

# Gender and Religiousness: Can Socialization Explanations Be Saved?<sup>1</sup>

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It has long been assumed in sociology that gender differences in religiousness are a product of differential socialization. Yet, there is little empirical support for this assumption. To address this gap in the literature, this study draws on an extensive investigation of the relationship between differential socialization and differential religiousness. Using the American General Social Surveys and the World Values Survey, this article analyzes the relationship between traditional gender attitudes and gender differences in religious beliefs and behavior. Surprisingly, these data show no relationship between the two. Therefore, a new set of hypotheses based on an alternative model involving risk preference is proposed. Results strongly support this new approach. Women are more religious than men to the extent that being irreligious constitutes risk-taking behavior. This model is able to predict differential religiousness in a wide variety of religious and cultural settings. Implications of these findings are discussed.

For at least 30 years, gender has been among the most popular topics in the social-scientific study of religion. Nevertheless, the most significant and enduring question about gender and religion has languished: What accounts for the apparently “universal” gender difference in religious commitment?

An enormous literature has been generated on whether religion, and

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Christianity in particular, perpetuates traditional gender roles and inequality (e.g., Richardson 1988; Stover and Hope 1984; and Dhruvarajan 1988). Nearly as much has been published about women's roles within religious organizations, especially about gender bias vis-à-vis leadership positions in mainline churches (e.g., Ebaugh, Lorence, and Chafetz 1996; Ammerman 1990; Carroll, Hargrove, and Lummis 1983). And feminist theological issues have received only slightly less attention (e.g., Schoenfeld and Mestrovic 1991; Neitz 1990; Rhodes 1987). But, when Walter and Davie (1998) published a review of the literature on gender and religiousness, they found it to have been a largely ignored topic. Though this literature is slim, there has been complete agreement that, whatever the dimensions of their religious differences, women are more religious than men because of *differential gender socialization*.

Recently, Miller and Hoffmann (1995) reconceptualized the question. They shifted from asking why women are more religious than men to asking why men are less religious than women. This led them to focus on men rather than women, and they recognized men dominate the commission of "irresponsible," short-sighted, risk taking. They then suggested that gender differences in religiosity are related to differences in risk preferences—that to be irreligious is to risk divine punishment. This view quickly gained considerable support (Forthun et al. 1999; Sherkat and Ellison 1999; Stark 1998, 2002; Whitmeyer 1998). It is well-known that men have a greater propensity to engage in risky behavior and that this difference in risk preference has long been considered the best explanation for gender differences in crime and delinquency, as well as other "risky" behaviors such as drinking, drug use, smoking, adultery, and the like (Gottfredson and Hirschi 1990; Gove 1985). Strong gender-based risk preferences have even been observed in financial decisions concerning business practices and investments, with males consistently willing to take greater risks (Jianakoplos, Ammon, and Bernasek 1998; Powell and Ansic 1997). In suggesting that irreligiousness be added to the list of risky behaviors, Miller and Hoffmann (1995) noted one would naturally expect males to be more irreligious than females.

However, the observation that gender differences in religiousness are similar to gender differences in other forms of risky behavior does not constitute an explanation, but merely expands the phenomenon to be explained. Indeed, in their original paper, Miller and Hoffmann (1995) did not actually offer a specific explanation of why these risk preferences are different for males and females, but simply invoked the standard assumption that it is likely due to differential socialization. Unfortunately, as those familiar with the literature know, an immense amount of competent research conducted over many decades has failed to discover any important link between socialization and gender differences in either crim-

inality or religiousness. Partly in reaction to these failures, a growing literature suggests that gender differences in risk preference have a strong biological component (Daly and Wilson 1997; Wilson and Daly 1985; Kanazawa and Still 2000; Gove 1985). This led Stark (2002), in a recent comprehensive review of the literature on this topic, to reluctantly conclude that physiological differences related to risk preference appear to offer the only viable explanation of gender differences in religiousness.

However, the case for differential socialization might have been closed too soon, leaving some very plausible research hypotheses untested. Several of these involve possible recent changes in gender socialization, which, if they have occurred, ought to diminish gender differences in irreligiousness and, indeed, in risky behavior in general. Furthermore, a major defect in all attempts to trace such things as gender differences to differential socialization may lie in the fact that virtually all such studies are limited to one society, usually the United States. This may sufficiently reduce the actual variations in socialization so that, in combination with the spillovers of the modal forms of socialization, only the crudest and most extreme socialization effects can be detected. That is, those aspects of differential socialization that produce the substantial gender differences in criminal and religious behavior may be too subtle to be adequately measured by the rather blunt research tools available to social science. Hence, until cross-cultural explorations of the socialization bases for the gender-religiousness relationship have been exhausted, it seems premature to reject the possibility that socialization holds the explanation. Therefore, in this article we re-examine the socialization literature more carefully in order to formulate specific and compelling hypotheses linking the gender and religiousness effect to differential socialization. We test each of these hypotheses using the best data available. However, before formulating new hypotheses, it will be informative to briefly summarize prior findings.

