

T.F. Torrance and James Clerk Maxwell: Science and the Trinity

Bruce Ritchie - Furbush (on-line) – 24th September 2021

Introduction

Describing, Explaining, Fishing.

Einstein: ‘I stood on Maxwell’s shoulders.’

Limited research possibilities

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- 1. James Clerk Maxwell: Christian Believer and Man of Science:** Birth (1831); mother’s death; schooling in Edinburgh
 - *Spiritual Heritage:* Presbyterian & Episcopalian: Westminster *Shorter Catechism*; Dean Ramsay’s *Catechism for Young People*
 - *School Life (1841–1947):* Edinburgh Academy; Lewis Campbell; Peter Tait; Archdeacon John Williams. Geology. 1843 Disruption in Church of Scotland. 1846 first paper read at Royal Society of Edinburgh (RSE). Fascinated by experiments – Torrance detects union of empirical and theoretical in Maxwell’s mind-set.
 - *Edinburgh University (1847–1850):* William Hamilton’s philosophy courses. Pre-Darwinian notions of evolution.
 - *Cambridge University (1850–1856):* 1855 some initial ideas on Field Theory. 1854, intense spiritual crisis. F.D. Maurice, Harvey Goodwin, and *Christian Socialism*.
 - *Aberdeen University (1856–1860).* Prize paper on Saturn’s Rings. *Pro bono* lectures. Revivalism in the north-east. Marriage to Katherine Dewar: shared devotional life: Torrance detects emphasis on ‘union with Christ’.
 - *King’s College London (1860–1865).* Series of creative papers in 1860s: *Dynamical Theory of the Electromagnetic Field* published 1965. light, electricity, magnetism, all part of a common electromagnetic field. More *pro bono* lecturing. Spiritual influence of John Offord and ‘Baptist’ Noel.
 - *Laird of Glenlair (1865–1871):* More publishing. Elder’s duties at Corsock church. Rev. George Sturrock of Corsock.
 - *The Cavendish Laboratory (1871–1879):* First Director of Cavendish Laboratory at Cambridge University. Illness and death in 1879.

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2. Torrance's Involvement with Maxwell

Theological Science (1969); *Space, Time, and Incarnation* (1969); *God and Rationality* (1971). *The Ground and Grammar of Theology* (1980); *The Mediation of Christ* (1981); *Divine and Contingent Order* (1981).

1982 Symposium at Paderborn 'Christian Faith and Physical Science in the Thought of James Clerk Maxwell.': *Christian Faith and Physical Science in the Frame of Knowledge* (1998). Torrance's 1982 republication of Maxwell's 'A Dynamical Theory of the Electromagnetic Field'

Torrance's sources: Lewis & Garnett's *Life of James Clerk Maxwell*; W.D. Niven's *Scientific Papers of James Clerk Maxwell*; Maxwell's articles in *Ency. Britt.*

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3. Torrance's Interpretation of Maxwell

(a) Areas of Methodology: (i) *Christian Faith assumes Orderliness in Nature*; (ii) *Christian Faith is Liberating not Limiting*; (iii) *Christian Faith addresses Ultimate Scientific Questions*: we have to leave that aside! (iv) *Christian Faith encourages Scientific Realism*: (v) *The Theoretical and the Practical belong together*: (vi) *The Concept of Analogy*.

(b) Positive Theology: A particular type of concept may aid understanding the Trinity.

- *The notion of Onto-relations: being-constituting-relations.* Reality exists as a *continuum*, not as individualised and separated points.
- *The Notion of 'Person'.* Importance of network of relations. Boethius' definition of 'person': '*An Individual Substance of Rational Nature.*' Effect on theological thinking.
- *Theological Concepts driving Scientific Thinking?* Torrance's interpretation of Church Fathers and their trinitarian/incarnational theology opening up a new way of understanding space and time. Torrance, in *Mediation of Christ*, suggesting similar thinking for Maxwell.

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4. Questions: Change of view in the Paderborn lecture? Torrance's thought driven by admiring over-enthusiasm? Problems concerning the validity of analogy. Does *creatio ex nihilo* allow analogy? Danger of *analogia entis*? Added notion of: **person-constituting-acts**. Exploration of this idea in: (BR), *TF Torrance in Recollection and Reappraisal*.