

PHILIP P. DUCE**Complementarity in Perspective**

Complementarity continues to be emphasised as an appropriate model for the interaction of science and theology or Biblical interpretation. This article draws attention to some analyses of complementarity and highlights some difficulties. In the light of these, it is clear that while this approach is of value in some contexts, it is not sustainable as a total model for integration, and needs to be incorporated into a more comprehensive framework. One such framework is given by J. P. Moreland's 'eclectic' model, which arguably offers a better starting point for engaging with the complexities of the science-theology interface. The fundamental issue is epistemological.

Keywords: Complementarity, MacKay, Van Till, Ratzsch, Moreland, epistemology, Gunton

Introduction

'Complementarity' continues to be emphasised as an appropriate model for the interaction of science and theology or Biblical interpretation. The purpose of this article is not to examine every exposition of complementarity in detail, but to draw attention to some analyses and highlight some difficulties, and then briefly to indicate the contours of an adequate, more comprehensive framework.

As a model for the relationship between science and theology, the complementarity approach (though not the term itself) may be dated back to Francis Bacon, who used the metaphor of the 'two books': nature (or better, the created order) and Scripture. Since the books of nature and Scripture both come from the same Author, they cannot be in conflict. However, since each has a different purpose it is idle to mix 'philosophy' (science) and divinity, and to seek scientific data in the pages of Scripture. Where Biblical and scientific evidence appear to clash, it is therefore necessary to recognise the complementarity of their modes of explanation.¹ This basic approach has continued to the present, and is associated with scientists such as Donald MacKay, Richard Bube and others.²

Thus, in general, complementarity holds that science and theology (or religion, or Biblical interpretation) are concerned with the same subjects, but deal with them in different, independent categories of description and explanation. Ratzsch has identified two forms of complementarity:

1 Russell, C. A. 'Science and theology', in Ferguson, S. B., Wright, D. F., and Packer, J. I. (eds.) *New Dictionary of Theology*, Leicester: IVP (1988), p. 625.

2 See Wilkinson, D. A. 'The revival of natural theology in contemporary cosmology', *Science and Christian Belief* (1990) 2(2), 108–111.

a) *strict*, which claims that both science and theology can be *complete* on their respective levels—there is no common ground on which they can come into conflict;³

b) *limited*, which accepts the basic idea that at least some phenomena can be approached from both a scientific and a religious/theological/Biblical perspective, but rejects the strict view that each perspective is in any important sense complete. Thus, for example, the ‘limited’ view could apply to the issue of the fundamental presuppositions of science (for example, the orderly nature of the external world and its knowability). These are accounted for by appeal to the theological realm: beyond these boundaries and foundations, the two perspectives are independent.⁴

MacKay’s approach, for example, is illustrated by the following quotations:

As a scientist, I have the job of helping to build in scientific language—at the scientific level—as complete a description of the pattern of physical events as I can, regarding no accessible events as exempt from examination. As a Christian, I find that the very same pattern of events can bear an additional and vital significance as part of the activity of God himself.⁵

Explanations in terms of scientific laws and in terms of divine activity are thus not rival answers to the same question: yet they are not talking about different things. They are (or at any rate purport to be) complementary accounts of different aspects of the same happening, which in its full nature cannot be adequately described by either alone.⁶

Austin has examined MacKay’s original papers in some detail.⁷ He states MacKay’s definition:

Two (or more) descriptions may be called logically complementary when

- 1) they have a common reference;
- 2) each is in principle exhaustive (in the sense that none of the entities or events comprising the common reference need be left unaccounted for), yet
- 3) they make different assertions, because
- 4) the logical preconditions of definition and/or of use (*i.e.* context) of concepts or relationships in each case are mutually exclusive, so that significant aspects referred to in one are necessarily omitted from the other.

