

Rethinking Religion and Science

Is good public debate between religion and science possible? The dominant conflict narrative suggests that the answer is “no.” Good debate is deliberative. Good debate happens when people and ideas are in productive engagement in public life. Good debate is not possible, the conflict narrative suggests, because religion and science will always be at war with each other.

Outrageous public statements reinforce the impression of conflict. Take, for example, debates over creationism, Intelligent Design (ID), and evolution. When the citizens of Dover, Pennsylvania, voted out their ID-supporting school board, televangelist Pat Robertson responded: “I’d like to say to the good citizens of Dover: If there is a disaster in your area, don’t turn to God; you just rejected him from your city. And don’t wonder why he hasn’t helped you when problems begin, if they begin. I’m not saying they will, but if they do, just remember, you just voted God out of your city.”¹ Likewise, biologist Richard Dawkins derides all who oppose evolution: “It is absolutely safe to say that if you meet somebody who claims not to believe in evolution, that person is ignorant, stupid or insane (or wicked, but I’d rather not consider that).”²

When public statements from religious leaders and scientists sound like the rantings of mad scientists and false prophets, it is easy to think that something about religion or science causes debate to go wrong. So we ask questions. The variety of these questions reflects the complexity of religion and science. Does faith conflict with reason? Is evolution a

threat to biblical truth? Do scientists believe in God? Can prayer be evaluated through double-blind clinical studies? What grades do regular church attendees get in science courses? Do evangelicals know that the earth revolves around the sun, and not vice versa?

In asking these questions about religion and science, it is easy to forget that public debates involving science and religion are, first and foremost, public debates. By “public debates” I mean extended public conversations about important issues that occur primarily through mass media such as newspapers and television. Religion and science are not hermetically sealed in their own capsule. They are two out of many cultural institutions involved in the broader process of working out issues through public talk.

But what if public debate is itself the source of problems with religion-and-science debates? Religion and science may participate in public debate, but the whole point of public debate is to negotiate and manage the changing categories of social life. Public debate shapes what we can talk about, what we know about it, how we talk about it, and what we can do about it. In a fundamental sense, it is public debate that produces and reproduces religion and science in public life. Many people claim that religion and science cause problems for public debate. But it is just as possible that public debate causes problems for religion and science.

In the world of science and religion scholarship, few inhabitants write about religion and science as part of some larger process of American public life.³ This book’s novel contribution to religion-and-science scholarship is that it appears to be about religion and science, but it is really a book about public debate. I agree with most other scholars that there are problems in American religion-and-science debate. But I think that the problems stem from how public debate works, rather than from the relationship between science and religion.

I structure the analysis around a well-known problem of public debate: representation.⁴ In theory, public debate is open to participation from anyone. But if everyone were to talk in public at once, the result would be cacophony, not debate. In practice, most significant and influential public debates occur in mass media, where elite actors define, present, and debate important issues before the widest possible audience. I call these elite actors “representatives.” Representatives participate in public debate instead of, though not necessarily on behalf of, ordinary people. Representatives have unique power to influence our understanding of what is being debated, simply because they are the ones doing the talking in public.

Return for a moment to the quotes from Robertson and Dawkins. If this was a casual exchange between two somewhat inebriated bar patrons, quickly forgotten after a good night's rest, it would be unremarkable. But that is far from the case. Pat Robertson and Richard Dawkins are highly visible representatives in public debate. Mass media outlets distribute their words to a wide audience. Robertson and Dawkins could be engaged in a rich, deliberative, and thoughtful conversation about human origins. Instead, they are slinging personal insults and channeling divine threats.

Thinking about representation as a problem for public religion-and-science debate generates very different kinds of questions than those generated by the conflict thesis. How does representation shape public debates? How do representatives attempt to intervene in public debates? How do ordinary people evaluate representatives as good or bad? What does it mean that, for example, Pat Robertson and Richard Dawkins are seen as representatives of (respectively) religion and science? Do representatives of religion and science act differently than representatives from other domains of public life?

In what follows, I look at public debates about human origins, stem cell research, environmental policy, and the origins of homosexuality. I call these "religion and science" debates because they meet two conditions. First, these are all debates in which some people make claims based on religious authority. Second, they are also debates in which some people make claims based on scientific authority. This definition accounts for science and religion as parts of broader public debates, but avoids the all too common problem of selecting only those instances when religion and science already appear to be in conflict.

As with many controversial issues in American life, these religion-and-science debates ramify in complicated ways across the American cultural landscape. For example, arguments in debates about the origins of homosexuality also implicate hot-button political issues such as gay marriage, personal and professional issues such as the ethics of psychological treatment, and religious organizational issues such as the limits of congregational authority to resist denominational mandates against gay clergy. One social scientist with finite resources cannot possibly track all of the ramifications of these debates, or even identify and organize all of the possible data sources for a single debate. So this study is limited to a practical subset of what is available.

