

# RELIGIOUS BELIEF AND PUBLIC ATTITUDES ABOUT SCIENCE IN THE U.S.

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Religion and science have long had an uneasy coexistence, at least in the popular imagination. This perception has been fueled in part by a number of famous episodes in history that have pitted scientists, like Galileo and Darwin, against the prevailing religious establishments of their time.

The United States had made its own contributions to this perception. In 1925, for instance, a shy science teacher from Dayton, Tennessee named John Thomas Scopes made headlines and history when he was tried and convicted for teaching evolution to his high school students. To this day, the "Scopes Monkey Trial" remains a potent symbol of what many see as an inherent conflict between faith and science. But to what extent does this conflict really exist? And is there clear evidence for it in American public opinion today?

The United States is the most religious of the advanced industrial democracies. At the same time, American scientists are recognized to be leaders in many areas of scientific research and application. This combination of widespread religious commitment and leadership in science and technology makes the potential for conflict in the U.S. very great. Indeed, the potential impact of a serious conflict on the ability of science to function could be significant, given the high level of religious commitment among the U.S. public and much of its political leadership.

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The analysis that follows will argue that while Americans respect science and scientists, they are not always willing to accept scientific findings that squarely contradict their religious beliefs. At the same time, such conflicts are not common in the U.S. today. True, more than 80 years after the Scope trial, evolution offers a very concrete (and ongoing) example of such a conflict. Faith also appears to play a less pronounced, but still powerful, role in shaping views of the nature of homosexuality. But on other questions, religion is a less powerful predictor of views of science; for instance, compared with views of evolution and homosexuality, religious variables are not highly correlated with views of global warming.

Furthermore, there are no additional, obvious examples of issues where scientists and people of faith disagree on critical facts. There are areas that one day could become the source of a factual dispute between scientists and some religious Americans. For instance, some scientists publicly claim that the most recent research on the human brain shows that it and it alone is the seat of consciousness and personhood and that this evidence disproves the existence of a soul or spirit. If this idea were to become widely accepted and publicized, it could, and indeed probably would, prove to be another area of conflict between religion and science. But currently, the debate over “the death of the soul” is not stirring significant opposition from religious people and groups, primarily because there is no scientific consensus on the issue (as there is with evolution) and no real constituency for increasing public knowledge of this debate (as there is with questions concerning the nature of homosexuality.)

Finally, there are religious differences of opinion about the ethics of some kinds of scientific research and its application. In the field of bioethics, public opinion is divided about cloning, embryonic stem cell research, end-of-life issues, and genetic testing. But here, the disputes do not concern questions of fact, as they do in the debates over evolution and homosexuality. Instead, the bioethics debates involve purely moral and ethical questions, which have been well documented and so will not be discussed at great length in this paper.

**Evolution**

In the last century, the most persistent and sharpest clash between religion and science in the United States has centered on the issue of evolution. Public opinion polling finds that there has been virtually no change over the past several decades in the percentage of the U.S. public – approximately 40% to 50% - who reject the very idea of natural evolution, largely on the grounds that it conflicts with biblical accounts of creation.

The Pew Research Center developed a sequence of questions to gauge opinion about evolution. Because of concerns that some respondents may feel a need to support a creationist account in order to express their belief in God, this sequence first asks half of the respondents about the belief in God or a higher power, and then asks the believers (95% of those asked) if God (or the higher power) was responsible for the creation of life on earth. The other group does not receive these introductory questions about belief. All respondents are then asked a two-part question about the development of human and other life. A comparison of the treatment and control groups found no difference in the percentage who believe in evolution. Being first asked about belief in God neither increases nor reduces the percentage who support creationism.

The two-part evolution question also attempts to gauge support for the idea that a supreme being guided evolution with the goal of creating life in its present form. This idea, similar to the notion of “intelligent design,” was appealing to many of those who said they believe that life has evolved. The sequence was worded as follows:

	Total	White Evang	Black Evang	White Mainline	Total Catholic	Secular
<i>Humans and other living things have...</i>	%	%	%	%	%	%
Existed in present form only	42	65	65	32	33	12
Evolved over time	51	28	23	62	59	83
<i>Guided by supreme being</i>	21	20	11	26	31	9
<i>Through natural selection</i>	26	6	8	31	25	69
<i>Don't know how evolved</i>	4	2	4	5	3	5
Don't know	7	7	12	6	8	5
	100	100	100	100	100	100

Source: Pew Research Center survey July 2006

“Some people think that humans and other living things [have evolved over time/have existed in their present form since the beginning of time]. Which of these comes closest to your view? And do you think that [Humans and other living things have evolved due to natural processes such as natural selection/a

supreme being guided the evolution of living things for the purpose of making humans as they are today]?” (items in brackets were rotated randomly)

Overall, 42% of respondents rejected evolution, choosing the option that humans and other living things have existed in their present form since the creation. About half (51%) believe that evolution has occurred, but many think it was guided by a Supreme Being or higher power (21%). Just 26% believe in evolution through natural selection.

