

HOWARD J. VAN TILL

In Search of a More Fruitful Question: A Response to P. P. Duce

P. P. Duce, in his essay, ‘Complementarity in Perspective,’ is, I believe, warranted in his judgment that the concept of ‘complementarity,’ as it has been variously applied by the cited writers, deserves careful scrutiny and critical evaluation. In the spirit of affirming that judgment, my brief response to this essay will focus on questions regarding selected elements of Duce’s strategy for pursuing that evaluation.

Identifying the Parties in Relationship

Presuming that the term ‘complementarity’ is here intended to refer to a particular kind of relationship between two specific entities, the first question to ask is, What are those two entities? Duce appears to have several answers to this question in mind, but I find it difficult to follow his movement from one answer to another.

Are the two entities to be identified as the Scriptural text and the Creation—two distinctly differing *sources* of information or data? If so, then Duce’s comparison of ‘complementarity’ with the ‘two books’ metaphor employed by Bacon and others might be appropriate. Both the Scriptural text and the Creation itself can be interrogated for answers to appropriate questions. Furthermore, one might defend, as I did in an earlier work, the ideas that the categories of questions appropriate to one source are in some sense complementary to the categories of questions appropriate to the other. In *The Fourth Day*, for instance, I argued that as a general rule—with, of course, no absolute prohibition against the occasional exception—I find that questions regarding the character and patterns of its creaturely behaviour, and questions regarding the character and patterns of its formative history (including its chronology) are best addressed to the Creation itself. On the other hand, questions about the status of the universe relative to Deity, about the source of the universe’s existence, about the identity of its ultimate governing authority, and about its ultimate purpose and value are questions appropriately addressed to the Scriptures.¹ In the sense just outlined, the Scriptures and the Creation might then be said to constitute ‘categorically complementary’ sources of information regarding the universe.

¹ Van Till, Howard J., *The Fourth Day: What the Bible and the Heavens are telling us about the Creation*, Grand Rapids: Wm. B. Eerdmans (1986), pp. 193–215.

However, if the two entities to be compared are identified as science and theology, both of which involve systematic *interpretations* and *analyses* of data, we have a quite different situation. Theorising in both science and theology draws from a diversity of fruitful resources. Theology, for example, must draw not only from the biblical text, but also from our knowledge of the universe, from the diversity of human experience, from philosophical traditions, and from a broad spectrum of other relevant resources. Likewise, the natural sciences draw not only from empirical data, but also from human creativity, from philosophical and historical traditions, and, for many of us, from biblical and theological considerations as well. Hence the relationship between the natural sciences and theology, or between 'scientific law and God's providence,' is quite complex and differs considerably from the relationship between the biblical text and the physical universe. If Duce wishes to continue his evaluation of the concept of complementarity, I would recommend that he give greater recognition to distinctions between the biblical text and theological theorising and also between the physical universe and scientific theorising.

The Character of Relationship

According to Duce, to say that science and theology are 'complementary' is to say that they 'are concerned with the same subjects, but to deal with them in different, independent categories of description and explanation'. But does complementarity necessarily entail both difference and independence? Suppose we were to grant that the principal concerns of science and theology are indeed quite distinct from one another—the natural sciences being concerned principally with the character of and interactions among creatures, and theology being concerned more with the nature and interrelationships of God, humanity and the world. Would that distinction or difference necessarily imply independence? Surely not. My wife and I are distinct and different persons; nonetheless we are not independent of one another but related in a profoundly important way. Hence, I believe Duce has moved far too quickly from the consideration of differences in the scientific and theological enterprises to the implication that differences entail either 'independence' or 'separation' or 'isolation.' (My own earlier reference to 'categorical complementarity,' for instance, was intended to note some important distinctions between biblically-informed theology and empirically-informed natural science but should not be taken, as some readers have, to be an encouragement to compartmentalise science and theology into isolated domains. Having failed to make that clear a decade ago, I am pleased to have another opportunity to do so.)

A closely related problem in Duce's discussion is its floating definition of 'science.' In some instances the referent of 'science' appears to be the natural sciences and their accounts of physical phenomena, 'the coming of rain,' for instance. At other times the referent of 'science' appears to be the

human behavioural sciences and their accounts of human experience or action, 'a psychological account of conversion,' for instance. Sometimes the focus is on some specific natural phenomenon, while at other times the concern regards 'the fundamental presuppositions of science.' Sometimes the question is focused on creaturely action (the behaviour of atoms, for example), while at other times the inquiry is directed to the question of divine action (miracles, or divine revelation in history, for instance). Duce is, of course, not alone in his shifting referent of 'science' or in varied identifications of just what entities might be in the relationship of complementarity. Most of us who have written on the topic have erred in this domain. Duce here joins the fallible flock.

On Completeness and Gaps

In his rejection of 'strict' complementarity Duce says, 'Science cannot give *complete* explanations in terms of its characteristic concepts, because of its extrascientific presuppositions, and physical conditions in nature which are not completely accounted for scientifically.' I would agree that the natural sciences cannot give a 'complete scientific account' for either its own presuppositions or for the particular properties exhibited by the fundamental components of the universe. But incompleteness of this sort is not, as I see it, at issue in the theistic evaluation of the scientific enterprise.