3 Ratzsch, D. *Philosophy of Science*, Leicester: IVP (1986), pp.133–134.

4 Ratzsch, *Philosophy of Science*, pp. 139–141.

5 MacKay, D. M. *The Clockwork Image*, London: IVP (1974), p. 38.

6 MacKay, D. M., in Berry, R. J. (ed.) *Real Science, Real Faith*, Eastbourne: Monarch (1991), p. 205. Cf. MacKay, *The Clockwork Image*, pp. 91–93.

7 Austin, W. H. *The Relevance of Natural Science to Theology*, London: Macmillan Press (1976), pp. 72–80.

These four conditions are designed to ensure respectively that if two statements (or ‘descriptions’) are complementary, they are not about different things, nor is either necessarily incomplete in itself, nor are they synonymous, nor are they (necessarily) contradictory.⁸

Berry gives an illustration and introduces a further feature:

It is possible to describe a painting entirely in terms of the distribution of chemicals that make it up, or entirely in terms of the design of the artist. Both descriptions refer to the same object and both are wholly true, but either by itself is incomplete as an explanation of the painting. It is possible to think of God’s action in the world in the same way: knowing *how* something comes to pass does not mean that we know *why* it does. In general terms, the scientist is concerned with answering ‘how’ questions, while the Bible and revelation are concerned with ‘why’ questions. Indeed, science cannot deal with ‘why’ questions: they are unapproachable by its methodology. This does not mean that they are improper; but we cannot expect to find answers to them from science.⁹

Bube comments:

To be able to give a description in the scientific categories by no means makes unnecessary, invalid or meaningless a complementary description of the same event in theological categories. The opposite is also true; having a theological description does not rule out the significance of a scientific description of the same event or phenomenon.¹⁰

Thus, for example, a psychological account of conversion differs from a theological account—these are different levels of explanation with their own vocabulary; or, the coming of rain can be described both in terms of physical processes and in terms of the activity of God providing support for the growth of crops¹¹; or, in theistic evolution, ‘God is in charge . . . evolution is the way he chose to carry out his creation.’¹²

According to Van Till,

the view through the spectacles of Scriptural exegesis reveals information about the relationship of the cosmos to God, providing answers to questions in the categories of status, origin, governance, value and purpose. The view through the lens of natural science, on the other

8 Austin, *Relevance*, p. 74. See also Jeeves, M. A. *The Scientific Enterprise and Christian Faith*, London: Tyndale Press (1969), pp. 70–71; Barbour, I. G. *Myths, Models and Paradigms*, San Francisco: Harper and Row (1974), p. 77.

9 Berry, R. J., in Berry (ed.), *Real Science, Real Faith*, p. 9. It is worth noting here that the ‘how?’/‘why?’ distinction has also been used in a strict complementarian, ‘two-language’ approach to relating science and religion, particularly by Gilkey (see Peters T. (ed.) *Cosmos as Creation*, Nashville: Abingdon Press (1989), pp. 15–16).

10 Bube, R. H. ‘The relationship between scientific and theological descriptions’, *Science and Faith* (RSCF Newsletter No. 10) (Nov 1988), 26. Similar discussions are given in Hummel, C. E. *The Galileo Connection*, Illinois: IVP (1986), pp. 260–262; Hyers, C. *The Meaning of Creation*, Atlanta: John Knox (1984), pp. 31–35.

11 Bube, ‘Relationship’, 20.

12 Humphreys, C., in Berry (ed.), *Real Science, Real Faith*, p. 125.

hand, reveals information about the internal intelligibility of the cosmos, providing answers to questions in the categories of physical properties, behaviour and history. As long as these categorical distinctions are honoured, no contradictions will arise.¹³

As Wilkinson suggests, Van Till's 'categorical complementarity' verges on compartmentalisation, with science having little interaction with theology: science is bound by the 'real world' and excludes from its consideration the very dimension which the Bible emphasises, that is, the relation between creation and Creator.¹⁴

In general, complementarian models assume that scientific descriptions can only consist of natural causes: God cannot be part of such descriptions.¹⁵ This does not, of course, imply that *every* event or phenomenon must be explainable in terms of natural causes, only that 'scientific' explanations must be of a certain kind, and that there are real events which cannot be explained in this way.

