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Risk and Religion: An Explanation of Gender Differences in Religiosity*

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Gender differences in religiosity are well known. Past studies have consistently shown that females tend to be more religious than males. We propose that gender differences in risk preferences are related to differences in religiosity. Building on the classic concept of "Pascal's wager," we conceive of religious behavior as risk averse and nonreligious behavior as risk taking. Analysis of data from the Monitoring the Future data set shows that the addition of risk preference strongly attenuates gender differences in religiosity. Risk preference also is a significant predictor of religiosity within each gender. Implications of this study are discussed.

Studies of religious beliefs and religious behavior have demonstrated consistently that females are more religious than males. They are more likely to express a greater interest in religion (Yinger 1970; Sasaki 1979; Lenski 1953), have a stronger personal religious commitment (Argyle and Beit-Hallahmi 1975; Bensen, Donohue, and Erickson 1989), and attend church more frequently (Batson, Schoenrade, and Ventis 1993; Cornwall 1989; Moberg 1962). Moreover, this appears to hold true over the life course (Cornwall 1989; Glock, Ringer and Babbie 1967) and regardless of the type of religious organization or belief system (e.g., cult, sect, or church affiliation; belief in astrology, magic, spirits, and so on) (Stark and Bainbridge 1985). Consistent with these studies, the 1990 General Social Survey showed that women are more likely than men to pray and read the Bible regularly (Davis and Smith 1991).

This is an intriguing area of study that has nevertheless generated relatively little empirical research. However, two general explanations have emerged in the sociological literature that address this issue. The first focuses on differential socialization and argues that females are taught to be more submissive, passive, obedient, and nurturing than are males, and that these traits are associated with higher levels of religiosity (Mol 1985; Suziedelis and Potvin 1981). The most compelling research to date notes that these characteristics are predictors of religiosity not only between the sexes but also within each sex (Thompson 1991). In other words, men who exhibit these personality traits tend to be more religious than men who do not exhibit these traits, and the same holds true for women. Thus, it is argued, the apparent gender difference is related to the fact that more females than males possess these personality traits.

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The second explanation argues that females are more religious than males because of their structural location in society. In general, this perspective argues that lower participation in the labor force and greater responsibility for the upbringing of children lead women toward greater involvement in religion. The contention is that lower participation in the labor force leaves women with more time for church-related activities and also a greater need for a source of personal identity and commitment (Luckmann 1967; Martin 1967). Moreover, some suggest that women's prominent role in raising children increases their religiosity because it correlates with concern for a family's well-being (Glock, Ringer, and Babbie 1967). The most comprehensive empirical test of these explanations was conducted by de Vaus and McAllister (1987) using data collected in Australia. They concluded that the child-rearing role of females does not lead to greater religiosity, but that labor force participation is negatively associated with several measures of religious behavior. However, a similar study conducted in the United States showed no relationship between labor force participation and identical measures of religiosity (de Vaus 1984; see also Cornwall 1989).

Various studies focusing specifically on church attendance show that it is, in part, related to structural positions in society. Azzi and Ehrenberg (1975) demonstrated that church attendance is higher for females than for males partially because religious participation is an extension of the division of labor. Religious participation is considered a household activity, and is usually performed by the wife because she is more able to allocate the necessary time. In a similar vein, Iannaccone (1990) related increased religious participation among females to their structural location in society. He, too, sees religion as a household commodity and religious participation as reflecting an implicit division of labor. According to Iannaccone, females are socialized into the role of the religious consumer and therefore not only allocate more time to religious activities than do men, but are also more skilled at obtaining "religious rewards" for their families. A shortcoming of these studies, though, is that they focus exclusively on religious behavior, ignoring gender variations that may or may not exist with regard to religious beliefs.

In a comprehensive comparison of these theoretical explanations, Cornwall (1989) showed that gender differences in a variety of religion measures persist even when controlling for socialization and location in the social structure. She indicated that although the social location thesis provides the most power for explaining gender differences, sex-specific models should be developed to fully explore this phenomenon.