For information on debates and representatives, I constructed a data set containing thousands of articles from major national and regional

newspapers in the United States within a ten year period, and analyzed these data using various forms of computer assistance. For questions about how ordinary people evaluate representatives, I interviewed sixty-two ordinary Americans across two different locations in the United States. Respondents varied in terms of religious background and affiliation and in terms of occupational commitments (e.g., scientific versus nonscientific job). While I briefly describe the various methods I used at appropriate points throughout the book, I have also included a detailed methodological appendix at the end of the book for reference. In all cases, respondents' names are pseudonymized to protect their identities.

I take a sociological approach to analysis in this book.⁵ This means that I focus on what actual people say and do, rather than on how abstract ideas based on scientific theory or theology fit together. It also means that I do not attempt to arbitrate the truth or ultimate significance of claims involving religion or science. Such an approach may initially seem strange to some readers. For example, the history of the relationship between religion and sociology suggests that some religious persons might see sociological analysis as an attempt to undermine the validity of religious beliefs.⁶ Similarly, the history of the relationship between the (other) sciences and sociology suggests that some science enthusiasts might see sociological analysis as an attempt to undermine the authority of science.⁷ So, to address potential concerns up front, let me begin by laying out the reasoning behind my analytical approach.

RELIGION VERSUS SCIENCE?

Both religion and science figure prominently in American public life. Most Americans claim some sort of religious affiliation. Most Americans agree that America is a “Christian nation.” Religious participation remains vibrant. Religious discourse permeates public discussion in settings ranging from alcoholism recovery meetings to presidential speeches. At the same time, most Americans have significant interest in science and technology. People regularly debate American competitiveness in terms of scientific and engineering education. Public respect for scientists remains high, and “scientific citizenship” is a key part of American identity.⁸ To the extent that religion and science are important to Americans, it is no surprise to see that religion and science are part of public life. It would be surprising if they were not.⁹

At the same time, there is little consensus about what counts as religion and what counts as science. “Religion” in public discourse refers

sometimes to institutions, sometimes to ideas, sometimes to practices, sometimes to people, and sometimes to all of these at once. It is sometimes any reference to moral principles, sometimes Christianity or Islam, sometimes what happens in churches, sometimes Protestantism or Catholicism, sometimes clergy, sometimes any reference to supernatural forces, and sometimes just “faith.” “Science” also refers sometimes to institutions; other times to ideas, practices, or people; and still other times to all of these at once. It is sometimes any use of the scientific method, sometimes what happens in big labs and universities, sometimes particle physics or biology, sometimes scientists, sometimes any reference to natural forces, and sometimes just “reason.” In short, the categories “religion” and “science,” like many categories invoked to describe society, are messy, incoherent, and inevitably, inherently incomplete. So discussions about science and religion range widely, from concerns about what they really are, to how they are related, to how religion and science operate and affect broader social concerns.

THREE PERSPECTIVES ON RELIGION AND SCIENCE

Despite this range of definitions and interests, however, it is possible to talk about three major perspectives on religion and science that recur in popular and scholarly literature. Following convention, I call these three perspectives *conflict*, *complementarity*, and *complexity*. I note here that there is substantial slippage in the relevant literature between the claim that there is one single “religion and science” debate (with many manifestations) and the claim that there are many debates involving religion and science.

Conflict

For more than a century, the dominant perspective in religion and science has been the “conflict” or “warfare” perspective. First popularized by John William Draper in his book *History of the Conflict between Religion and Science*, the conflict thesis posits that science and religion are inherently contentious domains of human knowledge with mutually exclusive explanations for how the world works.¹⁰ In this view, religion and science are essential and enduring categories of human life, extending back into antiquity and likely projecting into any visible human future. Citing such examples as the trial of Galileo, the “prayer gauge” debate, and the Scopes trial, scholars and popular sources attribute

particular instances of conflict to an overarching and inevitable conflict between religion and science. The usual conclusion of these analyses is that science provides the superior explanation for how the world works and is therefore winning, or will win, its battle with religion.¹¹

The conflict narrative imagines the world progressing toward total secular rationality. In this developmental view, societies become increasingly secularized as they become more modern.¹² Religion, as a primitive or irrational vestige of less developed societies, will be slowly eradicated by science, the paradigmatic rational epistemology. Rationality will displace irrationality. The future is secular.

In the more benign version of the conflict narrative, the displacement of religion by science is an evolutionary process. Rationality eventually wins out with the better form of knowledge production. Science's superior method of truth will, in the end, prove more durable. We need only wait for religion to play itself out. Although it is unfortunate that some people are still primitive and irrational, we can be generally tolerant of belief pluralism until our better future comes along.

In the most extreme, normative version of the conflict perspective, currently motivating the production of popular best sellers such as *The God Delusion* and *God Is Not Great: How Religion Poisons Everything*, there is no time to waste.¹³ If the better future is rational and secular, then religion is not simply a vestige of past irrationality but an inimical force hostile to human flourishing. Even though science may win in the end, it is immoral and dangerous to allow that process to play out by itself. Science must defeat religion to produce a better world.¹⁴ Anything less than the destruction of religion is a failure of humanity.

