

## Religion and Spirituality among University Scientists

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Religion occupies a controversial place in university settings. While some university scholars historically viewed scientific knowledge as incompatible with religion,<sup>1</sup> students are increasingly interested in religion as well as less traditional forms of spirituality. Some faculty and administrators might want to ignore religion, but in broader American public spheres religious rhetoric continues to be a force. In this context, many faculty, university chaplains, and administrators are searching for ways to meet the needs of already religious students and those exploring religion and spirituality, while not violating accepted academic norms of pluralism and tolerance.

Researchers concerned about these issues in universities are beginning to study the beliefs of students.<sup>2</sup> Until recently, however, there has been only a small amount of systematic research that explores the influence of religion or spirituality on university professors themselves.<sup>3</sup> This is particularly relevant for those in the sciences, the fields where there is the most public controversy about the involvement of religion. Without such information we know little about the role university scientists have in shaping the place of religion in the academy as well as public discussion about the connection between religion and science.

The findings presented here are based on research I completed during 2005-2006, which examined the religious and spiritual beliefs of academics in the natural and social sciences at twenty-one major universities in the U.S. This essay discusses the following central findings from the study: 1) Scientists are not very religious compared to the general public, although a significant minority is religious. 2) Scientists are surprisingly interested in spirituality. 3) While most are ambivalent about discussing religion in academic settings, a significant minority is seeking resources to engage students about religion. 4) University scientists who do view religion or spirituality as important are beginning to play a crucial role in mediating dialogue between the scientific community and the broader American public.<sup>4</sup>

The professors who participated in the study have positions at elite private institutions such as Harvard, Princeton and University of Chicago as well as elite public universities such as the University of Michigan and University of California, Berkeley.<sup>5</sup> The research began with a survey

using traditional means of measuring religiosity (for example, whether the respondent believes in God or attends religious services) as well as measures of spirituality.<sup>6</sup> The survey achieved a 75 percent response rate, resulting in 1,646 respondents. Over the past year, 271 in-depth interviews with faculty were completed. These longer discussions dealt with scientists' views on religion, the meaning of religion and spirituality in their lives and how they see the connection between science and religion in the academy and broader society.

## **Religion among University Scientists**

Scholars talk a great deal about research done in the 1960's that revealed differences in religious beliefs among members of different disciplines (especially comparisons between natural and social scientists).<sup>7</sup> My findings, however, do *not* reveal vast discrepancies in religious belief and practice among disciplines and fields.<sup>8</sup> The true difference lies between academics in these scientific disciplines and members of the general public. With little doubt, scientists at major research universities are less religious—at least according to traditional forms of religion—than members of the general public.

During public lectures about the study, the question inevitably asked first is: Do the professors you studied believe in God? When asked their beliefs about God, nearly 34 percent of academic scientists answer “I do not believe in God” and about 30 percent answer “I do not know if there is a God and there is no way to find out,” the classic agnostic response. This means that over 60 percent of professors in these natural and social science disciplines describe themselves as either atheist or religiously agnostic. In comparison, among those in the general U.S. population, about 3 percent claim to be atheists and about 5 percent are religiously agnostic.<sup>9</sup> When it comes to affiliation with particular religions, scientists are also vastly different from members of the broader society. About 52 percent of scientists see themselves as having no religious affiliation when compared to only 14 percent of the general population. Scientists who are not religious justify their inattention to religion through language that stresses the irrelevance of science to religion. Those not raised in religious homes, the case for the majority of scientists without religious affiliation, also emphasize their lack of experience with religion.

When comparing scientists who *do* have a religious identity to those among the general population, there are still big differences. According to data from the General Social Survey, a national survey of U.S. adults, 14 percent describe themselves as “evangelical” or “fundamentalist,” while less than 2 percent of scientists identify with either of these combined labels. The only traditional religious category where the science professors have a much larger percentage of members is among those who are Jewish. Among the broader American public a little less than 2 percent identify as Jewish. In comparison, about 15 percent of the scientists are Jewish.<sup>10</sup>

What are we to make of this lack of traditional religion?<sup>11</sup> Is knowledge of science somehow in conflict with being religious? Childhood religious background, not exposure to scientific education, seems to be the most powerful predictor of future irreligion. Those scientists raised in almost any faith tradition are more likely to currently be religious than those raised without any tradition.<sup>12</sup> In

addition, scientists who describe religion as important in their families as children are much more likely to practice faith currently.<sup>13</sup> When compared to the general population, a larger proportion of scientists are raised in non-religious homes.<sup>14</sup> When one considers that many more scientists come from non-religious homes or homes that were nominally religious, the distinctions between the general population and the scientific community make more sense. A large part of the difference between scientists and the general population may be due more to religious upbringing, rather than scientific training or university pressure to be irreligious, although these other possibilities should be further explored.

