
The Political Economy of Religion and Social Insurance in the United States, 1910–1939

Kenneth Scheve, *Yale University*

David Stasavage, *New York University*

1. INTRODUCTION

There are few scholars who would disagree with the proposition that individual economic position and economic risk play a critical role in shaping preferences for income redistribution and social insurance. There is less consensus, however, about the extent to which non-economic factors also influence individual preferences regarding social insurance provision. A number of scholars have examined how issues of race and identity have influenced the development of social insurance programs in the United States, as well as individual attitudes with respect to these programs.¹ In a theoretical context, other authors have considered how attitudes toward income redistribution might also depend upon psychological dispositions such as the “belief in a just

world.”² In this article, we focus on religiosity as an important factor that can shape both individual preferences and policy outcomes regarding social insurance in the United States. To do so, we develop an argument about religion and social insurance as substitutes that draws both on existing work on the political economy of social insurance and on findings in social psychology regarding what we call the “coping effect” of religion. We test our hypothesis using historical evidence from two early social insurance policies: workers’ compensation legislation enacted by state governments between 1910 and 1930 and New Deal unemployment relief.

Our core hypothesis, detailed in Section 2, involves the “coping effect” of religion and the possibility that this effect might reduce demand for social insurance. In a previous study, we suggested that, because religion allows individuals to “appraise” adverse economic events as being less damaging to their overall beliefs or self-esteem, the psychic effect of religion will result in them expressing less of a demand for social insurance than will secular individuals.³ This argument follows an important recent literature in social psychology and leads to two empirical predictions. First, to the extent we have data on individual opinions on social insurance provision, we should expect religious individuals, when compared to their secular counterparts, to prefer lower levels of spending in this area. Second, if individuals’ opinions influence policy choices, we should then expect to see

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1. Recent examples include Margaret Weir, “States, Race, and the Decline of New Deal Liberalism,” *Studies in American Political Development* 19 (2005): 157–72; Robert Lieberman, *Shifting the Color Line: Race and the American Welfare State* (Cambridge, MA: Harvard University Press, 1998); Seymour Martin Lipset and Gary Marks, *It Didn’t Happen Here: Why Socialism Failed in the United States* (New York: Norton, 2000); Erzo Luttmer, “Group Loyalty and the Taste for Redistribution,” *Journal of Political Economy* 109 (2001): 500–28; Alberto Alesina, Edward Glaeser, and Bruce Sacerdote, “Why Doesn’t the U.S. Have a European Style Welfare State?” *Brookings Papers on Economic Activity—2001 2* (2001): 187–254; and John Roemer, “Why the Poor do not Expropriate the Rich: an Old Argument in New Garb,” *Journal of Public Economics* 70 (1998): 399–424.

2. Roland Benabou and Jean Tirole, “Belief in a Just World and Redistributive Politics,” *Quarterly Journal of Economics* 121 (2006): 699–746.

3. Kenneth Scheve and David Stasavage, “Religion and Preferences for Social Insurance,” *Quarterly Journal of Political Science* 1 (2006): 255–86.

weaker social insurance programs being adopted in jurisdictions (whether states or countries) with higher degrees of religiosity. Our argument stresses the effect of religiosity in general, rather than focusing on denominational differences such as Protestant versus Catholic, which is the more common approach in political economy analyses of religion. Our argument is also distinct from the notion that religious individuals might demand less social insurance because they stand to receive significant material benefits from their churches if they experience financial difficulty. While this direct substitution effect is theoretically plausible, we will demonstrate that there is relatively little empirical evidence that U.S. churches have ever provided sufficient financial insurance for this effect to operate in any meaningful way.⁴

We also consider a second channel through which religion might influence individual demands for social insurance. This second channel involves the possibility that the theological content or doctrine of different religious denominations influences beliefs of church members about the extent to which poverty results from exogenous circumstances versus a lack of individual effort. Beliefs about the importance of effort might logically have a significant impact on individual preferences regarding social insurance provision.⁵ We argue that this “economic beliefs effect” of religion can coexist with the coping effect. While one would predict, based on the “coping effect,” that religious individuals will express less demand for social insurance, predictions regarding the “economic beliefs effect” will be contingent on the doctrine espoused by different religious denominations at different points in time.

In considering the impact of religion on the demand for social insurance, we focus on early policy development efforts because they might help us draw general conclusions on the development of the American welfare state. In addition, this approach might also provide insight for cross-country comparisons of welfare state development.⁶ In a previous

4. In making this argument, we draw on the arguments and empirical evidence presented by Mark Chaves, *Congregations in America* (Cambridge, MA: Harvard University Press, 2004); Jonathan Gruber and Daniel M. Hungerman, “Faith-Based Charity and Crowd Out During the Great Depression,” NBER Working Paper 11332 (2005); and H. Paul Douglass and Edmund de Brunner, *The Protestant Church as a Social Institution* (New York: Harper and Brothers, 1935).

5. A subject that has been analyzed in depth in Thomas Piketty, “Social Mobility and Redistributive Politics,” *Quarterly Journal of Economics* 110 (1995): 551–84.

6. In so doing we hope to contribute to the literature that examines the political economy of welfare state policies in a comparative context including Isabela Mares, *The Politics of Social Risk: Business and Welfare State Development* (New York: Cambridge University Press, 2003); Jacob Hacker, “The Historical Logic of National Insurance: Structure and Sequence in the Development of British, Canadian, and U.S. Medical Policy,” *Studies in American Political Development* 12 (1998): 57–130; Peter Swenson, *Capitalists*

effort based on data from the 1990s, we demonstrated a negative correlation between several measures of religiosity and levels of social insurance spending across OECD countries.⁷ Using data from the International Social Survey Program, we also established that there is a strong negative correlation at the individual level between religiosity, proxied by frequency of church attendance and preferences for increased social insurance spending.

While these statistical results are fairly robust, one can question the extent to which they imply a causal link between religiosity and social insurance. First, it might be the case that the negative correlation we observed between religion and social insurance using current data does not hold for earlier periods. A number of scholars, including Robert Fogel, William McLoughlin, Daniel Chen, and Jo T. Lind, have suggested that religion had a positive impact on the development of the U.S. welfare state during the first half of the twentieth century.⁸ One also encounters the related problem that the use of current correlations between religiosity and social insurance provision to investigate causation could be complicated by the presence of “policy feedback” (i.e., once enacted, welfare state policies exhibit a tendency to reshape a country’s political environment).⁹ Finally, for the cross-country results in our previous study, there remain questions about the extent to which unobserved sources of heterogeneity between countries, which could involve political, social, or

Against Markets: The Making of Labor Markets and Welfare States in the United States and Sweden (New York: Oxford University Press, 2002); Peter Swenson, “Varieties of Capitalist Interests: Power Institutions, and the Regulatory Welfare State in the United States and Sweden,” *Studies in American Political Development* 18 (2004): 1–29; Evelyn Huber and John Stephens, *Development and Crisis of the Welfare State: Parties and Policies in Global Markets* (Chicago: University of Chicago Press, 2001); Torben Iversen and David Soskice, “An Asset Theory of Social Policy Preferences,” *American Political Science Review* 95 (2001): 875–93; Karl Moene and Michael Wallerstein, “Inequality, Social Insurance, and Redistribution,” *American Political Science Review* 95 (2001): 859–73; Paul Pierson, ed., *The New Politics of the Welfare State* (Oxford: Oxford University Press, 2001), and Alesina, Glaeser, and Sacerdote, “Why Doesn’t the U.S. Have a European Style Welfare State?”

7. Scheve and Stasavage, “Religion and Preferences for Social Insurance.”

8. Robert Fogel, *The Fourth Great Awakening and the Future of Egalitarianism* (Chicago: University of Chicago Press, 2000); William G. McLoughlin, *Revivals, Awakenings, and Reform* (Chicago: University of Chicago Press, 1978); Daniel Chen and Jo T. Lind, “The Political Economy of Beliefs: Why Fiscal and Social Conservatives/Liberals Come Hand-in-Hand” (mimeo, 2005; version available online at http://home.uchicago.edu/~dlc/papers/PoliticalEconomy_of_Beliefs.pdf last viewed 8 Oct. 2006).

9. See Jacob Hacker and Paul Pierson, “Business Power and Social Policy: Employers and the Formation of the American Welfare State,” *Politics & Society* 30 (2002): 277–325; Paul Pierson, “When Effect Becomes Cause: Policy Feedback and Political Change,” *World Politics* 45 (1993): 595–628; and Hacker, “The Historical Logic of National Insurance: Structure and Sequence in the Development of British, Canadian, and U.S. Medical Policy.”

other factors, are influencing the statistical results.¹⁰ Our focus on U.S. state- and individual-level evidence covering the period from 1910 to 1939 helps to address each of these potential problems. First, the availability of quantitative historical data allows us to consider the correlation between religiosity and social insurance in the United States during the initial establishment of major welfare state programs, which thus aids in identifying a causal effect of religiosity on preferences for social insurance. In addition, the possibility of investigating developments in individual states allows us to conduct a comparative investigation of determinants of policy outcomes that is arguably subject to less unobserved heterogeneity than would be the case in a cross-country investigation.

While our primary evidence is quantitative, in Section 3, we begin our empirical analysis with a brief review of the historical background of religion and the early development of U.S. social insurance programs. Existing work has emphasized how certain features, such as negative experiences with civil war pensions and the presence of political corruption, helped serve as a brake on the development of public provision of social insurance in the United States.¹¹ We do not criticize this conclusion. There has also been an active debate over the way in which employer interests have influenced the development of US welfare state policies.¹² Further, some scholars have argued that the fragmentation of political power in America explains U.S. exceptionalism with regard to welfare state policies.¹³

In this article, we suggest that, in addition to these factors, religiosity has also played an important role in the development of U.S. social insurance. From Reconstruction through the early years of the New Deal, there is ample evidence that American religious authorities favored the use of religion for individual salvation rather than for societal change through the creation of social insurance.¹⁴ This emphasis on

individual salvation is, in fact, closely akin to the current concept of the “coping effect” of religion. In addition, throughout this period, one also sees common references by religious authorities to the fact that that any differences in circumstance between the fortunate and less fortunate resulted from individual actions rather than exogenous circumstances. This observation provides a further explanation of why specific religious denominations might be associated with opposition to social insurance. Although these two statements appear to represent the majority of religious opinion in the United States at this time, there were specific denominations and religious groupings that adopted substantially different views. For example, starting in 1919, the U.S. Catholic Church offered prominent public support for social insurance programs. As a result, there was a significant split in opinion on social insurance between mainstream American Catholicism and mainstream American Protestantism. In addition, within American Protestantism some groups did directly support greater provision of social insurance. This was most notably the case with the Social Gospel movement. Finally, there is very little historical evidence that any resistance to social insurance on the part of religious individuals was motivated by the fact that they already received significant monetary insurance from their churches. In their *Protestant Church as a Social Institution*, Douglass and Brunner demonstrate that, even before the New Deal programs were enacted, direct aid from churches was “infinitesimal within the total community expenditures for direct relief.”¹⁵

In Section 4, we continue our inquiry by using quantitative evidence to explore whether religiosity influenced the adoption of workers’ compensation legislation in the period between 1910 and 1930. To do so, we have used data drawn from Fishback and Kantor’s extensive study of the development of U.S. workers’ compensation legislation,¹⁶ as well as various other studies on the political economy of workers’ compensation.¹⁷ The development of

10. Scheve and Stasavage, “Religion and Preferences for Social Insurance.”

11. See Ann Shola Orloff and Theda Skocpol, “Why Not Equal Protection? Explaining the Politics of Public Social Spending in Britain, 1900–1911, and the United States, 1880s–1920,” *American Sociological Review* 49 (1984): 726–50; and Theda Skocpol, *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States* (Cambridge, MA: Harvard University Press, 1992).

12. See in particular the exchange between Swenson, “Varieties of Capitalist Interests: Power Institutions, and the Regulatory Welfare State in the United States and Sweden”; and Hacker and Pierson, “Business Power and Social Policy: Employers and the Formation of the American Welfare State.”

13. Sven Steinmo, “Rethinking American Exceptionalism,” in *The Dynamics of American Politics: Approaches and Interpretations*, ed. Larry Dodd and Calvin Jillson (Boulder, CO: Westview Press, 1994).

14. In Section 3, we discuss the contributions of several authors on this subject including Sydney Ahlstrom, *A Religious History of the American People* (New Haven, CT: Yale University Press, 1972); Douglass and Brunner, *Protestant Church as a Social Institution*; Charles Howard Hopkins, *The Rise of the Social Gospel in American*

Protestantism, 1865–1915 (New Haven, CT: Yale University Press, 1940); Robert Moats Miller, *American Protestantism and Social Issues: 1919–1939* (Chapel Hill: University of North Carolina Press, 1958); and Walter Rauschenbusch, *Christianity and the Social Crisis* (1907; Louisville, KY: Westminster/John Knox Press, 1991).

15. Douglass and Brunner, *Protestant Church as a Social Institution*.

16. Price Fishback and Shawn Everett Kantor, *A Prelude to the Welfare State: The Origins of Workers’ Compensation* (Chicago: University of Chicago Press, 2000); Price Fishback and Shawn Everett Kantor, “The Adoption of Workers’ Compensation in the United States: 1900–1930,” *Journal of Law and Economics* 41 (1998): 305–41; and Price Fishback and Shawn Everett Kantor, “The Political Economy of Workers’ Compensation Benefit Levels, 1910–1930,” *Explorations in Economic History* 35 (1998): 109–39.

17. These include Robert Asher, “Business and Workers’ Welfare in the Progressive Era: Workmen’s Compensation Reform

workers' compensation programs around the country is particularly important because, as Fishback and Kantor note, as the first social insurance program, this state-level policy offers extensive insight into the key political and economic factors behind the development of U.S. social welfare policies more generally.¹⁸ In adopting this approach, we also address directly Margaret Weir's concern that most existing studies of the rise (and fall) of the "New Deal order" neglect political and policy developments at the state level.¹⁹ During the Progressive Era, state governments were a frequent target for reform advocates, including those pressing for workers' compensation laws.²⁰ In addition, because workers' compensation programs are controlled exclusively by state governments, our proposed approach allows us to perform a comparative analysis of the determinants of individual state policies in this area.

Section 4 tests our core hypothesis on religion and social insurance by investigating both the timing of adoption of workers' compensation laws and whether these laws involved characteristics designed to ensure breadth and depth of coverage. To accomplish this, we estimate a multivariate hazard model where the risk of adopting each relevant subcomponent of a workers' compensation law is modeled as a function of a baseline hazard rate, a series of economic and political controls, and our religiosity variables. Our findings demonstrate that higher religiosity was associated with later adoption of workers' compensation laws, and the adoption of laws that were less extensive in their coverage for workers. We conclude this section with a time-series–cross-

sectional analysis of the expected accident benefit levels in U.S. states covering the years 1910 to 1930. This analysis indicates that higher religiosity was associated with lower benefit levels with a standard deviation increase in religiosity inducing between an 8 and 44 percent decrease in accident benefit levels.

