Kaiser, Humanity in an Intelligible Cosmos

Christopher B. Kaiser, "Humanity in an Intelligible Cosmos: Non-Duality in Albert Einstein and Thomas Torrance," in *The Promise of Trinitarian Theology: Theologians in Dialogue with T. F. Torrance*, ed. Elmer M. Colyer (Lanham, Bolder, New York, Oxford: Rowman & Littlefield Publishers, Inc., 2001), 239-267; #2001-CBK-1

Outline prepared by Kerry Magruder for discussion in the Torrance Reading Group, February 10, 2022.

Background

Study with T. F. Torrance: See section "A Twofold Tribute," and remarks by TF, p. 332.

tftorrance.org:
- profile (/cbk, with link to cv)
- "My Recollections of Thomas F. Torrance," #2021-CBK-1
- Unpublished class notes, "The Hypostatic Union"; #U-TFT-1

Chapter endnotes:
In addition to documenting CBK's own sources, provide valuable info for Torrance's sources and thinking as well.

Books:
- *The Doctrine of God* (1982)
- *Creation and the History of Science* (Eerdmans, 1991); #1991-CBK-1
- *Creational Theology and the History of Physical Science: The Creationist Tradition from Basil to Bohr* (Brill, 1997); #1997-CBK-1
- *Toward a Theology of Scientific Endeavour: The Descent of Science* (Ashgate, 2007); #2007-CBK-1

A Twofold Tribute

1. Einstein: "my imagination was captivated" cf. Einstein/Infeld, *The Evolution of Physics*
2. Torrance (p. 240):
    1. "deep belief in the unity of knowledge" (theology and physics).
    2. Mystery of intelligibility; "the miracle that we comprehend the universe at all"
    3. Inexhaustibility of intelligibility: "we comprehend the universe only at comparatively elementary levels" — same for TF? :)

The Problem of Subject-Object Duality in a Technological Society

1. "Scientists and theologians once did commonly read each other in depth" (p. 241)
2. Gnostic duality: We live in an increasingly constructed world, buffered by technology, but fail to take it seriously
3. Einstein a champion of non-duality (integration) in two ways (p. 242):
    1. General Relativity
    2. Epistemology

General Relativity and Einstein's Epistemology

1. Cross-disciplinary relationships: "Transfer of ideas" (p. 242); exaptation (physics, epistemology, theology, etc.; cf. p. 244: TF "does not attempt to relate General Relativity directly to the doctrine of God or other areas of theology."

2. General Relativity an achievement in the content of science, but one that has methodological implications as well (p. 243). Contrary to methodologies that posit a dualism between theory and empirical data, there is an actual, contingent role of "disciplined intuition" or "free invention" in science (p. 243; Einstein, Copernicus)

Torrance on the Mystery of Intelligibility

1. Eugene Wigner, "The Unreasonable Effectiveness of Mathematics in Natural Sciences" (1960)
2. TF's 1970 Harris Lectures (p. 245; *Reality and Scientific Theology,* #1985-450): Einstein's "religious awe" at the vast comprehensibility of the universe. Astonishing affinity between the order of the universe and the human mind. Two harmonies: in the cosmos itself, and between the cosmos and the mind. TF (p. 246): "There could be no science without belief in the inner harmony of the world or without the belief that it is possible to grasp reality with our theoretical constructions. Belief of this kind, Einstein claimed, is and always will remain the fundamental motive for all scientific work" (#1980-368). The mystery of intelligibility reveals a contingent non-duality between science and epistemology.

Comparison with Einstein's Views on Intelligibility

1. Leibniz: "preestablished harmony" between the mind and nature.
2. Kant: "eternal mystery of the world is its own comprehensibility."
3. Einstein: "The fact that it is comprehensible is a miracle." The mystery of the intelligibility of the cosmos is a belief or a faith, essential for science.
4. Clerk Maxwell: TF, p. 333: "I steeped my thinking in the work of Clerk Maxwell, and his belief in a divinely established harmony between the world God has created and the human mind…"
5. Many predecessors: cf. Kaiser, *Creational Theology*.
6. Kaiser: "what looks like a simple presupposition in modern science turns out to be a theological truth with deep roots in, if not unique to, the biblical tradition" (p. 248).

Torrance on Scientific Discovery

1. Torrance "goes beyond Einstein" by emphasizing not just the free invention of theory by the mind (with a relatively passive role for nature), but actual contact between the mind and the natural order in which the latter plays an active role, impressing itself upon the mind. TF (p. 249): "Because there is no logical road to these laws the scientist, in formulating them, must rely on his 'intuition,' that is upon the sheer weight or impress of external reality upon his apprehension" (*Theological Science*, #1978-352).
2. How does this impress of external reality upon the mind work? One key aspect is how we open ourselves up to the disclosure of natural order when we focus on interrelationships rather than objects in isolation (p. 250).

Scientific Discovery as a Form of Revelation

1. TF went beyond Einstein by emphasizing the active role of nature in scientific discovery: rational but not logical or inferential.
2. Impersonal modes of thought are a ghost of the positivist, mechanistic worldview which relativity and relational thinking made obsolete.

Human Science and Cosmic Light

1. TF went beyond Einstein even further with his grounding of epistemology in a non-dualist ontology based upon a theological understanding of humanity as the image of God. The image of God implies that humans are given an ability to read nature as the book of God (pp. 251-252). In his response, TF emphasizes how reading the two books together

enlarges the human capacity to read either one (pp. 334-335). The human mind is engaged by information beyond itself in either case (with either book).
2. Two examples of analogies between the two books of theology and natural science (agreement of referents):
    1. Divine light and created light in theology :: creation of light in scientific cosmology, e.g., the Big Bang.
    2. Humanity created in the image of God in theology :: the preadaptation of the human mind in biological evolution.

The Mobility of Angels

1. Is there an analogue of non-duality in evolutionary biology similar to that in Einstein's physics? CBK (p. 253): "At some point… we must ask what might have happened in prehistory that could have predated the human intellect to understand the deep structures of creation."
2. Conclusion (p. 255): "For Professor Torrance, Einstein's main contribution to physics was the integration (or non-duality) of geometry and cosmology in General Relativity. His main contribution to epistemology was the integration of mathematical formalism with the results of empirical investigation and the consequent positing of a preestablished harmony between the human mind and nature."

Response by T. F. Torrance, pp. 332-335

1. TF: "I am thrilled with this essay by Chris Kaiser…" (p. 332)
2. TF: "Professor Kaiser rightly stresses here the point I make that there is no logical bridge between ideas and reality, and therefore no logical bridge between data and the concepts on which a good theory rests, no logical road to the discovery of the laws of nature. That is why the scientist, in formulating them, must rely on what Einstein referred to as 'intuition,' that is, an intuition arising under the constraint or impress of the rationality of the created order upon the scientist's mind" (p. 334).