#### PRIOR ATTEMPTS TO EXPLAIN GENDER DIFFERENCES IN RELIGIOUSNESS

Although it has very seldom been the primary focus of research, the fact that women are more religious than men is taken for granted. Virtually every quantitative study of religious behavior includes sex as a control variable—usually with little or no explanation as to why it always has an independent effect. Even when religion researchers give extended attention to gender effects, they nearly always are content to assume that readers need not be told these are caused by socialization. For example, although gender effects were so significant as to appear in the title of their fine article, “Religious Consolation among Men and Women: Do Health

Problems Spur Seeking?" Ferraro and Kelley-Moore (2000, p. 232) are silent as to *why* "women are more likely than men to seek religious consolation." Even when actual mention is made as to why, essentially nothing is said. Thus, when women were found to be more likely than men to "come forward" at Billy Graham's revivals (Colquhoun 1955) and Catholic women were found to be almost twice as likely as men to go to confession (Fichter 1952), both studies simply stated that, of course, women are raised to be more religious. Even substantial reviews of the literature say very little beyond attributing the gender differences to differential socialization (Argyle and Beit-Hallahmi 1975; Beit-Hallahmi 1997; Bensen, Donahue, and Erickson 1989).

That social scientists have settled for invoking "socialization," with little effort to say how and why these specific socialization effects occur, is not too surprising because no one doubts that a vast array of male and female behavioral differences do stem from the obvious fact that males and females *are* raised differently. As to religion and socialization, the traditional argument is that women are raised to be nurturing and submissive and that these qualities make religious acceptance and commitment more likely (Mol 1985; Suziedalis and Potvin 1981). This line of reasoning makes good intuitive sense and dominates the discussion of gender differences in religiousness. After all, there is little doubt that females are socialized with the above characteristics, and studies have shown that these characteristics are associated with greater levels of religiousness (McCready and McCready 1973; Thompson 1991). Similarly, the role of mother is believed to subsume religiousness since it involves such activities as teaching the children morality and caring for the physical and spiritual well-being of other family members (Glock, Ringer, and Babbie 1967; Walter and Davie 1998).

This relationship is seen as recursive, with traditional gender roles leading to greater religiousness and religious teaching lending ideological support to traditional gender roles. Thus, while females are socialized to be submissive, passive, and nurturing, thus predisposing them to greater levels of religiousness, traditional religious institutions are seen as contributing to the legitimacy of this type of differential socialization (Chalfant, Beckley, and Palmer 1994). This latter issue has been the focus of most feminist scholarship on this topic, with a great many studies focusing on religion's historical contribution to the subordination of women (see, e.g., Verdesi 1976; Crabtree 1970).

Although there is little doubt that religious traditions have played an important role in teaching and promoting cultural definitions of gender roles, the claim that traditional gender role socialization leads to greater religiousness among females has not fared well when put to the test. For example, research has failed to find a relationship between child rearing

and greater female religiousness (de Vaus and McAllister 1987; Steggarda 1993). Furthermore, substantial gender differences in religiousness have persisted even after controlling for many aspects of differential socialization (Cornwall 1988).

A variant on the socialization theme has been proposed by several researchers who argue that women are more religious than men because they do not work outside the home and, therefore, have more free time to pursue religious interests (Azzi and Ehrenberg 1975; Iannaccone 1990; Luckmann 1967; Martin 1967). Furthermore, it has been argued that the development of a gender-based division of labor, which feminizes family duties for women and masculinizes workplace duties for men, produces higher levels of female religiousness since religion falls under the general sphere of family matters (Douglas 1977).

More generally, the above argument can be subsumed under the perspective of gender differences in social power (Turner 1991). This perspective focuses on the relative lack of social power experienced by women in society. This can be seen as influencing religiosity in several distinct ways. First, as discussed above in terms of differential socialization, a lack of social power leads to a sense of learned helplessness or submissiveness. Second, also as discussed above, a lack of social power is associated with lower workforce participation, which has been seen as related to greater female religious participation. Finally, women's subordinate social role could lead to greater religiosity as a means of comfort to compensate for blocked aspirations and mistreatment. Once again, though, empirical support is lacking. Studies, for example, have shown that career women are as religious as housewives, and both are far more religious than their male counterparts (Cornwall 1988; de Vaus 1984; Stark 1992). If social power were related to differential levels of religiousness, one would expect female levels of religiosity to vary based on the level of acceptance of traditional gender roles and female workforce participation. Empirical studies have failed to find either relationship.

Several more recent empirical studies have added to our understanding of gender differences in religiousness, although they leave unanswered the role socialization plays in the equation. Thompson (1991), using a femininity-masculinity scale, found a strong relationship between religiousness and feminine personality characteristics. Respondents who scored high on the feminine side of the scale (Bem Sex Role Inventory) tended to be more religious, regardless of their sex. These results would seem to support a socialization argument, and it appears that Thompson interprets them this way, discussing gender orientation in terms of social and cultural influences. However, his study only measures personality characteristics and does not explore their origin.

Similarly, Sherkat (2002) recently found a strong relationship between

gender orientation and religiousness. His study concludes that heterosexual females and homosexual males are far more religious than heterosexual males or homosexual females. Thus, results are consistent with Thompson's earlier study, and whether or not they support a socialization argument hinges on whether or not gender orientation is the product of socialization.

Finally, Miller and Hoffmann (1995) focused their analysis on risk preferences. As discussed above, this study measured the relationship between risk preference and religiousness. The rationale is that, just as secular norms assign considerable risk to criminal behavior, religious doctrines specify serious consequences for irreligion. Failure to conform in terms of beliefs and practices, or the commission of "sins," can result in serious consequences, such as going to hell. Therefore, the person who rejects his or her religious obligations, or who delays accepting them, is taking a risk.

When viewed from this perspective, the parallels between irreligious and criminal behavior are striking. Criminologists have long noted that criminals tend to be risk takers who lack the self-control needed to defer gratification (Gottfredson and Hirschi 1990; Keane, Gillis, and Hagan 1989). If irreligious behavior represents a form of risk taking, and the decision by many to "delay" becoming religious until later in life is driven by a desire for instant gratification, then the primary features of non-religious and criminal behavior are the same. Moreover, as noted above, gender differences in these two areas are strikingly similar.