In Section 5, we turn to individual-level data from the New Deal to extend our empirical tests. Although existing empirical work on redistributive preferences has been restricted to recent survey data, we have extended this approach to an earlier period by examining Gallup poll data from 1939 involving questions about church membership, church attendance, and attitudes toward government provision of unemployment relief. The latter question refers in particular to "relief" spending involving the Works Progress Administration (WPA), which served as a very significant source of insurance for the unemployed until state unemployment insurance programs were adopted and the reserve funds for these programs reached levels sufficient to pay out significant benefits.²¹ The question on unemployment relief spending is particularly useful for testing our hypothesis about religion and social insurance because the WPA was a very salient political issue during the survey period (January 1939). Our task is complicated, however, by the fact that there is one Gallup poll available from February 1939 that asked questions about attitudes toward unemployment relief but not church membership, while the aforementioned January 1939 poll asked questions about church membership but not about spending preferences. In order to test our hypothesis, we used the fact that our two Gallup polls share numerous identical questions as the basis to merge the polls' data and impute "missing" responses for church membership, church attendance, and spending preferences. The multiple imputation estimates indicate a strong negative correlation between religiosity, measured by frequency of church attendance, and preferences for greater spending on unemployment relief.

2. RELIGION AND THE DEMAND FOR SOCIAL INSURANCE

In this section, we consider how religiosity can influence demand for social insurance through two distinct channels. First, our core argument regarding

in Massachusetts, 1880–1911," *Business History Review* 43 (1969): 452–75; Robert Asher, "Failure and Fulfillment: Agitation for Employers' Liability Legislation and the Origins of Workmen's Compensation in New York State, 1876–1910," *Labor History* 24 (1983): 198–222; R. Rudy Higgins-Evenson, "From Industrial Police to Workmen's Compensation: Public Policy and Industrial Accidents in New York, 1880–1910," *Labor History* 39 (1998): 365–80; Julian Go III, "Inventing Industrial Accidents and Their Insurance: Discourse and Workers' Compensation in the United States, 1880s–1910s," *Social Science History* 20 (1996): 401–38; Christopher Howard, "Workers' Compensation, Federalism, and the Heavy Hand of History," *Studies in American Political Development* 16 (2002): 28–47; Addison Cutler "Labor Legislation in Thirteen Southern States," *Southern Economic Journal* 7 (1941): 297–316; and James Weinstein, "Big Business and the Origins of Workmen's Compensation" *Labor History* 8 (1967): 156–74.

18. Its importance is easily measured by the fact that U.S. state governments continue to spend twice as much on workers' compensation as on unemployment insurance.

19. Weir, "States, Race, and the Decline of New Deal Liberalism."

20. Given the time period for our study, we do not consider the important question Weir raises in "States, Race, and the Decline of New Deal Liberalism," where she argues that certain institutions put in place during the Progressive Era, such as independent boards for the administration of workers' compensation programs, ultimately undermined the subsequent possibility for state governments to pursue active welfare policies.

21. The early and extensive study provided by Donald S. Howard, *The WPA and Federal Relief Policy* (New York: Russell Sage Foundation, 1943) provides a wealth of evidence on the Works Progress Administration. The political economy of the WPA has also been considered by Edwin Amenta, *Bold Relief: Institutional Politics and the Origins of Modern American Social Policy* (Princeton, NJ: Princeton University Press, 1998); Amenta and Drew Halfmann, "Wage Wars: Institutional Politics, WPA Wages, and the Struggle for U.S. Social Policy," *American Sociological Review* 67 (2000): 506–28; and Gavin Wright, "The Political Economy of New Deal Spending: An Econometric Analysis," *Review of Economics and Statistics* 56 (1974): 30–38.

the “coping effect” of religion suggests that religiosity reduces the psychic cost of adverse life events like unemployment or shocks to income due to illness. Religious individuals will be more likely to appraise such events as being less threatening to their overall goals, they will experience less stress, and, consequently, if standard consumption and “psychic” consumption are partial substitutes, then religious individuals will prefer lower social insurance provision. We also consider a second channel through which religiosity may affect demand for social insurance. This second channel depends upon the content of specific religious beliefs. The political economy literature on redistribution and social insurance has emphasized that redistributive preferences can be heavily influenced by beliefs about the extent to which individual income depends on effort versus exogenous circumstances.²² Those who believe income depends mostly on effort will be less supportive of redistribution. There are a number of interesting explanations for how individuals form beliefs about the importance of effort. One possibility is that beliefs about the importance of effort depend on broader religious beliefs. It has long been recognized that certain religious traditions emphasize that if people are poor then this is due to their own personal failings, whereas other traditions have placed greater emphasis on the idea that society is responsible for poverty. Although the former belief is often associated with Protestantism and the latter with Catholicism, it is important to recognize that beliefs about the sources of poverty have varied widely between individual Protestant denominations.²³

2.1. Religiosity and Social Insurance as Substitutes

Our argument about the “coping effect” of religion and its effect on the demand for social insurance depends on three core assumptions. In the Appendix we show how these three assumptions can be incorporated into the formal model of social insurance developed by Wright,²⁴ and we demonstrate that these three assumptions are sufficient to produce our hypothesis regarding the coping effect of

religion. We also acknowledge that while we believe this formalization is useful, it is not a necessary requirement for presenting our argument, and in the remainder of this section we restrict ourselves to a strictly verbal presentation of the core assumptions underlying our hypothesis. The first core assumption is that adverse life events involving unemployment, illness, workplace accidents, or retirement income do not only generate monetary costs, they also generate important psychic costs involving stress, loss of self-esteem, and related phenomena. There is strong empirical support for this proposition.²⁵ Our second core assumption is that religiosity provides some of the same psychic benefits as does being in good health, having a job, or having sufficient retirement income, which is consistent with a substantial theoretical and empirical literature in psychology to which we refer to below. Our third assumption is that individuals have a utility function where monetary costs and psychic costs are not additively separable, which implies, again building on recent empirical findings, that the psychological benefits of religion are greater for those with lower incomes. This third assumption is critical to our hypothesis because it means that a factor such as religion, which influences the psychic cost of an event like job loss, will then also have an influence on individual preferences regarding any social insurance mechanism that reduces the monetary costs associated with an adverse event like job loss.²⁶ We will now turn to offering more detailed evidence to support our assumptions.

Our second assumption on the psychic benefits of religion is consistent with a wealth of theoretical and empirical evidence, much of it drawn from psychologists. At a cognitive level, it has been suggested that religion influences the way in which individuals will “appraise” adverse events such as job loss or ill health.²⁷ For example, religious individuals might be more likely to judge that such events do not pose challenges to their self-esteem or their principal life goals—they might even view adverse events as *opportunities* for spiritual growth. In

22. Piketty, “Social Mobility and Redistributive Politics”; Alesina, Glaeser, and Sacerdote, “Why Doesn’t the U.S. Have a European Style Welfare State?”; Alberto Alesina and George-Marios Angeletos, “Fairness and Redistribution,” *American Economic Review* 95 (2005): 960–80; and Benabou and Tirole, “Belief in a Just World.”

23. Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (1905; Oxford: Basil Blackwell, 2002); Richard Henry Tawney, *Religion and the Rise of Modern Capitalism* (New York: Harcourt, Brace, and Company, 1926); David C. Barker and Christopher Jan Carman, “The Spirit of Capitalism? Religious Doctrine, Values, and Economic Attitude Constructs,” *Political Behavior* 22 (2000): 1–27; and Sigrun Kahl, “The Religious Roots of Modern Poverty Policy: Catholic, Lutheran, and Reformed Protestant Traditions Compared,” *European Journal of Sociology* 46 (2005): 91–126.

24. Randall Wright, “The Redistributive Roles of Unemployment Insurance and the Dynamics of Voting,” *Journal of Public Economics* 31 (1986): 377–99.

25. See Andrew Clark and Andrew Oswald, “Unhappiness and Unemployment,” *The Economic Journal* 104 (1994): 648–59; Rafael Di Tella, Robert MacCulloch, and Andrew Oswald, “The Macroeconomics of Happiness,” *Review of Economics and Statistics* 85 (2003): 809–27.

26. It is also worth noting that the formal presentation of our model in Appendix A illustrates precisely why this third assumption matters.

27. Kenneth Pargament, *The Psychology of Religion and Coping* (New York: Guilford Press, 1997); Timothy Smith, Michael McCullough, and Justin Poll, “Religiousness and Depression: Evidence for a Main Effect and Moderating Influence of Stressful Life Events,” *Psychological Bulletin* 129 (2003): 614–36; and Crystal Park, Lawrence Cohen, and Lisa Herb, “Intrinsic Religiousness and Religious Coping as Life Stress Moderators for Catholics versus Protestants,” *Journal of Personality and Social Psychology* 59 (1990): 562–74.

making such arguments, scholars frequently draw on Richard Lazarus and Susan Folkman's examinations of stress, appraisal, and coping.²⁸ Lazarus and Folkman define cognitive appraisal as "a process through which the person evaluates whether a particular encounter with the environment is relevant to his or her well-being and, if so, in what way."²⁹ This could involve a judgment whether an event poses potential harm to one's self-esteem. They further suggest that a "range of personality characteristics including values, commitments, goals and beliefs about oneself and the world helps to define the stakes that the person identifies as having relevance to well-being in specific stressful situations." While Lazarus and Folkman did not themselves emphasize the importance of religiosity for appraisal, it is easy to see how religious beliefs could influence this process. One should also note that the approach of characterizing religion as a buffer against external negative forces is clearly consistent with the understanding of religion offered across several classic works, ranging from skeptics such as Sigmund Freud to those more favorable to religion, such as William James.³⁰

In addition to the strong theoretical arguments, there is also clear empirical evidence to support the idea that religion has positive effects on the psychological state of individuals, and that it helps in responding to adverse life events. A number of studies have demonstrated that individuals who describe themselves as being religious tend to have higher subjectively measured levels of life satisfaction.³¹ It is also interesting to note that a number of recent empirical studies have demonstrated that there is a lower incidence of depression in individuals who describe themselves as being

religious.³² In addition to this empirical evidence, Andrew Clark and Orsolya Lelkes have shown that religious individuals appear to suffer from significantly lower estimated losses in subjective utility as a result of episodes such as unemployment.³³ This supports our second assumption quite directly. Finally, at least one study has demonstrated that people who describe themselves as being religious tend to purchase significantly less life insurance than do non-religious people.³⁴ Taken together, this body of evidence makes a clear case for our second assumption.

Our third assumption is that individuals have utility functions where monetary consumption and "psychic benefits" are not additively separable.³⁵ This implies that the psychological benefits of religion are greater for those with lower incomes. This is consistent with empirical studies that point to higher levels of religiosity and religious coping in response to adverse events specifically among the poor, elderly, minorities, and women.³⁶ In a recent study drawn from the U.S. National Survey of Families and Households, Rajeev Dehejia, Thomas DeLeire, and Erzo Luttmer offer evidence that religious involvement may do more for low income than high income individuals to attenuate the negative effects on subjective well being of adverse events such as unemployment.³⁷ In addition, they also determine that the psychic insurance effect of religion is more clearly observed for African Americans than for whites in the U.S. Both of these conclusions are consistent with our non-additive separability assumption.

If our three assumptions hold, one can easily intuit that individuals who are more religious will be less demanding of social insurance.³⁸ Because religion allows individuals to "appraise" adverse economic

28. Richard Lazarus and Susan Folkman, *Stress, Appraisal, and Coping* (New York: Springer, 1984).

29. Susan Folkman, Richard S. Lazarus, Rand J. Gruen, and Anita DeLongis, "Appraisal, Coping, Health Status, and Psychological Symptoms," *Journal of Personality and Social Psychology* 50 (1986): 572.

30. Sigmund Freud, *The Future of an Illusion* (1927; London: Vintage, The Hogarth Press, and the Institute of Psycho-Analysis, 2001); William James, *The Varieties of Religious Experience* (1902; Cambridge, MA: Harvard University Press, 1985).

31. See Rajeev Dehejia, Thomas DeLeire, and Erzo F. P. Luttmer, "Insuring Consumption and Happiness through Religious Organizations," NBER Working Paper 11576 (2005), for recent findings. This same correlation is shown in Christopher Ellison, "Religious Involvement and Subjective Well-Being," *Journal of Health and Social Behavior* 32 (1991): 80–99, as well as in a second study by Ellison, David Gay, and Thomas Glass, "Does Religious Commitment Contribute to Individual Life Satisfaction," *Social Forces* 68 (1989): 100–123, which demonstrates that religiosity has a positive correlation with subjective life satisfaction even when controlling for levels of sociability. Jonathan Gruber, "Religious Market Structure, Religious Participation, and Outcomes: Is Religion Good for You?" NBER Working Paper 11377 (2005), has recently presented related evidence using a novel instrument for religiosity involving the density of a religion in a particular area given the area's ancestral mix.

32. See Park, Cohen, and Herb, "Intrinsic Religiousness and Religious Coping," and Smith, McCullough, and Poll, "Religiousness and Depression."

33. Andrew Clark and Orsolya Lelkes, "Deliver Us From Evil: Religion as Insurance" (available online at http://www.ugr.es/~teoriahe/RePEc/gra/paoner/per06_03.pdf [last viewed 2 Oct. 2006]).

34. John Burnett and Bruce Palmer, "Examining Life Insurance Ownership through Demographic and Psychographic Characteristics," *Journal of Risk and Insurance* 51 (1984): 453–67. Viviana A. Zelizer, "Human Values and the Market: The Case of Life Insurance and Death in Nineteenth-Century America" *American Journal of Sociology* 84 (1978): 591–610, provides historical evidence to demonstrate that the growth of the life insurance industry in nineteenth century America was initially limited by religious beliefs involving trusting in God to provide for one's future, among other factors.

35. In "Redistributive Taxation with Endogenous Sentiments," Matteo Cervellati, Joan Esteban, and Laurence Kranich provide an example of a model of redistributive politics where utility from income and from a "psychic benefit" are not additively separable (available online at <http://ideas.repec.org/p/iza/izadps/dp2312.html> [last viewed 2 Oct. 2006]).

36. See Pergament, *Psychology of Religion and Coping*, 156.

37. Dehejia, DeLeire, and Luttmer, "Insuring Consumption."

38. On this, see Appendix A, below, for significant supporting detail.

events as being less damaging to their overall beliefs or self-esteem, then this psychic effect of religion will result in them expressing less of a demand for social insurance than will secular individuals. This theoretical conclusion leads to two empirical predictions that we will test below. At the state level, we should expect there to be greater resistance to adoption of extensive social insurance programs when citizens are highly religious. At the individual level, we should see less support for social insurance spending programs on the part of religious individuals.

2.2. Religion and Economic Beliefs

Before proceeding with our empirical analysis, we also consider an alternative channel through which religiosity may affect social insurance provision, which we refer to as the “economic beliefs effect.” To this point, we have suggested that religious individuals benefit from a “coping effect” that mitigates the utility loss they suffer from adverse events like unemployment, or job accidents that produce a loss in income. In addition, we have also assumed that the factors that determine whether such events happen are exogenous. If we relax this assumption and allow for the possibility that events such as job loss depend in part on exogenous factors and in part on individual effort, we are faced with an additional plausible channel through which religion might influence social insurance provision. If individuals who believe income depends largely on effort are less supportive of redistribution, then individuals whose religion emphasizes this type of belief may be more likely to take this attitude.