Despite the sometimes aggressive polemical language, conflict thesis proponents use "conflict" and "warfare" metaphorically. To the best of my knowledge, no respectable writer seriously advocates the genocide of religious people to advance the cause of science.¹⁵ Even if they did, science has no armies, and such systematic violence would be difficult to mobilize. What is meant by "conflict" or "warfare" is not physical violence between armed bands of theologians and scientists, but rather confrontation between different perspectives. Conflict takes place in the public square, not on the battlefield. Battles are fought with words, ideas, policy, and laws, not guns, bombs, and assassination. This may seem obvious. But the fact that any proposed relationship between religion and science plays out primarily in the public sphere is of crucial importance to the argument of this book.

Complementarity

In the past fifty years, many scholars have challenged both the epistemological and the historical bases of the conflict thesis. From an epistemological perspective, theologians and scientists offer an alternative perspective often called complementarity. Like the conflict perspective, complementarity sees science and religion as essentially distinct realms of human understanding. Science is concerned with knowledge of the natural world. Religion is concerned with meaning and moral order. But in the complementarity view, this difference does not necessarily mean conflict. While conflict is one possible outcome, it can be avoided.

Under the aegis of complementarity there are differing normative prescriptions for avoiding conflict. For example, the “nonoverlapping magisteria” (NOMA) or “two worlds” approach, advocated by Stephen Jay Gould and Pope John Paul II, suggests that religion and science should be kept completely separate so that conflict will not occur over areas of epistemological jurisdiction.¹⁶ This position resonates with debates over the separation of religion from politics.¹⁷ Science is assumed to be a universally accessible way of knowing about the world, so it serves as the legitimate basis for government. Religion, by contrast, is plural and local, so it must be excluded from public deliberation over policies and laws that affect everyone.

At the opposite end of the normative spectrum, “dialogue” and “consonance” approaches suggest that religion and science should be in beneficial dialogue with each other, and even attempt to reconcile their differences, to best avoid conflict. Theologians, scientists, and organizations such as the John Templeton Foundation and the Metanexus Institute actively attempt to reconcile religion and science by highlighting similarities between the two, providing structured dialogues between actors affiliated with religious and scientific institutions, organizing public events to raise awareness of compatibility, providing personal testimonies of reconciliation between science and religion, and constructing systematic theologies that bring, for example, evolutionary theory and soteriology together into a coherent whole.¹⁸

Complementarity shares the conceptual model underpinning the warfare perspective, but does not assume inevitable secularization. Most proponents of complementarity are from vibrant religious traditions that bring the secularization thesis into question. Like the warfare perspective, complementarity sees potential conflict between religion and science as occurring primarily in the public square rather than through

physical violence. Complementarity also sees peace as the normative ideal. For NOMA, peace is achieved and maintained in public life by means of a firewall between science and religion. Likewise, the dialogue and consonance approaches embrace the ideal of public debate as the place for productive deliberative engagement between religion and science (however defined). In all complementarity perspectives, the underlying motivation is to minimize conflict in public life.

Complexity

A more recent alternative to the conflict and complementarity perspectives comes from historians, who examine the specific circumstances of historical events commonly cited as religion-and-science conflicts. Instead of presuming an enduring epistemological conflict, the “complexity thesis” claims that instances of contention between religion and science are not necessarily conflict, not necessarily about religion and science, and most important, not indicative of any sort of larger pattern of conflict between religion and science. Instead, the complexity thesis claims that science and religion have no identifiable pattern of interaction.¹⁹

This claim has two parts. First, there is no way to demarcate religion and science. Historically and sociologically the boundaries of religion and science are not fixed and, in practice, move around so much that no overarching narrative can explain their connections. There are many times and places where religion and science either were not in conflict or were not even considered as separate categories. For example, in the nineteenth-century United States, Baconian Common Sense Realism emphasized science as part of God’s revelation in nature.²⁰ And in Victorian England, some of the most ardent of “Darwin’s defenders” promoted evolution as part of the divine plan for the world.²¹

Second, although conflict sometimes occurs that can be called “science versus religion,” most episodes of conflict are local and contingent rather than universal and enduring. Local theological disputes or contentions over professional jurisdiction embody local concerns about power and authority that do not easily map onto a master narrative of conflict. So, for example, battles over Copernicus and Galileo are not episodes in the inevitable conflict between religion and science over the truth of the cosmos, but historically contingent conflicts over institutional authority.²² Likewise, the Scopes trial was as much about conflict between conservative and moderate American Protestantism as conflict between Darwin and God.²³

On its face, the complexity perspective is a ground-level attempt to debunk the conflict narrative by showing empirical examples that are contrary to what the conflict narrative would predict. However, this debunking is not just motivated by an overarching commitment to a position on religion and science (such as secularization). It is also motivated by concern for finding what is actually at stake in these conflicts so that future engagement can be more productive. Even though complexity does not share many assumptions about religion and science with the conflict or complementarity perspectives, it does share assumptions about the desirability of good public debate.

RELIGION AND SCIENCE AS A PROBLEM OF PUBLIC LIFE

While conflict, complementarity, and complexity differ in several respects, the more important point for this book is that they share three underlying assumptions. The first common underlying assumption is that religion and science encounter each other in the public sphere, not across a literal battlefield. The second is that the ideal for such encounters is deliberation or, in other words, that deliberative debate is good debate. The third is that good debate about religion and science is not just interesting in the abstract but also important to American society and meaningful to American citizens.