THEORETICAL MODEL

In this paper we suggest adding another element to the explanation of gender differences in religiosity: risk preference. Risk analysis has been used in several studies to look at behavioral differences with regard to a wide range of issues. The general theme of these studies is that individuals differ in terms of their willingness to perform certain behaviors that are viewed as containing an element of risk. Past analyses have focused on topics ranging from attitudes toward health and the environment to the likelihood of participating in criminal activities (Yates and Stone 1992b; Keane, Gillis, and Hagan 1989; Slovic 1987; Kronenfeld and Glik 1991; Freudenburg 1993). Although it has never been used in studies of religiosity, its appropriateness is plausible. One can conceive of religious acceptance as risk-averse behavior and the rejection of religious beliefs as risk-taking behavior. This type of conceptualization is compatible with a variety of classic and modern studies of religious behavior. Indeed, it is similar to the classic apologetic argument known as Pascal's wager: Religious beliefs are desirable because one has nothing to lose by believing in God but potentially much to gain. Such an argument is also consistent with the concept of risk appraisal and risk management (see Yates and Stone 1992b; Neumann and Politser 1992; and Dawes 1988 for examples of similar types of risk management strategies).

One classic perspective in the social scientific study of religion that is consistent with risk taking principles was developed by Malinowski (1925). Malinowski claimed that religiosity is related to a desire to control those things that cannot be controlled given the level of technological sophistication of a society (e.g., weather and disease), and is also a way of dealing with the fear of death. Many scholars have made similar claims (e.g., Homans 1941). These arguments are consistent with a risk analysis approach. A risk-averse person is more likely than a risk taker to deal with uncertainties and fears in a culturally appropriate way (i.e., through participation in religion). Several studies have shown that, in general, risk-averse people prefer traditional ways of handling stressful and uncertain situations while risk takers are more likely to look for innovative responses (Holloway 1979:391-414; Ferguson and Valenti 1991).

A risk analysis approach is also consistent with many of the contemporary perspectives used in the sociology of religion. For example, Stark and Bainbridge (1985, 1987) argued that individual religiosity involves a decision-making process where rewards and costs are considered rationally. They argued that religiosity increases when people actively seek the rewards religions provide (e.g., eschatological explanations, moral guidance, and social and emotional support). This approach is very similar to basic risk analysis approaches (see also Finke and Stark 1992). Rewards and costs are affected greatly by the perceived risks involved in any decision. For example, the perceived risk of not belonging to an institution that provides a moral education is likely to increase when a person has children. Thus one reward associated with church membership is likely to increase when a couple has children. Similarly, studies have shown consistently that religiosity increases with age. The explanation often given for this relationship is that as people age they become more aware of their own mortality and are therefore more desirous of religion's promise of an afterlife (Stark and Bainbridge 1987:50; Miller 1992; see, however, Cornwall 1989). This explanation can easily be restated in terms of a risk-avoidance strategy: As age increases, the perceived risk associated with a lack of religious commitment increases.

Similarly, Durkin and Greeley (1991) have begun work in reconceptualizing religiosity from a rational choice perspective. They proposed that decisions concerning religious participation are based partly on an expected utility model: Because there are costs (e.g., time, money, commitment) associated with participating in a religion, individuals try to weigh the likely benefits with the expected costs to determine their level of religious participation. In addition, Finke and Stark (1992) suggested that people contemplating religious participation weigh rationally the rewards promised by religious allegiance against the costs and risks involved. These arguments, of course, are very similar to the risk preference perspective that we propose. Nevertheless, our focus is not on a general utility maximization model of religious decision making, but rather on gender differences in personal religious beliefs.

It is not our intention to suggest that religious behavior is exclusively or even principally a matter of risk analysis. Many factors contribute to individual religious beliefs and behaviors. However, we suggest that risk is one factor in decision making, and that this is consistent with previous theory and research in the sociology of religion. We suggest that it is particularly useful to focus on this factor in order to elaborate gender differences in religiosity.