To address this, Thomas Piketty’s seminal 1995 article, “Social Mobility and Redistributive Politics,” offers a framework for considering how beliefs about the importance of effort influence individual attitudes toward redistribution.³⁹ Piketty examines how individuals, based on personal experience (either their own or that of their parents), draw inferences about the importance of effort as a determinant of economic success, sometimes drawing very different conclusions. Roland Benabou and Jean Tirole extend Piketty’s model by considering how individuals are able to manage their own beliefs about the importance of effort in order to motivate themselves to work harder.⁴⁰ According to this “belief in a just world,” the belief that hard work will be compensated with

economic success can serve as a useful self-motivational tool, even in the face of evidence which suggests that effort may be less important than socioeconomic background in determining income. Rather than depending exclusively on past experience (as in Piketty) or the need for self-motivation (as in Benabou and Tirole), we suggest that beliefs about the importance of effort versus exogenous circumstances can also be heavily influenced by religiosity. It is well known that different religious denominations have placed different emphases on the belief that poverty results from individual failings, and we discuss this extensively for the US context in Section 3 below. In the Appendix, we show how this insight regarding the effect of religiosity on economic beliefs can be incorporated as an extension of our formal model. Our analysis regarding religion and beliefs about the importance of effort demonstrates the robustness of the religious coping effect, highlighted in the previous sub-section, to the possibility that certain religious doctrines may have an impact on economic beliefs that influence social insurance preferences.

Once we take the “economic beliefs effect” into account, in terms of empirical predictions, at the state level, we will still expect a negative relationship between general measures of religiosity and the adoption of extensive social insurance programs while at the individual level we should see less support for social insurance spending programs on the part of religious individuals. The extension of the argument in this section does, however, suggest that these predictions may be best evaluated by controlling for religious influences on beliefs about the importance of effort versus exogenous circumstances in determining economic outcomes. We incorporate this insight into the empirical analysis in the following sections.

Finally, readers should note that because our theoretical discussion has considered a simplified world where all social insurance is financed by a flat-rate income tax, it abstracts away from important financing issues that might be related to the link between religion and preferences for social insurance.⁴¹ If certain religious denominations emphasize the importance of individual effort, they could be less favorable to social insurance provision; however, when we consider separate types of social insurance, these denominations may express less opposition to those forms that correspond most closely to an insurance policy that is individually rather than collectively financed. So, for example, in the U.S., old age insurance provided under Social Security is relatively closely linked to individual contributions while welfare payments represent a form of social insurance in which the recipients have provided financing only very indirectly via past income taxes on earnings.

39. Piketty, “Social Mobility and Redistributive Politics.”

40. In “Belief in a Just World,” Benabou and Tirole also consider a model where attitudes toward redistribution depend on religious beliefs. In this case, even when all individuals know the true influence of effort on individual income, they might have different redistributive preferences if they have different beliefs about the extent to which industriousness is rewarded in the afterlife. Individuals who expect that industriousness is rewarded in this manner expect to exert more effort and thus prefer less redistributive taxation.

41. We would like to thank an anonymous referee for suggesting this point.

Workers' compensation, one of the two policy areas we examine in this article, was directly financed by employers; however, as Fishback and Kantor demonstrate, employees ultimately financed this insurance program in an indirect manner through lower future wages.⁴² Conversely, the unemployment relief we consider in Section 5 involved a policy that was financed out of general taxation (unlike subsequent unemployment insurance, which was funded through employer contributions). Per the discussion above, to the extent the effect of religion on support for social insurance depends on the economic beliefs channel, we should expect a greater difference between those sharing a particular religious doctrine and those who do not share the same doctrine for those social insurance programs that are not individually financed. Furthermore, this approach does *not* suggest that the coping effect of religion should vary depending on type of social insurance program, because this hypothesized effect does not depend on beliefs about the importance of effort versus exogenous circumstances.

3. RELIGION AND SOCIAL INSURANCE IN THE EARLY TWENTIETH CENTURY

While our main empirical evidence is quantitative, we have identified other forms of historical evidence that can be used to evaluate our hypothesis about religion and social insurance provision. In this section, we draw on the work of historians and other scholars to establish the plausibility of our argument that religion had a negative effect on the development of social insurance provision in the United States. As stated in the introduction, we make no claim that religion was the predominant factor in shaping the development of the U.S. welfare state; rather, we suggest only that it was a significant factor among others. The following four subsections develop core points that will be relevant to our subsequent quantitative analysis. In the first subsection, we examine church positions espoused between 1910 and 1939. We contend that, although the Social Gospel represented an important minority religious tradition that directly advocated increased state provision of social insurance, mainstream church opinion during this period was focused on individual salvation and grounded in the belief that poverty was the result of insufficient individual effort. In the second subsection, which focuses on the Great Depression years, we examine the activities of a number of churches in support of such initiatives as unemployment insurance. Here, we discover that, even during this period of major economic insecurity, many religious organizations continued to promote the idea that religion should be used as a means of individual salvation,

not social transformation. In the third subsection, we examine U.S. Catholic opinions on social insurance, and discover that, between 1910 and 1939, the U.S. Catholic Church was a significant outlier among religious organizations in explicitly advocating social insurance. This atypical stance may have been linked to the fact that Catholic theology places a relatively weak emphasis on the idea that poverty results from individual failings. But it may also have arisen for non-religious reasons involving the economic and social position of Catholics in the United States during the early twentieth century. In the final subsection, we consider whether lack of religious support for social insurance can be explained by direct substitution—the idea that members of churches were already receiving significant material (and not psychic) insurance benefits directly from their churches. We conclude that this argument is implausible based on the minimal levels of social spending by churches during this period.

3.1. American Protestantism and Social Insurance: 1910–1939

While some observers argue that the emergence of the U.S. welfare state depended upon reform movements within Protestantism, historical evidence seems to suggest that overall, Protestantism was a source of resistance to social insurance during this period. The early twentieth century witnessed the birth of a movement within American Protestantism, subsequently known as the Social Gospel, that directly advocated the need for the religious to support state provision of social insurance. In one of the movement's foundational texts, *Christianity and the Social Crisis*, Walter Rauschenbusch criticized the tendency for American churches to focus on the goal of individual salvation, or for emphasizing what he called “individualistic Christianity,” rather than emphasizing the possibility of “social Christianity.” Rauschenbusch further contested existing doctrine regarding the sources of poverty, noting that, although “we are assured the poor are poor through their own fault,” such assertions were actually “lies dressed up in truth.”⁴³ Rauschenbusch's specific policy recommendations closely paralleled the social insurance reform agendas advanced by several key Progressives, including compensation for job-related disability and death and old-age pensions.⁴⁴ In advocating these policy measures, Rauschenbusch drew direct inspiration from the system of state accident insurance and old-age pensions implemented in Bismarck's Germany.⁴⁵

43. Rauschenbusch, *Christianity and the Social Crisis*, 350.

44. On Rauschenbusch's views, Douglass F. Ottati, “Foreward” in Rauschenbusch, *Christianity and the Social Crisis*, (1991 ed.).

45. See Rauschenbusch, *Christianity and the Social Crisis*, 237, 243.

42. Fishback and Kantor, *Prelude to the Welfare State*.

Clearly, Rauschenbusch's use of religion to advocate social reforms struck a chord with many American Protestants at the time. Some even contend that the U.S. Progressives were characterized by a much closer association with clergy than had been true of earlier Jeffersonian or Jacksonian reform movements.⁴⁶ Based on this, one might be drawn to conclude that if, in the 1990s, religious Americans have tended to have conservative economic views, in the early twentieth century, they were more likely to support increased social insurance provision—a position first advocated by William McLoughlin, who referred to the Social Gospel movement as the “Third Great Awakening,” and subsequently expanded in the works of Robert Fogel and Daniel Chen and Jo T. Lind.⁴⁷

In fact, Walter Rauschenbusch's work is probably best seen as evidence of the reluctance of a majority of U.S. churches at this time to advocate increased social insurance provision. In their writings, critics such as Rauschenbusch make it clear that they opposed the perceived majority trend among churches to ignore social issues. In his authoritative history of the Social Gospel movement, Charles Howard Hopkins emphasizes that it was instead (and always) a minority tradition within American Protestantism.⁴⁸ Sydney Ahlstrom suggests that the movement became institutionalized by the creation of the Federal Council of Churches, an interdenominational group organized by Social Gospelers. Ahlstrom notes that the Federal Council was a frequent target of criticism from various U.S. churches because, “underlying this circumstance was the hard fact that most American Protestants were conservative evangelicals who, despite massive provocations to change, strove chiefly to maintain the faith and practice of yore.”⁴⁹ We find that Ahlstrom's and Hopkins's conclusions are further supported by Robert Miller, who, after a thorough review of religious publications from the period, concludes that throughout the 1920s, the vast majority of American Protestants did little to question prevailing economic conditions, preferring instead to focus attempts on social reform on questions like prohibition.⁵⁰

3.2. Protestantism and Social Insurance during the 1930s

During the economic turmoil of the 1930s, some U.S. Protestant churches altered their previous stance to express greater support for social insurance provision. This behavior is not inconsistent with the theoretical

argument developed above, to the extent that even if religiosity has a negative effect on demand for social insurance, at any level of religiosity, an increase in economic insecurity should still lead to an increase in demand for social insurance.⁵¹ Among major denominations, Northern Methodists moved to support social security legislation, while Southern Methodists were more reticent on this point. Other congregations, including the Southern Baptists, remained conservative on economic issues.⁵² Congregationalist minister Roger Babson provides an example of this latter attitude on social insurance with his remark that, “[m]ore religion—rather than more legislation—is the need of the hour.”⁵³ In considering conservative religious opposition to social insurance programs during this period, Miller argues that “the most potent argument in the thirties as in the twenties was the old, old one that the churches should serve to aid individual souls into heaven and not bring heaven here to earth.”⁵⁴

Miller's work is also useful in providing a comparison with the findings we report in Section 5 that indicate a negative partial correlation between church membership and preferences for New Deal unemployment relief spending. Miller observes that virtually no Protestant publications supported Roosevelt during either of his first two presidential campaigns. One should note, of course, that in addition to being influenced by economic issues, opposition to Roosevelt was undoubtedly linked to his stance on prohibition and other such non-economic issues. More specific evidence on religious opposition to the New Deal can be found in the results of a 1936 *Literary Digest* poll to which 21,606 clergymen responded. 70.22 percent responded “no” to the question “Do you *now* approve the acts and policies of the Roosevelt New Deal to date?”⁵⁵ This response fits quite closely with the empirical results we present in Section 5.

3.3. The U.S. Catholic Church and Social Insurance

Between 1910 and 1939, the U.S. Catholic Church adopted positions on social insurance questions that were quite distinct from those held by other large denominations in the United States. As such, we believe it necessary to devote a separate subsection to considering its position. As early as 1919, U.S. Catholic bishops took an active and explicit stance on the issue of social insurance programs:

[T]he State should make comprehensive provision for insurance against illness, invalidity,

46. Richard Hofstadter, *The Age of Reform: From Bryan to F.D.R.* (New York: Vintage Books, 1955), 152.

47. McLoughlin, *Revivals, Awakenings, and Reform*; Fogel, *Fourth Great Awakening*; and Chen and Lind, “Political Economy of Beliefs.”

48. Hopkins, *Rise of the Social Gospel*.

49. Ahlstrom, *Religious History of the American People*, 804.

50. Miller, *American Protestantism and Social Issues*, 17–47.

51. Some of the best evidence on this period is offered in Miller's thorough study of Protestant publications (*ibid.*).

52. *Ibid.*, 116.

53. *Ibid.*, 117.

54. *Ibid.*, 126.

55. *Literary Digest*, 22 Feb. 1936, 8, cited in Miller, *American Protestantism and Social Issues*, 122.

unemployment, and old age. So far as possible, the insurance fund should be raised by a levy on industry, as is now done in the case of accident compensation.⁵⁶

Throughout the 1920s and into the Depression years, Church authorities, drawing on doctrine outlined in two key papal encyclicals that emphasized the rights and status of workers, *Rerum Novarum* (1891) and *Quadragesimo Anno* (1931), continued to advocate increased social insurance provision. Ahlstrom argues that the publication of the latter encyclical, in fact, was an influential force behind the National Catholic Welfare Council's call for a "new economic order."⁵⁷ In their discussion of social insurance lobbying efforts, Seymour Martin Lipset and Gary Marks also emphasize the important roles played by various U.S. Catholic leaders.⁵⁸

What explains this apparently atypical attitudes of the U.S. Catholic Church toward social insurance? One possibility is that Catholic doctrine had continually placed an emphasis on achieving both spiritual and temporal goals.⁵⁹ A second possibility is that Catholic doctrine gave less credence than did the U.S. Protestant ethos to the idea that poverty resulted from individual failings, or, as the famous Protestant preacher Henry Ward Beecher suggested, "no man in this land suffers from poverty unless it be more than his fault—unless it be his *sin*."⁶⁰ For the empirical tests we conduct below, this suggests a need to consider U.S. Catholics separately from other denominations. Finally, one should also consider the possibility that, rather than being driven by the specificity of Catholic beliefs, U.S. Catholic support for establishing social insurance can be explained by the economic status of its members. To the extent that U.S. Catholics were members of the economic groups that stood to benefit the most directly from state provision of social insurance, one might expect Catholic leaders to have an incentive to lobby for policies that would benefit their members. One should also consider that, during this time, the Papacy felt

pressured to support workers rights in order to counter growing socialist movements in Catholic countries worldwide. Although the two encyclicals noted above supported extensions of policies benefiting workers, they were also intended to serve as clear denunciations of socialism. The possibility that Catholic support for social insurance was dictated primarily by the economic position of members of the Catholic church suggests the importance of controlling for family income and other related indicators in our statistical tests.⁶¹ As discussed below, we attempt to control for family economic context, though available control variables in the historical data are inevitably imperfect.

3.4. Evidence for a Direct Substitution Effect

One possible explanation of why American churchgoers before 1940 may have been less supportive of state-provided social insurance programs is that they were already receiving direct material insurance benefits from their churches. In addition to its obvious relevance to current U.S. debates over the role of "faith-based initiatives," it also suggests a more direct theoretical explanation than our coping effect of religion. However, we have identified several major empirical facts that would seem to rule out the direct substitution argument. First, using extensive survey data on congregations during the 1990s, Mark Chaves finds little evidence that American churches provide a "hidden social safety net."⁶² In economic terms, social programs by most congregations are limited and tend to emphasize cultural objectives rather than social insurance. Yet, because Chaves draws on current data, it is still possible to conclude that direct provision of social insurance by churches was significantly more important before the New Deal, and that demand for direct provision by churches was subsequently "crowded out" by New Deal spending. Using data on New Deal spending, church membership, and charitable church contributions during the 1930s, Jonathan Gruber and Daniel Hungerman find that while there is evidence of a crowding out effect, New Deal spending at the end of the 1930s was ten times the level that total church charitable spending had been at the beginning of the decade.⁶³ As a result, unless one makes the implausible assumption that church provision was more efficient by an order of magnitude, there cannot have been a one-for-one substitution between church and government spending. Third, the conclusions of Gruber and Hungerman

56. "The Bishops' Program for Social Reconstruction," Feb. 1919. This program suggested that social insurance should be maintained until such time a legal minimum wage was established at a level sufficiently high to allow workers to make sufficient precautionary savings.