## **Spirituality among University Scientists**

While professors in the natural and social sciences are not as religious as members of the general population, a surprising number do view spirituality as important. As the scientists who work at some of the most elite universities in the U.S., I expected them to eschew affect-oriented concerns. Instead the survey reveals that academic scientists are actually quite interested in spirituality. When asked “to what extent do you consider yourself a spiritual person?” about 66 percent of the natural scientists and about 69 percent of the social scientists describe themselves as spiritual. This means there is a population of scientists who say they have no religious affiliation but who do see spirituality as important. Indeed, about 39 percent of those without a current religious affiliation still consider themselves spiritual. In addition, over 22 percent of the scientists who are atheists are spiritual. And over 27 percent of the scientists who are agnostic are spiritual.

And what did these respondents mean by spirituality? Analyses of the in-depth interviews reveal definitions that vary from “a vague feeling that there is something outside myself” to “a deep and compelling, other-centered worldview that directs how research and interactions with students are conducted.” Definitions of “religion” and “spirituality” are not benign constructs for this population. Among university scientists such distinctions often carry a moral weight. For example, one chemistry professor describes having “the feeling that [religion] doesn't really work in that it ends up being a mechanism by which people's thoughts and lives are controlled or meant to be controlled.” This same professor, when asked to compare religion and spirituality, says that spirituality is “more flexible and personal, and a lot less judgmental. In fact, she explains, “[W]hen I think of a spiritual person, the word ‘judgment’ doesn't even pop into my mind.” For many of those who consider themselves spiritual, spirituality means simply having a larger purpose or meaning that transcends daily concerns. For many of the natural scientists, in particular, knowledge of the spiritual comes directly from their work. For example, according to one physicist,

When I travel to observatories...and when I finally just have enough time to try to think of my place in the world and the universe and its vastness, it's then that I feel the connection to the world more than I do, say, sitting here in my office. And so that for me, that's the closest I can come to a spiritual experience.

This excerpt and the many others like it show that, for some scientists, rather than science replacing religion, *spirituality* may be replacing religion.

## Faculty Perspectives on Religion in Disciplines and Teaching

The study also explores what scientists think about the place of religion in their specific fields. When asked to respond to the following statement, “In general I feel that the scholars in my field have a positive attitude towards religion,” about 23 percent agree compared to 45 percent who disagree with this statement (about 32 percent of the sample had no opinion about the question).<sup>16</sup> The in-depth interviews expand on these results, revealing that while natural and social scientists rarely think their colleagues are hostile towards religion, there are strong unspoken barriers against discussing religion (especially traditional forms of religion, such as Catholicism) in academic settings. Religion is simply not a topic that scientists think is acceptable to discuss, even in informal university settings outside of the classroom.

In addition, the academic scientists were asked if their spiritual or religious beliefs influence how they interact with colleagues or students. Forty-five percent of those in my own field of sociology agree with this statement and about the same percent disagree (about 9 percent had no opinion).<sup>17</sup> Among the broader sample, 39 percent agree that their religious or spiritual beliefs influence interactions with students or colleagues, while 54 percent have some variation of disagreement with the statement.<sup>18</sup> In sum, although there is a sizeable minority who see faith influencing interactions with colleagues and students, the majority of academic scientists do not think that spiritual or religious beliefs influence such interactions.

However, scientists explain that students are talking about religion in academic settings. Such interactions might range from students raising religious perspectives during classroom discussions about evolutionary science to students talking about their own religious involvements during faculty office hours or even trying to convert faculty. Unless they actively suppress discussions about religion, professors in all of these natural and social science disciplines must figure out ways to interact with religious students.