Risk analysis has been used in many fields to explicate gender differences in a variety of attitudes and behaviors (Bromiley and Curley 1992; Irwin and Millstein 1991; Box, Hale, and Andrews 1988; Moore and Rosenthal 1991). In general, females perceive greater risk in virtually all aspects of life, and thus are less likely to have risk-taking attitudes and to be involved in risk-taking behaviors (Hagan, Simpson, and Gillis 1988; Keane, Gillis, and Hagan 1989; Bromiley and Curley 1992). However, risk-taking attitudes and behaviors tend to be situation specific, and thus gender differences vary according to the form of risk taking. When considering physical forms of risk taking, for example, males are clearly greater risk

takers and have greater risk preferences regardless of other factors such as age or race (Zuckerman, Ball, and Black 1990; Kagan 1992; Veevers and Gee 1986; Ginsburg and Miller 1982). On the other hand, research on other forms of risk taking, such as investment banking or career choices, fails to uncover such wide gender discrepancies (Bromiley and Curley 1992; Wallach and Kogan 1959).

There are three principal theoretical explanations for these widely noted gender differences in risk taking. The first involves biological differences, while the next two parallel the perspectives outlined above. The biological perspective emphasizes physiological differences between males and females. Since males tend to have greater muscle mass and quicker reaction times, they are more likely to be involved in physical activities, many of which include some physical risk (Schneider and Morris 1991). This view may also be used to explain heightened risk-taking behavior in adolescence, since it is a period of rapid physiological development. In addition, males may have a greater psychological need for stimulation and arousal, and they tend to be more impulsive than females. These personality traits that have been associated with greater risk-taking behavior (Zuckerman 1984). However, as Douglas (1985) suggests, research that focuses on physical and psychological traits fails to explain risk taking in general, so it is important to concentrate on social influences.

The two most common sociological explanations for gender differences in risk taking parallel those described above. First, differential socialization proposes that risk-taking behavior is reinforced to a much greater degree among boys than among girls. Risk taking is seen as a masculine characteristic that emphasizes courage and adventurousness, while females are socialized to be more passive and gentle (Veevers and Gee 1986; Graney 1979). This differential reinforcement continues through adolescence, and thus males continue to be greater risk takers. However, it is not clear whether other "masculine" characteristics are also associated with elevated risk taking, or, thus, whether females who exhibit these characteristics tend to prefer greater risk.

A second perspective argues that differences in structural location may explain gender variations in risk taking. Historically, occupations have been stratified by gender. Although there are various reasons why some occupations become known as "male" occupations and others as "female" occupations, one criterion used to justify gender stratification is risk. Those occupations that contain some degree of physical risk tend to be labeled male occupations (Barry 1987; Blau and Ferber 1985). Thus, males and females not only are socialized differently with regard to performing risk-taking activities as children, but they are also taught that it is appropriate for males rather than females to enter risky occupations as adults.

A related argument focuses on social role modeling. This argument states that because females exercise greater responsibility for child rearing than males, and because they are less likely to be involved in risky activities than males, children are provided discrepant models of risk taking. Children are often exposed to risk taking among males, but rarely among females. This creates a situation where male children are likely to model risk-taking behavior while female children are more likely to model risk-averse behavior (Veevers and Gee 1986).

In a provocative series of studies, Hagan and colleagues (Hagan 1989; Hagan, Simpson, and Gillis 1988; Hagan, Gillis, and Simpson 1985; Keane, Gillis, and Hagan 1991) suggest that these two theoretical perspectives can be integrated to explain gender differences in risk taking and delinquency. Their power-control theory argues that patriarchal structures in the home and workplace are associated with and affect child rearing. A patriarchal structure leads to greater power among males in the work environment, and this translates into greater authority in the home. At the same time, most of the child rearing responsibilities are left to mothers. In addition, due to the patriarchal social structure, both mothers and fathers employ greater direct control over daughters. This leaves sons rela-

tively free to engage in risk-taking endeavors and develop risk-taking preferences. Meanwhile, risk preferences among girls are curtailed and risk-averse attitudes reinforced, as a consequence of the relatively greater controls by parents.