The strongest opposition to the idea of evolution comes from evangelical Christians, most of whom accept the Bible as literally true and see a direct conflict between the biblical creation account and scientific accounts of evolution. Large majorities of both black and white evangelicals (65%) say that life did not evolve. Just 28% of white evangelicals and 23% of black evangelicals believe in evolution, and only 6% think evolution occurred through natural selection.

Among seculars and most other religious groups, majorities believe in evolution: this includes 59% of Catholics, 62% of white mainline Protestants and 83% of seculars. But mainline Protestants and Catholics who believe in evolution are themselves divided over the question of whether evolution occurred through natural selection or was guided by a supreme being for the purpose of creating human life in its present form. Overall, 31% of mainline Protestants believe in natural selection, while 26% believe a supreme being guided the process. Among Catholics, 25% subscribe to the idea of natural selection and 31% think evolution was divinely guided. Only among seculars does a majority accept natural selection: 69% of respondents with no religious affiliation believe that life evolved through natural selection.

<b>Certainty of Views on Development of Life</b>				
	Very certain	Fairly certain	Not too/Not at all certain	DK
	%	%	%	%
Total	46	31	21	2=100
<i>Among those believing in...</i>				
Creation	63	24	11	2=100
Evolution	32	40	27	1=100
With guidance	39	42	19	*=100
Natural selection	28	41	29	2=100
<i>Bible is...</i>				
Literal word of God	69	18	11	2=100
Word of God, but not literal	34	40	24	2=100
Not word of God	30	37	31	2=100
Source: Pew Research Center survey July 2005				

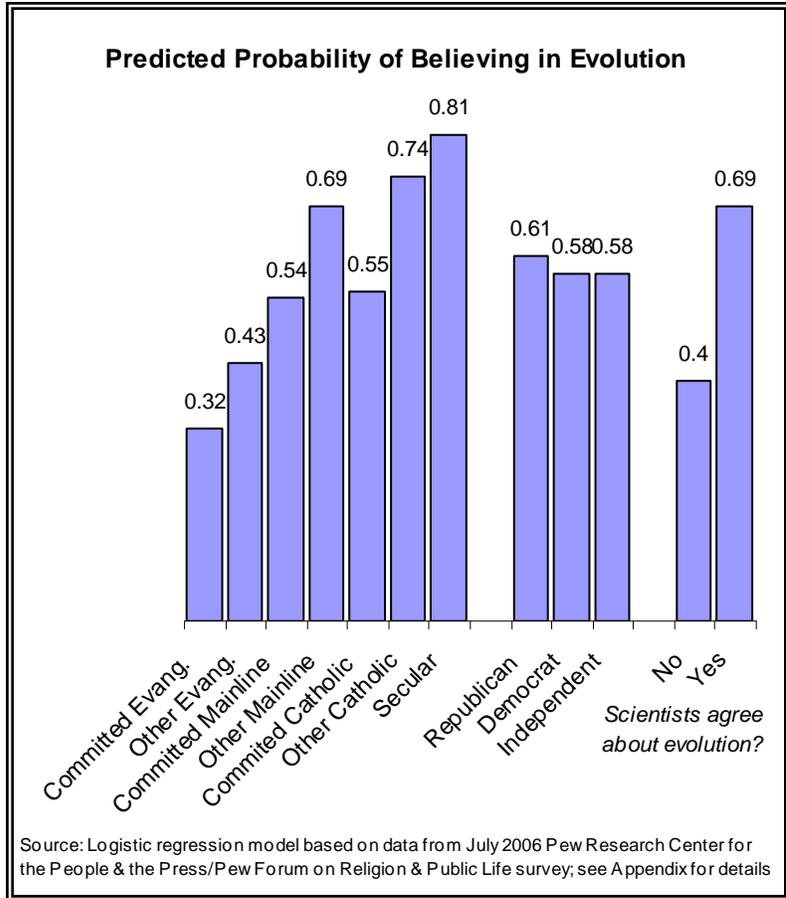
Part of the reason for the extent of creationist influence in the US is the stronger degree of certainty of belief about the origins and development of human life possessed by those who reject the theory of evolution compared with those who believe in evolution. More than six-in-ten (63%) of those who accept the creationist account say they are “very certain” of their views, while those who believe evolution occurred are far less certain (32% very certain). Relatedly, 69% of biblical literalists are very certain about their view on the development of life, compared with about one-third among those who do not take the Bible literally.

The rejection of evolution is not entirely a result of a lack of awareness of the scientific consensus on the subject. More people believe that scientists agree on evolution (62%) than accept the idea themselves (51%), and this is true even among white evangelical Protestants (43% think scientists agree on evolution but only 28% believe in evolution). Nor is the rejection of evolution a result of political or ideological beliefs. While Republicans and conservatives are more apt than Democrats or liberals to deny that evolution occurs, this correlation is mostly a result of the large number of evangelicals with creationist views in the Republican Party and among conservatives.

