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Forty Years of Science and Religion:

Looking Back, Looking Forward

Edited by

Neil Spurway and Louise Hickman

Cambridge Scholars Publishing



Forty Years of Science and Religion: Looking Back, Looking Forward

Series: Conversations in Science and Religion

Edited by Neil Spurway and Louise Hickman

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DEDICATED TO THE MEMORY OF DR. JEFFREY ROBINSON (1940-2015) SECRETARY AND TREASURER OF THIS FORUM

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THE SCIENCE AND RELIGION FORUM

Growing out of informal discussions which began in 1972 around the key figure of Revd Dr Arthur Peacocke, the Science and Religion Forum was formally inaugurated in 1975. Its stated purpose was "to enable and encourage further discussions of the issues which arise in the interaction between scientific understanding and religious thought". These issues, together with the social and ethical decisions demanded by scientific and technological advances, have remained the subject of the Forum's meetings since that date.

In 2005 the Forum merged with the Christ and the Cosmos Initiative. This had been founded by the Revd Bill Gowland, a past President of the Methodist Conference, with the intention of bringing the latest knowledge of scientific thinking within the orbit of the enquiring layperson.

Thus enlarged, the Forum is open to all, of any personal faith or none, who are concerned to relate established scientific knowledge and methodology to religious faith and theological reflection. Implementing its broad objectives, it seeks:

- 1) to encourage scientists with limited knowledge of religion, and religious people with limited knowledge of science, to recognise and appreciate the contributions of both disciplines to human understanding of life in the world
- 2) to provide an interface between academics active in science-religion work and public communicators notably teachers, clerics, and those training future members of these professions.

At every point, the Forum strives to extend recognition that science and religion, properly understood, are not antagonists, but complementary in the quest for truth.

The Forum holds a regular annual conference, plus occasional smaller *ad hoc* meetings, and publishes a twice-yearly journal, *Reviews in Science and Religion*. Since 2008 it has also published edited proceedings of its annual conferences under the series title *Conversations in Science and Religion*.

At the date of publication, the Forum's President is Prof John Hedley Brooke (Oxford) and its Chairman Revd Dr Michael Fuller (Edinburgh).

ACKNOWLEDGEMENTS

The lion's share of the initial work for the conference on which this book is based was undertaken by Dr Jeffrey Robinson, who had for several years fulfilled the dual roles of Secretary and Treasurer of the Forum. Jeffrey's sudden death, in April 2015, thus deprived the Forum of two officers at once, and left not only an aching void but considerable uncertainty as to what had or had not been done. Revd Dr Mark Harris, whose main concern as Conference Officer had, up to that point, been the programme of talks, therefore found himself responsible for substantially further work. The Membership Secretary, Mrs Hilary Martin, and Chairman, Revd Dr Michael Fuller, also made greatly increased contributions. The Forum's members owe all three of them the warmest appreciation.

Jeffrey's death likewise complicated matters for the staff of St John's College, Durham, where the conference was to be held. Under the exceptionally helpful leadership of Mrs Sue Hobson they rose to the challenge splendidly, and hosted an admirable meeting in terms of accommodation, facilities and food. It is a pleasure to thank them too.

Sincere thanks must also go to Aamina Amdavadi who worked with one of the book's editors (LH) in preparing this book for publication, and to the Newman University Students as Partners scheme, which enabled us to collaborate together on this project. Grateful thanks are also due to Kate Snow for her careful proof reading of the final draft.

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Neil Spurway studied at Cambridge, but has worked in the University of Glasgow ever since, and is now Emeritus Professor of Exercise Physiology. He has chaired Glasgow's Gifford Lectureships Committee, as well as the present Forum, been President of the Royal Philosophical Society of Glasgow and Vice-President of the European Society for the Study of Science And Theology, and also edited the latter's journal, *ESSSAT News*. Alongside considerable scientific writing he initiated the present series and edited three of its previous volumes—most recently *Laws of Nature, Laws of God?* (2015).