57. Ahlstrom, *Religious History of the American People*, 1,008.

58. Lipset and Marks, *It Didn't Happen Here*.

59. Pelikan suggests this was reinforced by the medieval papal doctrine that there were "two swords, namely, the spiritual and the temporal" and both were wielded by the church (Jaroslav Pelikan, *The Christian Tradition: A History of the Development of the Doctrine, Volume 5: Christian Doctrine and Modern Culture Since 1700* [Chicago: University of Chicago Press, 1989], 322).

60. Cited in Ahlstrom, *Religious History of the American People*, 789 (emphasis in orig.). In "Religious Roots of Modern Poverty Policy," Sigrun Kahl has recently presented evidence on the traditional division between Catholic, Lutheran, and Calvinist beliefs about the responsibility of the poor for their own condition, based on edicts from the Reformation concerning begging and poor relief.

61. In early work on individual level support for New Deal policies, Wesley AllinSmith and Beverly AllinSmith, concluded that average support was clearly correlated with average income levels across denominations ("Religious Affiliation and Politico-Economic Attitude," *Public Opinion Quarterly* 12 [1948]: 377–89).

62. Chaves, *Congregations in America*.

63. Gruber and Hungerman, "Faith-Based Charity."

and Chaves are supported by Paul Douglass and Edmund de Brunner's survey of Protestant church social activities conducted in the early 1930s.⁶⁴ In fact, Douglass and Brunner clearly demonstrate that, during the early New Deal period, Protestant churches were minimally engaged in social insurance activities. For example, in 1933, the average Chicago-area church spent a mere \$150 on direct relief annually. One should also take note of the fact that, in most cases, church relief spending was not limited to members, which further weakens the idea that church membership and charitable contributions to a church presented an alternative mechanism for individuals to *financially* insure themselves against future risks. In sum, although it offers a plausible theoretical mechanism, we see no significant empirical support for the direct substitution argument.

4. WORKERS' COMPENSATION INSURANCE: 1910–1930

The foregoing discussion suggests the plausibility of our argument that religion had a negative effect on the development of social insurance provision in the United States. In this section, we provide a quantitative test of the hypothesis by analyzing workers' compensation policies from 1910 to 1930. Workers' compensation is a social insurance program that provides benefits to pay for medical costs and to replace lost wages for workers who are injured in workplace accidents. Adopted by 44 of 48 states by 1930, it was one of the earliest social insurance programs in the United States and remains a major program with current spending nearly twice as large as for unemployment insurance.⁶⁵ As we will detail below, the adoption of workers' compensation provided significantly higher levels of social insurance and thus allows for a test of the hypothesis that religion had a negative effect on the development of social insurance provision in the United States. In addition, the specific characteristics of state programs varied significantly. States could choose to make participation on the part of employers compulsory; they could decide to include or exclude particular industries or classes of workers; and they could implement the plans employing private insurance only, monopoly state funds, or some combination of private and state funds. These characteristics had a significant impact on the overall levels of social insurance provided by the law. Thus, in addition to examining the relationship between state religiosity and the adoption of workers' compensation programs, we estimate the relationship between religiosity and the

adoption of specific features of these laws that made some programs more generous than others.

Our analysis in this section is divided into three subsections. In the first subsection, we discuss the historical context for adoption of workers' compensation insurance in the early twentieth century. In the second subsection, we conduct a statistical investigation of the adoption of workers' compensation laws in various states between 1910 to 1930. We consider the factors that influenced the speed with which individual state governments adopted these reforms.⁶⁶ In the final subsection, we examine the determinants of expected benefits from workers' compensation laws across the United States during this period.

4.1. Historical Context

The adoption of workers' compensation substantially increased the degree to which workers were insured against accident risk.⁶⁷ Prior to the implementation of state insurance programs, workers were compensated for losses due to accidents only if they successfully proved in court that their employer had been negligent. Proving negligence was made difficult by three common law defenses available to employers. First, under the "fellow servant" doctrine an injured employee could be held responsible for negligence of other employees. Second, one could argue that, by accepting a particular job or employment condition, an employee had agreed to assume the risk of accident. Finally, employers could mount a defense based on contributory negligence—that is, by failing to adhere to certain regulations or rules, an employee had contributed to the risk of accident.⁶⁸ Early twentieth-century workers' compensation laws eliminated the legal issues of proving negligence, and required that employers pay pre-determined levels of compensation to employees who suffered accidents, with different benefit levels applying to cases of fatal accidents, those producing

66. Fishback and Kantor, "Adoption of Workers' Compensation"; Eliza K. Pavalko, "State Timing of Policy Adoption: Workmen's Compensation in the United States, 1909–1929," *American Journal of Sociology* 95 (1989): 592–615.

67. The discussion in this subsection draws on a number of sources including Asher, "Business and Workers' Welfare in the Progressive Era"; Asher, "Failure and Fulfillment"; Higgins-Evenson, "From Industrial Police to Workmen's Compensation"; Go, "Inventing Industrial Accidents and Their Insurance"; Howard, "Workers' Compensation, Federalism, and the Heavy Hand of History"; Swenson, "Varieties of Capitalist Interests"; Cutler, "Labor Legislation in Thirteen Southern States"; Weinstein, "Big Business and the Origins of Workmen's Compensation"; Walter Trattner, *From Poor Law to Welfare State: A History of Social Welfare in America* (New York: Free Press, 1974); Michael Katz, *In the Shadow of the Poorhouse: A Social History of Welfare in America* (New York: Basic Books, 1996); and Fishback and Kantor, *Prelude to the Welfare State*.

68. See Weinstein, "Big Business and the Origins of Workmen's Compensation" and Fishback and Kantor, *Prelude to the Welfare State*, for concise discussions of these principles.

64. Douglass and Brunner, *Protestant Church as a Social Institution*.

65. Fishback and Kantor, *Prelude to the Welfare State*, 1.

permanent disability, or temporary disability. In addition, workers' compensation laws also introduced new requirements on employers to insure themselves against the risk of having to provide future accident payments, including specifying whether such insurance was mandatory, whether it could be purchased from private insurers, or whether employers were obliged to purchase this insurance from a state fund. Although the details of workers' compensation laws varied substantially across states, Fishback and Kantor estimate that workers' compensation raised expected accident payments by between 75 and 200 percent, on average, and by substantially more for fatal accidents.⁶⁹ It seems clear that this was a significant development in terms of social insurance.⁷⁰ In addition, while employers directly paid the costs for this insurance, Fishback and Kantor present compelling statistical evidence that indicates that a significant share of these costs was passed to employees in the form of lower wages.⁷¹ There is also evidence that this possibility was clearly recognized while workers' compensation laws were being drafted and adopted. As a result, the workers' compensation programs subsequently operated as a form of insurance that was supported in part by a payroll tax.

There are several potential reasons why Progressive Era reformers successfully induced the vast majority of states to adopt workers' compensation insurance legislation by 1930 while concurrently failing to sway state legislatures to implement other forms of social insurance such as universal old age pensions, unemployment insurance, and health insurance. First, as Theda Skocpol notes, in an era when few were willing to contemplate significant expansion of the scope of government, it may have been important that workers' compensation insurance did not involve an increase in government taxation and spending (although, as noted previously, it did reduce workers' wages).⁷² A second reason is that, during the first decade of the twentieth century, the problem of industrial accidents became an increasingly salient political issue. This was influenced both by reports of the high accident rates in different American industries, as well as by individual stories that emphasized in dramatic fashion the injustices of the existing negligence system. For instance, in one much reported case, Sarah Knisley had her arm torn off by a grinding machine's gears. Although state law specified that the machine's gears should be covered, they were, in fact, uncovered—a fact that Knisley brought to her employer's attention,

although she continued to work in the unsafe environment. In the subsequent post-accident lawsuit, the court ruled that the employer was not liable because, under common law, Knisley had effectively assumed the risk of the activity by continuing to work in the unsafe environment.⁷³

The nature of industrial accidents also suggests another explanation of why workers' compensation insurance may have been easier to establish politically than other forms of social insurance. Precisely because industrial accidents received broad news coverage that tended to portray the victims as hard-working individuals, there was less suggestion that workers' compensation payments would go to the undeserving. Julian Go argues that workers' compensation proponents succeeded because they were able to frame legislative proposals as an aid for the deserving poor rather than a dole aimed at those in a dire financial condition brought about by their own negligence.⁷⁴ In the language of our theoretical argument in this article, it was suggested that financial problems for victims of industrial accidents were attributable to exogenous circumstances, not a lack of effort. To the extent that this observation is accurate, then it also suggests that, if we observe a negative correlation between religiosity and the generosity of workers' compensation insurance (as well as the speed of its adoption), it is more likely to be attributable to the "coping effect" of religiosity as opposed to the "economic beliefs effect."

It is generally recognized that by 1910, a broad range of state-level interests supported adoption of some form of workers' compensation insurance legislation. Echoing many other contributions, Michael Katz suggests "[w]orkmen's compensation became the first widespread form of American social insurance because it served an unusually wide range of influential interests: labor, big business, insurance companies, and academic reformer-experts."⁷⁵ While it might not be surprising to see that labor groups widely supported this legislation, a number of authors have also emphasized the critical role played by businesses in passing the legislation, both to neutralize more onerous employer liability legislation and to reduce increasing uncertainty about payouts under the negligence system.⁷⁶

73. See Weinstein, "Big Business and the Origins of Workmen's Compensation," on this incident and its political ramifications.

74. Go, "Inventing Industrial Accidents and Their Insurance."

75. Katz, *Shadow of the Poorhouse*, 198.

76. Weinstein, "Big Business and the Origins of Workmen's Compensation," notes that several large companies including U.S. Steel and International Harvester actually started voluntary workmen's compensation programs whereby workers could have a certain amount deducted from their salary in exchange for benefits that would apply in the case of an accident. On these points, also see Asher, "Business and Workers' Welfare in the Progressive Era"; Asher, "Failure and Fulfillment"; Howard, "Workers' Compensation, Federalism, and the Heavy Hand of

69. Ibid.

70. Although Katz, in *Shadow of the Poorhouse*, draws a more pessimistic conclusion on the achievements of workers' compensation legislation, he does not present evidence to contradict Fishback and Kantor's conclusions on expected accident payments.

71. Fishback and Kantor, *Prelude to the Welfare State*.

72. Skocpol, *Protecting Soldiers and Mothers*.

Although the basic concept of workers' compensation insurance legislation generally met with support from diverse interest groups, scholars have also identified numerous politically contentious topics, including specific provisions on insurance and the levels of victims' benefits to be offered. This point is critical for our subsequent analysis, as it suggests that it may be more important to consider the correlation between religiosity and specific provisions and benefit levels, as opposed to simply considering whether states with more religious populations tended to adopt workers' compensation laws after a greater delay. There is, in fact, clear evidence of a divide between business and labor in many states. As one might expect, labor groups tended to advocate high benefit levels while business groups were more likely to counter that lower benefits were necessary to minimize costs (even if it was understood that part of these costs would be passed on to employees through lower wages). In addition, labor groups tended to favor laws that required employers to purchase insurance from a state fund, which was seen the best mechanism for ensuring that businesses would have the necessary funds to pay accident victims. Businesses, on the other hand, generally preferred the greater flexibility of a choice between private insurance or self-insurance.⁷⁷ When we examine state by state outcomes, we observe that different political conditions in each state led to workers' compensation laws that varied significantly both in their provisions and in the benefits offered. In addition, we also observe the same significant regional variation identified by Addison Cutler, who noted that, though most Southern states had passed workers' compensation insurance legislation by 1930, these laws generally provided less protection for workers than did similar laws in other parts of the country.⁷⁸

The above discussion can be summarized as follows. Workers' compensation legislation provided a significant form of social insurance that was, in practice, partly financed by workers. Although a number of specific political conditions favored the passage of workers' compensation laws over other forms of social insurance between 1910 and 1930, there was also significant contention regarding the details of implementation and the range of potential benefits

that resulted in the adoption of very different programs in individual states. Finally, precisely because there was no national consensus on program implementation and benefits, we are led to examine not only whether states with more religious populations tended to adopt workers' compensation laws after a greater delay, but also whether such states tended to adopt laws with weaker provisions for worker security and lower levels of expected benefits.

4.2. Adoption of Workers' Compensation Reforms

The dependent variables in this analysis are *Workers' Compensation Adoption* and *Reform Adoption*. *Workers' Compensation Adoption* is equal to 0 for all years from 1910 for which the state had not yet passed a workers' compensation law and is equal to 1 in the year of adoption. We note the year of adoption for each state in Table 1.⁷⁹ *Reform Adoption* is composed of six possible reforms that the previous literature has identified as important features of the initial workers' compensation programs: (1) adoption of *compulsory* workers' compensation insurance for employers; (2) adoption of a workers' compensation program with a state fund—whether a monopoly or one that competes with private funds; (3) adoption of a workers' compensation program administered by a commission; (4) adoption of a workers' compensation program that includes small firms; (5) adoption of a workers' compensation program that includes agricultural workers; and (6) adoption of a workers' compensation program that includes domestic workers.⁸⁰ *Reform Adoption* is coded separately for each possible reform and analogously to the *Workers' Compensation Adoption* variable.⁸¹ The reader should note that, although both dependent variables measure the adoption of laws that increased the provision of social insurance, the *Reform Adoption* variable is much more sensitive to the extent of insurance provided. Consequently, the analysis of the *Reform Adoption* variable is arguably the better of these two tests of the argument.

Our measure of religiosity, *Religious Membership*, is equal to total church membership in the state as a proportion of the state population. In a number of our specifications, we also include the variable *Catholic Membership*, which is equal to the total number of Catholics as a proportion of the state

History"; and Swenson, "Varieties of Capitalist Interests." It should be noted that these observations about business support for workers' compensation insurance parallel those Mares made regarding France and Germany in *Politics of Social Risk*.

77. For evidence on this divide, see the discussions in Asher, "Business and Workers' Welfare in the Progressive Era"; Weinstein, "Big Business and the Origins of Workmen's Compensation"; Howard, "Workers' Compensation, Federalism, and the Heavy Hand of History"; Cutler, "Labor Legislation in Thirteen Southern States"; and Fishback and Kantor, *Prelude to the Welfare State*.

78. Cutler, "Labor Legislation in Thirteen Southern States."

79. The electronic file for Fishback and Kantor's data used in our analysis differs slightly on the year of adoption variable from Table 4.3 in Fishback and Kantor, *Prelude to the Welfare State*, for Arizona, Maryland, and Nevada. We resolved the discrepancy in favor of the date in the electronic file based on other sources (e.g., Pavalko, "State Timing of Policy Adoption").

80. See esp. Fishback and Kantor, *Prelude to the Welfare State*.

81. *Ibid.* Except for the religious variables, all of the data employed in this section are from this source. For details on original sources and data construction, see Fishback and Kantor, *Prelude to the Welfare State*, esp. appendices.

