

**Phil Dowe**

*Galileo, Darwin, and Hawking.*

*The Interplay of Science, Reason and Religion.*

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Religion and science are often seen as standing in conflict. Science is believed to have shown important religious beliefs to be false, whereas religion in form of the Church has tried to block the success of the scientific worldview. Phil Dowe argues in his book *Galileo, Darwin and Hawking* that these are misconceptions of the relation between science and religion (or natural theology providing philosophical arguments and interpretations of central Christian doctrines). On the one hand, Dowe starts from a systematic account of what the relation between science and religion might be, and on the other hand he discusses in detail the context of three well-known cases of supposed conflict (i.e., the cases mentioned in the book's title).

Systematically the relation between religion/natural theology, which Dowe often does not clearly distinguish, and science can be one of conflict or no conflict, called 'harmony' by Dowe. 'On the conflict view, science and religion are seen as competing attempts to come to grips with one domain of human discovery and thought' (2). The conflict view thus presupposes some minimal realism, which requires that there can be only one true account of the world. A typical example of the conflict view is provided by proponents of a version of naturalism which claims that there are only the objects dealt with by science, and that the events in which these objects participate are completely explained by science. The contrary conflict view consists in a literal reading of the Bible (especially the book of Genesis). The harmony view divides into two subtypes. On the independence view religion and science do not stand in conflict, since they deal with completely independent domains. An example would be the Fideist view that religious talk expresses religious feelings and does not claim to explain the natural world. On the interaction view science and religion are not only compatible, but there is genuine interaction between them, mostly in the form of some religious view promoting a line of research or some scientific worldview. An example would be Newton's attempt to discover the laws of motion of the heavenly bodies starting from the idea that these laws were designed by God (and therefore possible to understand).

Dowe sees the specific philosophical work in clarifying the issues by setting out the detailed structures of the arguments involved and by considering what alternative philosophical perspectives could be developed (e.g., in the three cases under consideration). Dowe does not deny that historically the Church or related social forces have tried to regulate science, but this should be kept separate from the philosophical analysis whether there should

have been a conflict at all. 'With this distinction firmly in mind we find remarkably little philosophical conflict in our case studies' (192).

Going through the historic cases and considering some further philosophical options (like an anti-realistic reading of either science or religion), Dowe comes to the conclusion that the relation between science and religion is best seen as one of harmony — once again he focuses very much on natural theology (i.e., philosophical exposition of belief) in contrast to a religious practise based on the belief in revelation. And further on the relation is rather of the interactionist kind of no conflict in which we find a considerable amount of interaction between the two fields. The interaction occurs in two prominent forms. On the one hand religious ideas (mainly the idea of a designed world and the idea that man was made in the image of God, and so is able to understand the workings of the world) have led scientists, including Galileo, trying to describe and explain the laws and events of the natural world. On the other hand one basic principle — Inference to the Best Explanation — operates both in science and (natural) theology. Scientists could understand the theological doctrine of man made in the image of the Creator as insurance to the possibility of their endeavours. Theologians could take scientific findings that contradict the literal reading of the Bible as decisive reason that a metaphorical reading or a reading stressing the ethical perspective of the story told is the appropriate reading. This theological harmony view goes back, at least, to Augustine. Further evidence for the interactionist view Dowe sees in the case of miracles, which, in the manner of Schlesinger's theory, should be accepted if that is the best explanation.

The independence form of harmony is ruled out by Dowe by arguing against instrumentalist views of science and anti-realist views of religion. Instrumentalist views of science fail, according to Dowe, on the principle of inference to the best explanation, since they — in contrast to the scientific realist's view — cannot account why the theoretical predictions turn out true. Anti-realist views of religious language (like the expressive view of the later Wittgenstein) fly in the face of the self-understanding of religion, which claims that God (really) did create the world, ... .

The conflict view is ruled out by considering in detail what Galileo, Darwin and Hawking claim and whether this is really in conflict with (Christian) religion. Galileo himself proposes a harmony view based on the idea that because there is one God behind both scripture and nature there can be no conflict once science is properly done and scripture properly interpreted. This accords as well with the proper understanding of the Council of Trent. Darwin took his clues from design arguments, and refutes the biological case for design, as made by Paley, only. Whether Hawking and contemporary cosmologists in physics are successful in circumventing a cosmological design argument by Hawking's 'no boundary' model of the universe and/or the assumption of a multitude of universes can be doubted for two reasons. Firstly, Hawking starting from a realist point of view later on develops his model using imaginary time and expressively switches to an anti-realistic understanding of this theory/model, which makes it useless against the

religious claim of God having created the universe (by initiating the Big Bang). Second, the assumption of the multitude of universes, made to answer design arguments starting from the fine tuning of physical constants, works only if all possible worlds really are out there, but we just have no independent evidence for this. Here Dowe seems to acknowledge the force of some argument from natural theology.

Dowe's book provides an easy to read but also analytical overview of the discussion of the relation between science and religion, including recent philosophy of religion. Two hundred pages cannot cover all issues, but Dowe is successful in making a strong case against conflict views concerning theistic world views and contemporary science.

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