

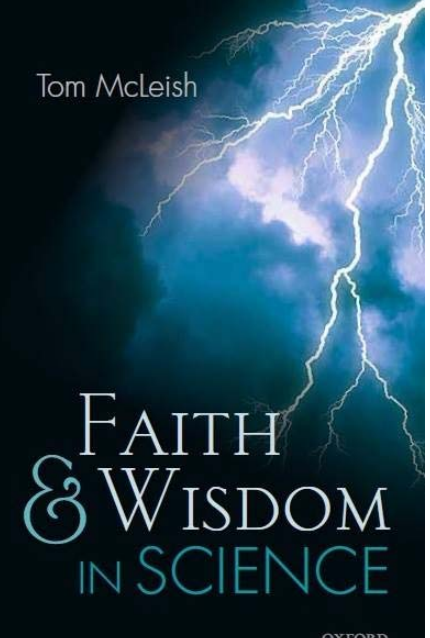
Faith in Science?

On the relationship between faith,
wisdom and science



Tom McLeish,
Durham University, UK

ISCAST-CASE Lecture, Sydney, September 2015



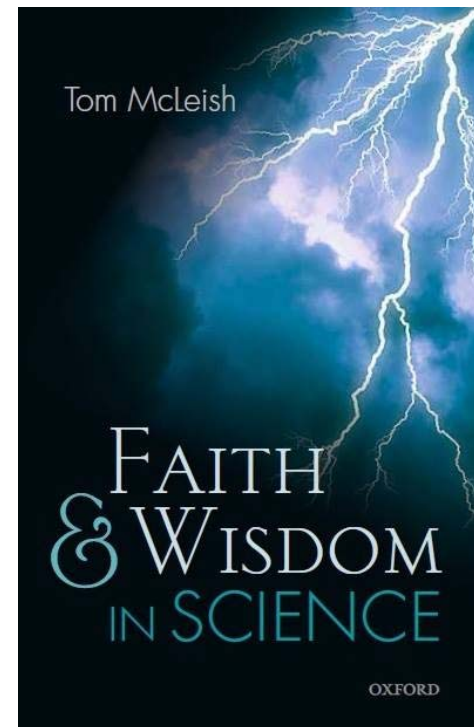
Some Prejudices

- Science needs (desperately) a deep cultural narrative
- Science the inheritor of a very long human history
- Current perception that 'Science is Modern' is a harm
 - impoverishes wellbeing
 - paralyses public debate
 - distorts relation of science and religion



A Manifesto....

- “Science/Religion debate” is the wrong place to look for the Science/Religion debate
- Read *Job* rather than *Genesis* for Biblical sources
- Think about chaos and statistical mechanics
- From “Theology *and* Science” to Theology *of* Science.
- Reappraisal of Science culturally, anthropologically, theologically.
- The church can embrace Science



High-pitched narratives....

Science and Technology are the key to improving our quality of life and the competitiveness of the UK.

UK White paper 1993

Art is made to disturb. Science reassures. There is only one valuable thing in art: the thing you cannot explain.

Georges Braque

I am against religion because it teaches us to be satisfied with not understanding the world.”

Richard Dawkins

Religion without Science is blind;
Science without Religion is lame.

Albert Einstein

We need to listen widely....

The Poet's View?....

Do not all charms fly
At the mere touch of cold philosophy?
There was an awful rainbow once in heaven:
We know her woof, her texture; she is given
In the dull catalogue of common things.
Philosophy will clip an angel's wings,
Conquer all mysteries by rule and line,
Empty the haunted air, and gnomed mine
Unweave a rainbow.

John Keats in *Lamia*



- Underlying narratives in European publics on science:

- Be careful for what you wish for

- Opening Pandora's Box

- Messing with Nature

- Kept in the Dark

- The rich get richer and the poor get poorer

J.-P. De Puy:

- Desire

- Evil

- Sacred

- Alienation

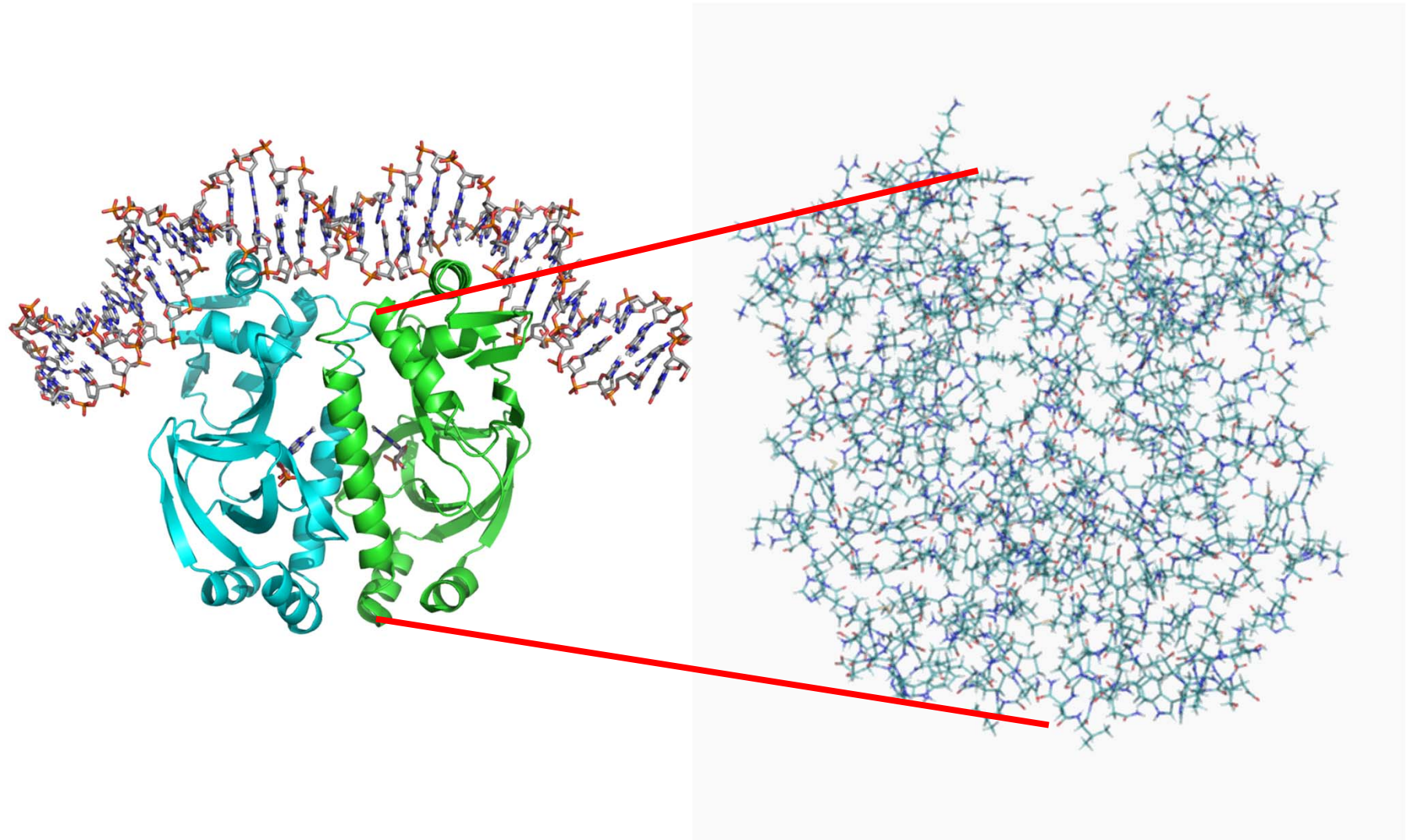
- Exploitation

Narrative Clues

G Steiner: “*Only art can go some way towards making accessible, towards waking into some measure of communicability, the sheer inhuman otherness of matter...*”

Real Presences

Unseen chaotic causes in protein binding



An ancient example of Science or Theology?