Table 1. Adoption of Workers' Compensation Programs, Descriptive Statistics

State	Year of Adoption	Average Benefit Ratio	State	Year of Adoption	Average Benefit Ratio
Alabama	1919	0.644	North Carolina	1929	0.283
Arkansas	1939	0.130	North Dakota	1919	1.664
Arizona	1912	1.679	Nebraska	1913	1.158
California	1911	1.553	New Hampshire	1911	1.028
Colorado	1915	0.707	New Jersey	1911	1.126
Connecticut	1913	1.136	New Mexico	1917	0.780
Delaware	1917	0.802	Nevada	1911	1.893
Florida	1935	0.270	New York	1910	2.181
Georgia	1920	0.597	Ohio	1911	1.409
Idaho	1917	0.957	Oklahoma	1915	0.882
Illinois	1911	1.256	Oregon	1913	1.417
Indiana	1915	0.985	Pennsylvania	1915	0.788
Iowa	1913	0.917	Rhode Island	1912	1.152
Kansas	1911	1.119	South Carolina	1935	0.150
Kentucky	1914	0.883	South Dakota	1917	0.804
Louisiana	1914	1.149	Tennessee	1919	0.810
Massachusetts	1911	1.557	Texas	1913	1.422
Maryland	1914	1.282	Utah	1917	1.033
Maine	1915	0.999	Virginia	1918	0.620
Michigan	1912	1.096	Vermont	1915	0.846
Minnesota	1913	1.290	Washington	1911	1.684
Missouri	1919	0.431	Wisconsin	1911	1.564
Mississippi	1948	0.230	West Virginia	1913	1.310
Montana	1915	0.988	Wyoming	1915	0.921

Note: Year of adoption indicates the year that the state legislature first enacted a general workers' compensation law. Average Benefit Ratio is equal to expected benefits divided by annual wages as defined in the text and averaged from 1910 to 1930.

population.⁸² While in the ideal case, we would also seek to measure religiosity through strength of belief and frequency of religious participation, the available state-level data for this period is limited to church membership. In the investigation of individual level-data presented in Section 5, we are able to test our core hypothesis using a more precise measure of religiosity that focuses on frequency of church attendance.⁸³

In evaluating whether states with more religious populations were slower to adopt workers' compensation and/or less likely to adopt laws with

generous characteristics, we need to control for other factors associated with the extent of social insurance provision in general and the adoption of workers' compensation programs in particular. These include:

- *Manufacturing Accident Risk* is an index of accident risk based on private insurance workers' compensation premiums. A simple account of why some states adopted programs earlier than others (and why some adopted specific features associated with generous programs) is that economic activity was relatively concentrated in riskier industries.
- *Mining Employment* is the percentage of the employed in mining. Mining employment provides an alternative measure of accident risk and we expect that states with greater activity in mining, and thus workers facing higher accident risks, were more likely to adopt policies associated with greater social insurance.
- *Small (Large) Firm Employment* measure the relative size of small and large manufacturing interests in each state. Fishback and Kantor argue that smaller and/or less productive firms tended to oppose

82. Data on state religious characteristics is from the *United States Census of Religious Bodies, 1906, 1916, 1926, 1936* and the *Statistics of Churches in the United States, 1890*. The data were accessed from electronic files available at the American Religion Data Archive (<http://www.thearda.com>; acquired Sept. 2005).

83. In his "Religious Belief, Religious Participation, and Social Policy Attitudes," John Huber has recently investigated the link between religious belief and religious participation, demonstrating that the correlation between the two varies substantially across countries, most notably with levels of income, as well as across individuals (available online at http://www.dartmouth.edu/~jcarey/Huber_CDG_2005.pdf; last viewed 2 Oct. 2006).

workers' compensation programs while larger and/or more productive firms supported the reforms.⁸⁴

- *Small Firm Employment* is equal to the percentage of manufacturing workers in establishments with fewer than five workers.
- *Large Firm Employment* is equal to the percentage of manufacturing workers in establishments with more than 500 workers.
- *Unionization* is a state-level measure of unionization based on industry unionization rates at the national level and the distribution of employment across industries within each state. Because organized labor strongly supported the adoption of generous workers' compensation programs, we expect that states that were more strongly unionized adopted programs more quickly and with more generous features.
- *Unified Democrat* and *Divided Government* measure the strength of the Democratic Party in the state with the expectation that increasing Democratic strength is associated with greater provision of insurance due to the sources of electoral support for the party.
 - *Unified Democrat* is an indicator variable equal to 1 if the governor of the state is a Democrat and both houses of the legislature are majority Democrat and 0 otherwise.
 - *Divided Government* is also an indicator variable equal to 1 if control of the governor's office and at least one of the two houses of the legislature are split between the parties and 0 otherwise.
- *Socialist Strength* is the percentage vote for socialists in the most recent presidential election. This is an alternative measure of preferences in the electorate for interventionist economic policies in general and generous social insurance policies more specifically.
- *South* is an indicator variable equal to 1 if the state is in the South and zero otherwise.⁸⁵ Southern states have often been considered to have less generous social insurance and welfare systems, particularly during this period, due to limited electoral competition.⁸⁶
- *Percent Black* is equal to the percentage of the total state population that is black. A number of studies in both political science and economics have argued that there is less support among individuals for generous social policies and less actual

provision of such policies in states with higher concentrations of blacks.⁸⁷

- *Percent Urban* is equal to the percentage of the total state population living in urban areas, defined as cities with populations 2,500 or greater. Urban residents may be more likely to be supportive of generous social policies because of differences in both the risks that they face and the availability of alternative, non-state provided, forms of insurance.⁸⁸ Moreover, urban citizens may be less likely to be religious making the inclusion of this variable particularly important for estimating the relationship between religiosity and the adoption of workers' compensation programs.

Consistent with previous analyses of state policy adoption, we study the adoption of a workers' compensation law of any kind, defined by the variable *Workers' Compensation Adoption*, applying a Cox duration model. The Cox model is a proportional discrete-time hazard model for which the independent variables account for variation in the time to some particular event, in this case, time-to-adoption.⁸⁹ We are primarily interested in the effect of state religiosity on the hazard rate or, more intuitively, on the probability of adopting workers' compensation in a given period, conditional on not having already done so. Consequently, we estimate two specifications. In Model 1, the only measure of state religious characteristics included is *Religious Membership*. This is the simplest and most straightforward test of the aggregate implications of a religious coping effect—that religiosity is negatively associated with the provision of social insurance. In Model 2, we add the variable *Catholic Membership*. This specification evaluates simultaneously the hypothesis that religiosity *per se* may have an impact on social insurance reforms because of the manner in which religious individuals assess adverse life events and, to the extent that Catholics held different economic beliefs than others, the “economic beliefs” hypothesis that religious doctrine can influence the provision of social insurance through its impact on economic beliefs.

As discussed previously, the variable *Reform Adoption* distinguishes among different types of workers' compensation reforms. We assume that each state is at risk of adopting each of the six types of reform and that since adoption of any one reform does not preclude

87. For example, see Luttmer, “Group Loyalty and the Taste for Redistribution,” and Alesina, Glaeser, and Sacerdote, “Why Doesn't the U.S. Have a European Style Welfare State?”

88. For example, see Jonathan Rodden, “Red States, Blue States, and the Welfare State: Political Geography, Representation, and Government Policy Around the World” (mimeo, 2005; version available online at <http://www.columbia.edu/~kab2106/papers/rodde.pdf>; last viewed 2 Oct. 2006).

89. Our application of the Cox model allowed for time-varying covariates and used Efron's method for handling tied events in the calculation of the log partial likelihood.

84. Fishback and Kantor, *Prelude to the Welfare State*.

85. For our purposes, the southern states are: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia.

86. V. O. Key, *Southern Politics in State and Nation* (New York: Knopf, 1949).

adopting the others, each state remains at risk of adopting the other policies after adopting any one or more of the reforms. To estimate the determinants of *Reform Adoption*, we use a multivariate hazard model.⁹⁰ Following the approach Bradford Jones and Regina Branton outline, we apply a stratified Cox model to estimate the impact of the independent variables on the time-to-adoption of these reforms.⁹¹ The model assumes that the covariate effects are the same for each reform type but that the baseline hazard for each reform varies. Again, we are primarily interested in evaluating the effect of state religiosity on the hazard rates for the six reforms associated with greater levels of public accident insurance for workers and thus again estimate two specifications, one with the *Religious Membership* variable only and one with *Religious Membership* and *Catholic Membership*.

We report the results of these two sets of analyses in Table 2. The key result is that across all four specifications there is a negative and statistically significant relationship between *Religious Membership* and the adoption of workers' compensation reforms. These estimates are consistent with the argument that religion had a negative effect on the development of social insurance provision in the United States.

Consider the first column of results for the dependent variable *Workers' Compensation Adoption*. The negative coefficient for *Religious Membership* indicates that, controlling for other factors, more religious states were slower to adopt workers' compensation laws than less religious states. The substantive size of the effect is also significant. Note that the standard deviation of the *Religious Membership* variable is 0.101. By exponentiating the product of the coefficient and 0.101, we can calculate that the effect of a standard deviation increase of *Religious Membership* is to decrease the hazard ratio by 34 percent. For example, in 1910, the difference between the twelfth least religious state, Kansas, and the twelfth most religious state, Georgia, is approximately equal to the standard deviation of the variable with a difference of 0.119. Given that neither state had yet adopted workers' compensation programs in 1910,

the model estimates suggest that Georgia was, all else equal, 39 percent less likely than Kansas to adopt a program in that year. As indicated in Table 1, Kansas adopted its program in 1911 while Georgia did not pass a reform until 1920. In short, modest differences across states in religiosity were associated with substantially different rates of adoption of workers' compensation.

Our results for Model 2 are qualitatively similar. The effect of controlling for *Catholic Membership* is to increase the magnitude of the coefficient estimate for the effect of *Religious Membership*. Thus, controlling for the strength of the Catholic Church, more religious states had lower hazard rates for the adoption of workers' compensation. The positive coefficient estimate for *Catholic Membership* is consistent with the qualitative evidence discussed above that the Catholic church was an early supporter of expansion of the welfare state. The estimate, however, is relatively imprecise and not statistically significant.

One should recall that the multivariate Cox model estimates the effect of the independent variables on six types of reforms associated with greater accident insurance provision. The results reported in third and fourth columns of Table 2 also indicate a negative relationship between religiosity and policy adoption. For Model 3, if we again exponentiate the product of the coefficient and 0.101, we can calculate that the effect of a standard deviation increase of *Religious Membership* is to decrease the hazard ratio by 21 percent. Adding *Catholic Membership* in Model 4 does not substantially alter the estimate for *Religious Membership*, although it does somewhat increase its magnitude. The positive coefficient estimate for *Catholic Membership* is once again consistent with the argument that Catholic social teachings encouraged more supportive attitudes toward social insurance programs like workers' compensation but the standard error of the estimate is relatively large.⁹² Overall, the evidence from the pattern of workers' compensation adoptions is strongly consistent with the predictions of our hypothesis about "coping effects," but only weakly consistent with this particular version of an "economic beliefs effect."⁹³

90. These models are often referred to in the literature as "competing risks" models. We use the term "multivariate hazard model" for clarity as the occurrences of each of the six specific event types coded in *Reform Adoption* are not mutually exclusive. For example, once a state adopts a workers' compensation law including agricultural workers but excluding domestic workers, this does not preclude it from subsequently modifying the law to include domestic workers. For a discussion of estimation of competing risks models, see Sanford Gordon, "Stochastic Dependence in Competing Risks," *American Journal of Political Science* 46 (2002): 200–17.

91. Bradford Jones and Regina Branton, "Beyond Logit and Probit: Cox Duration Models for State Policy Adoption," *State Politics and Policy Quarterly* (2005): 420–43. To implement the model, we stratified on reform type, used Efron's method for handling tied events in the calculation of the log partial likelihood, and adjusted the standard errors for clustering by state.

92. Note again that a positive coefficient estimate for the *Catholic Membership* variable is consistent with arguments about the effects of religious doctrine on economic beliefs but it is also consistent with other hypotheses such as that states with high concentrations of Catholics faced higher economic risks not measured by the control variables.

93. In addition to the estimates reported in Table 2, we evaluated the sensitivity of our results to model specification. We reestimated the model dropping various sets of control variables (e.g., all the partisan control variables) and found that the results for the correlation between religiosity and the adoption of workers' compensation reforms were qualitatively similar.

Table 2. Adoption of Workers' Compensation Programs

Regressor	<i>Workers' Compensation Adoption (Cox)</i>		<i>Reform Adoption (Multivariate Cox)</i>	
	Model 1	Model 2	Model 3	Model 4
<i>Religious Membership</i>	-4.149 (2.272) 0.068	-5.316 (2.659) 0.046	-2.347 (1.113) 0.035	-3.973 (1.971) 0.044
<i>Catholic Membership</i>		2.900 (2.382) 0.223		2.505 (1.655) 0.130
<i>Manufacturing Accident Risk</i>	-0.717 (0.427) 0.093	-0.661 (0.417) 0.113	0.096 (0.356) 0.786	0.069 (0.401) 0.863
<i>Mining Employment</i>	-0.037 (0.050) 0.467	-0.033 (0.050) 0.512	0.109 (0.038) 0.004	0.103 (0.037) 0.005
<i>Small Firm Employment</i>	-0.093 (0.060) 0.125	-0.090 (0.059) 0.131	0.091 (0.045) 0.043	0.087 (0.045) 0.056
<i>Large Firm Employment</i>	0.006 (0.023) 0.799	0.008 (0.023) 0.717	-0.045 (0.026) 0.084	-0.045 (0.027) 0.090
<i>Unionization</i>	-0.020 (0.057) 0.727	-0.016 (0.056) 0.773	-0.045 (0.021) 0.032	-0.044 (0.021) 0.038
<i>Unified Democrat</i>	-0.972 (0.532) 0.068	-0.902 (0.537) 0.093	1.041 (0.612) 0.089	1.033 (0.684) 0.131
<i>Divided Government</i>	-0.074 (0.426) 0.861	-0.170 (0.433) 0.695	0.454 (0.393) 0.248	0.472 (0.391) 0.228
<i>Socialist Strength</i>	0.157 (0.075) 0.037	0.155 (0.075) 0.039	-0.027 (0.013) 0.039	-0.029 (0.013) 0.032
<i>South</i>	2.146 (1.021) 0.036	2.242 (1.023) 0.028	0.033 (0.933) 0.972	0.147 (0.933) 0.875
<i>Percent Black</i>	-0.115 (0.040) 0.004	-0.107 (0.040) 0.007	-0.051 (0.035) 0.149	-0.045 (0.033) 0.180
<i>Percent Urban</i>	0.019 (0.015) 0.190	0.016 (0.015) 0.270	0.043 (0.009) 0.000	0.040 (0.010) 0.000
Observations	325	325	6,048	6,048
Log-Likelihood	-110.7	-110.0	-738.0	-735.7

4.3. Workers' Compensation Benefit Levels

The previous analysis evaluates the influence of religiosity on the extent of public accident insurance by studying policy adoption. The chief advantage of this empirical strategy is that measuring these policy changes is a relatively straightforward task. In addition, it is clear that policy adoption is associated with greater insurance. Nonetheless, policy adoption may be an imperfect test of the hypothesis that the extent of social insurance is decreasing in levels of religiosity. Consequently, to complement the analysis of policy adoption, we analyze the determinants of workers' compensation benefit levels during the period from 1910 to 1930.