Comment

Clearly, there are serious difficulties with *strict* complementarity. Science cannot give *complete* explanations in terms of its characteristic concepts, because of its extra-scientific presuppositions, and physical conditions in nature which are not completely accounted for scientifically. Furthermore, choice of *description* has no necessary, normative force for the actual nature and progress of events within objective reality.¹⁶ While strict complementarity approaches have played roles in neo-orthodoxy, religious existentialism and linguistic analysis,¹⁷ the Biblical testimony is that God is sovereign over the totality of history and the created order, not just a 'religious' sphere. Hence, if the separation between science and theology is less than complete, dialogue is in principle possible.

Historically, MacKay's particular implementation of complementarity was extremely helpful in the context of liberal manipulation of Biblical teaching which sought coherence with the latest scientific fashion, and in the context of 'God-of-the-gaps' or 'Biblical literalism' approaches. It enabled the maintenance of a strong Biblical position while giving due weight to whatever seemed reasonably well established in science.¹⁸

The complementarity approach has undeniable value. The 'how?'/ 'why?' questions are particularly helpful for thinking about the relation-

13 Van Till, H. *The Fourth Day*, Grand Rapids: Eerdmans (1986), pp. 205 (cf. pp. 193–215).

14 Wilkinson, 'Revival of natural theology', 110–111.

15 This is stated explicitly in a recent description of a complementarian model. See Grizzle, R. E. 'A conceptual model relating theology and science: the creation/evolution controversy as an example of how they should *not* interact', *Perspectives on Science and Christian Faith* (1993) 45(4), 222–228.

16 Ratzsch, *Philosophy of Science*, pp. 134–137.

17 Barbour, I. G. *Religion in an Age of Science*, London: SCM (1990), pp. 10–16.

18 Barclay, O. R. 'The RSCF in historical perspective', *Science and Faith* (RSCF Newsletter No. 10) (Nov 1988), 7.

ship between scientific law and God's providence. MacKay rightly states that

The essential point made in the Bible, and in a sense, I think, the key to the whole problem of the relation of science to Christian faith, is that God, and God's activity, come in not only as extras here and there, but everywhere. If God is active in any part of the physical world, he is in all. If the divine activity means anything then all the events of what we call the physical world are dependent on that activity.¹⁹

Blocher makes similar comments, which also moderate the strong categorical distinction posited by Van Till:

The Bible . . . is not a handbook of science. Agreed. But that does not mean it will have *nothing* to say which touches the realm of the scientist. The fact that the primary purpose of Genesis is not to instruct us in geology does not exclude the possibility that it says something of relevance to the subject. In the last analysis one cannot make an absolute distinction between physics and metaphysics, and religion has to do with everything, precisely because all realms are created by God and continue to depend on him.²⁰

Thus, 'A key consideration . . . [is] whether or not there is a clear distinction between *behavior* and *governance* as Van Till suggests and particularly whether, and to what degree, the *formative history* of life forms comes under *behavior* or *governance*.'²¹ The boundary between proximate questions ('how?') and ultimate questions ('why?') may not be so clearly definable.²²

The 'how?'/ 'why?' distinction does not seem appropriate exegetically when dealing with Biblical narratives (accounts of miracles, for example), where both 'how?' and 'why?' questions are relevant (rather than 'why?' questions alone). Clearly the Bible does not answer 'how?' questions if these involve description in *scientific* terms (for example, the hydrodynamics of the parting of the Red Sea, or the processes involved in the transformation of water into wine²³): but asking the 'how?' questions with respect to *historical* descriptions of events is necessary if we are ever to conclude that God's power is displayed in the miracles. The answer to 'why?' questions concerns theological *interpretation* of the events (for example, the Christological meaning of the transformation of water into wine). In general,

false dichotomies such as 'the Bible is theology not history' or 'the Bible is literature not history' must be avoided. The Bible evinces an

19 MacKay, *The Clockwork Image*, p. 57. See Sharp, J. C. 'Miracles and the "laws of nature"', *Scottish Bulletin of Evangelical Theology* (1988) 6, 1–19.