Miller and Hoffmann found strong empirical support for their claims—the risk averse were more religious—and the effects held *within* each gender, just as in Thompson's study. Also like Thompson, Miller and Hoffmann did not explore why women are more risk averse than men, but merely assumed the origin can be located in differential socialization. Again, such an assumption is reasonable since a variety of studies support the view that gender-based risk differences are at least partly due to differential socialization. Past research suggests there are two distinct ways males are socialized as risk takers and females are socialized as risk averse. First, boys have typically been encouraged to take risks—to be courageous and adventurous, while girls have been encouraged to be passive and gentle (Graney 1979; Veevers and Gee 1986). Second, occupations that involve physical risk have historically been defined as "male" occupations (Barry 1987; Blau and Ferber 1985). Thus, both socialization patterns and gender-role patterns promote risk taking among males but not among females.

Thus, to the extent that feminine personality characteristics and risk aversion are products of differential socialization, Thompson's (1991) and Miller and Hoffmann's (1995) studies can be seen as providing some

empirical support for the role socialization plays in producing gender differences in religiosity. However, relying on these two studies to provide empirical support for the importance of socialization is not satisfying for three reasons. First, neither study directly measures or tests the effects of socialization. The authors merely assume that it is the underlying cause. Second, those studies that *have* focused on socialization have failed to produce convincing results. And third, there is mounting evidence based on biological studies of hormone effects (see Udry 1988, 2000; Collaer and Hines 1995; Booth and Dabbs 1993; Dabbs and Morris 1990; Julian and McKenry 1989) that testosterone levels are strongly related to impulsive, risky behavior. Therefore, it does not seem appropriate to consider these two studies, in particular the risk and religion study, as supporting a purely socialization-based explanation of gender differences in religiousness.

At this point, it seems evident that, although the existence of a gender and religion effect is well-established and has been extended to many other societies and eras in Stark's recent paper (2002), the actual research literature attempting to demonstrate socialization effects is very slight. If we assume that male irreligiousness is simply another aspect of the risk-taking behavior that includes crime, then the socialization literature is far more extensive but just as disappointing (Gottfredson and Hirschi 1990; Wilson and Herrnstein 1985). It was for this reason that Stark turned to physiology as offering a more promising explanation. But, as noted earlier in this essay, he may have done so prematurely. Perhaps the socialization explanation still can be saved.

#### RESEARCH STRATEGY

It is important to note what this study is not. It is not a study of female religiosity or of women's role in the church. There are many excellent studies in the field of sociology of religion and gender studies that address those topics. We are, instead, interested in the relative difference in religious levels between males and females. In this regard, there are relatively few empirical studies. Instead, there appears to be the widespread acceptance of an implicit assumption that differential socialization is responsible for these differences.

Although little systematic theorizing has been done on this topic, our review of the literature suggests three distinct ways in which gender-specific socialization leads to greater levels of differential religiousness. The first involves personality characteristics. Females are socialized to be more passive and nurturing, characteristics associated with greater levels of religiousness. The second involves traditional gender roles. Women are socialized into the role of mother, family caretaker, and so on, which are

seen as subsuming religiousness. Third, women are raised in societies where they are denied social and economic power, which is seen as leading to greater religiousness by encouraging female passivity and submissiveness (a variation of the first explanation), forcing women to accept the role of mother and family caretaker (a variation of the second explanation), and increasing religion's appeal as a provider of social and emotional support to deal with blocked social and economic aspirations (a variation of classic deprivation theory).

These three explanations are obviously related but are also conceptually distinct. In particular, the first two explanations can be thought of as socialization arguments. Certain personality characteristics, as well as acceptance of traditional gender roles, are taught and encouraged as part of the socialization process. The third explanation, however, is less concerned with socialization than with characteristics of a given society. Specifically, societies vary in the degree to which they enforce a traditional gender-based division of labor, regardless of the degree to which women in those societies accept, or are socialized into, those roles. Thus, the focus of the first two explanations is the individual, while the focus of the third is the society. This suggests that empirical research needs to focus on both individual and societal-level characteristics.

The implication of the first two explanations is that if socialization leads to gender differences in religiousness, then we should be able to observe this influence by looking at individual variation in the degree to which women are socialized into traditional gender roles. Those who are less accepting of traditional gender roles should exhibit less differences in religiousness vis-à-vis males. The implication of the third explanation is that there is variation in the degree to which societies empower women, and this variation leads to gender-based differences in religiousness. Thus, societies that are more egalitarian should exhibit lower levels of gender differences in religiousness. Although these two concepts are clearly related in that more traditional societies have a vested interest in socializing women into traditional roles, they are still conceptually discrete issues and should be analyzed separately.

As discussed above, past empirical studies have failed to find a consistent relationship between differential socialization or empowerment and differential religiousness. This lack of support is quite surprising since gender differences in socialization provide such a powerful tool for understanding other gender-related differences. It is even more surprising in that recent studies have linked certain gender-specific personality characteristics (e.g., risk aversion, passivity, etc.) to gender differences in religiousness. There appear to be only two possible solutions to this mystery. One is that past empirical studies have been flawed and that there really is a relationship between gender-based socialization and gender differ-

ences in religiousness. Or the root cause of those relevant feminine characteristics related to religiosity is to be found outside the socialization process. The primary purpose of our research is to conduct the most extensive and broad-based analysis of gender differences in religiousness to date, to assess the relative merit of the socialization argument, and by implication, whether or not we need to look elsewhere for the root cause of gender differences in religiousness.