Contributors

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University, and doctorates in theology and in philosophy (Groningen 1989, Amsterdam 1994). Among his books are *Religion and Science in Context: A Guide to the Debates* (Routledge, 2010), *Creation: From Nothing until Now* (Routledge, 2002), *Religion, Science and Naturalism* (Cambridge University Press, 1996) and *Beyond the Big Bang: Quantum Cosmologies and God* (Open Court, 1990).

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Michael Poole trained as a physicist and became Head of Physics at a London comprehensive school. Three years' broadcasting on science and religion for overseas audiences led to a lectureship in Science Education at King's College London. He remains a Visiting Research Fellow there. He has written several books and some eighty papers and articles on science and religion for educationalists and a general readership, cf. www.kcl.ac.uk/sspp/departments/education/people/academic/poolem.aspx.

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INTRODUCTION

FORTY YEARS OF SCIENCE AND RELIGION: LOOKING BACK, LOOKING FORWARD

LOUISE HICKMAN AND NEIL SPURWAY

This book is the result of a celebration. In 2015 the UK's Science and Religion Forum marked its fortieth anniversary with a conference dedicated to commemorating the last four decades of scholarship in science and religion and to making a contribution to its future. The Forum's conference is an annual event. This one, however, offered a unique opportunity to reflect on the broad panorama of the field and its future prospects, together with the distinctive contribution of the Forum itself. The chapters presented here have grown out of contributions originally presented at our anniversary gathering. Taken together they constitute a book that offers more than just a map of where we have been or where we might go: they also contribute something to the shaping of the future terrain, actively moving us forward into territory that is theologically fruitful while offering reflection on how we might envisage the ideals and goals underpinning the field itself.

Part I

The first part of the book is comprised of chapters written by authors who were invited plenary speakers at the conference. Alister McGrath needs no introduction given his substantial contribution to the field of science and religion over the years. In Chapter One he offers some reflections on his own personal journey into the discipline while outlining three different ways of understanding the relationship between science and religion. The first highlights the fact that science and theology are concerned with the same world and so might be thought multiple perspectives on the same reality. The second critical realist approach posits different strata of reality each with their own appropriate research

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methods, while the third approach treats science and religion as different narratives *about* reality. McGrath shows us how understanding religion as narrative, as a way of shaping meaning and giving cultural identity, grants the narrative of religion something irreducible and allows it a unique role in making sense of our experience.

In Chapter Two (based on the public Gowland Lecture at the conference) Willem Drees offers an invaluable reflection on the changing landscape of science and religion in light of recent insights provided by religious studies and sociology. Secularization and individualism have shifted the very meaning of what it is to be "religious". In light of this, Drees offers an important new way of thinking about the relationship between science and theology. In looking towards the future he considers how science and religion might come together for common good. Science provides models of reality and religion models *for* reality (not least in the form of stories and visions). In this it is essential for helping us to reflect in a truly authentic way, not least on the human condition.

Andrew Davison in Chapter Three offers a perceptive summary of science and religion since the 1960s. He identifies distinct periods of development, charting a shift from a bilateral dialogue to multilateral conversations marked by interdisciplinarity involving a broad range of partners. Along with McGrath he highlights the importance of acknowledging that science and religion concern themselves with the same world. Theology must therefore avoid "howlers", as Augustine put it, by thinking correctly about creatures if we are to understand ourselves and our relationship to God. Davison makes a compelling case that this task would be well served with closer integration of the sub-discipline of "science and theology" with other aspects of theological study.

The way in which science and religion has understood itself as a distinct sub-discipline of theology owes much to Ian Barbour's work and the models of interaction between science and religion, which he first presented in the late 1960s. Michael Burdett undertakes a rigorous engagement with Barbour's legacy in Chapter Four. A greater understanding of how Barbour has shaped the field is essential for imagining its future and Burdett takes the opportunity to sketch some avenues crucial for further exploration. His call for more dialogue between theology and technology is particularly pressing, especially given our fast-developing capability of transforming our human nature.

