

Faith

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I used to be younger. In 1987 I conducted an ethnography of the creationist movement as my dissertation research. Wonderful it was to be in the midst of the granddaddy of science and religion controversies in the years when creationism packaged itself as scientific creationism. That experience filled my head with ideas about relations between science and religion.

A note to our European readers, including the British: yes, I realise it is beyond strange that in a major Western nation a large proportion of the population continues to challenge evolution on the basis of religious belief. I cannot explain that here. I can only note that this is an enduring feature of life in the USA. Creationism is not going to go away anytime soon. Our conservatives here insist on celebrating US exceptionalism, and then the exceptionalism they give us is hostility to evolution. Oy vey.

Several years after I finished my work on creationism, when I wrote my second book, *Conjuring Science: Scientific Symbols and Cultural Meanings in American Life* (Toumey, 1996), I used a figure of speech that I called 'science in an Old Testament style'. The chosen people knew that their God has some human attributes. After all, isn't he an old white guy with a long beard who is frequently angry at the disobedience of the people he favours? But they know him less by his personality than by powerful mysterious signs like pillars of fire, burning bushes and dreadful plagues. My point was that many non-scientists respect and appreciate science, but for the most part they know science only in terms of superficial symbols that can be just as mysterious, and

that can be manipulated to conjure a misleading image of scientific authority.

Now, to extend my simile: in the New Testament, God makes himself (or is it herself?) much less mysterious by arriving among us in human form. Walking with us, talking with us, eating with us and dying with us. If we are truly in an age when science is becoming more open and more public than before, then let us say that we are approaching science in a *New Testament* style and that we know that this is what we aspire to nurture.

One more phase: when we poor humans knew the God of the New Testament better than the one of the Old, there arose a new complication. A hierarchy of popes and bishops emerged to shape and dispense our knowledge of God. Another improvement became necessary. Martin Luther and others showed 500 years ago that each of us could know God personally and directly without needing clerics and theologians to manage our knowledge of God.

Is there an equivalent to the Protestant Reformation in non-scientists' knowledge of science? Do we need experts, and if so how do we need them, and how much do we need them?

After I finished my work on creationism I usually avoided those issues. One reason why I originally enjoyed my work on societal and cultural issues in nanotechnology was because I thought there were no issues of origins and ontology in this area. There is no religious denomination that I know of that argues that atoms and molecules are unreal. But in 2007 Jamie Wetmore at Arizona State University showed me that there were indeed some issues of religious reactions to nanotechnology, and that they are important. I have circled back to questions of the sacred and the profane in science and technology. Nanotechnology is unlike evolution, for which I am grateful, but I am back to where I should be when I examine new questions of science and religion.

I have a reason for sharing those thoughts with you. It is an honour for me to introduce the chapters in the theme of faith. As I do so, I see our theme not as a stand-alone part separate from the previous three themes, but as a question and a problem tightly intertwined with the others. Issues of the sacred and the profane can also be issues of openness, publics and experts. My figure of speech is a way to appreciate the other three themes as matters of the sacred and the

profane; meanwhile, our explorations of science and religion benefit from the insights in the other three themes. For example, you see that I ask how similar is the process of knowing science to the three-millennium process of knowing the Judeo-Christian God.

And so here we appreciate the two chapters in this part. First, in chapter 15, we have a critique by Fern Elsdon-Baker of research on creationism and evolution, and specifically of the assumptions and methods that shape definitions and measurements of creationist sentiment. The author shows us that large-scale survey research on public attitudes about creationism and evolution fails to capture the nuance and diversity of those attitudes. Creationism, especially, is more interesting than what we see in those surveys. For example, creationists frame their views as scientific (calling their programme creation science or scientific creationism), as opposed to presenting themselves as anti-scientific. This then raises a complicated question: if creationists say that their programme is scientific, then what do they think science is? Survey research does not capture any of these interesting problems. In fact, the author's extended critique steers us to the conclusion that large-scale surveys are terribly problematic in examining any issue that embodies nuance and complexity, not limited to creationist thought. All this implies that a proper understanding of creationist and evolutionary thought, especially among multiple publics, is going to need the kind of thick description that comes more from face-to-face ethnographic work than from large-scale surveys.

A parallel problem is a package of assumptions about the phenomena to be measured. Elsdon-Baker tells the reader that researchers' thinking is secular to a fault; also, that they believe that they need to construct a contrast between science and religion. This is a tricky problem. True, scientific thinking is rightly grounded in secular values, and science should not be expected to execute any religious agenda. But it does not necessarily follow that science and religion are intrinsically incompatible. One hopes that this fallacy is well known, and that serious scholars recognise it, and that they frame their research accordingly. One hopes, but the author shows that this fallacy unfortunately remains pervasive in research on public attitudes about creationism and evolution.

