Theology and the Natural Sciences: 
Materiality and Embodiment 

MPhil Proposal

Module title
Materiality and Embodiment

Term taught
Lent Term

Description
This module considers a particular topic in the relation between theology and natural science, namely the nature of materiality and embodiment. Particular attention will be given to how matter and the body are conceptualized philosophically – both explicitly and implicitly – in scientific and theological discussions.

The module begins with a historical study of theological, philosophical and scientific accounts of the ontology of matter. Across three classes, we will contrast characteristically ‘modern’ accounts with accounts that were held both before modernity, and with others that have been put forward as challenges more recently.

In the fourth class, we turn to the application of notions of materiality as they bear upon topics in cognitive science, philosophy of mind, theological anthropology and phenomenology of the body. The final class will consider a central tenet Christian doctrine from the perspective of what has been discussed about understandings of matter and the body, namely the Incarnation.

The emphasis will be on Christian theology. Other religious traditions, however, will be drawn upon to help interrogate the varieties of materiality and embodiment. While the approach is not primarily one of theological ethics, topics studied will bear upon a
range of ethical concerns such as custody of the environment, life, sickness, and death.

**Seminar coordinator**

Dr Andrew Davison

(Dr Jacob Sherman and Dr Daniel de Haan will also be involved with leading classes)

**Teaching provision**

Five classes of one and a half hours each

**Module aims**

The module aims to study understandings of materiality and embodiment from a broad range of perspectives, as well as attitudes towards matter and the body.

**Learning Outcomes**

Students will be called upon

To recognise and analyse how philosophical assumptions, of both an explicit and implicit nature, underlie work in both theology and science.

To identify and contrast particular examples of these assumptions and their consequences

To appreciate how intellectual understandings of materiality and embodiment relate to broader attitudes towards matter and the body

To place recent and contemporary writing in science and theology within a longer intellectual lineage

To develop skills in academic research and writing

To develop an understanding of relations between historical and constructive modes of theological engagement and study
Prerequisites

A Michaelmas Term module from either the Christian Theology or the Philosophy of Religion track

Senior Seminar

Christian Theology or the D-Society (Philosophy of Religion)

Description of Assessment

This module is assessed through a 5,000 word essay. Students may select an essay subject from the list below, in consultation with the course co-ordinator. Alternatively, students may formulate their own title on a suitable topic, in discussion with the module director, within the area of the module. Titles are subject to the approval of the module co-ordinator and the Degree Committee. In either case, the choice of essay subject will be dependent on the availability of appropriate supervision.

Suggested Essay Subjects

An account and theological analysis of explicit and implicit accounts of materiality or embodiment in one prominent writer in science and religion from the past four decades

An account and theological analysis of explicit and implicit accounts of materiality or embodiment in one or more prominent work or works of recent contemporary culture

The relevance and application of one pre-modern theologian or philosopher for theological understandings of one prominent dimension of discussions of materiality or embodiment today

Emergence as a theological paradigm

Embodiment and materiality in the relation of the Incarnation to non-human creatures (on Earth or elsewhere in the cosmos), and its consequences
Caro salutis est cardo (‘the flesh is the pivot of salvation, Tertullian, De resurrectione carnis, 8.3)

The theological meaning of ‘flesh’

The scope and meaning of ‘the body’ as a theological metaphor

Materiality in relation to time and/or space

The application of hylomorphic accounts of materiality to a topic of theological interest

The relation of matter to form

Matter and the Logos

Matter and panpsychism

Coursework

Students will be expected to contribute a critical reflection paper, of two double-spaced sides, for each seminar, showing evidence of critical analysis of seminar papers. These should be submitted not later than 4 pm the day before the class.

Seminar topics

Class 1: Scientific Conceptions of Matter in the Scientific Revolution and its Present Day Legacy

This class will consider the prominent account of matter that was influential in the development of early modern science, and remains the position assumed to be ‘scientific’ by a wider intellectual culture. We will consider how a new construal of matter underlies much of what was undertaken and achieved at the scientific revolution. The dominant picture of matter here will be seen to be one of atoms and res extensa.

