

# BOYLE LECTURE 2021

with Tom McLeish, “*The Re-Discovery of Contemplation through Science: Boyle Lecture 2021*”; Rowan Williams, “*The Re-Discovery of Contemplation through Science: A Response to Tom McLeish*”; Fraser N. Watts, “*Discussion of the Boyle Lecture 2021*”; and Tom McLeish, “*Response to Boyle Lecture 2021 Panel and Participant Discussion*.”

## DISCUSSION OF THE BOYLE LECTURE 2021

by Fraser N. Watts

*Abstract.* This short article summarizes and extends the panel discussion that followed the Boyle Lecture 2021 by Tom McLeish. The panel largely accepted the central claims of the lecture and focused rather on its implications. That included the importance of teaching history and philosophy of science alongside science itself, and the importance of finding helpful and appropriate ways of engaging the public in the scientific process. There was considerable discussion of the place of meditative and contemplative practices in science. It seems that intuition and imagination play an important role in scientific discovery, if not in more formal theorizing, and are close to contemplative experience. Emphasizing that aspect of science might lead to a refocusing of natural theology, focusing more on scientific processes than on scientific findings.

*Keywords:* contemplation; imagination; science

---

The Boyle Lecture 2021 was followed by a webinar discussion chaired by Michael J. Reiss. In addition to Tom McLeish, the panel consisted of Rowan Williams, Sarah Coakley, Sarah Lane Ritchie, and myself. Some of the panelists put questions and comments to Tom McLeish, and the panel also responded to questions from the audience. What follows is a summary of some of the issues raised in the discussion though, inevitably, filtered through my own perspective.

In his lecture, Tom McLeish set out to correct four mistakes or misunderstandings: the turn from human contemplation of nature toward an illusory objectivity; the turn from an appreciation of the value of imagination to an elevation of reason alone; the turn from seeing science, not as cultural activity, but as purely professional expertise; and the tendency to read the “Book of Nature” as prose rather than as poetry. There was

Fraser N. Watts is a Visiting Professor in Psychology and Religion at the University of Lincoln, Lincoln, UK; e-mail: [fraser.watts@cantab.net](mailto:fraser.watts@cantab.net).

no significant challenge to those key points from the panel. Rather, the discussion focused on their implications.

One issue, particularly raised by Sarah Coakley, was about how science should be taught, and whether history and philosophy should always be taught alongside science. That might help to overcome the divide discussed by C. P. Snow (1963) between science on the one hand, and imagination, poetry, and “contemplation” on the other. If people had a better sense of how the great scientists of the past reached their conclusions, we might understand better why it is impossible to leave imagination out of science. There are also philosophical issues at stake here, as there is often a covert metaphysics in science, and science can be used to smuggle in a kind of reductive naturalism. It is important to declare that to be only one philosophical option, rather than as being intrinsic to science. Doing that would go some way toward overcoming the sense of conflict between science and religion.

It would be helpful to have a stronger sense of science as a cultural activity, as Tom McLeish urged, and for people to see science as something in which they participate themselves, rather than as being something almost incomprehensible, carried out by experts. It might help to reduce the sense of alienation from science that manifests itself, for example, in vaccine skepticism. However, there are also dangers in science becoming a cultural activity in which everyone can join. As Sarah Lane Ritchie pointed out, this can go wrong. People can take just a morsel of science, and use it to pursue an agenda that is scientifically indefensible as, anti-vaccine people do. That leads to the question of how it is possible to involve the wider community in science in a way that garners the benefits of doing so, but minimizes the risks.

The claim, made by Tom McLeish, that science is closer to contemplation than is usually realized raises the question of what is meant by “contemplation” in this context. Sarah Lane Ritchie suggested that the contemplation involved in science is not so much an identifiable neurobiological state, but more like the experience of the penny dropping that many people have while working on a problem, and that arises from a stance of listening, openness, and a willingness to go deeper.

Rowan Williams suggested that there is a spectrum of attentive or mindful practices ranging from techniques that we might use to center or calm ourselves, to contemplation in the more traditional religious sense. The latter gives us openness to an agency other than ourselves, and a share in an energy that is not your own. These two ends of the spectrum are different, but they are not completely disconnected. There is an unexpected congruence or harmonic that is involved in scientific intuition that is similar to that experienced by poets, a sense that there is an order in which you are sharing, rather than just an object that you are scrutinizing. The decentering of anxieties concerns and desires that is needed for good science is

rather like what happens in the ascetical life. That means that the pursuit of science can have a role in the development of commitment and faith.