Gillian Straine's chapter makes an important contribution to this volume by bringing science into conversation with pastoral theology. She shows how science and theology might come together to form a broader self-understanding of human flourishing, to aid the pastoral care of those

affected by cancer—a disease still considered taboo—and to re-imagine the experience of suffering without unhelpful metaphors of war. Her Ricoeurian model is genuinely dialectic and shows us how human experience can be the "unifying focus for science and religion". Theology can thus challenge damaging narratives and imagine new ones, while science—when it is the subject of theological reflection—can deepen self-understanding.

One dominant feature of the conversation between science and religion historically has been natural theology. In Chapter Six, David Wilkinson offers a discerning reconsideration of the design argument drawing on Temple Chevallier's interweaving of natural theology and revelation. The result is a theology of nature with rich insights that are ripe for development in light of recent scientific theories, including the concept of the multiverse and the prospects for the long-term future of our own universe.

Part II

The second part of the book is derived from papers contributed by members and guests of the Science and Religion Forum attending the September 2015 meeting.

It opens (Chapter Seven) with a consideration by the Forum's current Chair, Revd Dr Michael Fuller, of a provocative claim by Prof Peter Harrison in 2015 that "[the] urging of a consonance between science and religion reinforce[s] the very conditions that make conflict possible. Advocates of constructive dialogue are thus unknowingly complicit in the perpetuation of conflict". As Prof Harrison is one of the Forum's Vice-Presidents, this might be anticipated as a somewhat incestuous, mutually-complimentary piece. It isn't! Dr Fuller's assessment is respectfully critical, and certainly contributes to the overall dialogue of the book.

As the next Chapter (Eight) we place an analysis by Dr Emmanuel Nartey, of the City University of New York, of "three distinct understandings of secularization: the elimination of religion, the privatization of religion, and the differentiation of religion". It is the third of these which Dr Nartey considers the most challenging for theists. In Chapter Nine Revd Dr Fraser Watts (Cambridge) then writes on the Epiphany Philosophers. In the third quarter of the last century, this group considered the Science-Religion interface with a radicalness we could do well to emulate, challenging the metaphysical assumptions underlying scientific practice, and emphasizing contemplative religion, with its experiential and empirical approach to theology. And in Chapter Ten, Dr

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Fabien Revol, of the Université Catholique de Lyon, views the study of Science and Religion as a source of commitment to tackling the ecological crisis of our times.

One of this book's editors (NS) documents in Chapter Eleven something of the range of biological questions which have been considered during the 40 year lifetime of the Forum. He is followed by Sarah Lane Ritchie, one of the impressively able research students assembled by Dr Mark Harris in Edinburgh; in Chapter Twelve Ms Lane Ritchie challenges the emergentist philosophy of mind proposed by Philip Clayton, and in particular his contention that here is the locus of divine action in the world. Another able research student, Finley Lawson (Kings College, London) presents, in Chapter Thirteen, an account of Christ's Incarnation, in its various phases, in terms of quantum holism. If a scientific understanding of these theological concepts is validly to be sought, this is surely a most fruitful line of exploration.

Part II ends with two chapters concerned with school education. The first of them (Chapter Fourteen), by Mr Adrian Brown (Belper, Derbyshire), reflects on changes in the school handling of Science and Religion in the past 20 years: many of them are for the better, but he could wish for a lot more. Finally, in Chapter Fifteen, Dr Berry Billingsley and colleagues (Reading) report a survey of the ideas about the soul of senior pupils in a sample of schools in England. I feel the pupils did pretty well: see what you think!

Part III

This concluding section prints the texts of three talks which expressly, but less formally, looked at the past and future of the Science and Religion Forum and the discipline to which it contributes. In Chapter Sixteen Mr Michael Poole (Kings, London) recalls the very beginning of the Forum. Chapter Seventeen is the text of the speech given by the Forum's President, Professor John Hedley Brooke, after the conference dinner. The first half of this offers reminiscences which admirably supplement Michael Poole's; the second half looks forward with all the flexible perception which those of us who have the privilege of knowing John Brooke would anticipate. The future is the key theme of this book. Stimulated by John, we shall round off this Introduction with our own thoughts on the subject. The book concludes (Chapter Eighteen) with the end-of-conference reflections of Dr Mark Harris (Edinburgh), organizer of the meeting. He considers the current problems of the Science & Religion discipline, particularly in getting sufficiently recognized in the academy

(and, we might add, the churches, mosques and synagogues), but draws encouragement from the vision of the conference contributors.