At issue, especially in the North American critique of biotic evolution, is the far more interesting question regarding the completeness (perhaps 'sufficiency' or 'robustness' would be better terms) of the form-producing economy of the universe. By the term 'form-producing economy of the universe' I here mean the set of all creaturely, form-producing capacities that contribute to the actualisation of physical structures and biotic forms in the course of time from more elementary units. Quarks, for instance, have the capacity to form nucleons; nucleons have the capacity to form atomic nuclei; nuclei and electrons have the capability to combine and form atoms and molecules; molecular aggregates are presumed to have the capabilities to form living cells; cells have the capacities to differentiate and to form more complex organisms, etc.

The fundamental question is this: Is the form-producing economy of the universe sufficiently robust to account for the actualisation of all physical structures and biotic forms that have ever appeared in the course of the universe's formative history? Or, on the other hand, is that form-producing economy missing some specific capabilities, thereby creating 'gaps' of the sort that would render impossible the macroevolutionary scenario envisioned by the natural sciences? Clearly there are *epistemological* gaps; our knowledge of what may have taken place in the formative history of life is incomplete. The question is whether or not those epistemological gaps warrant the presumption of corresponding *ontological* gaps. Is the form-producing economy of the Creation incomplete? Are

there gaps in that economy of the sort that could be bridged only by extraordinary divine acts of special creation—divine ‘interventions’ in which God coerces matter into novel forms that it was never equipped to actualise by the employment of its own, God-given capacities? Does a scientific account based on an incomplete form-producing economy of the universe need to be supplemented by a theological account built on the presumption of extraordinary divine acts that function to bridge gaps created by God’s withholding of particular creaturely gifts from the Creation?

Duce suggests that without clear instances of ‘gaps’ at the level of scientific description’ in at least some phenomena (the parting of the Red Sea, the creation of humankind, Jesus’ miracles) we would be left without sufficient ‘epistemological evidence for the justification of Judeo-Christian theism.’ This proposition raises a number of substantive questions regarding evidentialist apologetics and the relevance of modern empirical science to that strategy—questions which are well beyond the scope of this brief response. A closely related question would be, ‘If there are no clearly discernible gaps in the developmental and functional economies of the created world, how do we then avoid the swift slide down the slippery slope into deism?’ Both of these matters deserve greater attention than either Duce or I have given them.

Duce holds up the philosopher J. P. Moreland as one who has proposed a promising ‘eclectic’ approach to the relationship of science and theology. But Moreland’s approach to questions regarding biotic evolution has generally been to presume the existence of gaps in the Creation’s form-producing economy and to propose that it has been necessary to supplement that creaturely economy with occasional episodes of divine intervention.² Personally, I find that approach barren of promise and would have preferred that Duce commend his readers to other authors that he had already cited, especially Donald McKay, Richard Bube, John Polkinghorne, R. J. Berry, Ian Barbour, Malcolm Jeeves, Arthur Peacocke and Ernan McMullin.

Reformulating the Question

As has long been the custom, Duce structured his essay around the question, What is the relationship of science and theology? Having come to a point of great frustration with answers built on the presumption of an adversarial relationship, many of us have sought to employ a concept of relationship that recognised differences without entailing the idea of inherent conflict. Although the concept of ‘complementarity’ has been fruitful in our pursuit of that goal, I am inclined to agree with Duce’s

² See Van Till, Howard J. ‘Special Creationism in Designer Clothing: A Response to “The Creation Hypothesis”’, *Perspectives on Science and Christian Belief* (1995) 47(2), pp. 123–131.

principal conclusion that this concept does not at all exhaust the rich complexity of the actual relationship between these two enterprises.

Upon reflection on this goal of suppressing our cultural tendencies toward perceiving science and theology as adversaries, I would like to take Duce's criticism of 'complementarity' one step further. Perhaps we are asking the wrong question when we inquire about the relationship of science and theology. At this stage in human history, both science and theology have become extensively institutionalised. But institutions soon come to function as seats of power. Hence, asking about the relationship of two powerful institutions is to invite competition. A 'turf war' may then be inevitable.

Would it not be more fruitful for Christians to begin with questions such as these: What is the nature of the Creation to which God has given being? With what creaturely capabilities has it been gifted? Should we expect to find gaps in its form-producing economy? What is the nature of divine action in the created world? Is divine action empirically discernible? What is the relationship between creaturely activity and divine action? With these broad questions in mind, we may then draw from all disciplines, including science and theology, in our efforts to construct answers. The goal is not to determine whose contribution is 'best' or most 'correct.' The goal is to grow in knowledge and understanding. In that context, casting some of the contributors of knowledge in the role of adversaries in conflict is transparently counterproductive. Turf wars do not provide the most direct access to understanding.

Howard J. Van Till is Professor of Physics and Astronomy at Calvin College, 3201 Burton Street SE, Grand Rapids, MI 49546 USA.

**PERSPECTIVES ON SCIENCE &
CHRISTIAN FAITH**

**The Journal of the American Scientific
Affiliation**

**is now available to U.K. subscribers by a special
subscription arrangement**

Cost: £17 per year for 4 issues (post free)

The December 1996 Issue will contain papers entitled:

“Is Nature Purposeful?” by Robert M. Augros

**“DNA Sequences In Miocene and Oligo-Miocene
Fossils: Their Significance to Evolutionary Theory” by
Gordon C.Mills**

**“Cultural Sustainable Development: Concepts and
Principles” by H. Spaling and A. Tensen.**

**“A Preface to Bioethics: Some Foundations for a
Christian Approach to Bioethics” by A. Truesdale.**

**Subscriptions to: Christians in Science, Atholl Centre,
Atholl Road, Pitlochry, Perthshire, PH16 5BX**
