

Edward J Larson & Michael Ruse, *On Faith and Science*. Yale University Press, 2017, pp. 312, Hbk £25.00, ISBN 978-0300216172.

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Larson and Ruse have clearly marketed this book to those new to considering science and religion in a more compatible light, this is evidenced not only by their detailed and insightful suggestions for further reading on the debate but also through their approach in which the thinkers, their theories and their context is clearly set out. Managing to carefully negotiate the fine line between assuming knowledge of the key figures and losing the lay reader. There is enough information for the unacquainted reader to understand the scholars' contribution without leaving the more familiar reader feeling patronised – this is no mean feat particularly with the breadth of scholars and topics covered.

On Faith and Science joins an increasing number of books that tackles the relationship between science and religion with co-authors from different academic disciplines. For example, Roger Wagner and Andrew Briggs' *The Penultimate Curiosity: How Science Swims in the Slipstream of Ultimate Questions* (Oxford University Press, 2016) which offers a review of the "debate" framed by scientist and artist. However, it could be argued that *Penultimate Curiosity* is targeted at the reader already well versed in the relationship. Larson and Ruse approach the issue in both a chronological and thematic manner, with the authors alternating as the lead voice from one chapter to the next and with the reader reminded of who is leading each section. They are careful not to focus solely on Christianity and indeed frequently refer beyond the Abrahamic faiths to Buddhism in particular, but also touching on Hinduism. The focus is not to prove that faith has driven scientific discovery but rather highlight the breadth of interaction, both positive and negative between the two in a way that contextualises the complexities of the debate.

This is very much a book of two halves, and that is not driven by the co-author split but by the subject content. The first, and larger, half of the book deals with the history of the relationship between faith and science more generally. Highlighting key scholars who have worked from or argued for a position of compatibility or hostility to the relationship, it offers a fairly balanced account of the history of the faith and science journey. Clearly articulating some of the context and wider concerns that may have given rise to particular positions the book offers a great introduction to those first seeking to understand the more nuanced relationship. The second part of the book looks at how some of the ethical issues that have arisen from scientific advances have been approached by those of faith in both positive and sometimes surprising ways. For example, whilst in the UK and Europe we are perhaps more familiar with Christianity pointing towards a model of stewardship 'couched in shepherding and caring for flocks' (255), in some parts of the American Evangelical community there are still (the authors provide examples from 2005 and 2013) arguments that God's intelligent design of the universe has built in self-protecting and self-correcting features and therefore we should be 'skeptical of claims that this or that human action threatens permanent and catastrophic damage to the Earth' (254).

The historical survey in the first half of the book begins as one might expect with our first attempts at modelling the universe and the stars and how such models were influenced by our religious understanding that 'up there in the heavens all is eternal and unchanging and perfect as God intended' (p. 33) the chapter swiftly takes us from Plato and Aristotle via Newton to Einstein, the Big

Bang, and Multiverse theory. It explores the move from organic to mechanistic models of the universe and in doing sets the scene for the exploration of the growing place of physics, reason and philosophy. From the believing natural philosophers and scientists of the Enlightenment via Franklin and Shelley, Larson and Ruse explore how the holism of quantum physics has been seen to offer 'a parallel for how God might have an active presence everywhere at once' (73) and the Fysiks Group's 'reviving a perceived linkage between modern physics and Eastern mysticism' (77).

Into this deeply scientific exploration of the relationships between faith and science comes a surprising chapter entitled 'The Brain, the Mind, and the Soul'. The chapter is led by Ruse as the philosopher of the team and offers clear summaries of the Cartesian approach and the shape of the mind under Darwin before exploring the more contemporary computational models of the mind. Larson and Ruse conclude that both the problems with Cartesianism and Leibniz's gap (despite 'the confident claims of Daniel Dennett' (98)) still remain, however our understanding that 'matter is energized – dare one even say "alive" – in way not dreamed of even in the nineteenth century' (100) may allow for a form of dualism or perhaps 'religious believers can take refuge in the new-mysterianism view that not only has no one yet solved the body-mind problem, but that it is beyond solution' (100). Whilst it may feel like a non-conclusion, it accurately reflects the current state of affairs and the presence of the discussion within an overview of the science and faith relationship is an unusual and welcome addition.