20 Blocher, H. *In The Beginning*, Leicester: IVP (1984), p. 24.

21 Mills, G. C. 'A Theory of Theistic Evolution as an Alternative to the Naturalistic Theory', *Perspectives on Science and Christian Belief* (1995) 47(2), 112–122 (quote from 113, author's italics).

22 Cf. Peters, *Cosmos as Creation*, pp. 16–17.

23 Assuming that such descriptions are possible in principle.

interest in all three. The crucial question is . . . what *truth claims* are implied by each narrative with its broader context.²⁴

Ontologically, therefore, it is hard to take the Bible on its own terms, in grammatico-historical exegesis, without understanding some of its statements to be an account of what the world is like and how God brought things about.

[In response to 'strict' complementarity, it may also be added that cases like the parting of the Red Sea, the resurrection and the creation of humankind provide important epistemological evidence for the justification of Judaeo-Christian theism. 'Natural' processes and features are surely involved, but the Bible implies that natural explanations cannot completely account for such events. Jesus' miracles authenticated who He was: if such deeds could be accounted for without 'gaps' at the level of scientific description, how do they provide evidence for His claims?²⁵]

From a careful logical analysis of MacKay's definition, Austin concluded that:

- 1) the complementarity of two statements does not imply that there can be no conflict between them;
- 2) not all apparently-conflicting scientific and religious assertions are complementary;
- 3) in many cases it is difficult to tell whether a given pair of assertions are complementary or not.²⁶

Polkinghorne comments that

possibly MacKay exaggerates the value of having a name for what is often a perplexity. Complementarity is not by itself an instantly explanatory concept. It is simply suggestive of a search for understanding which seeks to take an even-handed view of two accounts of what is going on.²⁷

For Ratzsch, the essential problem with a limited complementarity approach is that the areas into which it would *not* extend are the very

24 Long, V. P. *The Art of Biblical History*, Leicester: IVP (1994), pp. 57, 95 (author's italics).

25 Moreland, J. P. *Scaling the Secular City*, Grand Rapids: Baker Book House (1987), p. 202.

26 Austin, *Relevance*, pp. 73–74. Austin examines the case of the parting of the Red Sea in his analysis, and highlights some logical difficulties.

See also the discussion in Peterson, M., Hasker, W., Reichenbach, B., and Basinger, D. 'Religion and science: compatible or incompatible?', in *Reason and Religious Belief: An Introduction to the Philosophy of Religion*, Oxford: OUP (1991), pp. 202–207.

27 Polkinghorne, J. *Reason and Reality*, London: SPCK (1991), p. 27.

It is actually difficult to decide whether MacKay advocated strict or limited complementarity. Cf. Ratzsch, *Philosophy of Science*, p. 134 (footnote 3), p. 139 (footnote 10). A tension in MacKay's writings has been noted in Sharp, J. C. 'Teaching science in a Christian perspective', *Biblical Creation* (1980) 2(7), 80. [Compare quotations 5 and 19 above. Sharp also questions the division, in the first quotation, between seeing the world 'as a scientist' and 'as a Christian' ('Miracles', 10).]

areas most subject to controversy (for example, origins, miracles, human self-consciousness).²⁸ Thus,

While complementarity rightly cautions us about the generically different approaches of theology and science, it may be that the blanket statement that there is no possibility of conflict cannot be made *a priori* . . .