In order to better assess the relationship between differential socialization and gender differences in religiousness, we improve on past studies in a variety of ways. First, we expand the research in terms of sample, focusing on a wide variety of societies and religious traditions. Second, we expand the level of analysis, considering both individual-level and societal-level influences. Third, we systematically distinguish between different conceptual issues, considering both socialization and female empowerment issues, each from a cross-national and interreligious perspective.

A variety of independent variables are used. In terms of traditional gender role attitudes, we consider attitudes that tap support for a traditional gender-based division of labor where men work outside the home and women raise families. We also consider attitudes toward single motherhood and abortion as measures of a liberal, as opposed to traditional, orientation. In order to test for the importance of gender differences in power and economic opportunity, we consider societal-level variables that include fertility rate, percentage females in the workforce, and an index developed by the United Nations to measure female empowerment.

In terms of measuring religiousness, we consider a variety of variables that tap a wide range of religious beliefs and behavior. These include church attendance, belief in life after death, denominational loyalty, frequency of prayer, belief in God, belief in the authority of the Bible, and self-appraised level of religiousness. Of course, these variables are modified for different religious traditions. For example, when focusing on Jewish respondents, we consider a variety of other measures of religiousness including keeping kosher and lighting Sabbath candles. Similarly, when focusing on Eastern religions, Judeo-Christian-specific measures of religiousness are omitted. Again, using as many measures as possible permits the fairest test of the role differential socialization plays, since it is possible that it might affect one form of religiosity, for example, prayer, but not others.

Because of the breadth of our analyses, we use a variety of data sources. First we use the 1972–98 American General Social Survey to explore American attitudes in depth. We then use the World Values Survey, which contains relevant data on 54 nations. Finally, we also use data from the National Jewish Population Survey.

TWO NEW SOCIALIZATION HYPOTHESES

We begin with the assumption that if gender differences in religiousness are the result of differential socialization, then if sex role socialization becomes less differentiated, as it seems to have in the United States over the past generation, the religious differences should decline too.

*HYPOTHESIS 1.—Gender differences in religiousness should be smaller in the United States today than they were a generation ago.*

Past research has consistently shown that the United States has experienced a liberal trend in attitudes toward gender roles over the past 30 years. Mason and Lu (1988) found growing support for women's rights issues over the 1970s and 1980s, and Smith (1990) notes a consistent liberal trend with regard to feminist issues from the 1970s to 1990. Furthermore, this same trend has been found among conservative Christians (Petersen and Donnenwerth 1998), and cohort analyses have shown that this trend represents both period and cohort effects (Miller and Nakamura 1997; Firebaugh 1992). Thus, the trend away from support for traditional gender roles has been clear and consistent in recent years. Does this trend correspond to a decrease in gender differences in religiousness?

Table 1 is based on the General Social Surveys. We know of no theoretical reason, or past research results, that would suggest other demographic variables that either increase or decrease gender differences in religiousness. Nevertheless, in preliminary analyses we did control for differences in education, age, and income. The substantive results remained unchanged. Therefore, for clarity and ease of interpretation, in this and all subsequent analyses, we merely present gamma-based correlations that directly test the proposed hypotheses.

Church attendance was the earliest item on religiousness asked by the GSS (in 1972, the first GSS conducted). There was a strong gender effect, but precisely the same effect exists in the 1998 survey. In 1973, the question on belief in life after death was asked for the first time. Women were more likely to believe. The gender difference is the same 25 years later. When first asked in 1983, women were much more likely than men to report frequent prayer. In 1998, the gender difference remains undiminished. The same lack of decline holds for denominational loyalty. These results fail to support hypothesis 1.

Perhaps socialization has not changed sufficiently in a generation to show up in table 1. A second possibility is that those Americans who do not hold traditional sex role attitudes may differ from those who do:

*HYPOTHESIS 2.—Gender differences in religiousness will be significantly smaller among Americans with less traditional sex role attitudes.*

Table 2 is based on the 1998 General Social Survey. Sex role attitude was measured by the item: "Most men are better suited emotionally for

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TABLE 1  
GENDER AND RELIGIOUSNESS OVER A GENERATION  
(UNITED STATES)

Religiousness Measure	Year ( <i>t</i> 1) (correlation)	Year ( <i>t</i> 2) (correlation)
Church attendance .....	1972 (.19**)	1998 (.18**)
Belief in life after death ...	1973 (.12*)	1998 (.12**)
Denominational loyalty <sup>1</sup> ...	1974 (.19**)	1998 (.17**)
Frequency of prayer .....	1983 (.37**)	1998 (.33**)

SOURCE.—General Social Surveys. Correlations (gamma) with gender.

NOTE.—Correlations (gamma) with gender.

<sup>1</sup> Survey question is “Would you consider yourself a strong [Lutheran, Catholic, Methodist, etc.] or not very strong?”

\*  $P < .05$ .

\*\*  $P < .001$ .

politics than are most women.” Those who agreed were classified as traditionalists and those who disagreed, as liberals. The results show that, if anything, the gender differences in religiousness are stronger among the liberals. Once again, results suggest that our hypothesis based on a traditional socialization argument must be rejected.

Of course, these results are based on one nation, and, as mentioned, it may be difficult to adequately measure variations in gender socialization within one society. Perhaps the socialization explanation still can be saved via cross-national research.

