

# The Limitations of Science

by Father Daniel Callam

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**D**ESPITE THE WISHES and the claims of religiously minded thinkers, the stubborn conviction of most people continues to be that science is, and must be, anti-religious. We may criticize the Jesus seminar for its reductionist view of Jesus, but we cannot deny that its approach is scientific. As a Catholic formed by a Thomism diluted by the Counter-Reformation and then restored to full strength in the mid-twentieth century, I adhere to the principle that truth is one. There can be, consequently, no conflict between what science has discovered about the natural order and what God has revealed about both it and the supernatural realm. In fact, the fundamental principle of science—that the universe is intelligible—is an implicit acknowledgement of the doctrine of creation: the universe is intelligible because it is the product of an intelligence. Nevertheless, the methods by which science and revelation arrive at truth are radically different. There are in particular two aspects of the scientific method that produce in some people anti-religious sentiments, inevitably so, given that the spectacular achievements of science depend on the qualities that make it most unlike revealed religion.

Science achieves its spectacular successes by eliminating most of the elements that constitute an event. Your lab partner may have beautiful eyes and a bewitching manner, but you must not include these details in the report of the experiment. Nor should you describe the decor of the laboratory. However ugly the curtains or the proportions of the room, they are irrelevant to your experiment which must focus on some precise measurement whose value consists in its being repeatable and therefore universal. Measurement is the ruling principle of scientific experimentation because number and dimension are found in every material object. The mathematical abstraction of data from complex situations allows science to recognize shared qualities of what, in their entirety, are incomparably distinct events. What is unique is, by definition, inaccessible to science, which cannot look upon our sun, e.g., as the providential agent of God's love for the early but merely as a minor star in the Milky Way, a galaxy, much

like others in the universe, many of which, it is assumed, will have suns with planetary systems. Similarly, the social sciences define man by the attributes he shares with others. There are what make behaviour predictable and, if need be, treatable (including, with an irony seldom noted, the behaviour of the expert who is performing the experiment or applying its results).

Christianity, on the other hand, is concerned with what is unique: “Jesus Christ of Nazareth. . . . There is no other name under heaven given among men by which we must be saved.”<sup>1</sup> Redemption is a series of events that have no parallel and, as unrepeatable, are not available for laboratory examination. Our allegiance to Christ is therefore much more like actually falling in love than measuring the physiological and emotional chances in some else who is in love. Such qualities are universal in that they do characterize, to the greater or lesser degree, all lovers. But my love is as unique as my birth and my death. Thus do I make the universal experience of mankind my own. Jesus too shares, as he must, qualities that characterize religious leaders in different societies. But he makes them uniquely his own in a surprising manner that subsumes into this supreme instance all the qualities that the other religious figures merely suggest. It is much more profound than my experience of love which differs from the experience of others only in secondary matters. It is much more like the actions of the progenitors of the human race, Adam and Eve, whose nature and decisions determined the possibilities that are open to their descendants.

The first quality of science that can make it antipathetic to religion is therefore its severe limitation of the components of an event in order to abstract measurements that allow the experimenter to form mathematical models of reality. These are tested by further experimentation in a desire to refine, to test, and even to replace the original theory. This cumulative cycle of testing and adaptation, which is the genius of the scientific method, is the second aspect of science that differentiates it radically from revealed religion. It is not that scientists, being human, can have too great an allegiance to a given theory with the consequence that reality is forced to fit the theory rather than *vice versa*. This is an error in method that any good scientist would decry. It remains true, however, that the root of this aberration lies in the legitimate requirement for science to reduce and simplify the phenomena being examined. Inexplicable results can easily be classified as irrelevant, and the complexity of the event safely ignored in the desire to maintain the validity of the theory and the prestige of the scientist.

The true scientist, on the other hand, is thoroughly sceptical about

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<sup>1</sup> Acts 4.12

his work and never happier than when some trivial detail that his fellows have all overlooked can bring crashing down the constructs of his most eminent predecessors. We have learned to admire Copernicus for bringing to us a shift in perception that in a single sentence—“the earth is not the centre of the universe”—eliminated the geo-centric universe of the Bible and the ancient world. Similarly we have adjusted our ideas about reality to accommodate the replacement of the Bohr atom by quantum theory and of the Newtonian mechanics by Einsteinian relativity. Advances in technology also help convince us that the new is always an improvement on the old.

Who could prefer the crude approximations of a slide rule to the instantaneous accuracy of calculators, a pendulum clock to a digital watch, or a long-playing record to a CD? It may be hard for us to imagine a future development with results comparable to the Copernican revolution, but a scientist would not be a scientist if he did not hope for such a change and welcome it when it came.

As Catholics, our notion of revelation is dramatically unscientific. First, instead of abstracting from human experience in an effort to generalize, religion is relentlessly specific: this man, this action, these consequences. The man may be Jesus Christ, whose actions and their consequences are unlike any other; or it may be Everyman, whose destiny hangs on the specifics of his behaviour. Baptism confers a name and therefore identifies an individual whose concrete decisions God will honour for all eternity. The second unscientific feature of revealed religion is its stability; one could even say, to be shocking, its immobility. The proudest claim a Christian can make is to believe what Saint Paul believed; indeed, to claim otherwise is to cease to be a Christian. The point is that God reveals himself to man in a mode that he can comprehend, whatever the level of his intellectual achievement or mechanical contrivances. Since human nature is universal and unchanging—that is the message of Genesis 1—there is no time or place which is incapable of receiving and experiencing the heavenly message which informs man of his origins and his destiny. Like art and morality in the natural order, religious truth as revealed in Jesus Christ can assume many forms, but there is no advancement as we move from one of them to another. Ibsen’s theatre was not that of Shakespeare or Aeschylus, but its different, design and later date do not make it better than theirs. Nor are the moral principles of our society superior to those of the past, however differently they may be implemented. The universal validity of the truths conveyed by art and morality points to the necessary continuity between what we believe today and what the Jews and Apostles knew about God and Jesus Christ in their time. The development of doctrine cannot therefore

mean that we comprehend Jesus Christ better than Abraham did, or Peter or John, only that we have fractured and scrutinized the truth which they saw in its unified entirety. We may come to know an individual by personal acquaintance or by dissecting his cadaver; the second mode is not necessarily to be preferred (especially if you happen to be the cadaver). Unlike scientific theory, religious truth can be revisited but not reinvented. To jettison a religious system is to admit that it was not from God but rather of human intervention, requiring refinement and replacement like some naive psychology or antique utensil.

Everyone knows instances of religion's trespassing in the domain of science, as in the conviction that the Bible is as much concerned with physics as it is with revelation. Less adverted to is the corresponding error whereby scientists claim to adjudicate on religion, a body of knowledge that is unavailable to their methods. They seem willing, even eager, to do so perhaps because of the success of the scientific method inflates their own self-worth and impresses their contemporaries. An examination, however of just how much the average person knows about the world he lives in could do much to instill a respect for other cultures of the past and present and a useful reminder of our own shortcomings. This topic I shall address next week.