<b>Do Scientists Agree about Evolution?</b>			
	<u>Yes</u>	<u>No</u>	<u>DK</u>
	%	%	%
Total (July 2006)	62	28	10=100
July 2005	54	33	13=100
White Protestant	54	33	13=100
Evangelical	43	42	15=100
Mainline	67	23	10=100
Total Catholic	67	23	10=100
White Non-Hisp	73	23	4=100
Secular	82	15	3=100
Among those believing in*			
Creation	47	40	13=100
Evolution	78	17	5=100
<i>With guidance</i>	71	23	6=100
<i>Natural selection</i>	85	11	4=100
* <b>Creation</b> refers to those who say living things have always existed in their present forms. <b>Evolution</b> refers to those who think living things have evolved over time. <b>With guidance</b> refers to those who think evolution was guided by a supreme being <b>Natural selection</b> refers to those who think evolution occurred through natural processes.			
Source: Pew Research Center survey July 2006			

Indeed, a binary logistic regression model shows that even after controlling for education, political partisanship and ideology, awareness of the scientific consensus on the topic of evolution, and a host of other demographic variables, religion remains a highly significant predictor of views of evolution (see appendix for details on the regression model). With all other religious variables held at 0 and all other variables held at their mean value, for instance, the model predicts that the likelihood that committed evangelical Protestants (those who go to

church regularly and say that religion is very important in their lives) will believe that humans have evolved over time is a mere .32, making this group .49 points less likely to believe in evolution compared to seculars. Less committed evangelicals, mainline Protestants, and highly-committed Catholics are also significantly less likely to believe in evolution relative to seculars. While the model confirms that awareness of the scientific consensus on evolution is also closely associated with the belief that evolution has occurred, merely knowing about the scientific consensus is not sufficient to induce acceptance of the theory of evolution. Political partisanship is a comparatively weak predictor of views about evolution.



**Homosexuality**

The issue of homosexuality presents a second case study. Unlike evolution, there is no scientific consensus on the causes of homosexuality – or at least no consensus that has been broadly disseminated. Consequently, there is little agreement – even among the well educated – about whether homosexuality is a personal preference or whether it can be changed. Still, conservative and religious groups have strongly contested the scientific research showing that homosexuality is associated with certain genetic features or exposure to hormones during gestation, and to the idea that homosexuals cannot change their sexual orientation or be “cured.”

Opinions about the nature of homosexuality have changed a little since 2003. Today, somewhat more Americans believe that homosexuality is innate (from 30% in 2003 to 36% now) and that homosexuality cannot be changed (from 42% to 49%). But the majority of the public still rejects the idea that homosexuality is something that people are born with, and see it instead as either a product of the way people are brought up (13%) or as “just the way that some people prefer to live” (38%).

Although the number of Americans who see homosexuality as something people are born with has increased only modestly since 2003, this view is now much more widely held among certain groups in the population than it was three years ago. Among college graduates, for instance, there has been a double-digit increase since 2003 in the view that

<b>No Consensus on Causes of Homosexuality</b>				
	Homosexuality is...			
	Something people are <u>born with</u>	Linked to up- <u>bringing</u>	Just how some prefer <u>to live</u>	<u>DK</u>
	%	%	%	%
Total (July 2006)	36	13	38	13=100
October 2003	30	14	42	14=100
December 1985	20	22	42	16=100
College graduate	51	9	28	12=100
Some college	39	15	32	14=100
High school or less	26	14	46	14=100
Conservative	21	20	46	13=100
Moderate	38	9	37	16=100
Liberal	57	7	27	9=100
Total Protestant	29	15	41	15=100
White evangelical	17	15	51	17=100
White mainline	52	13	22	13=100
Black Protestant	20	19	52	9=100
Total Catholic	44	10	33	13=100
White, non-Hisp	48	10	29	13=100
Secular	48	7	29	16=100
<i>Religious Attendance</i>				
Weekly or more	25	17	44	14=100
Monthly or less	36	8	43	13=100
Seldom or never	52	13	23	12=100

Source: Pew Research Center survey July 2006

homosexuality is innate (from 39% to 51%). Similar increases are seen among liberals (46% to 57%), mainline Protestants (37% to 52%) and among those who seldom or never attend church (from 36% to 52%).

In contrast to these groups, majorities of white evangelicals (51%) and black Protestants (52%) continue to view homosexuality as a choice. White evangelicals, in particular, have changed very little in their views on this question over the past three years.

Though most Americans reject the notion that homosexuality is an innate trait, a plurality of the public (49%) views sexual orientation as a characteristic that cannot be changed, a seven percentage-point increase since 2003.