The complementary principle seems too strong, guaranteeing not only the integrity of theology and science as independent disciplines, but also that none of their specific claims will clash. The very fact that the separate methodologies are allowed to explain the *same* objects seems to cast doubt on any such guarantee.²⁹

Furthermore, as particle physics and cosmology arrive at the boundary questions of existence, it appears that the distinction between the questions ‘how?’ and ‘why?’ has become unsustainable.³⁰

Russell identifies an additional deficiency in concluding that

For all its merits the ‘complementarity’ model by itself fails in a number of respects, particularly by ignoring the considerable network of relationships between science and theology disclosed by recent historical scholarship. A model which takes these into account may be termed *symbiosis*. This recognises that, historically, scientific and theological thinking have owed much to one another and that their growth has been mutually promoted.³¹

Thus, complementarity can, and should, be incorporated into a total picture of the interaction between science and theology. However, in the light of the analyses and difficulties indicated, it should not be given undue emphasis. If taken as an entire model, it can tend towards compartmentalisation, as seen with Van Till, for example. If it fails to respond responsibly to secular questions concerning Biblical belief, complementarity can also tend towards deism in its handling of God’s causal activity, and towards dualism or fideism.³² It is worth noting that, as early as 1953, MacKay warned that complementarity was open to abuse or misunderstanding.³³

28 Ratzsch, *Philosophy of Science*, pp. 139–141.

29 Peterson *et al.*, ‘Religion and science’, p. 206.

30 See, for example, Davies, P. *The Mind of God*, London: Penguin Books (1993).

31 Russell, ‘Science and theology’, pp. 625–626. Cf. Peterson *et al.*, ‘Religion and science’, p. 207.

32 Moreland, J. P. *Christianity and the Nature of Science*, Grand Rapids: Baker Book House (1989), p. 12. The view that complementarity as such is ‘Kantian’ is erroneous: it is not a contrast between the known and the unknowable. See Helm, P. ‘Arguing about origins’, *Themelios* (1978) 4(1), 23 (responding to the preceding article by N. Weeks). Nevertheless, a fideistic tendency is certainly possible [cf. Blocher, *In the Beginning*, p. 24].

33 See the quotation in Jeeves, *Scientific Enterprise*, p. 70.

A basic, adequate model for the interaction of science and theology, which incorporates complementarity, is therefore needed, and such a model has been given by J. P. Moreland.³⁴

Moreland's eclectic model

This model for integrating science and theology or Biblical interpretation recognises that:

- 1) sometimes the two are concerned with *distinct realms*;
- 2) sometimes they are *complementary approaches to the same realm* which provide different answers to different kinds of questions;
- 3) sometimes they are *interacting, competing approaches* to phenomena;
- 4) the Bible provides an *adequate worldview* which is consistent with the necessary philosophical presuppositions of science (for example: the existence of the external world and ultimate boundary conditions; the orderly nature of the external world and its knowability; the validity and applicability of logic and mathematics; the reliability of the senses and the mind; the adequacy of language to describe the world; the existence of moral, aesthetic and methodological values).

1) is straightforward. For example, atomic theory is not a Biblical topic: the theology of atonement is not a scientific topic.

With regard to 4), the significant role played by the Judaeo-Christian faith in the rise of modern science is now widely recognised, and has been expounded in major historical investigations.³⁵ While the exact degree and nature of the influence of Christian theology continues to be debated, a fundamental role was played by the doctrine of creation *ex nihilo*: a rational, contingent (*i.e.* neither necessary nor eternal) universe created by the God of infinite love and truth.³⁶ Moreland himself argues that it is probably more accurate to say that science owes its rational, truth-seeking character to philosophy, which is the proper domain for discussion of the necessary presuppositions for science, but that the main features of Christian theology are consistent with such presuppositions.³⁷ Clearly, once science was well-established, its own success was sufficient justification for many (atheistic or agnostic) scientists, who maintained the assumptions of orderliness and intelligibility without the need for religious legitimation.³⁸ Nevertheless, 'none of this changes the fact that science makes sense only in a certain kind of world—the kind that was in fact first envisioned by Christian theism.'³⁹

34 Moreland, *Scaling the Secular City*, pp. 200–208.

35 See, for example, Russell, C. A. *Crosscurrents: Interactions Between Science and Faith*, Leicester: IVP (1985), pp. 54–79; Nebelsick, H. P. *Renaissance and Reformation and the Rise of Science*, Edinburgh: T. and T. Clark (1992), pp. ix–xxi, 10–11, 148–189; Kaiser, C. *Creation and the History of Science*, London: Marshall Pickering (1991), pp. 120–150.