Onward with Science and Religion

Colleagues in this field are often rueful that the striking advances seem almost always to be scientific ones, to which religion and theology must respond. It is safe to say that theological innovations are not usually met with the fanfare of scientific advancements perhaps because developments in science are often highly technological and we are, as Heidegger suggested, technological creatures, enraptured by the pageantry of science, which has become our dominant narrative and primary way of looking at the world. It is worth remembering that religious thinking is a much older human activity than scientific thinking—even monotheistic ideas have been in circulation an order of magnitude longer than a recognizably modern empirical scientific outlook. On that ground alone it would be reasonable that science should seem to develop faster. More importantly, however, scientific advances are made possible by new equipment (and the money this requires!), in a way for which theological and religious thought can have no parallel. Consequently, we have no qualms about looking first at the developments in science foreseeable for the next few decades.

There will surely be great progress in understanding dark matter and energy. It seems more than feasible that human understanding of space and time themselves will be substantially changed as a result, and some thinkers will be disposed to ponder the theological significance of these changes. Much the same, one trusts, will be the case with quantum nonlocality, and the fate of the currently standard model of sub-atomic structures. There will probably be aspects of both these topics which affect monotheistic thinking generally, and it is profoundly to be hoped that Judaic and Islamic metaphysicians will be as much to the fore as Christian ones. (One of the pleasures we both take in this Forum is that it is concerned with Science and Religion generally, not Christianity in isolation.) That said, however, the fact that (as William Temple commented) "Christianity is the most materialistic of all religions" will require that the special challenges of Christology—cf. Finley Lawson's ideas in Chapter Thirteen of the present book—be explored in terms of whatever new theories of physical thought have crystalized, say, 40 years from now. But a particular application of quantum thinking which will presumably evolve in parallel with such developments, namely the multiverse concept, is one we predict will *not* affect theology significantly.

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Of all the self-delusions of pre-committed atheists, one of the weirdest is the belief that the multiverse concept is helpful to their cause: a Creator of the universe can equally logically create a multiverse.

Biological science, in its areas most familiar to Arthur Peacocke, will surely have progressed markedly. The first effect, one prays, must be to show up, ever-more inescapably, the absurdity of the Discovery Institute and its nonsensical effusions about "Intelligent Design". Much more interesting will be the serious work on the origin of life. The conviction of the biologist editor of the current volume (NS) is that this will be confirmed to have been a purely terrestrial process—which does not, of course, mean that comparable developments elsewhere in the cosmos are any less likely.

A belief as weird in our eyes as that the multiverse is incompatible with theism is the notion that life on other worlds would be a challenge to religion. Indeed, the two misconceptions are ultimately similar. If a billion planets in the knowable universe harbour life, and there exist a trillion other cosmic systems of which the same might be true, is that not all the stronger reason to revere the Creator? One thing this does do, however, is make more pressing the need to consider our human ethical responsibilities with regard to space exploration and possible contact with life in other parts of the universe: what Ted Peters has called the field of "astroethics".

Recent developments in the study of genetics and technology have also been striking in their pace. Since the Human Genome Project was begun in 1990 the science of genetics has radically challenged the way in which we see ourselves and conceive of both our own flourishing and that of the wider world. We can alter our own nature today in ways we barely dared to dream of forty years ago. Considerations of *imago dei* and particularly human *telos* cannot be far away from these advances.