The main difficulty in implementing this analysis is constructing a measure of benefit levels during this period. For any given year, some states have implemented programs while others are still operating under the negligence system. Moreover, even among states that implemented workers' compensation laws, program details differed along a number of dimensions, further complicating comparisons. Fishback and Kantor tackle this problem by constructing a common measure of expected benefits from workplace accidents for the 48 states for the period of 1910 to 1930.⁹⁴ They calculate a measure of expected benefits relative to annual earnings using the following formula:

$$E[B] = p_f B_f + p_{pt} B_{pt} + p_{pp} B_{pp} + p_u B_u \quad (1)$$

Since workers' compensation payouts depend on the type of accident that occurred, the measure needs to account for this. In the above expression, p is the probability of four types of accident occurring: (1) one that results in fatality; (2) permanent total disability; (3) permanent partial disability; or (4) temporary total disability. As these probabilities are based on data from a single state source (the Oregon Industrial Accident Commission), they vary by year but not by state.⁹⁵ For each type of accident, the B represents the present value of expected benefits using the earnings replacement and payments as specified by workers' compensation legislation, and using the average national weekly manufacturing wage as an estimate for current earnings. These benefit levels vary both across states and over time. For those state-years where a state did not yet have a workers' compensation law in place, Fishback and Kantor calculated the expected benefits under the negligence liability system, using information on accident probabilities, on settlement payments, and on the

likelihood that employees who sued their employers could actually expect to be awarded a settlement.

In subsequent regressions, we use as our dependent variable the natural log of the ratio of expected benefits scaled by the average annual national wage in manufacturing $\ln(E[B]/w)$. Table 1 reports the 1910 to 1930 average of the ratio of expected benefits to the average annual national wage in manufacturing for each state. The independent variables for this analysis are the same as in the analysis of policy adoptions. Most importantly, we again include *Religious Membership*, equal to total church membership in the state as a proportion of the state population, to measure religiosity.

The structure of the data is a time-series-cross-section with twenty-one years (1910–1930) and forty-eight states. In each reported specification, we estimate Prais-Winsten regressions assuming panel-specific AR(1) serial correlation and report panel-corrected standard errors. Furthermore, in addition to the independent variables from the policy adoption analysis, we include in all specifications year indicator variables to allow for common shocks to workers' compensation benefit levels. Model 5 includes only *Religious Membership* to measure each state's religious characteristics and as such is the most straightforward test of the aggregate implications of a religious coping effect—that more religious states provide lower levels of social insurance. The Model 6 specification adds the *Catholic Membership* variable to evaluate the robustness of the result and to examine the hypothesis that religious doctrine influenced the provision of social insurance through its impact on economic beliefs. Models 7 and 8 replicate the specifications for Models 5 and 6 with the addition of state fixed effects so that identification comes exclusively from within state change over time. This test controls for time-constant unobserved or unmeasured characteristics of states that would bias the analysis if these characteristics were correlated with both religiosity and benefit generosity. One potential difficulty with this analysis is that there is less over time versus cross-sectional variation in levels of religiosity off of which one can identify. For these specifications, the variable *South* is dropped.

We report the results of our analysis of benefit levels in Table 3. The main quantity of interest is the coefficient estimate for *Religious Membership*. Across all four specifications, the estimate is negative. In three of the four specifications, the estimate is statistically significant at conventional levels and in the fourth, it is significant at the 0.131 level. This finding that states that were more religious had lower benefit levels is consistent with main argument of this article. The substantive size of the effects of religiosity is also significant but varies somewhat across specifications. Since the regression is in log-levels, we can interpret the product of each coefficient and 100 as indicating the percent change in expected benefits from a 1-unit change in

94. Fishback and Kantor, *Prelude to the Welfare State*.

95. It should also be noted that these are the probabilities of each type of accident occurring, not the probability of each type of accident occurring given that some type of accident has occurred.

Table 3. Expected Workers' Compensation Benefits, 1910–1930

Regressor	Prais-Winsten Regression Estimates			
	Model 5	Model 6	Model 7	Model 8
<i>Religious Membership</i>	−0.791 (0.304) 0.009	−1.079 (0.461) 0.019	−1.501 (0.995) 0.131	−4.381 (1.716) 0.011
<i>Catholic Membership</i>		0.534 (0.267) 0.046		6.319 (2.760) 0.022
<i>Manufacturing Accident Risk</i>	0.098 (0.073) 0.179	0.101 (0.076) 0.183	0.169 (0.258) 0.512	0.164 (0.263) 0.534
<i>Mining Employment</i>	0.019 (0.007) 0.006	0.022 (0.007) 0.002	0.007 (0.013) 0.591	−0.001 (0.012) 0.925
<i>Small Firm Employment</i>	0.002 (0.008) 0.796	0.002 (0.008) 0.809	−0.005 (0.015) 0.762	−0.010 (0.014) 0.471
<i>Large Firm Employment</i>	0.001 (0.003) 0.819	0.001 (0.003) 0.833	0.002 (0.005) 0.620	0.002 (0.005) 0.676
<i>Unionization</i>	0.020 (0.006) 0.000	0.020 (0.006) 0.000	0.015 (0.007) 0.030	0.014 (0.007) 0.039
<i>Unified Democrat</i>	−0.048 (0.053) 0.361	−0.039 (0.053) 0.461	−0.035 (0.057) 0.537	−0.035 (0.056) 0.538
<i>Divided Government</i>	0.020 (0.039) 0.605	0.025 (0.039) 0.522	0.019 (0.043) 0.647	0.021 (0.042) 0.614
<i>Socialist Strength</i>	0.008 (0.005) 0.146	0.009 (0.006) 0.129	0.001 (0.005) 0.884	0.000 (0.005) 0.922
<i>South</i>	0.177 (0.174) 0.308	0.198 (0.177) 0.263		
<i>Percent Black</i>	−0.014 (0.007) 0.054	−0.013 (0.008) 0.088	0.034 (0.046) 0.458	0.036 (0.045) 0.428
<i>Percent Urban</i>	0.011 (0.003) 0.000	0.010 (0.003) 0.000	−0.002 (0.009) 0.849	−0.004 (0.009) 0.700
Year Fixed Effects	Yes	Yes	Yes	Yes
State Fixed Effects	No	No	Yes	Yes
Observations	1,008	1,008	1,008	1,008
Adjusted R-squared	0.37	0.36	0.49	0.50

the independent variable. For religiosity, a 1-unit change reflects the entire logical range of variation and is not observed in our data; as such, it is more informative to multiply this quantity by the standard deviation of the *Religious Membership* variable, which is 0.101. Therefore, a standard deviation increase in religiosity is associated with a 8.0 percent, 10.9 percent, 15.2 percent, and 44.2 percent decline in expected accident benefits in Models 5 through 8 respectively.

The addition of the *Catholic Membership* variable does not substantially affect the coefficient estimates for *Religious Membership*, though the magnitude of the estimates are somewhat larger. The positive and statistically significant coefficient estimate for *Catholic Membership* in Models 6 and 8 is consistent with the argument that Catholic social teachings encouraged more supportive attitudes toward social insurance programs like workers' compensation. However, it should be emphasized that this effect could also be the result of the economic and social positions of early twentieth-century American Catholics, something for which we can account for only partially with the control variables in Table 3.⁹⁶

5. INDIVIDUAL SUPPORT FOR UNEMPLOYMENT SPENDING

The state-level evidence indicates that states that were more religious were slower to adopt workers' compensation legislation and implemented less generous programs. In this article, we argue that this relationship is a consequence of religion and welfare state spending being substitute mechanisms for insuring individuals against adverse life events in general and workplace injuries in particular. A key prediction of this explanation is that religious individuals will prefer lower levels of social insurance provision than secular individuals. In this section, we evaluate this prediction by examining individual spending preferences on unemployment relief using late 1930s U.S. survey data. While no survey data exists tracking individual attitudes toward workers' compensation laws between 1910 and 1930, we have identified available New Deal survey data that tracks opinion with regard to other social insurance programs, and, in particular, unemployment relief. We present evidence that more religious respondents were

significantly less likely to support increased spending on unemployment relief programs.

The data requirements for our analysis in this section are, ideally, a national survey with indicators of individual preferences over unemployment relief as well as measures of individual religious engagement. For the 1930s, we have been unable able to identify a single survey that meets these requirements. However, it is possible to combine information across surveys to estimate the correlation between measures of religiosity and unemployment spending preferences. To this end, we combine religiosity data from a February 1939 Gallup survey with unemployment spending preferences data from a January 1939 Gallup survey in order to test the prediction of a negative correlation between religious engagement and support for unemployment relief.⁹⁷

Because these two surveys used the same sampling procedures and shared a significant number of identically-worded questions, we were able to merge the two surveys to yield an individual dataset containing a wide range of demographic and opinion measures for nearly all respondents. For example, wealth, sex, age, employment, and resident data is observed for virtually all respondents in both surveys; in addition, for most respondents, we also have their responses to questions about their voting behavior in the 1936 presidential election. These and other common variables across the two surveys contain much information relevant to estimating the correlation between the religiosity and spending preference measures that are observed in one but not the same survey. Consequently, we employed multiple imputation to use this available information to estimate the partial correlation between measures of religiosity and preferences for spending on unemployment relief.

The dependent variable for this analysis, *Unemployment Spending*, is based on responses to the question "Do you think government spending should be increased or decreased on the following: 'unemployment relief (WPA–Home relief)'." Individuals indicating that they think spending should be decreased, remain the same, and increased were coded 1, 2, and 3 respectively. This variable is, therefore, increasing in preferences for more generous unemployment relief. In the January poll, 42 percent of respondents thought government spending on unemployment relief should decrease, 32 percent thought it should remain the same, and 26 percent thought it should increase. It should be noted that prior to the New Deal, "relief" was the term most commonly used for what one would now refer to as either "social welfare spending" or "social

96. In addition to the estimates reported in Table 3, we evaluated the sensitivity of our results to model specification. We reestimated the model dropping various sets of control variables (e.g., all the partisan control variables). For the specifications that include the Catholic membership variable, the results for the correlation between religiosity and benefit levels were qualitatively similar across all specifications. For those omitting the Catholic membership variable, the coefficient on religiosity was not statistically significant in a few sparse specifications which omitted most of the control variables, but otherwise these alternative specifications generated qualitatively similar results.

97. Gallup Poll Number 1939-0149 with field dates 24 Feb. through 1 Mar. and a sample size of 3,134; Gallup Poll Number 1939-0143 with field dates 9–14 Jan. and a sample size of 3,063.

insurance spending.”⁹⁸ Spending on the Works Progress Administration—later the Works Projects Administration—(WPA) was a particularly controversial topic during the polling period (January 1939), which makes it especially useful for gauging social insurance preferences. Congress had cut WPA spending significantly in 1937 and would reduce it again in 1939. While the WPA and similar relief programs were always intended as temporary measures to deal with unemployment during the Great Depression, it should be emphasized that the WPA remained a very sizeable source of income for the unemployed through the early 1940s.⁹⁹ In 1939, the Roosevelt administration’s total spending on work relief programs amounted to 3.2 percent of national income.¹⁰⁰ The January 1939 Gallup survey did not ask a question about attitudes regarding spending on a more permanent system of “unemployment insurance.” The provisions for this system were laid out in the Social Security Act of 1935 and depended on a distinct system managed by both the states and the federal government. One likely reason the Gallup question focuses on “relief” rather than formal “unemployment insurance” is that the Social Security Act established 1938 as the first date at which benefits could be paid out under the latter system.¹⁰¹ In addition, the WPA continued to provide an important source of funds for the unemployed until state governments had accumulated sufficiently large reserves in their unemployment insurance funds to pay out significant benefits.¹⁰² Finally, we should also emphasize that while we focus here on individual preferences for overall levels of spending on unemployment relief, other related aspects of WPA spending were also the subject of political contestation during the 1930s including the wage rates for WPA jobs and the regional distribution of WPA-related federal expenditures.¹⁰³

98. John Joseph Wallis, Price Fishback, and Shawn Kantor, “Politics, Relief, and Reform: The Transformation of America’s Social Welfare System During the New Deal,” NBER Working Paper 11080 (2005).

99. Based on the figures Howard reports in *WPA and Federal Relief Policy*, the WPA employed 2.93 million workers in January 1939, in addition to the 0.44 million workers employed on “other federal work projects” (*ibid.*, 854–57). In January 1941, the WPA continued to employ 1.8 million individuals while the number of workers employed on other federal work projects increased to 0.78 million. The figures provided for “other federal work projects” here are exclusive of employment for the Civilian Conservation Corps (CCC) and the National Youth Administration (NYA).

100. *Ibid.*, 38.

101. Katherine Baicker, Claudia Goldin, and Lawrence Katz, “A Distinctive System: Origins and Impact of U.S. Unemployment Compensation,” NBER Working Paper 5889 (1997).

102. Howard, *WPA and Federal Relief Policy*, 435–40.

103. Conflict over WPA wages is analyzed in detail in Amenta and Halfmann, “Wage Wars: Institutional Politics, WPA Wages, and the Struggle for U.S. Social Policy”; and Amenta, *Bold Relief*. On the regional distribution of WPA spending, see Wright,

Our measure of religiosity distinguishes respondents by the extent of their church attendance and is based on responses to two questions. The first question simply asks individuals whether they attended church last Sunday; the second asks them whether they attend as often as their parents. For the first question, respondents were assigned a 1 if they said they attended church last Sunday and a 0 otherwise. For the second question, respondents were assigned a 1 if they indicated that they attended church at least as often as their parents and 0 otherwise. The variable *Religiosity* is equal to the sum of these two indicators of religious engagement.¹⁰⁴ The *Religiosity* variable allows us to test a direct implication of the religious “coping effect” hypothesis—that religious individuals are less supportive of social insurance programs. In addition, because we also want to allow for the possibility of an economic beliefs effect operating through Catholic social teachings and/or Protestant beliefs about the role of individual effort in determining poverty, we include the variable *Catholic* defined to be a dichotomous indicator variable set equal to 1 if the respondent is a member of the Catholic church and 0 otherwise and the variable *Protestant* analogously defined. As discussed above, we emphasize that there are a number of reasons, including systematic differences in exposure to economic risk, why denominational differences in welfare state support might exist besides an economic beliefs effect.

In evaluating whether more religious individuals are less supportive of unemployment relief spending, we need to control for the following factors:

- *Wealth* ranges between 1 and 5 indicating the interviewer’s classification of the respondent’s wealth.¹⁰⁵ To the extent that wealthier, higher income individuals are less likely to suffer job loss (or are better able to insure themselves against a loss), we can expect them to be less favorable to unemployment spending.
- *Unemployed* is a dichotomous indicator variable set equal to 1 for unemployed respondents and 0 otherwise. Those who are currently unemployed should have a clear preference for higher unemployment insurance than those who are not.
- *Female* is a dichotomous indicator variable equal to 1 for female respondents and 0 for males. This is a

“Political Economy of New Deal Spending”; and Howard, *WPA and Federal Relief Policy*.