I will briefly discuss two dominant ways that faculty respond to student discussions about religion. First, some scientists simply try not to talk about religion with students. These faculty members, who frequently teach at large state universities, often use language focusing on separation of church and state. A professor of chemistry explains,

I would engage in a religion discussion with students not inside this office or my classroom, not because I'm necessarily afraid of the consequences, but that's not what I'm here for. I'm not a professor of religion and I would not discuss religious matters with students in an academic teaching or research setting.

This group of faculty thinks it simply inappropriate to discuss religion with students.

Second, and in contrast, others are beginning to take more of an activist-orientation to discussions involving religion. These professors tend to see their students as a part of the extended public. They want to use their classrooms as a platform to try to inform students about the appropriate place of religion in public life, particularly the intersection of religion and science. Many of those

who advocate this position also mention that they lack a language or resources to talk about religion in what they would see as thoughtful ways.

For example, during the summer of 2005 the *New York Times* published a series of articles on religion and science, largely in response to the cases about intelligent design in Kansas and Pennsylvania.<sup>19</sup> Although I did not mention these cases during the interviews, the scientists consistently talked about them. We could imagine that these events would make scientists, especially natural scientists, respond negatively to religion. Rather, such events outside the university often serve to *push* scientists into the realm of religion, even those who have no personal interest in religion. A respondent mentioned, for example, that she generally does not think much about religion. She also explains that the cases about intelligent design mean students are bringing religion into the science courses she teaches at her university. To remain an effective teacher she is actively searching religiously-based websites to find any resources that deal with the connection between religion and science in what she views as insightful ways. This respondent asked me if I knew of any such resources and went on to explain that although she hasn't thought much about religion, "what is going on now is forcing [her] to think about religion and its relationship to science."

### **What Do These Results Mean?**

There is some truth to the perception that scientists and the academy are "godless."<sup>20</sup> Yet, to see the academy only from this monolithic view would overlook the significant numbers of scientists who do identify with some form of faith tradition (48 percent) as well as those who are interested in spirituality (about 68 percent). In addition, when we look at the religious backgrounds of scientists, the picture becomes more complicated. Scientists come disproportionately from irreligious backgrounds or backgrounds where a faith tradition was only nominally practiced. The question of why scientists come from these backgrounds will need further exploration beyond the data presented here. Some possible explanations: there may indeed be tension between the religious tenets of some groups (e.g. those that advocate doctrines of origins of the earth that are in opposition to evolution) and the theories and methods of particular sciences, making members of such faith traditions less likely to pursue scientific careers. That few scientists subscribe to the more conservative or traditional strands of religion would seem to support this idea. Alternatively, this difference in backgrounds between scientists and non-scientists could be due to differential emphasis on education and/or differential resources, factors apart from particular religious backgrounds. In addition, results reveal that scientists raised in religious homes often remain relatively religious. The story is more complex than the simple "religion is contradictory to science and hence religious individuals do not go into science."

*If* the goal is to increase dialogue between academics in science fields and different sectors of the American public, (space limits do not allow a thorough discussion of the pros and cons in the confines of this paper), then we need to consider what these findings say about how academic scientists might contribute to that dialogue. It is clear that scientists at elite universities are generally less religious than individuals in the broader population. Scientists often rightly lament the scientific illiteracy among the U.S. population.<sup>21</sup> Findings from this research also reveal,

however, that a portion of academic scientists may be *religiously* illiterate. In the wake of recent events about teaching intelligent design in public schools, increasing communication between academics in various scientific fields and the general public (some of whom are the students in their classes) may become a very important goal indeed. More thought could be given to how those in disciplines further removed from religion might learn about and engage productively with religion. It should also be kept in mind that, whether or not academic scientists openly discuss religion, a large minority is religious and the majority is interested in matters of spirituality. This leaves a sizeable population of scientists who are possibly crucial commentators in the context of an American public searching for a way to meaningfully connect religion and science. That the scientists in this population are from elite universities makes them all the more potentially influential in such a dialogue.

## Endnotes

<sup>1</sup> See Barbour (1966), Marsden (1994), White (1955 trans.), Wolfe (1997), who explain different approaches to the connection between religion and science.

<sup>2</sup> See Schmalzbauer essay, "Campus Ministry: A Statistical Portrait," which appears in this forum [here](#). See also Astin and Astin (1999) and Bartlett (2005).