The Public Sphere

All mainstream perspectives assume that religion and science encounter each other in the public sphere. According to Charles Taylor, the public sphere is “a common space in which the members of society are deemed to meet through a variety of media: print, electronic, and also face-to-face encounters; to discuss matters of common interest; and thus to be able to form a common mind about these.”²⁴ By “common mind” Taylor does not mean that everyone will agree on everything, or that total consensus is possible or even desirable. Rather, the public sphere is the space where people debate what kinds of things to talk about, how those things should be talked about, what kinds of things we can do, and what ways of doing things are generally acceptable.

Public debate thus shapes what we can talk about, what we know about it, how we talk about it, and what we can do about it. Given this power to shape imagination, thought, and ultimately, social activity,

theorists of democracy agree that a good public sphere is central to a fair and just society that enables human flourishing for its citizens.²⁵ Public debate informs policy makers about issues of concern and provides public guidance and accountability for the formal exercise of executive and legislative power. For example, congressional leaders considering a tax increase need only watch the news or read newspapers to see a wide range of opinions, arguments, and reasons being discussed. Likewise, debates in the public sphere enrich the private lives of citizens by informing them about issues of broad concern and by demonstrating that a wide range of positions on any given issue is available.

I use the words “wide” and “broad” because they invoke the kind of ideal public sphere whose purpose is to maximize the range of possibilities for thinking and acting. This requires at minimum a space for discussion of issues where differences do not escalate into violence.²⁶ Generally speaking, the laws and police powers of the state provide a kind of backstop to the public sphere so that even people whose ideas are in serious conflict do not take up arms and assault one another.²⁷ Rather, they (in theory at least) take to the airwaves, the editorial page, the lectern, or even their local pub, to make arguments and claims that contribute to a multisided discussion of the issue with which they are concerned.

Beyond the minimal requirement of enforced nonviolence, the ideal public sphere provides access to all citizens.²⁸ This does not mean that access is equal or that every single idea will be heard by every single citizen. Rather, ideally, no unequal burden or constraint is imposed on particular groups of citizens based, for example, on wealth, racial background, sexual preference, or gender. In the ideal public sphere, anyone has as much of a chance to participate in public debate as anyone else. Of course, to the extent that inequalities exist in society, providing universal access to the public sphere may import those inequalities into public debate.²⁹ And obviously individual preferences regarding participation will vary. The key point, and the assumption shared by most, if not all, analyses of religion and science, is that the public sphere provides the arena for widely accessible nonviolent discussion of issues of concern, including (but not limited to) religion and science.

What Is Good Debate?

Discussion in the public sphere could unfold in many different ways. Participants might hold a public conversation in which they give reasons for their arguments and display a willingness to change their

minds.³⁰ Participants might engage in agonistic conflict or contentious disagreement.³¹ Participants might advocate for their position or interests in the public sphere without engaging with other participants.³² Participants might “act up” in public to challenge dominant ideas about what should be debated at all.³³ All of these things might even happen at the same time.

But for scholars of religion and science, not all forms of debate count as good debate. Even though the various analyses of religion and science use different kinds of evidence and often come to different conclusions, they are all based (explicitly or implicitly) on a deliberative model of the public sphere. By “deliberative” I mean that participants in the public sphere encounter and engage one another with ideas, arguments, and claims.³⁴ This may at first seem like repetition of the previous point. But the emphasis here is on “encounter” and “engage.” Good public debate occurs not just when people participate in the public sphere but also when they encounter and engage one another in the public sphere. Propositions about conflict, complementarity, and complexity are all propositions about how religion and science realize, or fail to realize, this deliberative ideal. Good debate is deliberative debate.

Consider Robertson and Dawkins again. Their statements in the public sphere are undoubtedly nonviolent participation. They are saying things in the public sphere. Other people can hear what they are saying and use that to inform their own decision making. However, Robertson and Dawkins are not actually encountering or engaging each other with ideas, arguments, and claims. To the extent that they acknowledge other persons or positions, such acknowledgment is simply prelude to derisory rhetoric and insults. This is participation, but it is not deliberation. So it is not good debate.

Conflict, complementarity, and complexity each draw on the deliberative ideal to suggest an answer to the question “Is good debate between religion and science possible?” From a conflict perspective, the answer is “no.” Good debate is not possible because science and religion are at war. There is no interest in engagement. Religion and science are eternally and inevitably opposed. Further, for those working in a secularization mode, religion is an active problem for public deliberation because it benefits from subverting rational thought and argument. Religion cannot therefore legitimately participate in public debate. So the best thing to do is to wait out (or accelerate) the decline of religion so that the rational society can progress and a truly deliberative public sphere, based on shared public (secular) reason, can emerge.

From a complementarity perspective, the answer is “yes,” and in the case of dialogue advocates, “yes, please.” Deliberation is necessary in encounters between religion and science. Deliberative debate between science and religion generates and fosters productive relationships between two influential domains of society. In the NOMA model, deliberation clarifies the differences between religion and science. Such boundary work is key to maintaining the two magisteria as nonoverlapping, and thus crucial to keeping the peace. In the dialogue model, deliberation is necessary to identify common areas of concern and to move toward reconciliation between potentially conflicting viewpoints on those issues, again with an eye toward peace.

