

THE ROLE OF RELIGION

In the beginning God created Heaven, and Earth.

Gregory Martin (1609)

A knowledge of the existence of something we cannot penetrate, of the manifestations of the profoundest reason and the most radiant beauty, which are only accessible to our reason in their most elementary forms—it is this knowledge and this emotion that constitute the truly religious attitude; in this sense, and in this alone, I am a deeply religious man.

Albert Einstein (1949)

Perhaps it is not too rash to hope that new spiritual forces will again bring us nearer to the unity of a scientific concept of the universe which has been so threatened during the last decades.

Werner Heisenberg (1934)

The fundamental tenet of Einstein's cosmic religion is that science furthers religion.

Max Jammer (1999)

People often have strong emotional responses to questions of the origin of the universe—and sometimes these are either implicitly or explicitly related to religious preferences. This is not unnatural; for the issue is indeed that of creation of the entire world in which we live.

Roger Penrose (2004)

Everyday there is far more we *know* we don't know.

Stuart Firestein (2012)

For days now every morning as the fog of sleep is lifting it dawns on me again that it's a cosmic—even comic—conceit to think he has figured it all out. It's not so long since this thought would have had him stirring right away. Before he said it I would know what he would have to say: "Is there another way?"

But for six days now he's not stirring and he doesn't say. While I walk to the corner store for java my misdoubt subsides. He's right. He's always right. It bugs me that he's right. It bugs me to depend upon him so.

Beginning by its very nature tends to raise anew pulp fiction's clichéd question: Who? As in: Whodunit? This question is of course not scientific. It's religious. It needs different clues, a different cast, a different detective and a different book.

But the Beginning might invite—nay, may require—a new look at what I have called the Old Divide, 'twixt science and religion. Is it such a gulf? It's curious that if he's right about his Manifold the science side can say no word of where it came from; it simply was. Curiouser and curiouser, as Carroll tells us Alice cried, is that it's hard to see how the religious side of the Divide can say much more. Random recall tells me that the early Hebrew word for the creator is the tetragrammon YHVH and it means 'I am.' This single iamb seems to say all that a universe could have to say; René Descartes' 'I think, therefore I am' protests too much.

Does the Manifold define *precisely* the divine divide? It's Robinson who says that no one gives a definition of religion. Definition she defines as setting limits. To which he would reply: My definition *does* set limits. Here then are his limits to the reach of science: Time-wise every Tock from Move 1 to the universe's end whenever that may be; space-wise every Fleck. Outside these limits lies religion. His definition has religion circumscribed yet unconfined. He would not, I think, think it will live within his limits. Nor would I. To me religion is to do with what we do not know or, more precisely, is a *name* for what we *know* we do not know, which may be less than all we do not know. Is this *gemisch* Confucius, or Thoreau, or even, God forbid, a Rumsfeld reflux?

Cynics might say it's to do with what some *think* they know but don't, which could be even wider. This accusation, if that's what it is, might also be laid at the feet of physics. And physics tends to see religion—when it sees it—as a name for what we cannot know, with physics left to cover what we can. So it is striking that so many physicists refer to God or to religion in their writings on cosmology. I don't find this in papers about chemistry. Why is it physics, rather than say mathematics, that patrols the borders of the Old Divide?

Some come to understand that what we do not understand is almost everything. Thus any of these definitions grants religion tenure of a wide domain. Five lives ago, it covered all that is now science. Within living memory the greater part of what today one takes for granted would have been regarded as miraculous. As Clarke says, 'Any sufficiently advanced technology is indistinguishable from magic.' In this fashion all these definitions change in time. Not his.

Northrup says of QM's early days,

One cannot bring in the instruments of modern physics without sooner or later introducing its philosophical mentality, and this mentality, as it captures the scientifically trained youth, upsets the old familial and tribal moral loyalties.

How much more does the Beginning introduce a philosophical mentality? It offers opportunity for public conversation about how the world began. It's

bound to influence ideas in much wider ways. No matter what she says this *will* involve religion since religions offer language for such things. Maybe science should rebuild some bridges. Weislogel would concur:

As the quantity and diversity of our knowledge increases, our understanding of ourselves and our world is becoming ever more fragmented. ... A central and particularly troubling aspect of this fragmentation is the rift between religion and science, two domains that are critical to human flourishing.

Frank's *Beginning* is all antifrAGMENTATION; it links everything together—even science and religion. Thus the line it draws between them need not speak of separation; it can be the new place—or the very old one—where they meet. This notion has a sudden bitter savor. New chances for all, it seems; for all, that is, except for him and me.