cut taxes	0.1053***	(0.0169)	0.0577***	(0.0132)	0.0292*	(0.0157)	0.0554***	(0.0073)	23148
<i>Moral conservative</i>									
Abortion: Any reason (i)	0.4362***	(0.0395)	0.3178***	(0.0165)	0.2042***	(0.0131)	0.2689***	(0.0151)	24546
Abortion: Any reason (ii)	1.1627***	(0.2713)	0.9605***	(0.1363)	0.2005	(0.2034)	0.6398***	(0.1688)	29046
Abortion: Defect (i)	1.0288***	(0.1738)	0.4093**	(0.1355)	0.1708	(0.1687)	0.3731***	(0.1078)	29992
Abortion: Defect (ii)	0.2472***	(0.0206)	0.1615***	(0.0078)	0.0208**	(0.0097)	0.1520***	(0.0132)	29695
Abortion: Mother's health	0.0301***	(0.0077)	0.0667***	(0.0067)	0.0241***	(0.0060)	0.0864***	(0.0096)	29803
Abortion: Preference	0.4548***	(0.0445)	0.3242***	(0.0156)	0.2109***	(0.0178)	0.2908***	(0.0145)	29710
Abortion: Family poor (i)	0.4568***	(0.0381)	0.3124***	(0.0164)	0.1911***	(0.0143)	0.2763***	(0.0135)	29643
Abortion: Family poor (ii)	1.1862**	(0.3818)	0.7118***	(0.1505)	0.4958**	(0.1291)	0.5307***	(0.1099)	953
Abortion: Rape	0.1537***	(0.0151)	0.1501***	(0.0126)	0.0769**	(0.0154)	0.1382***	(0.0146)	29489
Abortion: Mother single	0.4380***	(0.0412)	0.3165***	(0.0165)	0.2012***	(0.0131)	0.2864***	(0.0125)	29661
Teacher: Homosexual	0.1402***	(0.0225)	0.2396***	(0.0112)	0.1747***	(0.0102)	0.1557***	(0.0121)	26584
Teacher: Atheist	0.1222***	(0.0163)	0.1934***	(0.0116)	0.0915***	(0.0149)	0.0380***	(0.0062)	25338
Conf. in org. religion (i)	0.6798***	(0.0738)	0.5198***	(0.0153)	0.5482***	(0.0203)	0.5557***	(0.0140)	28402
Conf. in org. religion (ii)	1.2298	(0.7948)	0.8264**	(0.3377)	1.9508***	(0.3752)	1.0908***	(0.2578)	346
Legalize marijuana (i)	0.3221***	(0.0210)	0.2635**	(0.0160)	0.2036**	(0.0190)	0.2104***	(0.0151)	25058
Legalize marijuana (ii)	0.6665***	(0.0955)	0.3986***	(0.0651)	0.3557***	(0.0706)	0.2347***	(0.0604)	542
Homosexual relations (i)	1.2708***	(0.0808)	1.0583***	(0.0405)	0.6896**	(0.0335)	0.6545***	(0.0291)	25144
Homosexual relations (ii)	1.1738***	(0.1771)	1.0146***	(0.0725)	0.6288***	(0.1100)	0.5379***	(0.0614)	3873
Book in library: Atheist	0.0919***	(0.0238)	0.2207***	(0.0132)	0.1278***	(0.0160)	0.1043***	(0.0124)	26821
Book in library: Homosexual	0.1243***	(0.0225)	0.2088***	(0.0106)	0.0973**	(0.0170)	0.0585***	(0.0081)	25651
Pornography laws	0.3932***	(0.0344)	0.2915***	(0.0156)	0.1441***	(0.0173)	0.1573***	(0.0129)	26022
Religiosity	2.5331***	(0.0588)	2.3437***	(0.0091)	2.2996**	(0.0138)	2.2136***	(0.0120)	40473
Free speech: Atheist	0.0533**	(0.0183)	0.1678***	(0.0126)	0.1148***	(0.0171)	0.0554***	(0.0087)	27271
Free speech: Homosexual	0.0958***	(0.0208)	0.1562***	(0.0132)	0.0660**	(0.0080)	0.0301***	(0.0089)	25690
Extramarital relation (i)	0.5243***	(0.0327)	0.4368***	(0.0306)	0.3314***	(0.0176)	0.3229***	(0.0209)	26059
Extramarital relation (ii)	0.4831***	(0.0468)	0.4022***	(0.0341)	0.2803***	(0.0757)	0.3034***	(0.0371)	4112

## Notes:

1. The table shows all the estimated coefficients on dummies for the respondent's religious denomination.
2. Estimated coefficients are from OLS regressions controlling for the same variables as Table X. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.
3. Standard errors are clustered at the region of residence.