TESTING THE ROLE OF DIFFERENTIAL SOCIALIZATION CROSS-NATIONALLY

The 1995–97 World Values Surveys (WVS) are based on national surveys conducted in 54 nations. The interviews asked similar questions in each nation, translated into the local language(s), although some items were omitted in some nations. Our first use of these data is to retest hypothesis 2. Table 3 is based on more than 73,000 respondents. Sex role attitudes were measured by responses to the question: “Do you think that a woman has to have children in order to be fulfilled or is this not necessary?” Traditionalists were those who responded that a woman needed children to be fulfilled; liberals were those who thought this was not necessary. Five measures of religiousness reveal very significant gender differences within both the traditionalist and liberal groups. As to magnitude, if

TABLE 2  
GENDER, RELIGIOUSNESS, AND SEX ROLE ATTITUDES  
(UNITED STATES)

	Traditionalists	Liberals
Frequency of prayer .....	.34*	.42*
Belief in life after death ...	.11	.28*
Church attendance .....	.26*	.31*
Denominational loyalty ....	.24*	.26*
N .....	194	677

SOURCE.—General Social Survey 1998.

NOTE.—Correlations (gamma) with gender.

\*  $P < .001$ .

anything there is a slight tendency for gender differences to be greater among the liberals. Once again hypothesis 2 is rejected.

But, let us now take a more conventional cross-cultural approach to these data. If differential socialization, and more specifically differential social power, is the basis for the gender differences, then the religious differences between women and men ought to be proportional to the extent of differential socialization and differential female empowerment.

**HYPOTHESIS 3.**—*The gender effects on religion ought to be greater in societies wherein more traditional sex roles prevail and women's primary roles tend to be limited to home and family, than in societies where there is far greater gender equality.*

The dependent variable is the correlation (gamma) between gender and the percentage who identified themselves as “a religious person.” Five measures of sex roles are available. These variables are also useful in testing the relationship between social power and female religiousness. Turner (1991, p. 236) defines social power as the degree to which women have economic independence and also have control of their bodies and reproductive systems. We, therefore, consider a variety of variables that are directly related to these issues, as well as a United Nations measure of female empowerment, to test the relationship between female empowerment and gender differences in religiousness.

Results are presented in table 4. The first measure is the percentage of persons in each nation who answered “approve” when asked: “If a woman wants to have a child as a single parent but she doesn’t want to have a stable relationship with a man, do you approve or disapprove?” If the gender-religiousness relationship is rooted in traditional sex role socialization, then we ought to expect a strong, negative correlation, that is, the gender difference ought to be larger where people disapprove of this sort of “liberated” behavior. But this hypothesis is not merely rejected, it is contradicted. The correlation is very strong and positive. Gender differ-

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TABLE 3  
GENDER, RELIGIOUSNESS, AND SEX ROLE ATTITUDES (“WORLD”)

	Traditionalists	Liberals
Belief in God .....	.28*	.32*
Belief humans have souls ...	.26*	.33*
Belief in life after death .....	.16*	.23*
Church attendance .....	.12*	.16*
“I am a religious person” ...	.23*	.25*
<i>N</i> .....	45,534	27,906

SOURCE.—World Values Survey 1995–97.

NOTE.—Correlations (gamma) with gender.

\*  $P < .001$ .

ences are stronger in nations where more people are willing to condone single motherhood.

The second measure of traditional sex role socialization is the abortion rate. Once again, the correlation is strong and positive. Gender affects religiosity more where the abortion rate is higher. Further confirmation is offered by the third correlation, which shows that gender affects religiosity least where the fertility rate is highest.

To explore a different facet of sex role orientations of societies, the fourth correlation shows the percentage of the labor force made up by women. Once again, the socialization hypothesis is contradicted. Finally, we consider a measure of female empowerment (United Nations 1995). It too is highly, positively correlated with gender differences in religiousness.

Results from the above tests are both perplexing and counterintuitive. Contrary to expectations, where female socialization is less traditional, the effect of gender on religiousness is actually greater. Given the intuitively appealing theoretical perspective that traditional female socialization patterns would lead to increased gender differences in religiousness, and the wide range of societies being sampled, we expected to find at least modest support for a socialization argument. Furthermore, even if this perspective were wrong and physiological, rather than socializing influences, were the cause, one would expect no correlation. However, neither of these results was obtained. Instead, we found a strong and consistent inverse relationship between traditional socialization and gender differences in religiousness. Moreover, not only were all of these correlations highly significant, when the scatterplots were examined, we found no distortion from outlying cases. The results are real. They also are really mysterious. It is one thing to find no support for socialization, it is something else to find a strong effect in the “wrong” direction.

To explain this new mystery, we propose to explore more deeply the

TABLE 4  
GENDER EFFECTS AND SEX ROLES

	Correlation ( <i>r</i> )
Approval of single motherhood .....	.50*
Abortion rate .....	.42*
Fertility rate .....	-.46*
Percentage of workforce that is female ...	.44*
Index of female empowerment .....	.40*
<i>N</i> .....	55

\*  $P < .001$ .

religious aspects of risk and to place them within comparative religious contexts. That is, we propose that it is riskier to be irreligious within the terms of some religions than others and, consequently, that gender differences will be greater within the riskier religious contexts.