For complexity advocates, the answer is “yes, but not always, and not always in the same way.” While deliberative debate is possible, whether or not deliberative debate is possible for religion and science is not a single, universally applicable question. There have been times when such deliberative debate has happened and other times when it has not. So it is at least possible. But look carefully at the underlying commitment to debunking the conflict narrative. That commitment is itself grounded in the deliberative ideal. If we are going to argue about religion and science, complexity advocates suggest, we should at least be having an informed debate about empirical cases rather than resorting to inadequate and counterproductive stereotypes left over from a previous century.

Why Does Good Debate about Religion and Science Matter?

All three major perspectives on religion and science are concerned about good debate. If the religion-and-science literature were just a few isolated pieces scattered across the scholarly landscape, we might shrug and move on. But this is not the case. Obviously, different disciplines vary across time in their interest levels in science and religion. For example, sociology began the twentieth century very interested in questions of religion and science, turned its attention elsewhere in mid-century, and only recently has experienced a resurgence of interest in religion-and-science questions.³⁵ But across disciplines, and throughout the past century, “religion and science” has been of enduring popular and scholarly concern. People are interested.

But why? As a recent book title asks about religion-and-science debate, “Why does it continue?”³⁶ There are many answers to this question. But one of the most obvious is that these debates are sustained and durable because many complicated social arrangements depend on how

the debates unfold. For example, debates between creationists and evolution proponents are not just about abstract origin stories. They also concern the education of American citizens and the state's role in enforcing a particular view of the educated citizen. Debates about the efficacy of prayer and the health benefits of religiosity are important battlegrounds over the political authority of religion to influence the government, the role of science in determining good medicine, and the foundations of medical ethics. Abortion debates certainly involve issues of life and death, but historically they have also engaged "the role of women, the role of the state as a moral agent, . . . the right to privacy, the nature of democracy, and society's obligation to those in need."³⁷

As entrenched institutions with connections to multiple sources of power, religion and science are also powerful sources of legitimacy. Empirically, debates become more significant when they draw on religion or science for legitimation. For example, patients with HIV/AIDS were largely dismissed as participants in debates about research and treatment until they appropriated the cultural authority of science.³⁸ Abortion is a prominent public issue in part because it is inextricably connected to religious "master frames" that claim transcendent truth about life and death.³⁹ Debates over homosexuality have become more prominent as participants have invoked scientific claims about a "gay gene" or the benefits of "affirmation therapy" to counter religious claims about the correct form of sexual relations.⁴⁰

When we argue about religion and science, we are arguing about many other things at the same time. Science-and-religion debates are not simply objects of abstract interest or self-contained hermetic spheres of debate restricted to a few narrow or technical questions. Religion-and-science debates endure because they are important and influential more broadly in public life. They are important not just because they are about religion and science, but especially because they are also about many other things.

What I propose in this book is a basic shift in thinking about religion and science in public life. Instead of thinking about science and religion as a problem for public debate, we should think about public debate as a problem for science and religion. That is, if we think there are problems with religion-and-science debates (and every single perspective makes this claim), then I suggest that the problems lie in features of public debate rather than (necessarily) features of religion and science. If we want to know whether good debate between religion and science is possible, we need to consider the question of good debate.

REPRESENTATIVES AND PUBLIC LIFE

While debate certainly involves ideas, perspectives, and arguments, ultimately it is people who communicate ideas, articulate perspectives, and make arguments. People debate. So claims about the quality of public debate, however abstract or theoretical in their expression, are ultimately empirical claims about participants in public debate. At the risk of abusing one example, I point again to the opening quotes from Robertson and Dawkins. The question of good debate between religion and science, whatever else it might be, is an empirical question about what participants say and do in discussions involving religion and science.

Practically speaking, not everyone can participate in every discussion all of the time. Nor could we follow every discussion even if they did. So in this book I focus on representatives in public debate. Recall that by “representatives” I mean elite actors who define, present, and debate important issues before the widest possible audience, usually by contributing to general-audience mass media such as newspapers or television. Such access to general-audience mass media is highly restricted, so most Americans are not representatives in this sense. Rather, most Americans are ordinary people. By “ordinary people” I simply mean those persons who do not participate in public debate as it occurs in mass media. While there are many ordinary people in America, relatively few representatives participate in American public life.

Representing Religion and Science

In the most basic sense, representation is the “making present” or “representing” of something or someone that is not present.⁴¹ To enable productive discussion on issues of interest to a large number of people, a relatively small group of actors represents the positions, opinions, and arguments of larger groups. Theories of representation are theories about the connection between ordinary people and elite representatives. The problem of representation is how do we get from a large group of interested people to an elite group of actors who have the power to participate in public debate?