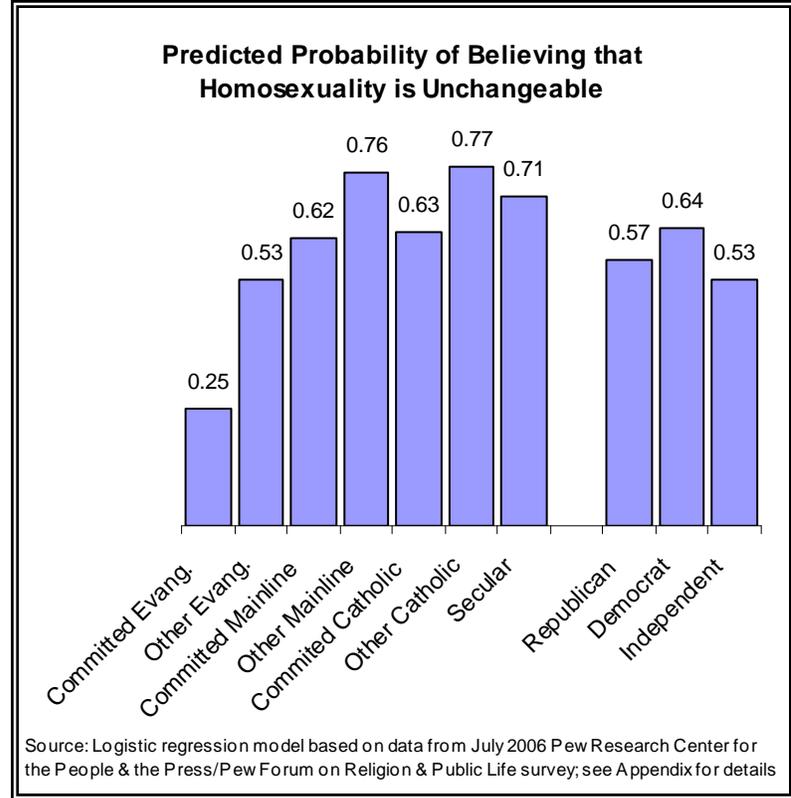
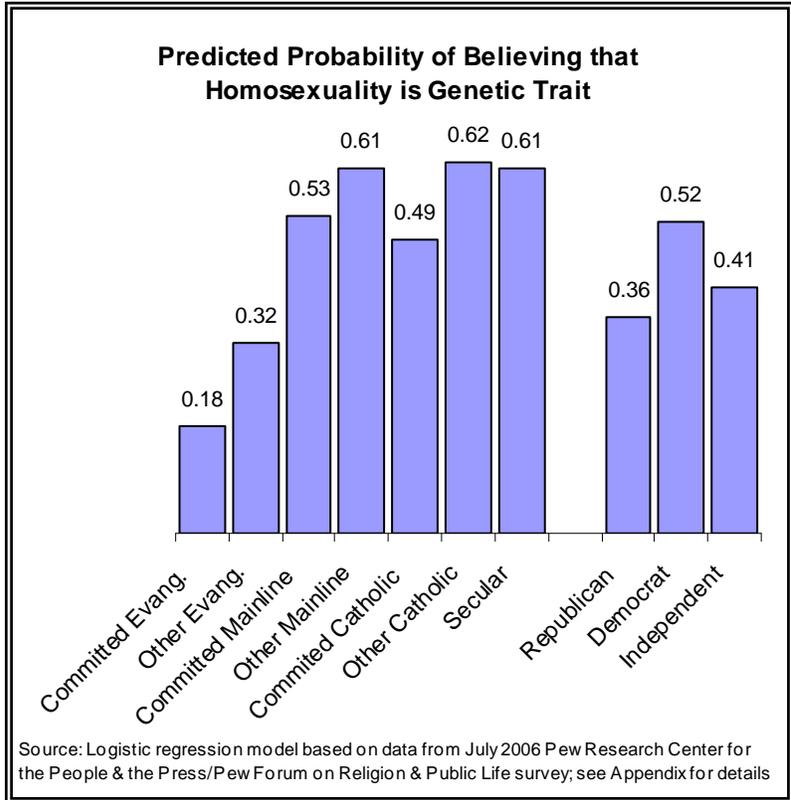
Views of whether homosexuality can be changed have both a political and a religious component. A small majority of conservatives (52%) says homosexuality can be changed, while the overwhelming majority of liberals (71%) disagrees. Similarly, substantial majorities of white evangelicals (56%) and black Protestants (60%) say that homosexuality can be changed, while majorities of white mainline Protestants (67%), Catholics (56%) and seculars (59%) say homosexuality cannot be changed.