HYPOTHESES

Many similarities exist between explanations of gender differences in risk preferences and religious behavior. Both consider socialization and social structure, and both analyze the costs and benefits of behavior. Although it is interesting to speculate about the initial cause of gender differences in risk preferences, it is not necessary for our purposes. In the current analysis, we are only concerned with explaining gender differences in religiosity. We hypothesize that those differences are, in part, related to gender-based differences in risk preferences. We specifically propose two hypotheses:

- H₁: Females exhibit greater religiosity than males in part because they tend to be more risk averse.
- H₂: Risk preferences influence religiosity within as well as between the sexes.

Our first hypothesis predicts that when risk preferences are taken into consideration, the association between gender and religiosity will be attenuated. Our second hypothesis predicts that risk preferences have predictive value for both males and females when studying individual religiosity. In other words, we expect that, in general, risk-averse people are more religious than risk takers. Therefore, we predict that risk-averse males will be more religious than risk-taking males, and risk-averse females will be more religious than risk-taking females.

DATA AND METHODS

Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth, 1990 (Bachman, Johnston, and O'Malley 1993) is a nationally representative annual survey of high school seniors conducted by the University of Michigan's Survey Research Center. We use this data set because it is one of the few national data sets that contains information on both religiosity and risk preference. Information on the instruments, including their validity and reliability, has been reported elsewhere (Bachman, Johnston, and O'Malley 1993). The study uses a multistage sampling procedure to select approximately 135 schools representing the contiguous United States. Four hundred seniors are selected from each school to participate in the survey. The current study uses a subsample of participants ($N = 2,408$) who completed questions about both religiousness and risk preferences.

Risk preferences are measured with two questions that inquire about the respondent's attraction to risk and to danger (with responses ranging on a Likert scale from 1 to 5). Although the literature on risk taking notes a variety of forms, we focus on what some term "adventure seeking" (Bromiley and Curley 1992) for two reasons. First, adventure and danger are more salient aspects of adolescent life than are other potential forms of risk (e.g., occupational choices, monetary investments). Second, risk preference questions such as these reflect a more general risk orientation. Using specific behaviors to identify risk (e.g., Alexander et al. 1990) tends to confound risk behaviors and risk preferences. In the present study we are specifically concerned with risk preference because it has been used successfully to assess gender differences in several studies (Hagan, Simpson, and Gillis 1988; Hagan 1989). Further, it would be inappropriate in this study to use many of the behaviors commonly used in other studies of risk taking because they often involve a moral dimension (e.g., drug taking and certain sexual practices). One would expect religiosity to be negatively

correlated with these behaviors because of religious proscriptions as well as because of their risky nature.

We create a risk preference scale by combining the two risk-related variables. Before doing this, however, we conduct a principal components analysis. Our purpose is two-fold: First, we analyze the two measures of risk to confirm that they represent one underlying dimension. Second, we include two measures of religiosity to confirm that our measures of risk and religiosity represent two unique dimensions. Results are presented in Table 1. They confirm that the two risk variables load on a single factor, and the Cronbach's alpha (.84) indicates high scaling reliability. Results also clearly demonstrate that risk and religiosity represent two separate dimensions.

TABLE 1
PRINCIPAL COMPONENT ANALYSIS FOR RISK AND RELIGIOSITY

Variables	Factor 1	Factor 2
Risk	.93	-.08
Danger	.92	-.09
Relig. import.	-.12	.88
Attendance	-.04	.89
Eigenvalue	1.97	1.35
Cronbach's Alpha	.84	.73

The dependent variable for our analysis is religiosity. The Monitoring the Future data set contains the two most common ways of measuring religiosity: church attendance and a subjective rating of religion's importance in one's life. Past research, however, indicates that the latter measure is a more reliable indicator of religiosity than the former measure (Johnstone 1992:64). This is especially true when studying adolescent religiosity, since church affiliation and church attendance might reflect family behavioral requirements rather than individual religiosity (Benson, Donahue, and Erickson 1989). Therefore, we use the self-reported scale of religion's importance in the respondent's life as the dependent variable in our analysis.