<sup>3</sup> Some recent studies examine religion among faculty. See recent work on faculty spirituality sponsored by the Higher Education and Research Initiative (HERI) at UCLA as well as a Harvard study focusing on professors' political attitudes. The latter study had several survey questions on religion. See <http://www.wjh.harvard.edu/soc/faculty/gross/religions.pdf>. Neither of these studies focused on faculty at elite institutions, scientists or the connection between religion and science.

<sup>4</sup> See Collins (2006).

<sup>5</sup> For a literature review of other work on elites, see Lindsay (2006).

<sup>6</sup> The survey was administered by Schulman, Ronca & Bucuvalas Inc. Some questions were replicated from other national surveys of religion (such as the General Social Survey) in order to compare university scientists to those in the general U.S. population. A random sample of individuals were contacted from the natural science fields of chemistry, physics and biology and the social science fields of economics, sociology, political science, and psychology.

<sup>7</sup> The largest study of American faculty is the Carnegie Commission faculty study, a survey of more than 60,000 US professors, initially completed in 1969. The survey asked several basic questions about religion, which were replicated in the RAAS survey. These included questions such as: "How often do you attend religious services?" and "What is your present religion?" According to the 1969 survey, which included most of the questions on religion, 42 percent of those in the life sciences "regularly attended religious services" while only 20 percent of faculty in psychology regularly attended. See (Stark and Finke 2000; Wuthnow 1985), which mention this research.

<sup>8</sup> There are some statistically significant differences between disciplines. For example, when

asked, "Which one of the following statements comes closest to your views about religion?" respondents were provided with the choices, 1) There is very little truth in any religion, 2) There are basic truths in many religions, 3) There is the most truth in only one religion, and 4) No answer. About 33 percent of physics professors answered, "There is very little truth in any religion" compared to 15 percent of political scientists who gave this answer. The magnitude of difference between the larger natural and social science fields, however, is not vast compared to the differences in religiosity between academic scientists and the general population.

**9** These percentages come from the General Social Survey 1998. The total sample size was 1,235.

**10** It is likely that many who are Jewish would see themselves as reformed or liberal Jews rather than conservative (fully recognizing the heterogeneity of this category) or Orthodox. For example, one of the questions on the survey was "Compared to most Americans where would you place your religious views on a seven-point scale?" The lower numbers on the scale indicated liberal views and the higher numbers conservative views. Among the academic scientists who identified as Jewish, the mean was 2.19. From this, we could infer that most of those who identify as Jewish would also associate with a less traditional form of Judaism.

**11** See the March 24, 2006 issue of the *Chronicle of Higher Education*.

**12** The exception is among academic scientists raised Jewish, who do not differ substantially in their religiosity from those raised with no religious tradition.

**13** Another way to examine the impact of religious upbringing is through predicted probabilities. For instance, consider two sociologists who are male, in the 18-35 range, born in the United States, have no children and are currently married. One was raised in a Protestant denomination and religion was "very important" while growing up. The other was raised as a religious "none" and religion was "not at all important" while growing up. Analyses of the RAAS survey reveals that the former has a predicted probability of 14 percent for saying that he does not believe in God. This compares to a 54 percent chance of the latter saying he does not believe, a striking difference. These differences do not offer conclusive evidence about the causes of disproportionate self-selection of scientists from certain religious backgrounds into the scientific disciplines. They do, however, offer potential for explaining the differences in religiosity between scientists and the general population.

**14** In the 2004 GSS, 100% (n=60) of the respondents who were raised Jewish say that they are religious "liberals."

**15** For example, research shows that religious liberals, members of mainline Protestant traditions, for example, tend to be more tolerant, less sectarian, and by some measures, less devout than religious conservatives. See, for example, Ammerman (2005). For a further discussion of the current challenges of religious diversity in broader American society, see Wuthnow (2005).

**16** Choices were 1) Strongly agree 2) Somewhat agree 3) Have no opinion 4) Somewhat disagree 5) Strongly disagree and 6) No answer.

**17** Ibid.

**18** Seven percent of the sample had no opinion about this question.

**19** See Behe (2005), Editors (2005).

**20** See Smith (2003).

**21** See Editors (2005), Lakoff (2005).

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