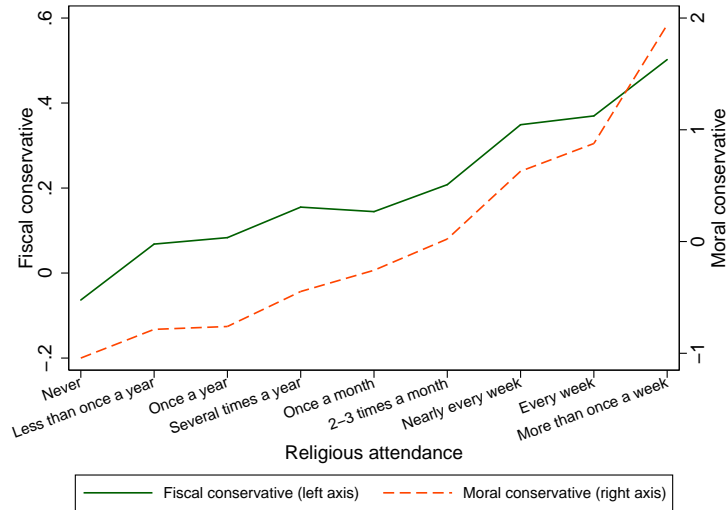
APPENDIX TABLE XV  
WITHIN-GROUP GIVING BY DENOMINATION IN THE U.S.

	\$ to Relgs	\$ to All	%Charity to Relg	Income	%Inc to R	N
Mormons	4066	4467	<b>0.91</b>	77730	0.052	26
Evangelical Protestants	908	1139	<b>0.82</b>	49755	0.018	1271
Mainline Protestants	740	1193	<b>0.62</b>	72310	0.010	997
Catholics	491	962	<b>0.51</b>	71010	0.007	1451
Other	750	1504	<b>0.50</b>	49780	0.015	938
Jewish	1127	2791	<b>0.40</b>	125160	0.009	142
None	221	553	<b>0.40</b>	54360	0.004	663

Notes:

1. Data are from the 2001 Center on Philanthropy Panel Study portion of the Current Population Surveys. Summary statistics by denomination are reported in Smith (2004).

APPENDIX FIGURE 2.— Welfare attitudes and Fundamentalism in the U.S. - Principal components



Notes: Data are from General Social Survey cumulative file, 1972-2012. Fiscal and moral conservative are the predicted first factors from principal component analyses of the full data employed in Table I. Missing values are imputed the value 0 in the standardized variables. Sample is the white population.