So far we have considered possible developments in regions of the Science-Theology interface which were already being actively explored in the 1970s. The psychology of religion, by contrast, had then only been touched upon, and its neuroscience not at all. A start has been made in the last generation. Inauspicious early claims associated religious experience with proneness to epilepsy, but findings more encouraging to the believer have emerged from the measured studies, notably by Andrew Newberg and colleagues, of the most reproducible forms of religious discipline, prayer and meditation. Will some future experimenters manage to investigate the neurobiology of less predictable, yet non-pathological, religious events? And will the cognitive science of religion have matured

from its present stage of fervent hypothesizing to experimentally validated concepts concerning the mechanisms of belief?

These scientific innovations are remarkable but many of the developments in theological thought in the last forty years should give us confidence that theology is not restricted to a rear-guard position of response to scientific advances. Whenever the official birthday of postmodernity (whether with the dynamiting of the Pruitt-Igoe housing project in Missouri in 1972 or with the fall of the Berlin Wall in 1989), its growth into maturity has generated a myriad of theological opportunities. Even for those not much inclined towards celebrating this particular event, it has still opened up the possibilities of new metaphors, new ways of envisaging the methods of science and theology, new conceptions of language, and radically different ways of thinking about our own nature.

The immediate future thus presents precious opportunities for theology, particularly in proposing alternative narratives to those of scientism and reductionism, and in challenging some of the more problematic conceptions of *telos*, salvation, and selfhood that dominant narratives of science and technology often unwittingly promote. Recent work in theological anthropology has much to contribute towards medical perspectives on disability, for example. In the immediate future, theology looks set to challenge further what actually constitutes a scientific "advance". Forty years ago those engaging in science and religion were working in the shadow of the nuclear age. Today our scientific progress has made another form of global destruction much more pressing. In response to the ecological crisis, ecotheology will become even more invaluable by furthering its re-imagining of nature and human beings, and the relationship between them.

Closely related to this, future developments in theologies of nature will certainly be of significant importance. Pamela Sue Anderson, Stephen Clark and Mark Wynn, for example, have recently highlighted how our way of seeing the world is inescapably ethical and theological. The world can be perceived in different ways: scientistically and reductively as something to be controlled, or alternatively as something to be contemplated and learned from. It is an unavoidable fact that science and religion concern themselves with the same world. Theologies of nature will thus continue to carve new ways of seeing the world, giving us imaginative new myths, symbol systems and narratives with which we might seek to understand ourselves and to live in the world.

To conclude these ruminations, the most important move of all is to acknowledge that the essence of science, and also sometimes of theology,

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is to produce the unexpected—and that these are likely to be the most interesting developments. But this is the endemic risk of forecasting.

PART I

CHAPTER ONE

MULTIPLE PERSPECTIVES, LEVELS, AND NARRATIVES: THREE MODELS FOR CORRELATING SCIENCE AND RELIGION

ALISTER E MCGRATH

Science and religion are two of the most important presences in western culture, and the exploration of their interaction continues to attract much attention and interest. The field of "science and religion", in my view, needs some strategic redevelopment and an injection of a new sense of direction, in that it is showing signs of tiredness and routine preoccupation with issues that are in danger of over-exposure. In order to sustain this interest in the field of science and religion, both in the academy and wider culture, we need to be able to offer plausible and persuasive frameworks for understanding how each of its elements might relate to each other. In particular, we need to show that there are viable alternatives to the pervasive yet discredited "conflict" model of the relation between science and religion, which still dominates media discussion of the issues (Harrison 2015; Watts 1997, 125-38).

This paper sets out three ways of understanding the mutual relationship of science and religion which I have personally found helpful over the last 40 years. My object in writing this paper is simply to offer them to my readers, in case they find them as helpful as I do. I am not for one moment suggesting that these three models represent a definitive formulation or conceptualisation of this relationship. My point is simply that they are helpful, opening up positive and constructive ways of understanding the relation of science and faith. Each allows us to see science and religion as distinct yet potentially complementary aspects of a greater whole, while respecting their distinct integrities.

Encountering Science and Faith: A Personal Narrative

I myself first became interested in the interaction of the natural sciences and faith in the early 1970s (McGrath 2015). I was studying chemistry at Oxford University, and trying to work out how to hold together the Christian faith and scientific research. Up to that point, I had been an atheist, and naturally assumed that science and religion were mutually incompatible, having nothing of any interest or importance to say to each other. However, my discovery of Christianity as a serious intellectual option at Oxford forced me to reconsider this, and opened up ways of understanding the world and human existence.