Set Reading


Francis Bacon, *De Sapientia VETERUM* (‘On the Wisdom of the Ancients’), ‘Proteus, or Matter’ and ‘Cupid, or an Atom’ [Many online sources]

Descartes, *Meditations on First Philosophy* (with particular attention to meditations five and six); *Principles of Philosophy*, part II and part IV.119-207 – both trans. John Cottingham and Robert Stoothoff in *Selected Philosophical Writings* (Cambridge: Cambridge University Press, 1998)

**Recommended Accompanying Reading**


Norma Emerton, *The Scientific Reinterpretation of Form* (Ithaca, NY: Cornell University Press, 1984). [Proposes that the 17th century did not see the eclipse of the category of form, as much as had generally been thought]


Frederick Gregory, *Scientific Materialism in Nineteenth Century Germany* (Dordrecht: Reidel, 1977) [Discusses the prominence of strongly materialistic philosophies in nineteenth century Germany]

Ernan McMullin (ed.), *The Concept of Matter in Modern Philosophy* (Notre Dame, IN: University of Notre Dame Press, 1978) [Note that much of this appeared in an earlier Notre Dame volume entitled *The Concept of Matter*]


We are not taking the question of materialism / naturalism as a focus here, but the following will provide some orientation in that topic and theological responses:


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*Class 2: Matter before Modernity*

This class will consider dominant pre-modern approaches to materiality (*materia, hyle*), with particular attention to those that had a strong influence upon theological
thinking. Arguably, philosophy itself began when pre-Socratic thinkers embarked on their quest to identify the substrate of all things (e.g., Thales and water). The frustration of pre-Socratic efforts, however, eventually yielded two different approaches to the problem of the material, both of which have proven important for theology.

The first is the Platonic school, rooted in the Timaeus' vision of matter as the recalcitrant eternal receptacle (chora) upon which the forms were imposed. This ancient Platonic vision eventually yielded to the antique Neoplatonic synthesis that viewed matter as the terminus of emanation, a kind of impossible possibility whereby being simultaneously extinguishes itself in nonbeing (me on) and passive undergirds all active imposition of intelligible form.

The second tradition is the hylomorphic scheme of Aristotle, and its adoption by the scholastics. Here we find the proposal that matter is more than simply 'stuff': it is a principle or orientation (or receptivity, of potentiality) that is understood and defined alongside the concept of form or formality.

Set Reading

Plato, Timaeus, especially 27c-34b, 37c-44b, 47e-69b

Aristotle, Physics II; Metaphysics VII and IX; On the Soul II

Plotinus “On Matter” (Enn. II.4) and “Against the Gnostics” (Enn. II.9)


Recommended Accompanying Reading


Oliva Blanchette, ‘Matter as Indeterminate Being in Potency’ in *Philosophy of Being: A Reconstructive Essay in Metaphysics* (Washington, DC: Catholic University of America Press, 2003), 285-318 (it may be helpful to read this chapter in concert with the next one, on ‘substantial form’).


W. Norris Clarke, *The One and the Many: A Contemporary Thomistic Metaphysics* (Notre Dame, IN: University of Notre Dame Press, 2001)


Etienne Gilson, *Three Quests in Philosophy* (Toronto: PIMS, 2008), Part III – ‘In Quest of Matter’


James Madden, ‘Thomistic Hylomorphism and Philosophy of Mind and Philosophy of Religion’, Philosophy Compass 8.7 (2013): 664–676


Ernan McMullin (ed.), The Concept of Matter in Greek and Medieval Philosophy (Notre Dame, IN: University of Notre Dame Press, 1965)


[Read the introduction and Part I, chapters 1–5 on Matter; see also chapters on substance, quantity, extension, location, and quality]


Class 3: Non-Reductive Approaches to Matter

This class will consider the way in which matter has been treated in expositions of the idea of emergence, and rebuttals to it. We will consider a full range of options: eliminative materialism, supervenience / weak emergence, strong emergence, emergent dualism, integral dualism, and Cartesian dualism. A range of scientific disciplines will be consider, especially condensed matter physics, evolutionary biology, and neuroscience. Philosophically, we will consider both the domain of ‘emergence’ proper, and the quest for the basic substrate in analytic mereology.

Set Reading

At least three of the following essays from Philip Clayton and Paul Davies (eds), The Re-Emergence of Emergence: The Emergentist Hypothesis from Science to Religion (Oxford: Oxford University Press, 2006):

Philip Clayton, ‘Conceptual Foundations of Emergence Theory’

Paul Davies, ‘The Physics of Downward Causation’

George F. R. Ellis, ‘On the Nature of Emergent Reality’

Terrence W. Deacon, ‘Emergence: The Hole at the Wheel’s Hub’

Lynn J. Rothschild, ‘The Role of Emergence in Biology’

Jaegwon Kim, ‘Being Realistic about Emergence’

Niels Henrik Gregersen, ‘Emergence: What is at Stake for Religious Reflection?’


Recommended Accompanying Reading

Samuel Alexander, Space, Time, and Deity, (London: Macmillan and Co., 1920)


Terrence Deacon, *Incomplete Nature: How Mind Emerged from Matter* (New York: W. W. Norton and Co, 2013) [This is something of a tour de force and will repay attention, although it is rather long.]