In order to specify more precisely the role that risk preference plays in the relationship between gender and religion, we include several control variables in the models. First, since racial and urban/rural location differences are commonly found in studies of adolescent religiosity, both are controlled in the analyses (Benson, Donahue, and Erickson 1989). Second, studies by Hagan (1989) and colleagues (Hagan, Gillis, and Simpson 1985; Keane, Gillis, and Hagan 1989) indicate that parental occupation affects gender discrepancies in risk preferences among adolescents. Monitoring the Future does not collect data on parental occupation; therefore, we use mother's and father's education as proxies.¹

Table 2 provides descriptive statistics for the relevant variables broken down by gender. As expected, females report higher religiosity than males. Moreover, males demonstrate a greater preference for risk than females. Finally, there are slight differences in parental education. Males report higher levels of parental education than females. This may reflect the fact that males from lower socioeconomic strata are more likely to drop out of school than their female counterparts.

1. Several other variables are important predictors of religiosity among adolescents (e.g., parental religiosity, group and peer affiliations). Unfortunately, the Monitoring the Future data set does not contain a sufficient variety of religion questions — such as parental religious practices — that would allow complete tests of alternative hypotheses. Therefore, any findings from this study remain tentative until further confirmation is obtained.

TABLE 2
DESCRIPTIVE STATISTICS FOR RELEVANT VARIABLES, BY GENDER

Variables	Total	Male	Female	T-Value of Differ.
Means and Standard Deviations:				
Religiosity	2.71 (1.03)	2.59 (1.03)	2.83 (1.00)	5.90***
Risk preference	6.19 (2.42)	6.84 (2.27)	5.49 (2.38)	13.93***
Father's educ.	3.81 (1.41)	3.90 (1.40)	3.73 (1.40)	2.82*
Mother's educ.	3.62 (1.27)	3.68 (1.24)	3.56 (1.31)	2.26*

Percent black	13	11	15	
Percent rural	45	44	46	

* p < .05
** p < .01
*** p < .001

RESULTS AND DISCUSSION

We begin by regressing religiosity on the various predictor variables. Results are presented in Table 3. As expected, Model 1 shows that females are more religious than males. The only other variable that is a significant predictor of religiosity is race, with black respondents being more religious than white respondents. In Model 2, risk preference is added. Consistent with Hypothesis 1, risk preference is a significant predictor of religiosity and its addition to the equation attenuates the importance of gender. The addition of the risk preference variable decreases the size of the gender coefficient by about 40%. All other variables in the model remain, for the most part, unchanged.

Table 4 displays the effects of risk preference on religiosity for males and females separately. The results of these analyses support Hypothesis 2. Risk preference is a significant predictor of religiosity for both males and females. The t-values computed in column 3 show that the unstandardized coefficients are not significantly different for males and females. In other words, the strength of risk's effect on religiosity is similar for both groups. In addition, the effect of race on religiosity is similar regardless of gender.

Finally, in order to confirm the above results, we conducted a structural equation analysis of the model. Using LISREL 7, we construct a model that can more directly capture the direct and indirect effects implied in the previous tables. The model is presented in Figure 1. As can be seen, the results are similar to those obtained in the regression analysis. When the risk path is added to the model, the structural coefficient between gender and religiosity drops from .15 to .08, and a significant indirect path through risk preference is revealed.

TABLE 3
REGRESSION COEFFICIENTS FOR THE EFFECTS OF RISK PREFERENCE
ON GENDER DIFFERENCES IN RELIGIOSITY

Predictor Variables	Model 1		Model 2	
	b	Beta	b	Beta
Gender (female=1)	.200*** (.048)	.097	.124* (.049)	.061
Race (black=1)	.673*** (.081)	.197	.586*** (.082)	.171
Father's education	-.017 (.021)	-.022	-.016 (.021)	-.022
Mother's education	-.007 (.023)	-.009	-.006 (.023)	-.007
Rural	.088 (.049)	.043	.080 (.048)	.039
Risk Preference	—		-.058*** (.011)	-.134
Constant	2.543 (.101)		2.944 (.124)	
R ²		.051		.072
Number of cases		2,408		2,408

* p < .05
** p < .01
*** p < .001

Note: Numbers in parentheses are standard errors.