No book regarding the relationship between science and faith would be complete without an exploration of fossils, Darwin and evolutionary theory and *On Faith and Science* is no exception. Larson and Ruse dedicate three separate chapters to exploring the issues which allows for a more detailed survey of the most common weapons in the science defeats religion arsenal. What I found to be particularly interesting was the dedication of a separate chapter to the question of the evolution of humanity. As the authors highlight 'the big issue has never been the theory of evolution in general but applying it to humans' (159) and the unique challenges it poses to being created in the image of God. It this question of human evolution that draws the truly historical exploration of the relationship to a close. This first section of the book is wide ranging, and whilst some readers may prefer a more detailed treated of some issues, for those wanting to explore further the bibliographic essay at the end of the book provides some valuable suggestions.

Whilst the authors alternate in leading the "dialogue" during the book there isn't a feel of genuine dialogue or a noticeable change in approach or tone between the lead authors in each chapter – this may perhaps allow for an easier read but, in my mind doesn't provide the sense of dialogue and conversation promised in the introduction. The greatest change in tone rests in the move from exploration of the science-faith dialogue in relation to the scientific journey to the concluding chapters' exploration of the interplay of science and faith in relation to ethical issues.

The choice of Larson and Ruse to explore sex and gender in this volume, and their approach to it, is possibly the weakest aspect of the book. The chapter devotes a lot of time to exploring the social change of women's roles in society (and science) and the progression of some faiths towards an acceptance or tolerance of homosexuality. Whilst this discussion does perhaps play in to the overall conversation between faith and science its presence in the book feels somewhat contrived and the style of the chapter differs significantly from the others. When one considers its place in the text after a discussion of Darwin and the fact that he 'wrote extensively about gender' (197) in relation to

survival and reproduction it is possible to understand the sentiment in including it. However, the multi-faith perspective of the book and the limited space with which the topic is able to be handled means that an incredibly complex issue is reduced to a series of extended bullet points touching on different issues attached to sexuality and gender without providing the same feeling of direction and purpose as other chapters. This is compounded by the troubling assertion that homosexuality may be understood as a genetic by-product 'for instance the genes might be linked to genes for the avoidance of schizophrenia. Or there could be direct selective pressures, such as aiding close relatives' (208-209). This is not helped by the unfortunate closing segway into 'issues of human genetics and eugenics' (211).

Both the genetics and stewardship chapters are more reminiscent of the earlier tone of the book and whilst they feel more informative rather than discursive, they do seem to hold together more coherently. As with the rest of the book the individual chapters contain a lot of information, and this sometimes leads to the chapters feeling overly full or busy. In the bibliographic essay Larson and Ruse comment that the question of ecology at the interface of science and faith is 'a major reason why we wrote this book, to get others engaged and working on this problem' (286). It is a shame that this does not come through more strongly within the book, maybe they have plans for a sequel? The chapters on ethics are an interesting addition to the exploration of the science-faith dialogue. However, whether it was due to their placement at the end of a very full book or the lack of space to explore the issues within an introductory text they were also the most difficult chapters. This is a shame because it is with these chapters that *On Faith and Science* adds a genuinely unique voice to the science and faith discussion.

Larson and Ruse offer the interested reader a wealth of information, and whilst it may not read as a dialogue *per se* the chapters follow a clear and coherent narrative, and bravely investigate topics that often aren't found within the "standard" science and religion introductory text. Whilst in parts it is clearly geared towards the discussion within the US context, this focus is explicit and in doing so it allows the reader an opportunity to compare the US journey to their own context. As an introductory text touching on not only science and the Christian faith but multiple faiths, it is a success and the bibliographic essay is a valuable resource for those new to the science-faith dialogue or wishing to explore the ethical implications further.