#### HIGH-RISK RELIGIONS

Including irreligiousness among the list of risky behaviors dominated by men assumes that religious nonconformity carries the risk that if religious doctrines are true, then the consequences of irreligiousness will be very expensive, although perhaps not immediate. But, that view of religion has a Western bias. Prospects of posthumous punishment are central to Christianity and Islam, as well as to Orthodox Judaism. But, as will be discussed at length presently, such notions are at most very peripheral to the major Eastern faiths. The point here is that in religious traditions wherein irreligiousness is not risky or not very risky behavior, gender differences should be far smaller, and might consist of no more than modest effects of differential socialization vis-à-vis religion specifically. This might explain the mysterious findings, since the nations with the great gender equality also are overwhelmingly Christian nations. Thus, to begin assessing this possible interpretation, we will examine data for the United States.

Christianity teaches that the primary risks of irreligion are located in “another” or a “next” world or life where the fires of hell or the tedium of purgatory await a miscreant—even those Christian denominations that deny hell accept that at the very least unbelievers will be denied access to heaven. Orthodox Judaism shares this view, offering a vivid portrait of Gehenna, where the wicked suffer eternal torment. However, when Reform Judaism arose in the 19th-century, among the many Orthodox tenets it rejected were those concerning life after death. As the famous Pittsburgh Platform (1885) explained: “Judaism [is] a progressive religion,

TABLE 5  
DENOMINATION AND BELIEF IN LIFE AFTER DEATH (UNITED STATES)

	Conservative Protestants	Liberal Protestants	Roman Catholics	Jews
Yes .....	78	75	71	31
Undecided ...	7	10	9	17
No .....	15	15	20	52
<i>N</i> .....	5,677	5,608	6,372	526

SOURCE.—National Jewish Population Survey.

NOTE.—Survey question is “Do you believe there is life after death?” Data are given in percentages.

ever striving to be in accord with the postulates of reason, [whereas] the Bible reflect[ed] the primitive ideas of its own age. . . . We reject . . . the belief both in . . . Hell and Paradise” (complete text in Mendes-Flohr and Reinharz 1995). If this view is widespread among American Jews, then they should not perceive a substantial risk in irreligiousness. Table 5 shows that, in fact, while the overwhelming majority of Protestants (both conservative and liberal) and Catholics believe in life after death, and only small minorities actually reject it, the majority of American Jews say they do not believe.

**HYPOTHESIS 4.**—*If perceived risk is the basis of gender differences in religiousness, then these effects ought to be strong among Protestants and Catholics, but should be very weak or absent among Jews.*

Table 6 shows the effects of gender on five measures of religiousness. Strong, highly significant gender effects show up on all five among conservative Protestants, liberal Protestants, and Roman Catholics. Among Jews there are no gender effects on four of the measures and only a weak, but significant, correlation with prayer. As can be seen in the table, gender effects are far greater on prayer than on any of the other four measures—this may account for the fact that it even turns up among Jews. In any event, hypothesis 4 is strongly supported. There is an even more stringent test of the risk hypothesis available in American data.

**HYPOTHESIS 5.**—*If perceived risk is the basis of gender differences in religiousness, then these effects ought to be strong among Orthodox Jews, but should be very weak or absent among other Jews.*

Table 7 is based on the 1990 National Jewish Population Survey (Kosmin et al. 1991). It was conducted on the basis of an elaborate and effective method for locating everyone having a Jewish background, rather than relying on the more common, and very biased, method of sampling membership roles of synagogues and of Jewish organizations (Stark and Roberts 1998). This is the only reliable national sample of Jews including sufficient cases to compare Jewish “denominations.” Unfortunately, the researchers took an extremely narrow view of Jewish religion as consisting

TABLE 6  
DENOMINATION AND GENDER EFFECTS (UNITED STATES)

	Conservative Protestants	Liberal Protestants	Roman Catholics	Jews
Bible authority .....	.18**	.23**	.15**	.01
Bible reading .....	.26**	.31**	.13*	.07
Attendance .....	.17**	.15**	.18**	.03
Prayer .....	.37**	.40**	.37**	.15*
Denominational loyalty ...	.16**	.18**	.15*	.01
<i>N</i> .....	8,505	8,650	9,408	807

SOURCE.—Merged General Social Surveys 1972–98.

NOTE.—Correlations (gamma) with gender.

\*  $P < .05$ .

\*\*  $P < .01$ .

entirely of practice, and the only thing approaching a belief item was a question asking whether the Bible was the inspired word of God or merely an ancient book. This question revealed a very strong gender effect among the Orthodox, but none among conservative or reform Jews, or among those who claimed no denominational preferences, saying they were “just Jewish.” The same strong and significant gender pattern holds among the Orthodox for keeping kosher, lighting candles on Friday nights, and lighting Hanukkah candles, but no gender effects exist among other Jewish groups. More than a third of American Jews say they always or often have Christmas trees. This is not related to gender among most Jews, but it is, very strongly, among the Orthodox. Finally, only among the Orthodox is there a gender effect on synagogue attendance, but it is negative. Not surprising, given the very peripheral role of women in Orthodox synagogues, men are more likely than women to attend frequently. With this one qualification, hypothesis 5 is very strongly supported. While some of the gender effects related to lighting candles on Friday and at Hanukkah might be because women are more likely than men to be assigned this family role, belief in the authority of the Bible and keeping kosher are individual behaviors. These show an equally strong gender effect, and only among the Orthodox.