In religion-and-science debates, ordinary people are often disconnected from elites. Formally appointed leaders such as church council members or clergy may have a different set of priorities than laypeople, because of different levels of personal commitments to social causes, or because their organizational duties may outweigh the need to represent

ordinary believers, a situation commonly referred to as the “clergy-laity gap.”⁴² Elites might also leverage one set of issues and positions to gain power or elite standing, then change their minds or drift from their original positions so that the original set of issues is no longer salient, as with Christian politicians such as Jimmy Carter.⁴³

The situation for science is similar. An entire scholarly subfield, called public understanding of science, exists solely to study the gaps between scientists and ordinary people.⁴⁴ Explanations for these gaps range from a “knowledge deficit” on the part of ordinary people to a “values conflict” between elite scientists and ordinary people.⁴⁵ At the same time that scientific elites emphasize the truth of claims about, for example, evolutionary origins or genetic markers for sexuality, ordinary people often operate with “vernacular knowledge” that is scientifically “wrong” but useful for building social relationships and communicating with other ordinary people.⁴⁶

If the ideal of the public sphere is deliberative, and representatives are the ones who are supposed to be encountering and engaging one another in a deliberative public sphere, what does it mean that ordinary people and elite representatives are disconnected? What does it mean that Robertson and Dawkins, for example, are representatives of (respectively) religion and science? How do ordinary people evaluate representatives like Robertson and Dawkins? How does this evaluation shape public debate? How does it affect our understanding of what science and religion are doing in the public sphere?

The Good Representative

Representation has long been a central problem for political theorists. But until very recently, most normative theories of representation were grounded in empirical assumptions about elections and democracy.⁴⁷ When scholars talk about political representation, they usually mean electoral representation in democratic states.⁴⁸ Through the electoral process, ordinary people authorize, assess, and hold accountable representatives who speak or act on their behalf in the arena of institutional politics.⁴⁹ If an elected representative ceases to be a good representative, then he or she soon ceases to be an elected representative. So, in theory, representatives do what ordinary people want them to do.

But, in practice, electoral theories of representation fail to account for actually existing representatives in two ways. First, even for formal political representatives, there is often no electoral process, no

authorization, and no accountability. For example, agents of international nongovernmental organizations, such as the Red Cross or Amnesty International, are generally recognized as representatives of prisoners of war or political prisoners, obviously without electoral authorization. World Trade Organization representatives are recognized as representatives of their respective countries but are neither elected by their countries nor particularly accountable to their country's populace. Subcomandante Marcos is widely recognized as a representative of the Zapatista movement, despite the fact that the entire existence of the Zapatistas presupposes an alternative model of political organization and action.⁵⁰ The only thing these representatives have in common is that some people see them as representative.

Second, representatives exist throughout society, not just in formal political institutions.⁵¹ For example, in the controversy over creation and evolution, school board members, church officials, prominent scientists, and local government officials confront each other in courtrooms, marshal public support through interviews and opinion editorials, and petition curriculum committees.⁵² In the controversy over human genetic engineering, scientists, bioethicists, theologians, philosophers, and politicians jostle for position on government advisory panels, institutional review boards, congressional committees, and the leadership of professional associations.⁵³ Clergy members make claims about the environment or sexuality directly from the pulpit, even as scientists publish scholarly articles and books on those same issues.⁵⁴ The only thing these representatives have in common is that they participate in public debates that occur in a variety of settings across American society.

So, what counts as a good representative in public debate? This is a complex empirical question. It is not simply a question of elections and their outcomes. To answer this question requires tracking what representatives in public debate actually do and say. But it also requires asking what ordinary people think about what representatives do and say. In public debate, what counts as a good representative depends on the connections between representatives and ordinary Americans.

Generally speaking, whether representatives are seen as good representatives or not depends on whether or not their words and actions align with what ordinary Americans expect from them. But since public debate shapes what we can talk about, what we know about it, how we talk about it, and what we can do about it, this evaluation process has specific consequences for religion and science. What people think about science and religion representatives in public debate shapes what they

think about religion, science, and conflict in American public life more broadly.

How Representatives Matter

Representatives in public debate shape social life in two key ways. First, representatives shape the perception, formation, and organization of social groups. Pierre Bourdieu, drawing on a tradition leading back to Thomas Hobbes, theorized that representation is primarily a constitutive process.⁵⁵ Representatives do not just reflect the interests or identity of a territorially defined constituency, as in elections; they also create the symbolic meaning of a group membership, for members and for nonmembers. Subcomandante Marcos may be an exemplar to those within the Zapatista movement, but his main symbolic power is that he represents that group to observers across the world, who shape their own perceptions of, and actions toward, the Zapatistas based on what they know of Marcos.⁵⁶

Such constitutive power has concrete effects. Groups organize based not only on support for or solidarity with their own exemplars, but also against those they perceive to be representative of their opposition. For example, American lesbian and gay activist groups changed their organization, frames, claims, and mobilization tactics in response to the rise and fall of Anita Bryant as a representative of the Christian Right anti-gay rights movement.⁵⁷ Similarly, mass media attention to one set of representatives rather than another effectively contained the Students for a Democratic Society (SDS) by shaping the public perception of SDS both for its members and for broader American society, resulting in the “unmaking” of the New Left.⁵⁸

This matters for religion-and-science debates because it means that Pat Robertson and Richard Dawkins are not simply Pat Robertson and Richard Dawkins. They are part of a process that constitutes religion and science in the public sphere. When Robertson claims religious authority in public debate, he is in part defining for ordinary people what it means to be religious in that debate. When Dawkins claims scientific authority, he is in part defining for ordinary people what it means to be scientific in that debate. This does not mean that meanings transfer unproblematically from representatives to ordinary people or that such activity overrides all other available definitions of “religion” and “science.” The point is that representatives in public debates about religion and science constitute (in part) what such debates are about, who

is involved, what is at stake in each debate, and, most basically, what counts as religion and science in each debate.