104. The exact wording of the Sunday attendance question was “Did you happen to go to church last Sunday?” The exact wording of the relative attendance question varied across the two forms of the survey instrument for Gallup Poll Number 1939-0149. For Form A, the phrasing was “Did your parents go to church more often or less often than you do?” For Form B, the phrasing was “Do you go to church more often or less often than your parents did?”

105. The categories used were 1 for “poor”; 2 for “poor plus”; 3 for “average”; 4 for “average plus”; and 5 for “wealthy.”

standard control variable included in individual analyses, based on the fact that there have been consistent differences observed between males and females for certain policy preferences.

- *Age* is equal to the respondent's age in years. Older individuals may be more likely to favor unemployment spending to the extent that they may have more difficulty finding a new job if they become unemployed.
- *White* is equal to 1 if the respondent was white and 0 if the respondent was classified as "colored" in the Gallup survey. Previous research has demonstrated that blacks and whites have consistently different policy preferences about social insurance and redistributive spending. Again, these differences may be a result of different patterns of socialization, or differences in economic condition, such as less average job insecurity, not measured by the other variables in the model.

Upon constructing these variables and combining the two surveys into a single individual-level data set, it was not possible to run a conventional regression. In those cases in which we observed the religiosity measure, we were missing the spending variable and vice versa. More generally, the standard approach of deleting cases that have missing values for any of the variables—known as "listwise deletion"—can create two major problems for inference. The first issue is inefficiency caused by discarding information relevant to the statistical inferences being made. The second issue is that inferences from listwise-deletion estimation can be biased if the observed data differs systematically from the unobserved data.

To deal with this issue of missing data, we have adopted a "multiple imputation" approach.¹⁰⁶ The most general and extensively researched means for addressing missing data issues, multiple imputation requires a relatively weak assumption that the process generating the missing data is random conditional on the data included in the imputation procedures (this is commonly referred to in the literature as assuming the data are *MAR*). For the primary missing data problem in this study, this means that the probability that a particular respondent failed to answer the religiosity questions or the unemployment spending question is random controlling for the observed data such as respondent demographic characteristics. Because the "missingness" in these variables is determined by whether the respondent happened to be interviewed in the January or

February poll, this assumption almost certainly holds. For the assumption to be violated, it would have to be the case that the political environment changed from one month to the next in such a way to make it more likely that religious questions or spending questions were asked in one month rather than the other. Given that the surveys are so close in time and that the questions of interest are part of larger batteries of standard Gallup questions, this seems rather unlikely. In a related application, Gelman, King, and Liu suggest more generally that "this is a reasonable assumption here because almost all the missingness is due to unasked questions."¹⁰⁷ Multiple imputation yields consistent coefficient estimates and gives correct uncertainty estimates under the *MAR* assumption.¹⁰⁸

Although this approach offers several variations, it will always involve three main steps. First, some algorithm is used to impute values for the missing data. In this step, m ($m > 1$) "complete" data sets are created consisting of all the observed data and imputations for the missing values. The second step involves analyzing each of the m data sets using standard complete-data statistical methods. The final step combines the parameter estimates and variances from the m complete-data analyses to form a single set of parameter estimates and variances. Importantly, this step systematically accounts for variation across the m analyses due to missing data in addition to ordinary sample variation.

The first step in our multiple-imputation procedures was to create imputations in the missing data cells for all the variables discussed above.¹⁰⁹ We based our imputations on 35 variables selected from the Gallup surveys, most of which were fully observed in each survey. These variables included all those used in our analysis as well as some additional information that we determined would be helpful in predicting the missing data. Altogether, we imputed 10 complete individual-level data sets. The exact imputation algorithm we used is known by the acronym "EMis," which combines a well-known Expectation Maximization missing data algorithm with a round of importance sampling to generate imputations. King et al. provide a complete explanation of the use of this

107. Andrew Gelman, Gary King, and Chuanhai Liu, "Not Asked or Not Answered: Multiple Imputation for Multiple Surveys," *Journal of the American Statistical Association* 93 (1998): 847.

108. It is also necessary to assume the parameters describing the missing data process are distinct from parameters of the data model so that the missing data mechanism is ignorable. Again, because the "missingness" in this analysis is primarily due to questions not asked, there is no reason to think this assumption is violated. See Gelman, King, and Liu, "Not Asked or Not Answered," for further discussion of the application of multiple imputation to the problem of missing questions in independent cross-sectional surveys.

109. The imputation procedures were implemented using the Amelia software package.

106. Gary King, James Honaker, Anne Joseph, and Kenneth Scheve, "Analyzing Incomplete Political Science Data: An Alternative Algorithm for Multiple Imputation," *American Political Science Review* 95 (2001): 49–69; Joseph L. Schafer, *Analysis of Incomplete Multivariate Data* (London: Chapman & Hall, 1997); J. Rodrick Little and Donald Rubin, *Statistical Analysis with Missing Data* (New York: Wiley, 1987); Donald Rubin, *Multiple Imputation for Nonresponse in Surveys* (New York: Wiley, 1987).

algorithm for missing data problems.¹¹⁰ The final data sets contain completed observations equal to the actual number of individuals in the two combined surveys. Also, all data sets contain the same non-imputed information; they differ only in the imputations for missing data.

The second step in our multiple-imputation analysis was to run an ordinary least squares regression of *Unemployment Spending* on *Religiosity* and the control variables described above separately on each of the ten final data sets. The last multiple-imputation step was to combine the ten sets of estimation results to obtain a single set of estimated parameter means and variances. The single set of estimated means is simply the arithmetic average of the ten different estimation results. The single set of estimated variances is more complicated than a simple average because, as mentioned above, these variances account for both the ordinary within-sample variation and the between-sample variation due to missing data.¹¹¹

We report the multiple imputation coefficient estimates for our baseline specification in the first column of Table 4. Our results indicate a significant negative partial correlation between *Religiosity* and *Unemployment Spending*. The magnitude of the correlation is relatively large. A 1-unit increase in the *Religiosity* variable is associated with a decrease in response to the spending question equivalent to one third the difference in spending opinions between employed and unemployed respondents. This is consistent with the religious “coping effect” hypothesis—that religious individuals are less supportive of social insurance programs. These results for the 1930s are remarkably consistent with those documented in a

110. King, Honaker, Joseph, and Scheve, “Analyzing Incomplete Political Science Data”. In this analysis, the imputation model was multivariate normal with a slight ridge prior.

111. See *ibid.*, and Schafer, *Analysis of Incomplete Multivariate Data* for a complete description of these variances. Another potential problem with the Gallup surveys is that they were conducted using quota control sampling rather than probability sampling methods. Adam Berinsky, “American Public Opinion in the 1930s and 1940s: The Analysis of Quota-Controlled Sample Survey Data,” (mimeo, 2005; version available online at <http://web.mit.edu/berinsky/www/QCS.pdf>; last viewed 2 Oct. 2006), discusses the methodology of these early surveys and the problems that these methods may generate for various types of analyses. For individual-level regression analyses like those conducted in this section, the recommended method for dealing with potential biases from non-representative quota samples is to control for those demographic variables that may influence sample selection. See also Andrew Gelman, “Struggles with Survey Weighting and Regression Modeling,” (mimeo, 2005; available online at <http://polmeth.wustl.edu/retrieve.php?id=565>; last viewed 2 Oct. 2006). For example, quota samples are known to have undersampled women and therefore sex should be controlled for in the regression analyses. As discussed above, our baseline analysis includes a fairly full set of demographic controls including sex, age, race, and wealth. Moreover, in the robustness checks below, we include a comprehensive set of control variables including indicators for region, occupation, and living in an urban area.

Table 4. Determinants of Support for Unemployment Relief Spending

Regressor	Multiple Imputation Estimates	
	<i>Unemployment Spending</i>	
<i>Religiosity</i>	−0.060 (0.023) 0.020	−0.058 (0.022) 0.019
<i>Catholic</i>	0.073 (0.105) 0.503	0.039 (0.104) 0.717
<i>Protestant</i>	−0.104 (0.075) 0.191	−0.079 (0.078) 0.335
<i>Wealth</i>	−0.224 (0.015) 0.000	−0.197 (0.014) 0.000
<i>Unemployed</i>	0.163 (0.066) 0.019	0.166 (0.066) 0.019
<i>Female</i>	0.018 (0.026) 0.486	0.026 (0.026) 0.313
<i>Age</i>	−0.001 (0.001) 0.582	0.000 (0.001) 0.794
<i>White</i>	0.047 (0.165) 0.777	0.052 (0.166) 0.756
<i>Roosevelt</i>		0.348 (0.028) 0.000
Constant	2.401 (0.185) 0.000	2.068 (0.192) 0.000
Observations	6,197	6,197

Note: This table reports the multiple imputation estimates for the ordinary least squares regression of the dependent variable *Unemployment Spending*. For each estimate, its robust standard error is reported in parentheses followed by the p-value.

previous study we developed using contemporary data from OECD countries.¹¹²

The estimates for the variables *Catholic* and *Protestant* have the expected signs, positive and negative respectively, but are not statistically significant. There is no evidence in this data that Catholics and

112. Scheve and Stasavage, “Religion and Preferences for Social Insurance.”

Protestants have systematically different unemployment spending preferences relative to respondents who are neither Catholic or Protestant, controlling for levels of religiosity, unemployment status, and other demographic characteristics. Although this would be inconsistent with the economic beliefs argument outlined above to the extent that Catholics and Protestants held systematically different economic beliefs, it is once again consistent with the individual-level survey results reported in our previous study based on data from OECD countries.¹¹³ The evidence, however, is not completely inconsistent with the economic beliefs argument as the difference between Catholics and Protestants is in the hypothesized direction and statistically significant at the 0.05 level.¹¹⁴

The estimates for the other control variables are generally consistent with expectations. *Wealth* is negatively correlated with preferences for increased spending while *Unemployed* is positively correlated. These two variables have the strongest substantive influence on the dependent variable which is consistent with both our hypothesis about the “coping effect” of religion and with the existing literature’s emphasis on the role of individual economic position and economic risk in determining preferences for social insurance. There is not, however, evidence in this data of a significant correlation between sex, age, and race and unemployment spending policy opinions.

To evaluate the robustness of the correlation between *Religiosity* and *Unemployment Spending*, we estimated several alternative specifications. First, one potential objection to our analysis is that the correlation between religiosity and preferences about social spending is due to how political elites have combined these issues rather than due to the coping mechanism we have emphasized in this article. For example, religious individuals may be less supportive of social spending because they are influenced by the political right with which they identify for religious reasons (e.g., support of prohibition), regardless of their views on economic policies such as social insurance spending. Given this possibility, it is potentially useful to identify whether more religious individuals are less

supportive of social insurance spending controlling for their political ideologies. Although the Gallup surveys do not inquire about left-right political ideology or partisanship, they did ask respondents to identify who they voted for in the 1936 presidential election; for the purpose of this article, we view a vote for FDR in 1936 as a rough measure of left ideology or Democratic partisanship. We report the results of adding this regressor to the baseline specification in column two of Table 4. Importantly, the negative correlation between religiosity and support for increased unemployment spending is almost unchanged controlling for support for Roosevelt.¹¹⁵ In our previous study based on a sample of OECD countries, we employed an arguably better measure of left-right ideology and reported similar results.¹¹⁶ Second, the measure of respondent wealth is based on the perception of the interviewer, which might be subject to numerous biases. We replaced this measure with dichotomous variables indicating whether or not the respondent owned a phone and whether or not he or she owned a car. For both variables, ownership was negatively correlated with preferences for more spending on unemployment relief, but the estimated negative coefficient for *Religiosity* was unchanged in both significance and magnitude.¹¹⁷ Third, we also considered the possibility of bias in our estimates due to the omission of variables that might be correlated with both *Religiosity* and support for generous unemployment assistance programs. For example, there might be important regional variation in both these variables that accounts for their correlation.¹¹⁸ We added a measure for whether the respondent lived in an urban area, a set of regional dummy

115. The obvious problem with this analysis is that to the extent that support for Roosevelt is determined by attitudes toward redistribution and social insurance, it does not make sense to enter this variable in the regression. For this reason, our baseline specification excludes the support for Roosevelt measure.

116. Scheve and Stasavage, “Religion and Preferences for Social Insurance.”

117. We also considered the possibility that the marginal effect of religiosity varied across different levels of income or wealth. We added interaction terms between religiosity and our measures of wealth to the baseline specification. The coefficient estimates for the interaction terms are positive but not statistically significant. It is important to note that although the argument and its formalization presented in the appendix assumes that utility from monetary consumption and “psychic benefits” are not additively separable and thus implies that the psychological benefits of religion are greater for those with lower incomes, the model does not generate any direct predictions about the relationship between religiosity, income, and spending preferences (see equation 7). Even if we assume that economic insecurity is correlated with income, the model does not make unambiguous predictions about the magnitude of the effect of religiosity for different levels of economic insecurity. Thus, the lack of a significant interaction term between religiosity and the wealth measures is not inconsistent with the model.

118. See, for example, Rodden, “Red States, Blue States, and the Welfare State.”

113. Ibid.

114. Note again that differences between Catholics and Protestants may be a function of differences in economic risk not accounted for in our control variables. While we think the mixed results for the economic beliefs effect are interesting, the main point here is that there is evidence of a negative correlation between the religiosity measure and unemployment spending preferences, controlling for denominational membership. We note also that other studies including our own analysis of contemporary social insurance policy opinions in the United States have found systematic differences between Catholics and Protestants (see Kenneth Scheve and David Stasavage, “Religion and Social Insurance: Evidence from the United States, 1970–2002,” [mimeo, 2005; Not available online]).

variables, and indicator variables for whether the respondent was a professional or businessperson, a white-collar worker, or a blue-collar worker. In this specification, there is some evidence of regional effects as well as differences by urbanness and occupation. However, the estimated negative coefficient for *Religiosity* was again virtually unchanged in both significance and magnitude. Fourth, as discussed previously, there were important differences among Protestant denominations in the extent to which they advocated beliefs that discouraged support for generous social insurance policies. For example, Baptist preaching remained generally unsupportive of New Deal legislation throughout the Depression while other denominations like the Northern Methodists became more supportive. Because aggregating all Protestant denominations together could bias our estimate of the correlation between *Religiosity* and *Unemployment Spending*, we constructed three alternative indicators of each respondent's denominational membership: an indicator for Baptists, Methodists, and all other Protestants. We substituted these three measures for the *Protestant* variable and reestimated the regression. None of the three Protestant indicators was statistically significant, and none of the other results including the estimated partial correlation between *Religiosity* and *Unemployment Spending* were changed.¹¹⁹

Overall, the results detailed above offer robust evidence that more religious individuals were less supportive of spending on unemployment relief programs in the 1930s, which is consistent with thesis that religion and welfare state spending are substitute mechanisms for insuring individuals against adverse life events.