<b>Plurality Believes Homosexuality Is Forever</b>			
	<i>Homosexuality...</i>		
	<u>Can be changed</u>	<u>Cannot be changed</u>	<u>DK</u>
	%	%	%
Total	39	49	12=100
October 2003	42	42	16=100
College graduate	31	58	11=100
Some college	40	52	8=100
High school or less	43	42	15=100
Conservative	52	36	12=100
Moderate	37	49	14=100
Liberal	21	71	8=100
Total Protestant	45	42	13=100
White evangelical	56	29	15=100
White mainline	22	67	11=100
Black Protestant	60	30	10=100
Total Catholic	31	56	13=100
White, non-Hisp	26	61	13=100
Secular	27	59	14=100
<i>Religious Attendance</i>			
Weekly or more	54	34	12=100
Monthly or less	34	52	14=100
Seldom or never	22	68	10=100

Source: Pew Research Center survey July 2006

As with views of evolution, multivariate analysis reveals that religion variables are strong predictors of views of the nature of homosexuality even after controlling for education, partisanship, and a number of demographic variables. Most notably, evangelicals are much less likely than other groups to accept either the notion that homosexuality is an innate characteristic or that it is a permanent, unchangeable trait. But it also appears that religion

is a less important predictor of views of homosexuality than it is of views of evolution. Unlike with evolution, there are only small differences in the views of homosexuality among non-evangelicals; whereas highly committed Catholics and both highly-committed and less-committed mainline Protestants were significantly less likely than seculars to believe in evolution, none of these groups differs significantly from seculars in their views of the nature of homosexuality. And political partisanship is a somewhat stronger predictor of views of



homosexuality than of views of evolution; Democrats are significantly more likely than independents and Republicans to say that homosexuality is innate and unchangeable. (The survey did not ask about perceptions of the degree of scientific consensus regarding the nature of homosexuality.)

**Global Warming**

Religious differences are somewhat smaller on another controversial issue, global warming. An overwhelming majority of those polled (79%) believe that there is solid evidence that the average temperature of the earth has been increasing over the past few decades; just 17% say there is no solid evidence for this. Sizable majorities of each of the largest religious groups agree: 77% of Catholics; 79% of white mainline Protestants; and 70% of white evangelicals.

Most of those who believe that the earth is getting hotter also believe that human activity, such as the burning of fossil fuels, is responsible: based on the total sample, 50% say this, and 23% say it is mostly a result of natural patterns in the earth’s environment. But there are somewhat larger differences

across religious groups on this question: 52% of Catholics and 48% of white mainline Protestants believe the earth is getting hotter and think this is because of human activity, while fewer evangelicals think this (37%). Fully 62% of seculars feel that global warming is occurring because of human activity.

<b>Global Warming</b>					
<i>Is there solid evidence that the earth is getting warmer?</i>	<u>Total</u>	<u>White Evang.</u>	<u>White Mainline</u>	<u>Total Catholic</u>	<u>Secular</u>
	%	%	%	%	%
Yes	79	70	79	77	88
Result of human activity	50	37	48	52	62
Result of natural causes	23	27	24	21	20
Don’t know cause	6	6	7	4	6
No	17	25	18	19	9
Don’t know/mixed	4	5	3	4	3
	100	100	100	100	100
<b>Is Global Warming a Serious Problem?</b>					
<i>How serious a problem is global warming?</i>	<u>Total</u>	<u>White Evang.</u>	<u>White Mainline</u>	<u>Total Catholic</u>	<u>Secular</u>
	%	%	%	%	%
Serious (net)	79	68	78	86	88
Very serious	43	29	40	48	48
Somewhat serious	36	39	38	38	40
Not too serious	11	16	14	7	7
Not at all serious	9	15	8	6	4
Don’t know	1	1	*	1	1
	100	100	100	100	100