Second, representatives shape what kinds of debate and discussion are possible. One way this happens is by shaping the content of the knowledge on which debate is grounded. For example, having representatives from the AIDS activist community involved in AIDS policy changed scientific knowledge about AIDS to include “lay expertise,” rather than just clinical or experimental data, which in turn led to changes in AIDS policy making and substantive health outcomes.⁵⁹ Much of the recent dispute in the United States over such issues as climate change or Intelligent Design hinges on who is seen as speaking for scientists, with requisite attempts on all sides to prove that they are the real representatives of “scientific consensus.”⁶⁰ And, more generally, because most scientific research builds on earlier research, established representatives of a particular position or field have a disproportionate effect on the content of subsequent scientific knowledge.

Representatives also shape discussion more directly by maneuvering to control debate in a way that favors their position. For example, the profession of “bioethicist” emerged from a jurisdictional battle among representatives over who could legitimately speak for ethics.⁶¹ As a result, debate about ethics in science shifted from substantive rationality to formal rationality, excluding questions about ends in favor of questions about means. Likewise, important differences between the institutional position of representatives in Germany and the United States led to dramatically different types of public debate over abortion. In particular, those seen as representative by media in the United States are more likely to dominate debate, whereas in Germany those seen as representative of a political party, union, or organized religion dominate debate, regardless of media involvement.⁶²

This ability to maneuver matters for religion-and-science debates because it means that representatives have an advantage in shaping subsequent debate, as they are the ones already prominent in public life. Such prominence can happen for many reasons unrelated to the quality of their arguments or their willingness to engage with other public sphere participants. For example, Pat Robertson benefits from the Christian Right’s enormous investment of resources in media efforts over the past thirty years.⁶³ These efforts have targeted precisely the kind of attention that makes Robertson prominent in general-audience mass media. Even if a new representative appears in public debate and attempts to engage Robertson, that representative must do so, in part,

on the terms set by Robertson. So representatives in public debates about religion and science do not just shape current debate; they also shape the possibilities for future debate.

BOOK OUTLINE AND PREVIEW OF FINDINGS

The basic plan of the book is to report what debates look like now, how representatives participate, how ordinary people evaluate them, why representatives do what they do, and what that means for what happens next. To anticipate the findings of the book, let me answer the main question first: Is good debate about religion and science possible? I say “yes.” But it depends on aligning visions of good debate, not on aligning religion and science. In the chapters that follow, I break this answer down along a number of dimensions. Figure 1 provides a visual summary of the book’s structure and argument.

Chapters 2 and 3 address the common claim that there is a problem with religion-and-science debates by analyzing four existing debates in American news media. Chapter 2 looks at debates over human origins and stem cell research, in which conflict is claimed to occur. Chapter 3 examines debates over the origins of homosexuality and environmental policy, in which encounters between religion and science might conceivably occur. Regardless of the issue at stake, public participants are rarely engaged with one another in discussion and argument at all. Religion talk and science talk tend to occur separately in mass media. Newspaper articles about science tend strongly to avoid religion, and vice versa. The most prominent representatives of religion and science in each debate, such as Pat Robertson or Richard Dawkins, simply promote their own agenda or engage historical figures that are not part of contemporary debate.

Religion and science representatives in existing debates are not engaged in deliberative talk. So what are they doing instead? And why does it matter? Chapter 4 uses data from the debate analysis and archival sources to show that for the most visible representatives in these debates, good debate means advancing an agenda. While a few representatives attempt to engage in more deliberative public talk, the highest-visibility representatives of religion and science (and other social institutions) consistently pursue advocacy rather than deliberative debate.

The obvious explanation for why representatives do what they do is that ordinary people want them to do it. Chapter 5 uses interview data to show that this is not the case. Representatives and ordinary people disagree over what counts as good debate. In contrast to