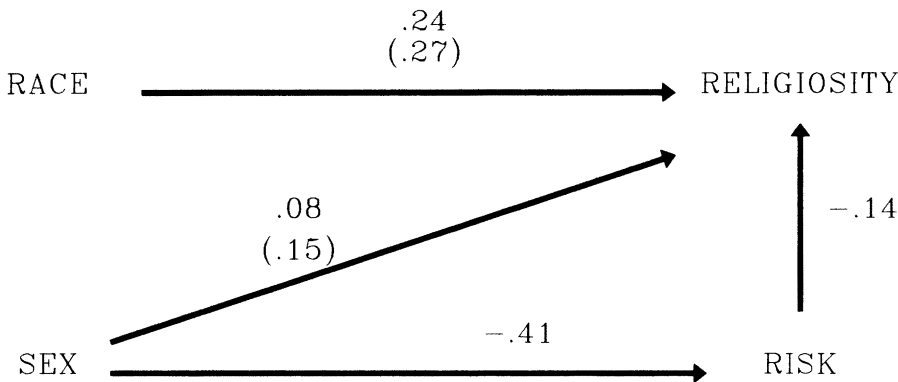
TABLE 4
TRIMMED MODEL OF THE EFFECTS OF RISK PREFERENCE ON RELIGIOSITY, BY GENDER

Predictor Variables	Male	Female	T-Value of Differ.
Race (black = 1)	.595*** (.115)	.550*** (.093)	.429
Risk Preference	-.051*** (.014)	-.067*** (.013)	1.183
Constant	2.871 (.108)	3.077 (.084)	
R ²	.042	.073	
Number of Cases	1,200	1,147	

* p < .05
** p < .01
*** p < .001

Note: Numbers in parentheses are standard errors.

FIGURE 1
STRUCTURAL EQUATION MODEL: GENDER, RISK, AND RELIGIOSITY



Note: Numbers in parentheses are coefficients when risk path is constrained to be zero.
All coefficients are significant at $p < .001$.

Model Fit:
N = 1850; AGFI = .95
Without Risk Path: ChiSq = 72.5; d.f. = 5
With Risk Path: ChiSq = 51.7; d.f. = 4
Model Difference: ChiSq = 20.8; d.f. = 1 $p < .001$

To further test the hypotheses, we constructed a second structural equation model that reversed the causal order of risk and religion. This model assessed whether the relationship between gender and risk preference is attenuated by religiosity. Thus, we examined the alternative hypothesis that gender is related to risk preference partly because females are more religious than males. The results from the analysis do not support this hypothesis: The association between gender and risk preference was $-.41$, and decreased insignificantly to $-.39$ when religiosity was introduced into the model.

The results of these analyses support both of our hypotheses. They suggest that risk preferences affect gender differences in religiosity in a subtle yet significant manner. Although the mechanisms by which this occurs are not entirely clear, we propose that gender distinct socialization patterns affect the development of risk preferences early in the life course. An unintended consequence of these socialization patterns is a lower probability of religiousness among males later in life. In addition, the structural implications of these results should not be ignored. Gender stratification is likely also to affect risk preferences, which then might serve to reinforce or impede religiosity. In fact, our findings indicate that risk preferences partially mediate the relationship between gender and religiosity. Many studies indicate that gender distinctions in risk analysis affect a diversity of behaviors; the present findings extend this research and imply that risk analysis has implications for

religiosity. Therefore, these results demonstrate that risk preference may be added to the growing list of personality traits that affect religiosity both between and within gender groups (see Thompson 1991). Additional research that includes all these considerations is needed in order to fully understand the effects of risk and gender on religiousness.

Nonetheless, gender differences in religiosity make a complex issue, and there are a variety of alternative explanations for the results we obtained. One obvious alternative explanation involves time ordering. Since our analysis involves cross-sectional data, the temporal sequence is difficult to determine. One might argue, for example, that increased religiosity leads to greater risk aversion, and therefore that gender's influence on risk preferences is partially mediated by religiosity. For several reasons, however, this explanation is not compelling. First, we examined the alternative hypothesis that the effect of gender on risk is mediated by religiosity, and rejected it. Second, most studies of risk suggest that risk preferences are acquired very early (either through biological predisposition or early socialization), and that they tend to remain constant throughout one's life (Tellegen et al. 1988; Zuckerman 1979; Zuckerman, Simons, and Como 1988). Individual religiosity, on the other hand, requires a higher level of cognitive development and therefore does not typically develop until one's early teens (Johnstone 1992:74; Allport 1957; Hoge and Petrillo 1978). Thus, it is reasonable to assume that risk preference precedes personal religiosity for most people.