Source: Pew Research Center survey July 2006

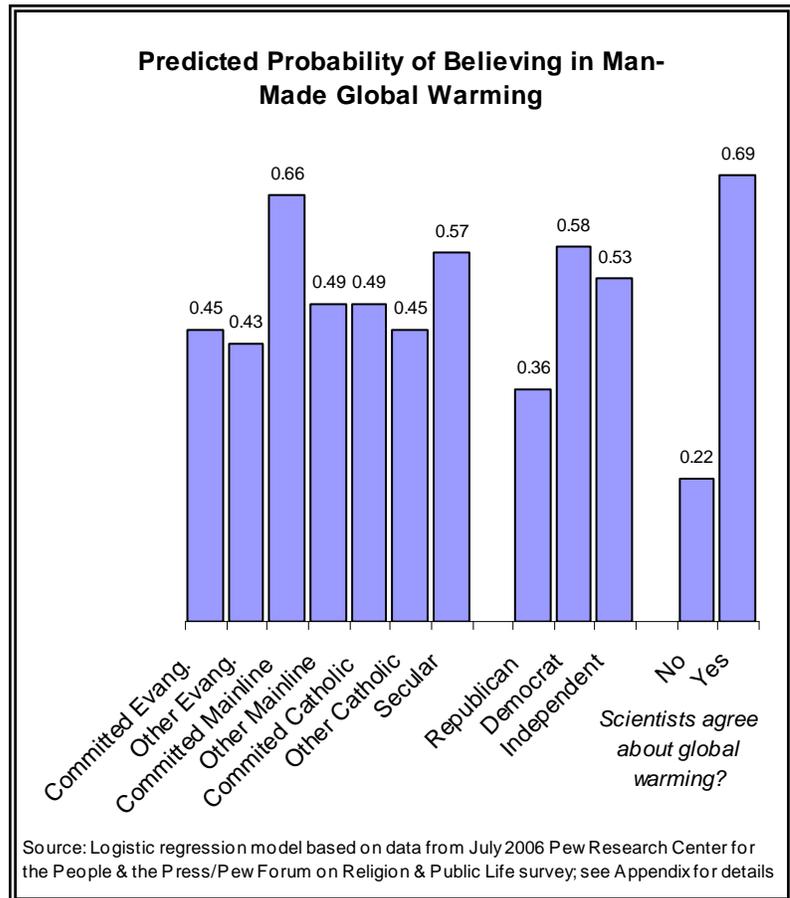
While majorities of all religious groups (from 68% among white evangelicals to 88% among seculars) view global warming as a serious problem, considerably fewer regard it as a *very* serious problem: just 43% overall and as few as 29% among evangelicals say this. Global warming also ranks near the bottom of policy priorities for the public when asked about a long list of issues.

There also are differences among religious groups in the perception that there is a scientific consensus on global warming, but even among evangelicals, a small majority (51%) thinks there is a scientific consensus, a finding that may help explain why some evangelical leaders have begun to pay more attention to environmental issues. Overall, 59% of the public says that scientists agree that global warming is occurring and that it is caused by human activity; 29% think there is no scientific consensus. Among other religious groups, more see scientific agreement: 58% among mainline Protestants and 59% among Catholics. Fully 72% of seculars think scientists agree on this issue.

Multivariate analysis of the correlates of views of global warming reveals that after controlling for demographic and political variables, and especially for awareness of the scientific consensus with respect to global warming, religion is not closely

	Yes %	No %	DK %
Total	59	29	12=100
White Protestant	54	34	12=100
Evangelical	51	37	12=100
Mainline	58	30	12=100
Total Catholic	59	31	10=100
White Non-Hisp	61	33	6=100
Secular	72	15	13=100

Source: Pew Research Center survey July 2006



related to views of global warming. In particular, the magnitude of the difference between evangelicals and seculars in views of global warming is much smaller than that seen on views of evolution and homosexuality. The predicted probability of believing in man-made global warming is .12 higher among seculars than among highly committed evangelical Protestants; by comparison the predicted probability of agreeing with the scientific mainstream on the issue of evolution is 49 points higher among seculars than highly committed evangelicals, 43 points higher on the question of whether homosexuality is innate, and 46 points higher on the question of whether homosexuality is changeable.<sup>2</sup>

At the same time, perception of a scientific consensus on global warming is a relatively stronger predictor of views on this issue than on views of evolution. While the predicted probability that evolution occurred is 29 points higher among those aware of the scientific consensus on evolution than those unaware of it, the predicted probability that man-made global warming is occurring is 47 points higher than among those who believe there is a scientific consensus on global warming. Political variables are also strong predictors of views of global warming, with Republicans and political conservatives much less likely to believe that human-caused global warming is occurring.

The apparent low relevance of religion in shaping views on global warming is corroborated in respondent self-reports about the importance of various factors with respect to another environmental issue: whether environmental regulations do more harm than good. Asked to compare religious beliefs as an influence with five other possible factors, fewer

<b>Religion Not a Major Influence on Environmental Views</b>		
	Environmental regulations...	
<i>Biggest influence on this issue</i>	<u>Hurt</u>	<u>Help</u>
	%	%
Seen on news	26	24
Personal experience	24	22
Education	18	30
Religious beliefs	9	7
Friends/family	8	6
Something else	14	10
Don't know	<u>1</u>	<u>1</u>
	100	100
Number of cases	(599)	(1154)
Source: Pew Research Center survey July 2006		

<sup>2</sup> The only religious group for which there is a statistically significant difference with seculars on global warming is low commitment evangelicals, but in absolute terms they are very similar to the other religious groups. Highly committed mainline Protestants do appear to stand out for their high level of belief that the earth is warming due to human causes, but the size of this group is quite small – accounting for roughly 5% of the US population and only 52 of the 974 cases in the data upon which this model is based. It is therefore not possible to say with a high degree of confidence that mainline Protestants are substantially more likely than other groups to accept scientific claims about global warming.

than one-in-ten cite their religious beliefs as the biggest influence on their views on environmental regulation.