# APPENDIX TABLE XVI

## DETAILED ESTIMATION RESULTS ON WELFARE ATTITUDES AROUND THE WORLD

Country	Total	Wave 2	Wave 3	Wave 4	Wave 5
Albania	.077*** (.027)		.085** (.04)	.035 (.038)	
Algeria	-.028 (.029)			-.028 (.029)	
Andorra	.02 (.037)				.02 (.037)
Azerbaijan	.1*** (.034)		.1*** (.034)		
Argentina	-.091*** (.02)		-.095*** (.036)	-.044 (.035)	
Australia	-.014 (.018)		-.0064 (.023)		-.022 (.03)
Bangladesh	.015 (.029)		-.026 (.059)	-.063* (.037)	
Armenia	-.024 (.029)		-.024 (.029)		
Brazil	.021 (.022)	.041 (.034)	-.036 (.055)		-.04 (.031)
Bulgaria	-.00074 (.029)		-.081** (.041)		.067 (.042)
Belarus	.2*** (.025)		.15*** (.029)		
Canada	-.039** (.016)			-.028 (.023)	-.045** (.021)
Chile	-.053*** (.017)		-.095*** (.035)	-.014 (.03)	-.043 (.034)
China	.074* (.04)			-.012 (.079)	.0053 (.062)
Taiwan	.03 (.027)		.0052 (.041)		.049 (.036)
Colombia	-.032* (.018)		-.0042 (.025)		-.056** (.026)
Cyprus	-.069* (.039)				-.069* (.039)
Czech Republic	.058* (.03)		.022 (.036)		
Dominican Republic	.14** (.068)		.14** (.068)		
El Salvador	.012 (.043)		.012 (.043)		
Ethiopia	.041 (.034)				.041 (.034)
Estonia	.081* (.044)		.081* (.044)		
Finland	.026 (.029)		.068 (.047)		-.0017 (.036)
France	-.12*** (.04)		-.012 (.032)		-.12*** (.04)
Georgia	.0026 (.022)		-.012 (.032)		-.00087 (.032)
Ghana	.037 (.047)				.037 (.047)
Guatemala	-.014 (.054)				-.014 (.054)
Hong Kong	-.0059 (.024)				-.0059 (.024)
India	-.078*** (.02)	.019 (.027)	-.091** (.043)	-.16*** (.044)	.088** (.042)
Indonesia	-.087*** (.031)			-.058 (.057)	-.099*** (.036)
Iran	.00048 (.019)			.05 (.037)	.027 (.022)
Iraq	.026** (.013)			.043** (.019)	.0081 (.016)
Italy	.02 (.038)				.02 (.038)
Japan	-.066*** (.023)			-.13*** (.043)	-.092** (.045)
Jordan	.088*** (.02)			.049* (.026)	
South Korea	-.092*** (.017)	-.025 (.049)	.064** (.028)	.061** (.025)	.022 (.026)
Kyrgyzstan	.016 (.04)			.016 (.04)	
Latvia	.066* (.037)		.066* (.037)		
Lithuania	.069 (.042)		.069 (.042)		
Mali	.0084 (.039)				.0084 (.039)
Mexico	.0076 (.017)		.036 (.026)	-.014 (.048)	.014 (.039)
Moldova	.12*** (.026)		.19*** (.044)	.016 (.047)	.17*** (.045)
Morocco	.062*** (.022)			.062*** (.022)	
Netherlands	-.091*** (.033)				-.091*** (.033)
New Zealand	-.051** (.025)		-.061* (.033)		-.046 (.037)
Nigeria	.034 (.028)	-.072 (.055)	.11*** (.043)	-.07 (.051)	
Norway	-.027 (.025)		.034 (.034)		-.09** (.036)
Pakistan	.18*** (.042)			.18*** (.042)	
Peru	.0011 (.024)		.0058 (.045)	-.011 (.043)	.0054 (.039)
Philippines	-.019 (.038)			-.028 (.046)	
Poland	.065* (.036)		.11** (.049)		.0074 (.052)
Puerto Rico	-.0088 (.031)		-.00096 (.04)	.00076 (.05)	
Romania	.018 (.028)		.082* (.043)		-.025 (.037)
Russian Federation	.12*** (.021)		.033 (.033)		.0084 (.033)
Rwanda	-.099 (.06)				-.099 (.06)
Saudi Arabia	.053* (.028)			.053* (.028)	
Singapore	.17*** (.03)			.17*** (.03)	
Slovakia	.066** (.027)		.059** (.03)		
Viet Nam	.061** (.027)			-.09* (.046)	.13*** (.034)
Slovenia	.051** (.026)				.033 (.037)
South Africa	-.028* (.014)		-.049* (.027)	.0086 (.025)	-.047** (.024)
Zimbabwe	-.0019 (.046)			-.0019 (.046)	
Spain	-.022 (.015)		.016 (.03)	-.000014 (.027)	-.011 (.028)
Sweden	-.014 (.025)		-.0043 (.035)	-.018 (.039)	-.016 (.04)
Switzerland	-.037 (.024)		.0041 (.034)		-.048 (.032)
Thailand	.12*** (.037)				.12*** (.037)
Trinidad and Tobago	.06 (.048)				.06 (.048)
Turkey	-.025* (.014)	-.12*** (.038)	.18*** (.032)	-.075*** (.019)	-.031 (.029)
Uganda	-.092 (.068)			-.092 (.068)	
Ukraine	.027 (.021)		.071*** (.024)		-.048 (.041)
Macedonia	.054* (.032)		.1** (.046)	-.019 (.045)	
Egypt	-.02* (.012)			.0052 (.019)	-.039*** (.014)
Great Britain	.028 (.034)				.028 (.034)
Tanzania	-.025 (.055)			-.025 (.055)	
United States	-.095*** (.017)		-.063** (.028)	-.052 (.032)	-.11*** (.028)
Burkina Faso	.06* (.036)				.06* (.036)
Uruguay	-.069** (.03)		-.019 (.038)		-.058 (.05)
Venezuela	-.02 (.031)		.015 (.045)	-.055 (.042)	
Zambia	-.17*** (.04)				-.17*** (.04)
Germany West	-.0045 (.025)		-.023 (.034)		-.03 (.036)
Germany East	-.057* (.03)		-.071 (.043)		-.041 (.042)
Serbia	.015 (.024)		.077** (.038)	.14*** (.042)	-.035 (.042)
Montenegro	.18*** (.039)		-.16* (.089)	.26*** (.044)	
SrpSka - Serbian Rep	.095* (.054)		.014 (.059)	.24*** (.087)	
Bosnia Federation	-.056** (.028)		-.031 (.039)	-.082** (.04)	

Notes:

1. Data are from World Values Survey cumulative file, waves 2-5. Standard errors in parentheses are adjusted for correlation within country of residence.

22

2. All specifications include dummies for country of residence, survey wave, gender, and category of educational attainment and controls for the income, age, and age<sup>2</sup>.

3. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.