Of course, non-Orthodox Judaism is not the only major faith that attaches a low risk to irreligiousness. Buddhism, Confucianism, and Shintoism project very mild (if any) penalties for irreligiousness (Miller 2000). In contrast, Islam is the equal of Christianity and Orthodox Judaism in terms of the fate believed to be in store for the unfaithful. However, this is not how these faiths compare in terms of commitment to traditional sex roles. Here, the Eastern faiths truly excel, as do Islam and Orthodox Judaism. While there is some overlap in these orderings, they are suffi-

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TABLE 7  
GENDER EFFECTS WITHIN U.S. JUDAISM

	Orthodox	Conservative	Reformed	"Just" Jewish
Bible authority .....	.39*	.08	.10	.09
Keep kosher .....	.53*	-.04	.03	-.14
Friday night candles .....	.32*	.09	.12	-.07
Hanukkah candles .....	.36*	.10	.12	-.08
No Christmas tree .....	.42*	.07	.01	-.18
Synagogue attendance ...	-.34*	-.04	.06	-.17
<i>N</i> .....	111	720	797	113

SOURCE.—1990 National Jewish Population Survey.

NOTE.—Correlations (gamma) with gender.

\*  $P < .01$ .

ciently different to permit a clear contrast between predictions vis-à-vis sex role socialization and risk.

**HYPOTHESIS 6.**—*If risk is the basis for the gender effects on religiousness, the effects ought to be greatest among Christians, Muslims, and Orthodox Jews and least among Buddhists, Confucianists, Shintoists, and non-Orthodox Jews.*

Conversely:

**HYPOTHESIS 7.**—*If gender socialization is the basis for gender differences in religiousness, then gender effects ought to be the most pronounced among Muslims, Orthodox Jews, Buddhists, and Hindus, while the differences ought to be substantially smaller among Christians and non-Orthodox Jews.*

To test these hypotheses we used nations as the units of analysis, as shown in table 8. The data support the risk interpretation: the gender effects are strongly, significantly, and *positively* correlated with the percentage Christian and with the percentage Muslim, while significantly *negatively* correlated with the percentage Buddhist (there were insufficient cases to permit analysis of the percentage Hindu). We already have seen that gender differences are strong among Orthodox Jews and absent among non-Orthodox Jews. Thus, hypothesis 6 is supported, and hypothesis 7 is rejected.

This exhausts the data available for cross-cultural analysis using nations as the units. However, much can be learned from close study of two polar cases: the United States, where religious risks are pronounced and gender socialization tends toward the equalitarian, and Japan, where risks are slight and gender socialization is very traditional.

GENDER DIFFERENCES IN RELIGIOUSNESS: JAPAN AND THE UNITED STATES

Japan and the United States offer a unique opportunity to test for the relative importance of risk preferences and differential socialization on religiousness. This is because the religious landscape, as well as socialization patterns, are quite different in the two countries. While the United States is overwhelmingly Christian, there is no single dominant religious tradition in Japan and few cultural norms promoting specific religious beliefs or behaviors. Instead, being Japanese implies, though does not demand, holding a variety of basic beliefs (e.g., most Japanese accept a basic Buddhist view of an afterlife, believe in a variety of Shinto-related spirits, and have a fairly strong belief in a human soul), but otherwise they do not think much about religious issues or perform religious acts except on special occasions (Kitagawa 1987; Miller 1992, 1995). This does not mean they cannot. It is completely a matter of personal preference; there are no strong cultural norms encouraging or discouraging religious behavior (see Miller 1998).

Furthermore, the religious tradition does not teach that being irreligious constitutes a risk in the same way that it does for Christians. People will become "religious" to the extent that they find it comforting and appealing, but they will not claim that it "gives them a leg up" in the next life or that irreligious people are doomed to go to hell. In short, there is little risk to being irreligious in modern Japan. Therefore, to the extent that gender differences are based largely on differences in risk preference, one would expect those differences to be rather small among Japanese.

From a differential socialization perspective, however, we would draw the opposite prediction. Among the many countries sampled in the World Values Survey, Japan is the most traditional in terms of attitudes toward gender roles. For example, Japanese people are more likely than people in any other country to claim that being a housewife is as fulfilling for a woman as working outside the home, and over 70% of the Japanese population believes women are better than men at housework and raising children (Miller and Kanazawa 2000). More important for this study, approximately 63% of the population believes boys and girls should be socialized differently, a figure twice as high as in any other modern industrialized country (Brinton 1993). Thus, if differential socialization leads to differential religiousness, the difference in religiousness between Japanese men and women should be very great.

In addition, as discussed above, gender differences might be related to free time. Once again, Japan is very traditional, and it is still common for women, when they become wives and mothers, to quit their jobs and assume the role of housewife. Men, on the other hand, are expected to

TABLE 8  
GENDER EFFECTS AND RELIGIONS

	Correlation ( <i>r</i> ) <sup>1</sup>
%Christian ...	.40**
%Muslim <sup>2</sup> ....	.35*
%Buddhist ...	-.31*
<i>N</i> .....	40

SOURCE.—World Values Survey.

<sup>1</sup> Correlations (*r*) with the strength of gender-religiousness correlation.

<sup>2</sup> Turkey, Albania, and Bulgaria removed as deviant cases.

\*  $P < .05$ .

\*\*  $P < .01$ .

dedicate their lives to their work, spending both day and night with their coworkers. This means that women in Japan have a great deal more free time than men (Iwao 1995). If gender differences in religiousness are related to free time, again we would conclude that the difference in religiousness between Japanese men and women should be very great.

Thus, the religious and social landscapes of Japan and the United States provide a unique opportunity to test for the relative importance of risk preferences and differential socialization on religiousness. Japan is uniquely high in differential socialization and uniquely low with regard to the risk of being irreligious. The United States is relatively low in differential socialization and high with regard to the risk of being irreligious. Therefore, we can propose the following two hypotheses.