### ***The U.S. Public Respects and Admires Science and Scientists***

The public image of science is generally very positive. Strong majorities of the public in the U.S. express support for scientific enterprise and for scientists: 80%-90% of the public agrees that developments in science have made society better, that most scientists want to work on things that make life better for the average person, and that basic research is worthy of government support even if it does not yield immediate benefits. Similarly, few believe that the risks of scientific research outweigh the benefits (an average of about 10%-12% over the past 20 years). Fewer than one-in-five believe that the federal government is spending too much on scientific research. And eight-in-ten say they would be happy if a son or daughter wanted to be a scientist. There are only modest differences among religious groups on these questions.

But some in the public do have reservations about science. A small majority of 56% agreed in 2006 that “scientific research doesn’t pay enough attention to the moral values in society.” A similar number (51%) said that “scientific research has created as many problems for society as it has solutions.” And half (50%) agreed in 2001 that “we depend too much on science and not enough on faith.” Religiously-committed individuals are more likely than others to hold these attitudes.

And our analysis also suggests that overall views of science are related to views of some of the specific scientific controversies discussed here. For instance, multivariate analyses (not reported here) find no direct link between religion and overall views of science; but those who do not believe in evolution are significantly more likely than those who do to say that overall, scientific advances will harm mankind more than help mankind.

### ***Discussion***

Are religion and science on a collision course in the U.S.? Our review of three important issues on the public policy agenda in the U.S. suggests that there is certainly a potential for

religiously-based conflict, but the circumstances and specifics of each issue limit the generalizations one can make.

First of all, as already noted, it is difficult to find many other major policy issues on which there are strong religious objections to scientific research. Religious concerns do arise in connection with a number of areas of life sciences research, such as the effort to develop medical therapies from embryonic stem cells. But objections to certain aspects of medical research can be found across the spectrum of religious sentiment. Devout Catholics join with evangelical Protestants in opposing stem cell research, though they may diverge on many other issues. And members of other religious traditions very different from these, as well as some seculars, may object to medical research conducted on animals

Second, there are important differences among the three cases described here. On evolution, there is a clear and strong objection to the scientific consensus among people who accept a literal interpretation of the Bible. Significant numbers within other religious groups believe that evolution occurred, but was divinely guided. The latter sentiment may or may not pose a problem for scientific enterprise, in that much of it does not explicitly dispute the scientific fact that evolution has occurred.

In contrast, beliefs about global warming appear to be only tangentially related to religious beliefs. On the issue of homosexuality, where a scientific consensus has yet to form, and where significant cultural traditions may continue to exert an influence on individual attitudes, religious beliefs are strongly related to opinions but even the non-religious are conflicted.

It is also worth remembering that psychological research finds that people usually believe what they want to believe when what they want to believe is compelling to them - for whatever reason, whether religious or not. In this respect, the examples of religious faith trumping scientific truth do not constitute a special case of the rejection of strong evidence of truth. Indeed, polls also routinely show that large numbers of Americans believe in quasi-religious phenomena, such as astrology and ESP, in spite of the fact that scientists routinely contend that

there is no evidence to support the validity of any of these claims. One also can point to numerous examples in highly charged situations outside the metaphysical or supernatural realm: the case of WMDs in Iraq, the guilt or innocence of Duke University lacrosse players vs. their accuser, even the question of whether O.J. Simpson was guilty of murder in the eyes of blacks and whites in the public.

Finally, it is important to note that the relationship between religion and views of science should be of interest not just to scientists and social scientists concerned with understanding the public's knowledge and perception of science, but to policymakers as well, since surveys show that public acceptance or rejection of scientific findings are closely related to the public's policy preferences. The surveys discussed here find, for instance, that those who reject the theory of evolution are more likely to favor teaching creationism along with evolution in the public schools compared with those who believe that evolution has occurred. Those who believe that homosexuality is an innate characteristic are much more likely than others to favor gay marriage, civil unions, and allowing gay and lesbian couples to adopt children. And, not surprisingly, those who believe that global warming is occurring as a result of human activity are substantially more likely than others to view global warming as a problem that requires immediate government attention and action.

### *Conclusion*

The late paleontologist Stephen Jay Gould spoke of the disciplines of science and religion as separate, operating in different realms to answer different questions. He described this complementary relationship as “non-overlapping magisteria” or “NOMA.” Gould wrote about religion and science and hoped that the concept of NOMA could provide a way to prevent what he saw as needless conflict:

I believe, with all my heart, in a respectful, even loving concordat between our magisteria—the NOMA solution. NOMA represents a principled position on moral and intellectual grounds, not a mere diplomatic stance. NOMA also cuts both ways. If religion can no longer dictate the nature of factual conclusions properly under the magisterium of science, then scientists cannot claim higher insight into moral truth from any superior knowledge of the world's empirical constitution. This mutual humility has important practical consequences in a world of such diverse passions.