APPENDIX TABLE XVII  
SOCIAL CONSERVATISM AROUND THE WORLD

	Attendance	N
(1r)2-3 Respect and love for parents	0.012*** (0.001)	152872
Parents responsibilities to their children	0.008*** (0.001)	152336
Important child qualities: good manners	0.001 (0.001)	123876
Important child qualities: religious faith	0.043*** (0.003)	232732
Important child qualities: obedience	0.006*** (0.001)	234867
Important child qualities: independence	-0.010*** (0.001)	234867
Important child qualities: imagination	-0.007*** (0.001)	232569
Important child qualities: tolerance and respect for other people	-0.002*** (0.001)	234867
What children should learn 1	0.028*** (0.002)	69072
Jobs scarce: Men should have more right to a job than women	0.007*** (0.001)	219238
A woman has to have children to be fulfilled	0.008*** (0.001)	156126
Marriage is an out-dated institution	0.000 (0.000)	205297
Enjoy sexual freedom	-0.013*** (0.002)	87478
Woman as a single parent	-0.016*** (0.002)	216423
Statement: good and evil	0.021*** (0.002)	128720
Justifiable: homosexuality	0.014*** (0.001)	205856
Justifiable: abortion	0.024*** (0.002)	216178
Justifiable: divorce	0.015*** (0.001)	218534
Justifiable: euthanasia	0.021*** (0.002)	201121

*Notes:*

1. Data are from World Values Survey cumulative file, waves 2-5. Standard errors in parentheses are adjusted for correlation within country of residence.
2. All specifications include dummies for country of residence, survey wave, gender, and category of educational attainment and controls for income, age, and age<sup>2</sup>.
3. Missing values in control variables are replaced by the value 0 and a dummy for the variable being missing is included.

# APPENDIX TABLE XVIII

## COUNTRIES WITH AND WITHOUT A STATE CHURCH

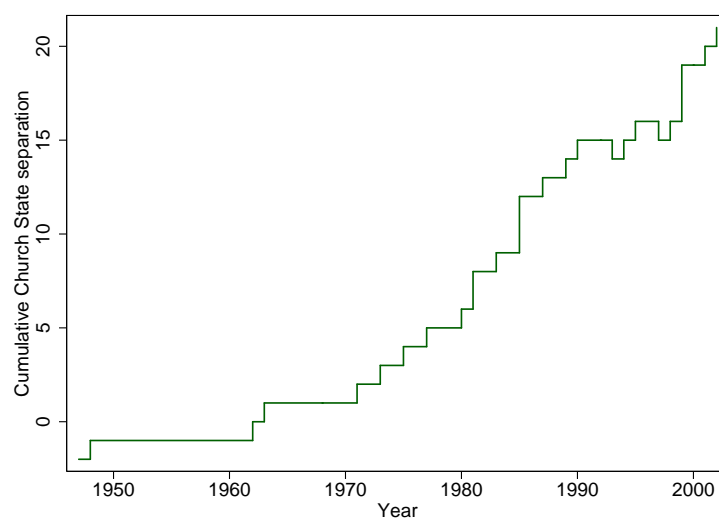
Without state church	With state church
Albania	<i>Armenian Apostolic Church</i>
Australia	Armenia
Brazil	<i>Buddhist</i>
Canada	Thailand
Chile	<i>Jew</i>
China	Israel
Taiwan	<i>Muslim</i>
Cyprus	Algeria
Czech Republic	Azerbaijan
Ethiopia	Bangladesh
Estonia	Iran
France	Iraq
Ghana	Jordan
Hong Kong	Kyrgyzstan
Hungary	Malaysia
India	Morocco
Indonesia	Pakistan
Japan	Saudi Arabia
South Korea	Egypt
Latvia	<i>Orthodox</i>
Lithuania	Bulgaria
Mali	Belarus
Mexico	Georgia
Netherlands	Moldova
New Zealand	Ukraine
Nigeria	Macedonia
Philippines	<i>Protestant</i>
Poland	Finland
Puerto Rico	Norway
Romania	Great Britain
Russian Federation	<i>Roman Catholic</i>
Rwanda	Andorra
Singapore	Argentina
Slovakia	Colombia
Viet Nam	Croatia
Slovenia	Dominican Republic
South Africa	El Salvador
Zimbabwe	Guatemala
Switzerland	Italy
Trinidad and Tobago	Peru
Turkey	Spain
Uganda	Venezuela
Tanzania	<i>The Church of Sweden</i>
United States	Sweden
Burkina Faso	
Uruguay	
Zambia	
Germany West	
Germany East	
Serbia	
Montenegro	
SrpSka - Serbian Republic of Bosnia	
Bosnia Federation	

### Notes:

1. Coding of state church status is taken from Barro and McCleary (2005), which is based on Barrett (1982) and Barrett et al. (2001).



APPENDIX FIGURE 3.—



*Notes:*

1. The graph shows the cumulative number of church state separations defined as the number of increases minus the number of decreases since 1947.