Sarah Coakley pointed out that there are different stages in contemplation, and referred to the point made by Origen that *ethike* (or *praktike*), the acquisition of virtue or ethics, is a necessary preliminary for *physike*, a more godly way of relating to the natural world. If contemplation is really to contribute to science, it is important that there should be some actual contemplative practice that will transform the person concerned. Something has to change in the person themselves before they can leap to seeing the world from God's perspective.

My own comments draw on my background in psychology. There is a growing consensus that humans have two different modes of central cognition, something that distinguishes them from other primates. Formulating and testing scientific theories depends on our abstract, analytical intelligence, whereas imagination and contemplation belong to a more intuitive, experiential (and phylogenetically older) form of intelligence, which is important in religious and spiritual life (Watts 2013). MacLeish is, in effect, arguing that both modes of cognition can make a useful contribution to scientific enquiry. Scientists can use their intuitive intelligence to understand the nature of reality, and can then use their analytical intelligence to develop more precise scientific theories.

That raises the question of whether imagination and contemplation can lead to a different way of doing science, and how scientists might proceed if they were making more deliberate and explicit use of contemplation in their scientific work. There are, of course, times at which all creative scientists find themselves using imagination and intuition to reach a better understanding of the nature of things. However, some scientists have made more sustained use of meditation in scientific work. The person who was probably boldest in doing so was the German poet and scientist, Johann Wolfgang von Goethe, who used a particular way of meditating on the structure of plants in his research on plant morphology (Bortoft 1996)

The connection between science and contemplation has not generally been much explored in the literature on science and religion but an interesting exception can be found in the work of the Epiphany Philosophers, when led by the Cambridge academic, Margaret Masterman (Watts 2016). The title of their journal, founded in 1966, was "Theoria to Theory," a title that deliberately evoked the way in which contemplation can be a handmaid of science. As Dorothy Emmet (1966) explained in the first issue, *theoria* evokes an intellectual vision that arises from being both intellectually open, and rooted in inner spiritual discipline, and that can give rise to scientific theories. *Theoria* is "less like looking at an object and more like participating in a life" (13–14).

It is worth noting that there has been a general change in the evolution of human consciousness, described, for example, by the philosopher

and etymologist, Owen Barfield (1957). There is evidence for a pervasive shift from an early animistic consciousness that experienced the spiritual world as speaking to humanity through the natural world, to a later sense in which the spirit is experienced as within. That felt change of direction, from spirit coming at us from outside, to spirit welling up within us, creates the possibility of looking at the natural world with spirit-imbued eyes. One particular manifestation of that general change is the one that Tom McLeish suggested in his lecture, from engaging in the kind of natural theology in which scientific discoveries are taken as evidence for God, to looking at the world with a contemplative gaze or, so to speak, through the eyes of God.

Sarah Coakley questioned whether there is actually such a sharp disjunction between the two as Tom MacLeish implied. It is possible that a contemplative approach could lead us to regenerate traditional arguments for the existence of God. What often seem like abstract philosophical arguments can be reworked as accounts of the contemplative journey. Such an approach would, however, refocus natural theology on the *process* of science, rather than on the traditional interpretations of its findings.

#### REFERENCES

- Barfield, Owen. 1957. *Saving the Appearances: A Study in Idolatry*. London: Faber & Faber.
- Bortoft, Henri. 1996. *The Wholeness of Nature: Goethe's Way Toward a Science of Conscious Participation in Nature*. Edinburgh: Floris Books.
- Emmet, Dorothy. 1966. "Why Theoria?" *Theoria to Theory* 1 (1): 10–18.
- Snow, Charles Percy. 1963. *The Two Cultures: And a Second Look: An Expanded Version of the Two Cultures and the Scientific Revolution*. Cambridge: Cambridge University Press.
- Watts, Fraser. 2013. "Dual System Theories of Religious Cognition." In *Head and Heart: Perspectives from Religion and Psychology*, edited by Fraser Watts and Geoff Dumbreck. 125–154. West Conshohocken, PA: Templeton Press.
- . 2016. "Towards a Bolder Engagement between Theology and Science: Learning from the Epiphany Philosophers." In *Forty Years of Science and Religion: Looking Back, Looking Forward*, edited by Neil Spurway and Louise Hickman. 136–146. Newcastle-on-Tyne: Cambridge Scholars Press.