Alasdair MacIntyre, Dependent Rational Animals (Chicago: Open Court, 1999).

Jacques Maritain, Bergsonian Philosophy and Thomism (New York: Philosophical Library, 1955)


C. Lloyd Morgan, The Emergence of Novelty (London: Williams and Norgate, 1933) [Classics of the British school of writing on emergence in the early twentieth century]


Gregory R. Peterson, ‘Species of Emergence’, Zygon 41.3, 2006


Yves Simon, Great Dialogue of Nature and Space (South Bend, IN: St Augustine’s Press, 2001)


*Class 4: The Body*

With this class we turn to the principle arena for theological attention to materiality, namely the human body. The main focus will be on how the body features or is framed within the ontological aspect of theological anthropology (broadly, the soul-body question). Two areas of more practical consideration will be neuroscience (for instance, with the neuroscience of addiction) and our relation to animals and the wider creation.

*Set Reading*


*Recommended Accompanying Reading*


David Clough, ‘Not a Not-Animal: The Vocation to be a Human Animal Creature’, 
*Studies in Christian Ethics*, 26.1, 2013, 4-17

Robert C. Fuller, *Spirituality in the Flesh: Bodily Sources of Religious Experience* 
(New York: Oxford University Press, 2008)

Gregory of Nyssa, *On the Soul and the Resurrection* in *Ascetical Works* (Washington, 

Paul Murray, *Decreation* (Waco, TX: Baylor University Press, 2014)

Essays in P. Robbins and M. Aydée (eds.), *The Cambridge Handbook of Situated 
Cognition* (Cambridge: Cambridge University Press, 2009) including: F. Adams and 
K. Aizawa, ‘Why the Mind is Still in the Head’, in Philip Robins and Murat Aydée 
eds), *The Cambridge Handbook of Situated Cognition* (Cambridge: Cambridge 
University Press, 2008), pp.78–95. [Available online 
http://dx.doi.org/10.1017/CBO9780511816826.005]

James J. Gibson, *The Senses Considered as Perceptual Systems* (Boston: Houghton 
Mifflin, 1966), Introduction, chs 1–3 and 13–14

James Gibson, *The Ecological Approach to Visual Perception* (Boston: 

Adrian Johnston and Catherine Malabou, *Self and Emotional Life: Philosophy, 
Psychoanalysis, and Neuroscience* (New York: Columbia University Press, 2013)

Mark Johnson, *The Meaning of the Body* (Chicago: University of Chicago 
Press, 2007)

George Lakoff and Mark Johnson, *Philosophy in the Flesh: The Embodied 
Mind and its Challenge to Western Thought* (New York: Basic Books, 1999)


John Macquarrie, ‘Embodiment’ in *In Search of Humanity: A Theological and 


Class 5: Materiality and the Incarnation

In this class we will consider how various approaches to the theology of the Incarnation have responded to, and have been shaped by, different scientific and philosophical conceptions of matter. The doctrine of the Incarnation serves as a test case for thinking theologically about matter, and examining different implicit accounts of matter at work.

Set Reading


Suggested Accompanying Reading


F. LeRon Shults, *Christology and Science* (Grand Rapids, IN: Eerdmans, 2008)


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**General Bibliography**

By way of orientation with theology and natural sciences, students should consult the bibliographies for Tripos papers B12 and C12. For orientation in Christology and the doctrine of creation, they should consult the bibliographies for B12, C6 and C12.


Robert C. Koons and George Bealer (eds), The Waning of Materialism (New York: Oxford University Press, 2010).


Levi Bryant, Nick Srnicek and Graham Harman, eds. The Speculative Turn: Continental Materialism and Realism, (Victoria, Australia: re.press, 2010)


Ernan McMullin (ed.), The Concept of Matter in Modern Philosophy (Notre Dame, IN: University of Notre Dame Press, 1978)


Galen Strawson, Real Materialism and Other Essays (Oxford: Oxford University Press, 2008)


Keith Ward, *More than Matter: Is this all we really are?* (Oxford: Lion, 2010) [a defence of contemporary dualism]

Michael Welker, ‘What is the “spiritual body”?: on what may be regarded as “ultimate” in the interrelation between God, matter, and information’ in Paul Davies and Niels Henrik Gregersen (eds), *Information and the Nature of Reality* (Cambridge: Cambridge University Press, 2010)

‘New Materialism’

Clayton Crockett and Jeffrey W. Robbins, *Religion, Politics, and the Earth: The New Materialism* (New York: Plagrave MacMillan, 2012) [This, with the next three books, belongs to a movement called the ‘new materialism’].