It is not my intention to produce an alternative to Ian Barbour's fourfold categorisation of possible relationships between science and religion (Barbour 1966). Barbour's approach reflects his own cultural location, and is perhaps best seen as a descriptive account of attitudes towards the relation of science and religion within American academic culture in the 1960s. It is undoubtedly helpful in some respects, particularly in understanding the relationship between physics and Christian theology. However, it offers a very flat and inadequate account of the complex historical relationship of science and religion, and fails to take the complexity of religion with sufficient seriousness (Cantor and Kenny 2001).

My own approach is different. I write as someone who, after a period of atheism, had come to the conclusion that a positive and constructive dialogue between science and religion was possible (McGrath 2015), and who therefore was searching for theoretical frameworks that would help me to grasp the distinct identities of both science and religion while at the same time allowing them to enter into a meaningful dialogue. The three approaches that I will outline in this paper seem to me to offer us possibilities for a mutual enrichment of understanding of our strange universe, and our place within it, without a loss of intellectual integrity.

To help you position this discussion, I need to tell you something about my personal history. I began my scientific career by studying chemistry at the University of Oxford, with a major emphasis on quantum theory. This was extremely demanding intellectually, but helped me grasp some of the fundamental difficulties of my earlier somewhat rationalist approach to the natural world. I then moved into the more biological sciences for my doctoral research. I was part of the large research team of Prof Sir George Radda in Oxford University's Department of Biochemistry. My particular interest was the development of physical methods for the investigation of complex biological membranes.

Those years were very exciting, raising many questions in my mind—including some I will be discussing in this paper. Perhaps one of the most striking impressions to remain with me to this day was of the fundamental differences between the physical and biological sciences, particularly in relation to their specific research methods and the theoretical expectations attached to them. Immersion in two quite different scientific cultures made it clear to me that there was no single research methodology that could be applied comprehensively and coherently across the vast range of scientific disciplines. I shall return to the importance of this point later in this paper.

As I reflected on the relation between my faith and my scientific interests in the early 1970s, two things became clear to me. The first was that I simply could not live with any kind of compartmentalisation of my mind, in which one hermetically sealed region was devoted to science and another watertight compartment to my faith. It was tempting to keep science and faith apart from each other, perhaps as rivals, and possibly as enemies. This had the advantage of convenience; yet I felt that this amounted to an evasion of legitimate challenges and questions that I would have to confront sooner or later. I had to find some way of allowing my love of science and my faith to interact, and face up to any intellectual challenges that this raised.

My second insight was that I simply did not have the intellectual equipment I needed to deal with the religious side of my life. I knew I would have to study theology in detail if I was going to have the intellectual toolkit necessary for the exploration of the borderlands of science and faith. But how on earth was I going to do that? As I reflected on this, in conversation with colleagues, I gradually came to the conclusion that I ought to give up science after I had gained my doctorate, and focus on theology. I owe much to the wisdom of Jeremy R. Knowles (1935-2008), my tutor in organic chemistry at Wadham College before his departure to Harvard in 1974, who dissuaded me from an immediate transition from chemistry to theology. Knowles told me that my credibility as a serious participant in any dialogue between science and faith would rest on having a doctorate in a mainline science in the first place, and some publications in the field in the second. I took his advice.

The first of these issues resolved itself in a manner that was surprising, both in that it was unexpected, and that it turned out to be less challenging than I had feared. I was an undergraduate at Wadham College, Oxford, and regularly attended college chapel on Sunday evenings. At one such service—I believe in 1973, but I have no written record of this—I heard Charles A. Coulson, Oxford's Professor of Theoretical Chemistry, speak

on the relation of science and faith. Coulson was a fellow of Wadham College, and a well-known Methodist lay preacher.