36 See, for example, S. Bishop (referring to M. B. Foster, S. Jaki, R. Hooykaas and T. F. Torrance), 'Science and faith: boa constrictors and warthogs?', *Themelios* (1994) 19(1), 8.

37 Moreland, *Scaling the Secular City*, p. 203.

38 Barbour, *Religion in an Age of Science*, p. 17.

39 Peterson *et al.*, 'Religion and Science', p. 214.

With respect to 3), Moreland argues that Biblical interpretation sometimes implies that gaps will exist in scientific accounts at particular points of God's intervention.⁴⁰ This perspective permits Biblical revelation to speak for itself, with the important qualification that appropriate hermeneutical issues are allowed to play their proper role in interpretation in any given instance. It can be combined with the other three perspectives to give an eclectic model for integration.⁴¹

Moreland acknowledges the criticism that 3) might be taken to imply a God-of-the-gaps strategy, where theological explanations merely fill (ever-decreasing) gaps in naturalistic explanations, and gives five responses:⁴²

- a) an adequate model of integration is not limited to this view alone;
- b) it is debatable whether theology has always lost battles to science;
- c) even if the gaps in science are decreasing, this does not prove that there are no gaps at all (especially in cases where ultimate boundary conditions are being discussed);
- d) a 'god-of-the-gaps' argument can be used against science itself (replaced or falsified theories of the past are like cases where God was used inappropriately to explain gaps);
- e) in some cases the gaps may be getting worse, not better, with the advancement of science (e.g. problems in origin-of-life research).

Clearly, caution must be exercised here, to guard against merely using God to cover scientific ignorance. However, Moreland argues, when ultimate boundary conditions are being considered, or in cases where careful Biblical exegesis indicates that a gap should be expected, God's activity can be used to explain such cases. This, in turn, raises the issues of the validity, or otherwise, of 'methodological naturalism' (particularly in origins research),⁴³ and of theistic evolution.⁴⁴

A recent comment by Ratzsch, in the light of the 'increased modesty in the claims made for science', is pertinent here:

40 Moreland, *Scaling the Secular City*, pp. 204–205. This need not imply semi-deism. It does not necessarily follow that to infer that God has acted in a discrete, special way in one case is to deny His constant, ordinary providential activity.

41 'Symbiotic' models have also been recommended by Sharp ('Teaching science', 81–82) and Russell ('Science and theology', pp. 625–626, quoted earlier). See also the general discussion in Peacocke, A. R. *Theology for a Scientific Age*, Oxford: Basil Blackwell (1990), pp. 19–23.

42 Moreland, *Scaling the Secular City*, pp. 205–207.

43 Ratzsch, *Philosophy of Science*, pp. 141–149. On this issue, an exchange between Moreland, Meyer and Bube is instructive: see Moreland, J. P. 'Conceptual problems and the scientific status of creation science', *Perspectives on Science and Christian Faith* (1994) 46(1), 2–13; Meyer, S. C. 'The use and abuse of philosophy of science: a response to Moreland', *PSCF* (1994) 46(1), 14–18; Bube, R. H. 'Is creation science an oxymoron? A response to Moreland', *PSCF* (1994) 46(1), 19–21; Moreland, J. P. 'Response to Meyer and Bube', *PSCF*, (1994) 46(1), 22–25.

44 For a recent critique, see Lane, D. H. 'Special creation or evolution: no middle ground', *Bibliotheca Sacra* (1994) 151(601), 11–31; 'Theological problems with theistic evolution', *Bib. Sac.* (1994) 151(602), 155–174. Lane rightly questions the applicability of complementarity (as in, for example, Berry's 'painting' metaphor) in this context. The essential problem is that the Genesis text and evolutionary theory refer to *different* events ('Special creation or evolution', 20–22).