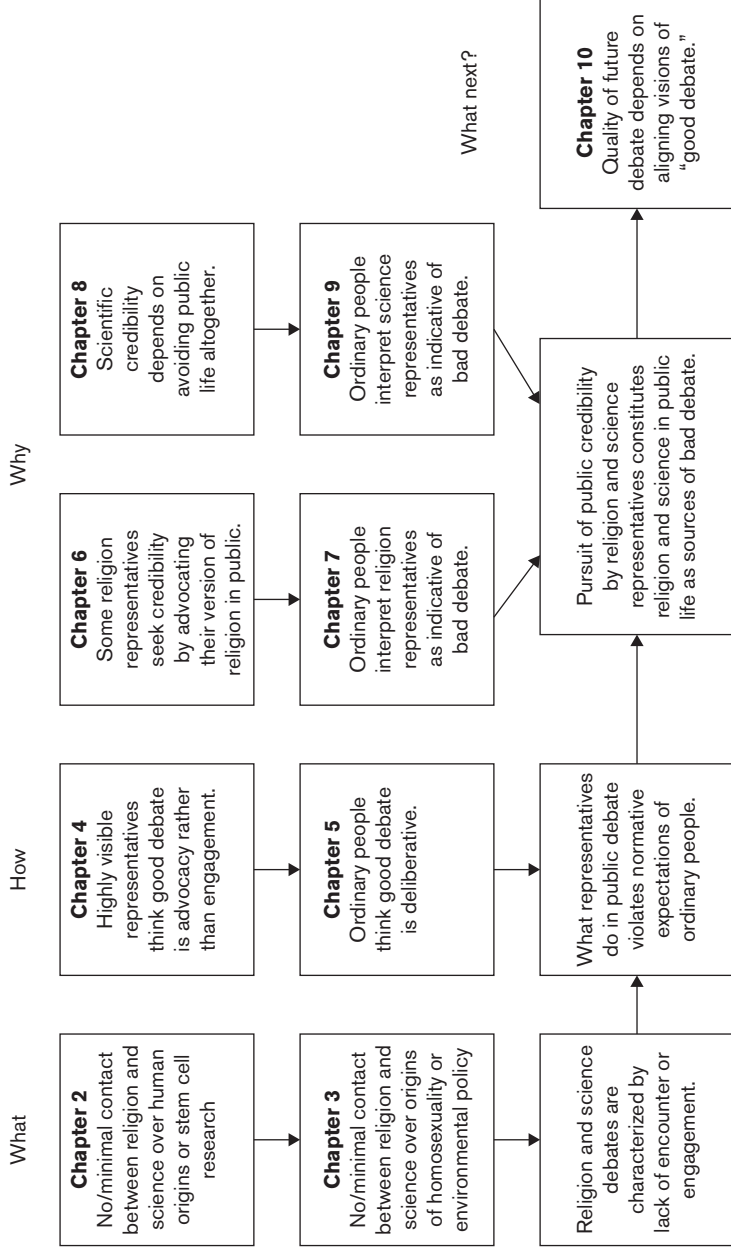


FIGURE 1. Diagram of the book.

representatives, ordinary people think that good debate means engagement and deliberation. The key problem in these debates is that representatives participate in ways that conflict with what ordinary persons expect. The result is that ordinary persons negatively evaluate representatives and debates on normative grounds. For example, elected politicians are discounted in public debate because they are seen as incapable or unwilling to engage meaningfully with serious issues.

So why are representatives trying to get their way in the public sphere, rather than (or in addition to) some other setting? Drawing on theory from science and technology studies (STS), chapter 6 introduces the idea that representatives participate in the public sphere in order to pursue public credibility, which does not necessarily require deliberation. But not everyone pursues credibility in the public sphere. For example, the Religious Right pursues religious credibility in the public sphere, while the Religious Left does not. The historical domination of public debate by theologically and politically conservative religion representatives gives the Religious Right a structural advantage as those representatives continue to “own the space” of religion in public life.

Chapter 7 shows that the ways in which some people and not others pursue credibility in the public sphere shapes the possibilities for good debate in the future. Since Religious Right representatives are generally seen as working against good debate, they have poisoned the well of religion in the public sphere. Ordinary respondents, whatever their personal religious commitments, see all religion talk as inimical to good deliberative debate, no matter what its source. This effectively secular norm of public debate renders even moderate and liberal religious language and arguments either as not distinctively religious or as contrary to good debate.

And what about science? Chapter 8 shows that the dominant model of scientific credibility depends on separating the public credibility of science from any individual scientist. The result is that scientists generally do not pursue scientific credibility in the public sphere. But science remains a respected authority for ordinary Americans. With few exceptions, ordinary people are not “antiscience” in any meaningful way, even if they hold religious or other moral commitments that explicitly conflict with scientific claims.

Yet as chapter 9 demonstrates, this confidence depends on science remaining “faceless” in public life. Respondents largely endorse the public narrative of scientists as virtuous seekers of knowledge for whom participation in public life is a distraction or, at worst, corruption. Thus respondents see science as valuable, but generally disapprove of

scientists in public life. In some cases, respondents think that science representatives are abusing the authority of science for their own personal gain. In other cases, such as that of Richard Dawkins, respondents think that scientists are trying to cut off good debate by deploying expert knowledge to silence opponents. Since public defense of science by science representatives runs counter to what ordinary people expect, science is particularly susceptible to challenge in public debate.

Chapter 10 returns to the opening question of the book. Good debate about religion and science is possible. But problems plaguing public debate about science and religion are deep-seated. Moreover, while there are identifiably different limits on future possibilities for religion and science to be involved in the public sphere, the root causes of problems lie in the structure of American public life and in the institutional histories that produce different versions of public credibility. But, ultimately, I think that our shared commitment to good debate in some form offers hope for our shared future.