His sermon opened up ways of thinking that were hitherto unknown to me. He very generously gave me 10 minutes of his time after the service, in which we explored some themes of his sermon—such as the inadequacy of the "God of the gaps" approach, and the idea of science and faith as different perspectives on a greater reality. Coulson did not answer all my questions, but he gave me something which I now realise was much better—a mental map of possibilities, which I was able to explore at leisure in my own time. As you will discover from this paper, Coulson's basic framework remains important for me to this day.

The second issue resolved itself when I was awarded a senior scholarship at Merton College, Oxford in 1976 on the basis of my research work in the Department of Biochemistry, which had opened up some interesting new ways of investigating physical models of biological membranes. On examining the terms of this scholarship, I discovered that it could be used either to pursue advanced research, or a second first degree. I now realise I must have seemed incredibly manipulative to the college authorities, but I asked if I could do both—continuing my doctoral research in molecular biophysics, while at the same time studying for Oxford's final honour School of Christian theology. For reasons I still do not understand, the college agreed.

In the summer of 1978, I gained my D.Phil.—Oxford's version of a PhD—in molecular biophysics, and graduated with first-class honours in theology. Having already published some scientific papers (including one accepted for publication while I was still an undergraduate), I felt I could now secure closure on my life as a scientist, and move on. I would now focus on the detailed study of historical and systematic theology, which gave me the intellectual framework I needed to reflect on how best to relate science and faith. By 1995, I felt ready to engage questions of science and faith in an informed way.

In this paper, I shall be exploring three approaches which seem to me to have real potential to illuminate both the relationship of science and religion, and the ways in which they can engage and interact to yield a richer vision of reality. After presenting each approach and offering some reflections, I shall then ask how they illuminate one deeply flawed and inadequate way of thinking about the relation between science and faith—scientism.

"Scientism"—a contracted version of "scientific imperialism" privileges the natural sciences, holding that scientific inquiry enables the resolution of conflicts and dilemmas in contexts where traditional sources of wisdom and practical knowledge seemed to have failed (Robinson and Williams 2014). Scientism has gradually come to be understood as:

... a totalizing attitude that regards science as the ultimate standard and arbiter of all interesting questions; or alternatively that seeks to expand the very definition and scope of science to encompass all aspects of human knowledge and understanding. (Pigliucci 2013, 144)

Its chief vice is, of course, its perceived arrogance. For Mary Midgley, "scientism's mistake does not lie in over-praising one form of [knowledge], but in cutting that form off from the rest of thought, in treating it as a victor who has put all the rest out of business" (Midgley 2014, 5).

Yet we need to offer a better critique of scientism than this. A more rigorous engagement with scientism must offer a theoretical account of its distinct approach, so that this can be calibrated against alternative possibilities such as those I myself propose in my "narrative of enrichment" (McGrath 2015). So how can we conceptualize scientism? In this paper, I shall consider how each of the approaches I shall explore will illuminate the distinct identity of scientism and offers us ways of challenging its inadequacy.

1. Multiple Perspectives on Reality

The first approach I wish to consider is that of Charles A. Coulson, which I first encountered back in the early 1970s. This is set out in a number of his writings to emphasize the fundamental coherence of science and faith (Coulson 1953, 1955, 1958). I had huge respect for Coulson, who had a stellar reputation as a theoretical chemist, yet felt it important to reflect publicly on the relation of the two sides of his life—his science and his faith. My brief conversation with Coulson after a college sermon, mentioned earlier, led me to reflect more on developing conceptual frameworks for relating science and faith. It will not surprise readers to know that the first such framework that I explored was that of science and faith as distinct yet potentially complementary perspectives on reality.

Coulson's personal interest in relating science and faith emerged during his time as an undergraduate at Cambridge University. Coulson refused to think in terms of an intellectual separation between his science and his faith, as if our experience of the world could be pre-assigned to self-contained and mutually agonistic "religious" or "scientific" categories. He was not prepared to countenance the notion of "some sort of hedge in the country of the mind" that separated these two domains (Coulson 1955, 19). Others might be prepared to tolerate such a