6. CONCLUSION

Through the course of this article, we sought to use historical evidence from the early development of the U.S. welfare state to test a general proposition about the relationship between religiosity and the demand for social insurance. Variation in social insurance provision across individual states allows the examination of correlates of policy outcomes in an environment where there is arguably less unobserved heterogeneity than is the case with cross-country analyses. In addition, the availability of quantitative

119. The analysis here provides substantial evidence of a robust correlation between religiosity and unemployment spending preferences, controlling for measured characteristics of respondents. It remains possible that there are unobserved characteristics omitted from the model that could generate biased estimates. Although not available for the 1930s data analyzed here, in "Religion and Social Insurance: Evidence from the United States, 1970–2002," we use parental religiosity in an analysis of contemporary U.S. social insurance policy opinions to address this issue and document further evidence that increasing religiosity decreases support for general social insurance programs.

evidence from an early period of welfare state development allows for investigating the link between religion and social insurance while addressing issues such as "policy feedback," which might otherwise exist for studies comparing levels of religiosity today with current preferences for social insurance provision. We have argued that there is a strong theoretical case for believing that religious individuals will express less of a demand for social insurance because their religious engagement offers personal psychic benefits that partially substitute for social insurance. In early twentieth-century America, the existence of a coping effect of religion, and of its significance for welfare state development, is supported by the frequent emphasis of religious authorities on using faith to seek individual salvation rather than to change society. The "coping effect" of religion can coexist with other effects of religion that have implications for social insurance and redistribution. Based both on aggregate evidence involving workers' compensation legislation, and on individual-level data involving attitudes on unemployment relief, our statistical evidence strongly supports the idea of a negative correlation between religiosity and social insurance in the United States during this period.

A. FORMAL MODEL OF RELIGION AND THE DEMAND FOR SOCIAL INSURANCE

In this appendix, we develop a formal framework to consider two channels through which religion may influence social insurance provision. We begin with a baseline model that considers preferences for social insurance when religion does not enter as a factor. We then expand the model to incorporate the idea that events like unemployment, illness, and workplace accidents have psychic as well as monetary costs, and that religious engagement reduces these psychic costs, thus reducing demand for social insurance. In the final subsection, we expand the model further to consider how our predictions are altered when individuals have varying beliefs about the extent to which individual levels of income depend on effort versus exogenous circumstances. Our "coping effect" of religion continues to hold in this expanded version of the model, but the prediction about the correlation between religiosity and social insurance preferences for a specific denomination will now also depend on beliefs about the importance of effort.

We recognize that our argument about the effect of religiosity on the demand for social insurance can also be expressed intuitively in strictly verbal terms, which is the principal reason we have chosen to present the formal version of the argument in an appendix. We believe, however, that this formalization serves two useful purposes: First, by presenting our model, we can show exactly why the three core

assumptions detailed in Section 2.1 are sufficient for producing our predicted negative effect of religiosity on the demand for social insurance. Second, this presentation of our model allows us to detail how our arguments relate to several recent formal political economy contributions, including articles by Iversen and Soskice and Moene and Wallerstein, who, like us, build on Wright’s model of social insurance.¹²⁰ In addition, we also address recent contributions from Piketty and Benabou and Tirole, who model the effect of beliefs on preferences for redistribution.¹²¹

1. Baseline Model

Our baseline is a simplified version of the model of social insurance Wright proposed.¹²² To focus on the core element of social insurance, we assume that individuals are in either a “good” state or a “bad” state. In the relevant literature, it is most common to consider the good state to represent being employed and the bad state to represent unemployment; however, this distinction between a good and bad state can also refer to a number of other outcomes that can generate a loss of income. Thus, the bad state could also involve being ill and finding it necessary to pay high costs for medical care, or suffering a workplace accident and subsequent loss of earnings, or suffering some event that produces a loss in expected retirement earnings. In this one-period model, individuals begin in either the good or the bad state, and there is an exogenous risk for each individual that at the end of the period they will find themselves in the bad state. Finally, there is a social insurance mechanism by which individuals who end up in the good state can commit to paying taxes that fund a redistributive transfer received by individuals who wind up in the bad state. The question then becomes what level of social insurance (and thus what level of taxes) individuals will prefer to establish at the outset.

In formal terms, we assume that society is composed of n individuals who are identical except for the fact that some people begin in the good state and some begin in the bad state. People in the good state at time 0 have an exogenous probability λ of shifting to the bad state, and people who start off in the bad state have a probability θ of remaining in that state. In the context of a multi-period model, these two transition probabilities describe a Markov process that would converge to a steady state

proportion of individuals in the bad state $u \lambda / (1 - \theta + \lambda)$. In the following section, we consider a single-period model in which the economy has already converged to the steady state and for which λ is assumed to be less than θ .¹²³

People ending in the good state have an income normalized to 1, and they have consumption equal to $c (1 - \tau)$ where τ is the tax rate. People ending in the bad state have no income apart from their social insurance benefit f , and they have consumption $c f$. The choice of the tax level and the benefit level must respect a government budget constraint, where u is the proportion of individuals in the bad state.

$$uf = \tau(1 - u) \tag{2}$$

This implies that the benefit rate can be expressed in terms of u and the tax rate $f (\tau (1 - u) / u) (\tau(1 - \theta) / \lambda)$. We assume that people have a utility function $U(c_i) \ln(c_i)$. A person in the good state at time 0 will prefer a tax level τ that maximizes the following expression.

$$E[U(\tau)] = (1 - \lambda) \ln (1 - \tau) + \lambda \ln \left(\tau \frac{1 - \theta}{\lambda} \right) \tag{3}$$

From this, we can observe that the tax rate maximizing their utility will be simply $\tau \lambda$; thus, the preferred level of social insurance is directly proportional to the level of economic risk. We can use the analogous expression for individuals who begin in the bad state to show that they will prefer choosing a tax rate $\tau \theta$. Under the assumption that $\lambda < \theta$ then individuals who begin in the bad state will prefer a higher level of social insurance provision which is intuitive.

2. Religion and Social Insurance as Substitutes

We now expand the model by incorporating the three assumptions referred to in Section 2.1. In formal terms, individual utility will now depend on two components: standard consumption c and a psychic benefit b .¹²⁴

$$U(c, b) = \ln (c + b) \tag{4}$$

The formulation for the utility function incorporates our third assumption from Section 2.1 that utility

120. Iversen and Soskice, “Asset Theory of Social Policy Preferences”; Moene and Wallerstein, “Inequality, Social Insurance, and Redistribution”; and Wright, “Redistributive Roles of Unemployment Insurance.”

121. Piketty, “Social Mobility and Redistributive Politics”; and Benabou and Tirole, “Belief in a Just World.”

122. Wright, “Redistributive Roles of Unemployment Insurance.”

123. One way of stating this assumption in words is that someone who currently has a job is more likely to be employed in the next period than is someone who is currently unemployed.

124. The advantages and disadvantages of including a psychic benefit directly in a utility function of this sort is discussed by Jean Tirole, “Rational Irrationality: Some Economics of Self-Management,” *European Economic Review* 46 (2002): 633–55. For a related application, see Roland Benabou and Jean Tirole, “Incentives and Prosocial Behavior,” (mimeo, 2004; version available online at <http://ideas.repec.org/p/iza/izadps/dp1695.html>; last viewed 2 Oct. 2006).

from psychic and standard consumption are not additively separable.

In order to incorporate our first and second assumptions that being in the bad state has psychic costs, as well as the idea that religiosity has a positive coping effect, we assume that the psychic benefit is determined by the following state contingent function:

$$\begin{cases} b = 1 & \text{if end up in the good state} \\ b = r & \text{if end up in the bad state} \end{cases} \quad (5)$$

The degree of religiosity r (with $r \leq 1$) is taken to be exogenous, and, for simplicity of exposition, we assume that all individuals have the same level of religiosity (although this can be easily extended to a case of heterogeneous levels of religiosity).¹²⁵

Based on these assumptions, a person who starts off in the good state will now have preferences for taxation as follows:

$$E[U(\tau, r)] = (1 - \lambda) \ln((1 - \tau) + 1) + \lambda \left(\ln \left(\tau \frac{1 - \theta}{\lambda} + r \right) \right) \quad (6)$$

If we take the first order condition for the above expression with respect to τ and simplify, we obtain the following expression for the preferred tax rate, given the level of religiosity r :

$$\tau = 2\lambda + r\lambda \frac{(\lambda - 1)}{(1 - \theta)} \quad (7)$$

Here, we see that the preferred tax rate is increasing in the economic risk parameter λ ; in addition, preferred taxation is strictly decreasing in the degree of religiosity. As a result, the “coping effect” will lead religious individuals to prefer a lower level of social insurance provision. We can perform the same exercise for individuals who begin in the bad state, concluding that their preferred level of taxation will be simply $\tau = 2\theta - r\lambda$.¹²⁶

3. Religion and Economic Beliefs

We next consider a case where the two transition probabilities λ and θ are determined by the following

125. In Scheve and Stasavage, “Religion and Preferences for Social Insurance,” we explored the possibility that individuals choose their level of religiosity under the constraint that greater time spent on religion leaves less time for other leisure activities, and we obtained similar theoretical predictions to those reported here.

126. One would also continue to observe a preferred level of social insurance that is decreasing in the level of religiosity even if individuals were partially altruistic, if one followed the proposal in Anthony Atkinson, “Income Maintenance for the Unemployed in Britain and the Response to High Unemployment,” *Ethics* (1990): 569–85, for modeling altruism.

relationship where α is an exogenous parameter, x represents an individual’s level of effort and β is an exogenous parameter that determines the extent to which individual effort determines the probability of either remaining in the good state or of shifting to the good state.

$$\lambda = \alpha - \beta x \quad (8)$$

$$\theta = (1 - \alpha) - \beta x \quad (9)$$

This setup is based on Piketty, who considers how individuals learn about the importance of effort for determining individual income, based on past outcomes.¹²⁷ Because individuals are using a unidimensional outcome (income) to learn about a two dimensional process (α , β), they will learn the correct transition probabilities (λ , θ) over time; however, they will not learn the true values of α and β with certainty.¹²⁸ Another interesting possibility that Benabou and Tirole pursue is that the belief parameters (α , β) are an endogenous outcome that depends on efforts by individuals to motivate themselves via the “belief in a just world.”¹²⁹

In what follows, we suggest that the belief parameters (α , β) may be influenced by religiosity; however, we take the parameters to be exogenous. We then concentrate our analysis on demonstrating how the “coping effect” of religiosity still operates even in the presence of this “economic beliefs effect.” The belief parameters could arguably be linked to religiosity but exogenous if an individual’s view of the importance of effort is influenced by their particular religious (or non-religious) upbringing, and this belief cannot subsequently be easily modified.

We also assume that $0 < \alpha < 0.5$, implying there is some inequality of opportunity in society, though the extent of this remains uncertain (with a lower α implying greater inequality of opportunity). In order to simplify the presentation (without loss of generality), it is assumed that the effort choice is binary $x \in \{0, 1\}$ and $\beta < \alpha$ in order to ensure that the transition probabilities each remain between 0 and 1. The parameter x could represent a number of factors depending on the context. In the case of unemployment, x could represent the extent to which people work hard to keep a job or search earnestly for a job if they are currently unemployed. The timing of the game now proceeds as follows: first, a tax rate is chosen; next, individuals choose their level of effort based on their observation of the tax rate τ , their beliefs about the mobility parameters α and β , and a linear cost of effort c (which applies when $x = 1$); finally,

127. Piketty, “Social Mobility and Redistributive Politics.”

128. On this issue, see Christophe Chamley, *Rational Herds: Economic Models of Social Learning* (Cambridge: Cambridge University Press, 2004).

129. Benabou and Tirole, “Belief in a Just World.”

individuals learn whether they end the period in the good or the bad state and individuals receive their payoffs.

We can draw two principal conclusions from the above model. First, individuals with a higher estimate of β will prefer lower levels of social insurance. This is because the higher the level of the social insurance benefit, the lower the likelihood that individuals will have an incentive to exert positive effort, and a low level of effort has negative consequences by tightening the government budget constraint. As a consequence, if members of a particular religious tradition believe that income depends mostly on effort, we should thus observe a negative correlation between the presence of this particular tradition and social insurance. Second, when we allow for this “economic beliefs effect” by holding β constant, we continue to observe a “coping effect,” which implies a lower demand for social insurance on the part of religious individuals. To see this, beginning with the last stage of the game, first consider the individual decision problem regarding effort $x \in \{0, 1\}$. An individual who begins in the good state will choose $x = 1$ if the inequality in (10) is satisfied. In this expression, the social insurance benefit will need to satisfy the budget constraint $f \tau (\alpha + \beta_{xB}) / (\alpha - \beta_{xG})$, where $x_B^?$ and $x_G^?$ refer to the expected average levels of effort for those who begin in the bad state and the good state respectively.

$$(1 - \alpha + \beta) \ln(2 - \tau) + (\alpha - \beta) \ln(f + r) - c > (1 - \alpha) \ln(2 - \tau) + \alpha \ln(f + r) \quad (10)$$

This simplifies to:

$$\beta \ln(2 - t) - \beta(f + r) - \alpha \ln(\tau + r) > c \quad (11)$$

The left half of this inequality represents the expected income gain from choosing a higher level of effort; the right half represents the cost of effort. The analogous inequality for an individual who begins in the bad state is:

$$\beta \ln(2 - t) - \beta \ln(f + r) > c \quad (12)$$

For both those who begin in the good state and those who begin in the bad state, intuitively, they are more likely to choose effort $x = 1$ the greater the extent to which they think “effort pays” (a higher

estimate of β), the lower the tax rate τ , and the lower the social insurance benefit f . In addition, the magnitude of the disincentive effect created by the social insurance benefit will be increasing in β .

With regard to the choice of the tax rate, when we consider the preferences of individuals who begin in the good state, they know that if all individuals choose effort $x = 0$, their expected utility would then be given by:

$$\begin{aligned} E[U(\tau, r)|x = 0] &= (1 - \alpha) \ln(2 - \tau) + \alpha \ln(\tau + r) \end{aligned} \quad (13)$$

This leads to the following preferred tax rate:

$$\tau = 2\alpha - r(1 - \alpha) \quad (14)$$

In this expression, the tax rate continues to be decreasing in the degree of religiosity r (recall $\alpha < 0.5$).

However, if individuals who begin in the good state instead anticipate that all individuals will choose effort $x = 1$, their expected utility would be:

$$\begin{aligned} E[U(\tau, r)|x = 1] &= (1 - \alpha + \beta) \ln(2 - \tau) \\ &+ (\alpha - \beta) \left(\ln \left(\tau \frac{\alpha + \beta}{\alpha - \beta} + r \right) \right) \end{aligned} \quad (15)$$

This leads to the following preferred tax rate, which continues to be decreasing in the degree of religiosity:

$$\tau = \frac{r(\alpha(\alpha - 1) + \beta(\beta + 1) - 2\alpha\beta) + 2(\alpha^2 - \beta^2)}{\alpha + \beta + 2\alpha\beta} \quad (16)$$

Finally, demonstrating that individuals who begin in the good state will be better off if others exert effort is a relatively straightforward task. To demonstrate this, consider expression 15 holding an individual’s own effort constant and allowing the effort level of others to vary. Positive effort by others leads to a looser budget constraint allowing higher social insurance provision than would otherwise be the case and/or a lower tax rate.