

# Science and Religion: Models and Metaphors I

## *Ian Barbour's four ways of relating science and religion*

1. conflict (metaphor: warfare)
2. independence (metaphor: separation)
3. dialogue (metaphor: friendship)
4. integration (metaphor: harmony)

- conflict ↔ independence ↔ dialogue ↔ integration
- Barbour's models can also be used for relations between religious traditions

## ***Conflict (warfare)***

- the concept of an inherent conflict between science and religion begins to emerge in the thought of the eighteenth-century Enlightenment, which begins to move towards materialism and sees religion as a hindrance to progress in reason and natural philosophy (science)
- the classic presentations of the "The Conflict Thesis":  
John William Draper, *History of the conflict between religion and science* (1874)  
Andrew Dickson White, *A history of the warfare of science with theology in Christendom* (1896)
- heavily influenced by distorted views of classic case studies (e.g., the Galileo Affair and the 1860 Huxley-Wilberforce debate on evolution; Draper attended the latter event)
- a model more useful for apologetic purposes than sophisticated historical or sociological analysis
- almost completely irrelevant to the Medieval and early modern periods
- nevertheless, certain types of conflict *do* exist in certain types of contexts
- the most common type derives from the incommensurability of two distinct metaphysics: *naturalism* and *supernaturalism*, and in particular overly arrogant or "fundamentalist" versions of both
- conflict between the two "fundamentalisms" (religious and scientific) generates the majority of the conflict that exists between science and religion

## ***Independence (separation)***

- complementarity: science and religion describe different facets of the world and human experience (compare wave-particle duality in light)
- separate but equal? no contact? lack of common language? incommensurate?
- attempt to set up disciplinary hierarchies?
- "the right tool for the right job" (Jean Pond)
- the ghettoisation of religion?
- proposed by both secular and religious thinkers (two worlds or two halves of the same world?)
- critics argue that a radical separation of the two spheres is not possible in practice, partly because some scientists attempt to comment on theology (positively or negatively) and because some religious thinkers attempt to comment on science or the natural world

## ***Dialogue (friendship)***

- retains distinctiveness of science and religion as ways of knowing
- allows for cross-fertilisation of ideas and insights
- ideally should not prioritise one way of knowing over another

## ***Integration (harmony)***

- an apt description of science-religion relations in the ancient, Medieval and early modern periods
- more commonly employed today by those with religious commitments

## ***The Kantian and neo-Kantian separation of science and religion***

- Immanuel Kant (1724-1804) largely accepts David Hume's critique of the Design Argument (thus sundering religion from the empirical study of nature)
- Kant separates science and religion by confining religion to the moral sphere (a view of religion possibly arising in part from his German pietist background)
- against the backdrop of debates over evolution, the neo-Kantian Wilhelm Herrmann (1846-1922) accepts this separation, contending that science should study the natural world without hindrance and that religion should be able to pronounce on ethical issues; religion is morality and science is *Naturbeherrschung* (mastery of nature)
- Herrmann argued that religion must relinquish the study of nature to science, while both religion and science

must not assert to have penetrated absolute metaphysical reality

**John Haught's four dynamics**

- John Haught, *Science and religion: from conflict to conversation* (1995)
- conflict
- contrast
- contact
- confirmation

**Ted Peters' eight approaches to the relation between science and religion**

- Ted Peters, "Theology and natural science", in *The modern theologians*, ed. D. Ford (1997)
- scientism
- scientific imperialism
- ecclesiastical authoritarianism
- scientific creationism
- the two-language theory
- hypothetical consonance
- ethical overlap
- New Age spirituality

**Margaret Osler's "appropriation-and-translation" model**

- Margaret J. Osler, "Mixing metaphors: science and religion or natural philosophy and theology in early modern Europe", *History of Science* 36 (1998): 91-113
- of particular value for the study of science-religion relations in the Medieval and early modern periods, but still useful for the contemporary period

**J. Wentzel van Huyssten's "transversality" model**

- overall separateness with specific linkages

**Stephen Jay Gould's "non-overlapping magisteria" (NOMA) model**

- Stephen Jay Gould, *Rocks of ages: science and religion in the fullness of life* (1999)
- science and religion should keep to their separate realms so as to avoid conflict
- a variant of the complementarity or independence model; similar to the Kantian and neo-Kantian positions
- this model is an ideal born out of a particular historical and cultural context (Gould's experience with debates over creation and evolution)
- some critics argue that the ideal of NOMA is impossible to achieve and that it may be intended to ghettoise religion
- a *magisterium* (pl. *magisteria*) is a realm of teaching authority

**The "Semi-overlapping magisteria" (SOMA) model**

- science and religion have some *similar* goals, methods, subject matter and cultures and some *distinct* goals, methods, subject matter and cultures
- these realities suggest *semi-overlapping* magisteria, rather than radically separate (non-overlapping) or wholly integrated (fully-overlapping) spheres (even Gould acknowledged that science and religion could "inter-digitise")
- these realities also help explain why science and religion often come into contact
- thus Christianity and Darwinism often come into contact in both harmony and antagonism precisely because they occupy some of the same conceptual territory (*e.g.*, explanatory paradigms of origins, genealogies and human nature)
- some overlap is also inevitable because science and religion often compete for authority, are both respected by many individual believers and scientists, are historically associated and since both exist within the human sphere
- SOMA allows for the partial reality of each of Barbour's four models of conflict, independence, dialogue and integration
- whereas the NOMA model tends to be *prescriptive* of what ought to be (idealistic), the SOMA model is more *descriptive* of what is (practical)