The third theme that guides this chapter is the observation that most of the work on creation versus evolution controversies has been

done in the USA. From this it might seem as if issues of creationism and evolution in other nations are imports from the USA, 'uncritically consumed' in local circumstances, as Elsdon-Baker puts it.

On the contrary, these controversies are just as much situated and adapted in local circumstances as the US versions are situated in US culture. The author points out that European values are far more secular than US ones and that this has clear consequences for the way that creationism flourishes, or fails to flourish, beyond the borders of the USA. Evolution elsewhere is hardly ever considered the nexus of all evil that American creationists believe it to be. This is not to say that creationist and evolutionary thought are either reconciled or synthesised in other nations, but neither are they amenable to a 'clash of civilisations' approach.

Here the author corroborates the 2004 collection *Cultures of Creationism*, edited by Coleman and Carlin. That work tells us that the Institute for Creation Research (ICR, located in southern California) produces and exports a particular vision of creationism. That vision is well received in many places by conservative Christians, e.g. certain missionaries and their converts in Kenya and South Korea, but then the host cultures adapt the ICR message to local circumstances. One might say that these variations of creationist belief show that ICR's message undergoes a process of nuance and diversity, exactly as Elsdon-Baker suggests (but which ICR probably did not intend).

Which be the monsters here? Creationists who threaten science? Fictitious creationists who are fabricated to conform to secular prejudices? Or misguided research assumptions and methods that contain structural fallacies which have the effect of suppressing the nuance and diversity that are part of the reality of creationism?

Next comes chapter 16 by David A. Kirby and Amy C. Chambers, on religious judgements about science in the movies of the twentieth-century USA. Much has been written about science and religion, and also about science and film, but this chapter nicely balances those three elements. This is important because one's religious values and beliefs often shape one's attitudes about science and technology.

We can ask whether Catholic and Protestant officials really understood the science – or rather the movie science – that they judged, and also whether they overestimated the power of film to shape viewers' minds and morals. Whatever the case, this chapter shows us that

certain Christian leaders felt that they needed to control film content, and later to merely evaluate it, especially cinematic depictions of science. Topics of sexually transmitted diseases, birth control, eugenics, evolution and psychiatry aroused their disapproval, which would then lead to government bodies that would channel religious sentiment into government censorship. It is a relief to me that Kirby and Chambers do not try to measure movie science against realistic science. That might have been tempting, but it would have distracted from the strength of their chapter.

Which be the monsters here? Movie monsters? Monstrous offenses to morality that come from movies about science? Or are they the self-appointed gatekeepers of our morality who decided which stories of science in the movies would meet their approval?

The chapters

The two chapters in this part enhance the theme of tensions between experts and publics. Kirby and Chambers show us that self-appointed experts intended to control the ways that movie-going publics think about science and morality. I dare say that, in the long run, these would-be experts discredited themselves by insisting on small-minded interpretations of science and religion, and by imagining that they controlled audience behaviour more than they really did. I like today's status quo in which religious authorities offer denominational guidance and commentary, and in which their publics can accept or reject those views. Note that this is very different from a programme of aspiring to control what publics see and think about science and religion.

Elsdon-Baker's chapter adds more to the question of experts and publics. The experts who measure and describe creationism in terms of large-scale survey research are unlike the censors in the final chapter, but here we see that with the best of intentions experts can inadvertently distort the descriptions of creationism and creationists which publics encounter when survey research appears in mass media.

In much the same vein, we see that the themes of openness and responsibility resonate in these two chapters. If openness is good, then experts who are responsible to no-one else are contraindicated, as a pharmacist might say. It is not always easy to say to whom one is responsible, but here we appreciate that being responsible to no-one

is bad for openness, and this at a time when there are good reasons to embrace openness in relations between science and religion. To put it another way, in tune with my earlier comments, it is inadvisable to underestimate the virtue and the influence of the Protestant Reformation. If we are moving in the direction of relations between faith and science that approximate the themes of the Protestant Reformation – including the theme of expecting experts to justify the need for their expertise – then it is good for experts to be responsible for explaining and justifying their values and methods.

The theme of transparency runs parallel to the theme of responsibility. Imagine how different it might have been if the experts presented in these two chapters had been required to explain in detail to their publics how they made their decisions.

I thank the editors for inviting me to introduce the chapters in this part, and also the authors for raising the issues they put before us. My role in this volume reminds me that there will never be anything simple about issues of science and religion. True, there are some simplistic opinions, but none of them do justice to these topics. There have been times when I wanted to walk away from those issues because they required more wisdom or more time for reading, research and writing than I possess. Good on you, Elsdon-Baker, Kirby, Chambers and the editors, for insisting that we must not turn away from difficult issues of science and religion.

References

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