Third, there is scant reason to believe that becoming more religious makes one more risk averse. Religious doctrines do not typically promote risk aversion; indeed, they often encourage risk-taking behavior in the form of missionary work, proselytizing, or a number of other beliefs and behaviors at odds with secular norms. One can even argue that religiosity might increase risk taking rather than risk-averse behavior not only by promoting these acts but also by decreasing the individual's fear of death. It is possible, of course, that religious beliefs might influence how people respond to questions concerning risk preference even if they do not influence risk-taking behavior. In this case, one might argue that religious people are less likely than others to say that they enjoy doing risky or dangerous things. However, social institutions (such as religious organizations) tend to discourage risk taking in females more than in males. If that had been the case, we would expect to find a stronger relationship between risk preference and religiosity for the females than for the males in the sample. Our results, however, show that the magnitude of risk preference's effect on religiosity is similar for both males and females.

Nevertheless, it is important to note that our results do not cast doubt on the notion that socialization practices in the family and community affect both risk preferences and religiosity (Cornwall 1988, 1989; Suziedelis and Potvin 1981). Risk preferences and religiosity might influence one another in a reciprocal manner, and be influenced by sex due to gender socialization. Absent further tests that use specific socialization variables and longitudinal data, we cannot be certain that our findings are not fully explained by other factors, such as parental religiosity or other socialization practices that affect the development of risk preferences and adolescent religiosity.

Although we offer this caveat, the most important support we have for the proposed temporal ordering of risk and religiosity is that it is consistent with a large body of previous theory and research. As stated in the beginning of this paper, a risk analysis perspective is consistent with much of the previous literature. Social scientists ranging from Malinowski and Durkheim to Greeley and Stark and Bainbridge have all proposed that religiosity is, in part, a risk analysis strategy, although they do not actually use that terminology. Classic studies that suggest religiosity is a reaction to the fear of death, an expression of the desire to control nature, and a reaction to the need for comfort and hope during times of crisis are all, in essence, risk analysis studies. We merely extend these analyses by concentrating on individual risk preferences rather than the social structural conditions that create uncer-

tainty. An additional and notable extension of previous "risk analysis" research is the focus on gender differences: Consistent with previous studies, we find that males and females differ in their preference for risk (e.g., Bromiley and Curley 1992), yet we also show that these differences affect religiosity during the formative period of adolescence.

CONCLUSION

The concept of risk preference has played a role in a variety of analyses, and has been used to assess gender differences in a number of studies. However, it has not been used explicitly in conjunction with research on religiosity. Our results suggest that it is a useful concept in explaining both religiosity in general and gender differences in religiosity specifically. We believe this adds an important element to the understanding of individual religiosity.

It is worth noting that although we have added a new concept to the study of individual religiosity, the perspective advanced here does not contradict the perspective discussed earlier that explains gender differences in religiosity by focusing on the acquisition of masculine and feminine personality traits via family and community socialization practices. Risk analysis, of course, can easily be viewed as a subset of this perspective. Risk aversion can be added to the other "feminine traits" typically associated with increased religiosity. The implication, however, should not be overlooked. If males are differentially socialized to be risk takers, then they are also being differentially socialized to be less religious.

There are, no doubt, many social factors that influence risk preferences. Our results suggest that these social factors not only directly affect certain risk-taking behaviors (e.g., drug-taking, delinquency, unsafe sexual practices, and business-related risk taking), but also indirectly affect more general behavioral practices and cognitive decision-making patterns. Risk analysis needs to expand its current focus beyond direct behavioral manifestations of risk preferences to consider more general decision-making patterns. Our study suggests that religiosity is related, in part, to risk preferences. It is therefore conceivable that other behaviors and social institutions — such as school performance, occupational choices, participation in voluntary organizations, or even choice of spouses — might also be affected in a subtle fashion by one's risk preferences.

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