As *New York Times* science writer William J. Broad wrote, “For its part, organized religion has for centuries found means of accommodation, approval and even support for science to leaven its sometime resistance. The early Roman Catholic Church adapted cathedrals across Europe to serve as solar observatories. Muslims of the Middle Ages pioneered the forerunners of optics and algebra.”

The public may instinctively understand the idea of non-overlapping magisteria, even if it does not express it in such eloquent terms. Religious respondents to a 1996 poll were asked whether “new developments in science support your religious beliefs, threaten your religious beliefs, or don't really have much to do with your religious beliefs if any?” A majority of 66% said science doesn't have much to do with their religious beliefs (15% said science supports their beliefs; only 7% said science threatens them). Still, most people (64%) say that if science were to prove that one of their religious beliefs was scientifically incorrect, they would continue to believe what their religion teaches. Yet as our review has shown, this is a rare circumstance in the U.S.

## Appendix

To investigate the relationship between religion and views of science, we estimated four binary logistic regression models, the results of which are reported in the table below.

	Believe in <u>evolution</u>	Believe homosexuality is innate trait	Believe homosexuality is <u>unchangeable</u>	Believe in man- made global <u>warming</u>
<i>Demographic Predictors</i>				
Male	0.38**	-0.594***	-0.791***	-.221
Black	-0.116	-0.413	-0.220	.043
Other non-white	-0.494	0.245	-0.073	.529
Hispanic	0.107	-0.506	-1.038***	.220
Age	0.004	0.017***	-0.003	-.004
Education	0.214***	0.262***	0.074	.148***
Income	0.086**	0.140***	0.088**	-.042
<i>Political Predictors</i>				
Republican	0.110	-0.209	0.167	-.696***
Democrat	-0.004	0.408**	0.431**	.178
Conservatism	-0.436***	-0.588***	-0.535***	-.212**
Scientific Agreement	1.221***	--	--	2.096***
<i>Religious Predictors</i>				
Evangelical - low commitment	-1.737***	-1.174***	-0.805**	-.572*
Evangelical - high commitment	-2.200***	-1.917***	-2.015***	-.503
Mainline - low commitment	-0.642*	0.013	0.240	-.339
Mainline - high commitment	-1.284***	-0.307	-0.417	.348
Catholic - low commitment	-0.429	0.048	0.276	-.513
Catholic - high commitment	-1.269***	-0.466	-0.407	-.333
Other religious affiliation	-0.588	-0.866**	-0.521	-.153
Constant	0.051	-0.442	1.869	-.448
Nagelkerke R-squared	.381	0.360	0.322	.364
Number of cases	932	852	865	974

\*p<.1, \*\*p<.05, \*\*\*p<.01

The dependent variables are specified as follows:

Believe in evolution: coded 1 for those who believe that humans have evolved over time, and 0 for those who believe that humans and other living things have existed in their present form since the beginning of time

Believe homosexuality is innate trait: coded 1 for those who believe homosexuality is something that people are born with, and 0 for those who say homosexuality is something that develops because of the way people are brought up or just the say that some people prefer to live

Believe homosexuality is unchangeable: coded 1 for those who believe that homosexuality cannot be changed, and 0 for those who believe that homosexuality is a trait that can be changed

Believe in man-made global warming: coded 1 for those who believe that the earth is warming and that this is caused by human activity, and 0 for those who do not believe the earth is warming or who believe that warming is caused by natural processes

The independent variables are specified as follows:

Male is a dummy variable coded 1 for males and 0 for females. Black is a dummy variable measuring race, coded 1 for blacks and 0 for all others. Other non-white is also a dummy variable measuring race, coded 1 for non-whites who are not black, and 0 for all others. Hispanic is a dummy variable coded 1 for Hispanics, and 0 for all others. Age is a continuous variable measuring respondents' age in years, ranging from 18 to 97. Education is a seven category variable ranging from 0 for those with less than an eighth grade education to 6 for those with an advanced degree. Income is a nine category variable ranging from 0 for those with an annual income of less than \$10,000 to 8 for those with an annual income of \$150,000 or more.

In the evolution model, scientific agreement measures agreement with the statement that "there is agreement among scientists that humans evolved over time," coded 1 for those who agree with the statement and 0 for all others. In the global warming model, scientific agreement measures agreement with the statement that "scientists agree that the earth is getting warmer because of human activity," coded 1 for those who agree with the statement and 0 for all others.

A series of dummy variables combine measures of religious identity (e.g., evangelical Protestant, mainline Protestant, Catholic) with a measure of religious commitment, which in turn is a combination of measures of church attendance and religious salience. Those who attend church frequently and say religion is important in their lives are considered to be highly

committed, while those who do not attend church frequently or say religion is not very important constitute the less religiously committed.

All predicted probabilities in the text were generated by allowing the variable in question to vary from its minimum value to its maximum value, with all other variables held at their mean value.