**HYPOTHESIS 8.**—*To the degree that risk preference is central, gender difference in religiousness will be smaller among Japanese than among Americans.*

Conversely:

**HYPOTHESIS 9.**—*To the degree that differential socialization is central, gender difference in religiousness will be larger among Japanese than among Americans.*

We begin by considering gender differences among Americans and among Japanese using five basic measures of religiousness from the 1995 World Values Survey: (1) the importance of religion in the person's life, (2) affiliation with a religious group, (3) frequency of attending a religious service, (4) the importance of belief in god/supernatural, and (5) belief in an afterlife. Table 9 presents the results. As can be seen, results are more supportive of hypothesis 8 than hypothesis 9. In three of the five measures, not only are gender differences smaller for Japanese than for Americans, they are actually statistically insignificant. For the fourth measure, concerning belief in the supernatural, gender differences are significant for

TABLE 9  
GENDER EFFECTS IN JAPAN AND THE UNITED STATES

	Japan	United States
Importation of religion ...	.06	.36**
Religious affiliation .....	-.12	.32**
Attending services .....	.07	.19**
Belief in supernatural ....	.14*	.25**
Belief in an afterlife .....	.34**	.28**
<i>N</i> .....	1,054	1,542

SOURCE.—World Values Survey 1995.

NOTE.—Correlations (gamma) with gender.

\*  $P < .05$ .

\*\*  $P < .001$ .

both countries but stronger for Americans. The only result that does not directly support hypothesis 8 is belief in an afterlife. For this, both countries display strong gender differences, with Japan actually displaying a stronger correlation (although a *t*-test of correlations shows the two coefficients are not significantly different).

To further explore this one ambiguous result, we conduct a more thorough examination of belief in an afterlife. First, we construct a multiple regression model that contains a variety of demographic controls. Next, we add a measure of traditional gender role attitudes to the model. The variable we add asks if being a housewife is as fulfilling for a woman as working outside the home. (Note that we tried a variety of other variables that measure gender-specific socialization, and the substantive results remained unchanged.) If traditional socialization plays any role in producing gender differences in religiousness, inclusion of this variable should greatly attenuate the gender differences. Results are presented in table 10.

Model 1 replicates the results obtained in table 9, this time with a variety of statistical controls. As can be seen, results are essentially the same. Gender differences in belief in an afterlife are significant for both Japanese and American respondents. Model 2 includes a measure of traditional gender role attitudes. Results are clear. It is unrelated to the dependent variable, and its inclusion has no appreciable affect on gender differences for either Japanese or Americans. (The slight reduction in the regression coefficient is not statistically significant.)

This analysis does not answer why Japanese women are more likely than Japanese men to believe in an afterlife. Data are not available to directly test whether or not it is a product of risk preference, though that remains a plausible explanation. While there is no risk in being irreligious in Japan, a risk-averse person is still likely to find belief in an afterlife (and to a lesser extent belief in the supernatural) to be comforting. What

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TABLE 10  
GENDER DIFFERENCES AND BELIEF IN AN AFTERLIFE

	JAPAN		UNITED STATES	
	Model 1	Model 2	Model 1	Model 2
Age .....	.23*	.24*	.06	.06
	(5.86)	(5.51)	(1.94)	(1.85)
Education .....	-.03	-.06	-.02	-.00
	(.51)	(1.42)	(.51)	(.09)
Income .....	-.09	-.08	-.04	-.04
	(1.89)	(1.78)	(1.08)	(1.33)
Sex (female = 1) ...	.14*	.12*	.09*	.08*
	(3.46)	(2.76)	(2.93)	(2.51)
Traditional .....	. . .	.01	. . .	.01
		(.11)		(.42)

NOTE.—Standardized regression coefficients with *t*-values in parentheses.  
\* *P* < .01.

the above results do answer unambiguously is that traditional gender socialization plays no role in producing gender differences in religiousness.

CONCLUSION

We began this study with the aim of better understanding the role that traditional gender socialization, as well as gender differences in social power, plays in producing gender differences in religiousness. To the best of our knowledge, this is the most thorough analysis conducted to date in this area. Results are surprising and startlingly unambiguous. It appears that neither have a relationship to gender differences in religiousness. Amazingly, these results hold across time periods, cohorts, religious traditions, and cultures. In place of socialization, hypotheses based on risk preference were consistently supported. Again, results held for a wide range of hypotheses covering various religious and cultural traditions.

One possibility we did not explore is the degree to which risk preference, and by extension the relationship between gender and religiousness, might be physiologically based. While it is still possible that gender differences in risk preference are due to differential socialization, a growing literature suggests otherwise. Furthermore, our results strongly suggest this is not the case. Since general measures of differential socialization are unrelated to religiosity, one would have to propose that risk preference is somehow different: that it alone influences gender differences in religiousness and not other forms of differential socialization, and that it is taught uniformly to all females. Such a proposal, to say the least, is unlikely.

Finally, it is important to note that although all results are consistent

with a risk preference perspective, this study was unable to directly test the relationship between gender differences in religiousness and actual risk preference levels. Currently available data sets do not directly measure risk preference. Thus, our conclusions in this regard are preliminary. We do not claim that any one empirical test conducted above definitively undermines a socialization argument and supplants it with a risk preference argument. Nevertheless, the results consistently point in that direction. Indeed, we can think of no alternative explanation that would predict the results we obtained. Those who disagree with our tentative conclusions should see this as a challenge to finally answer this long-ignored and extremely important question.

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