Within the newer picture of science, it is in principle rationally permissible for Christians to assess scientific theories in part on grounds of whether or not such theories conflict with well-grounded theological principles. Even some secular philosophers of science now admit that.⁴⁵

It should be stressed that adoption of Moreland's eclectic *model* need not imply commitment to his eclectic approach to the *philosophy of science* (case-by-case instrumentalism or rational realism⁴⁶). Such vacillation is unsatisfactory, and, as Bishop has noted,⁴⁷ Moreland's reasons for eclecticism here could be fulfilled within a critical realist approach.

As with Polkinghorne's comment on complementarity, Moreland's model which incorporates it is 'not instantly explanatory'. The challenge is to implement the model in such a way that the methodological integrity of each discipline is respected, but where their appropriate levels of mutual interpenetration are clarified, all within an overall framework of belief arising from that interpenetration.

Conclusion

At this point it is worth recalling McMullin's comment, that

the question of how science and religion should interrelate is not primarily a scientific one or a theological one. Nor is it primarily historical or sociological, though one will surely want to know much about the historical relations of the two, as well as about the sociological issues these relations raise, before coming to any conclusions. The question is primarily an *epistemological* one about how two different sorts of claim to knowledge are to be related. In discussing it, it is important to be sensitive to the complexities of the properly scientific and properly theological issues involved. . . . But in the end the question is a characteristically epistemological one, one of great complexity.⁴⁸

Attempts to model that complexity are offered an adequate starting point in Moreland's model, which is able to accommodate the intertwining critical-realist⁴⁹ hermeneutical spirals of Biblical exegesis, theology, science and historical research. Furthermore, it might be suggested that, in order to function properly, such a model should be embedded within an overall epistemology which is neither foundationalist (as in the Enlightenment's quest for universal truth) nor anti-foundationalist (which advo-

45 Ratzsch, D. 'Science', in Atkinson, D. J., and Field, D. H. (eds.) *New Dictionary of Christian Ethics and Pastoral Theology*, Leicester: IVP (1995), p. 763.

46 Moreland, *Christianity and the Nature of Science*, pp. 202–211.

47 Bishop, 'Science and faith', 7.

48 McMullin, E. 'How should cosmology relate to theology?', in Peacocke, A. R. (ed.), *The Sciences and Theology in the Twentieth Century*, Stocksfield and London: Oriol Press (1981), pp. 25–26 (author's italics).

49 See, for example, Peacocke, *Theology for a Scientific Age*, pp. 11–19.

cates the autonomy of distinct intellectual disciplines), but ‘fallibilist’,⁵⁰ requiring ‘a concept of truth that is appropriate to our limits, both in capacity and in time and space’.⁵¹

It has been acknowledged that complementarity was—and still is—an important corrective to the tendencies of liberal and ‘fundamentalist’/literalist approaches to the issue of the relation of Biblical interpretation and theology to science. However, adoption of complementarity as *the* model for integration can flatten the issues into the one dimension defined by these extremes—and arguably has not achieved clarity or stability. Simplistic reiteration of complementarity neither does justice to the intrinsic complexity of the methodological and epistemological issues, nor provides a satisfactory basis for theistic responses to end-of-century challenges which include persistent scientism, the domination of science by naturalism, and postmodernity.

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After ten years in university chemistry teaching and research, Philip Duce spent four years in full-time theological study.

50 Gunton, C. E. *The One, the Three and the Many*, Cambridge: CUP (1993), pp. 130–135; cf. Gunton, C. ‘Knowledge and culture: towards an epistemology of the concrete’, in Montefiore, H. (ed.), *The Gospel and Contemporary Culture*, London: Mowbray (1992), pp. 84–102. For a helpful discussion of the possible relationships between philosophy (‘Athens’) and theology (‘Jerusalem’), see Vanhoozer, K. J. ‘Christ and Concept: Doing Theology and the “Ministry” of Philosophy’, in Woodbridge, J. D., and McComiskey, T. E. (eds.) *Doing Theology In Today’s World*, Grand Rapids: Zondervan (1991), pp. 99–145.

51 Gunton, *The One, the Three and the Many*, p. 135.

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