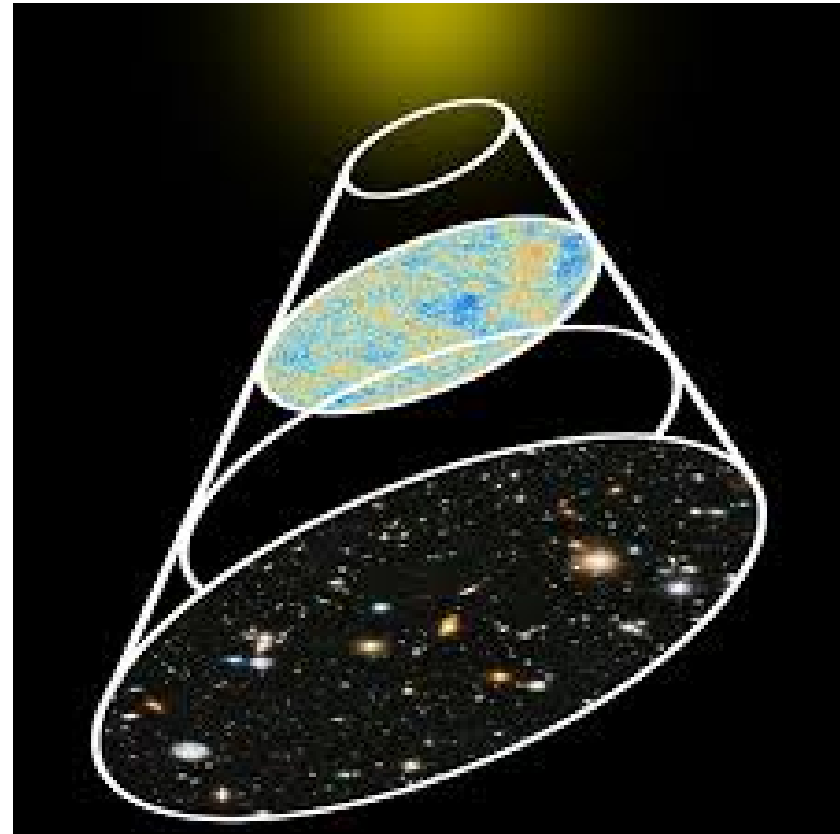
“It is by an abuse of language that a jar is said to be "empty"; for when it is empty of any liquid it is none the less, even in this state, full, in the eyes of the experienced. A proof of this is that a jar when put into a pool of water is not immediately filled, but at first floats on the surface, because the air it contains helps to buoy up its rounded sides; till at last the hand of the drawer of the water forces it down to the bottom, and, when there, it takes in water by its neck; during which process it is shown not to have been empty even before the water came; for there is the spectacle of a sort of combat going on in the neck between the two elements, the water being forced by its weight into the interior, and therefore streaming in; the imprisoned air on the other hand being straitened for room by the gush of the water along the neck, and so rushing in the contrary direction; thus the water is checked by the strong current of air, and gurgles and bubbles against it.”

Gregory of Nyssa, “On the Soul and the Resurrection”,
translation from Nicene and Post-Nicene Fathers, Series II, Vol V,
Christian Classics Ethereal Library, Calvin College (1999).

The Bible and ...*Science?* ... or .. *A relational engagement with Creation?*

Creation Stories:

- Prov 8
- Psalm 19
- Psalm 33
- Psalm 104
- Isaiah 40
- Isaiah 45
- Jeremiah 10
- Hosea 2
- John 1
- ...



The Bible and ...Science? ... or .. *Wisdom for nature?*

The Book of Job

*Surely there is a mine for silver, and a place
where gold is refined.*

*Iron is taken from the soil, rock that will be
poured out as copper.*

*An end is put to darkness, and to the
furthest bound they seek the ore in gloom
and deep darkness. A foreign race cuts the
shafts; forgotten by travelers, far away from
humans they dangle and sway. That earth
from which food comes forth is underneath
changed as if by fire. Its rocks are the source
of lapis, with its flecks of gold.*

Hymn to Wisdom – Ch 28



*But God understands the
way to it; it is he who knows
its place.*

*For he looked to the ends of
the earth, and beheld
everything under the
heavens,*

*So as to assign a weight to
the wind, and determine the
waters by measure,*

The Bible and ...*Science?* ... or .. *Wisdom in reconciling the physical world?*

Job 38-40

Questions, questions...



Have you journeyed to the springs of the sea?.....

Where is the way to the abode of light?....

..From whose womb comes the ice?...

.. Do you know the laws of the heavens?

And can you apply them to the earth?

Job structure

Clines: “the most intense book theologically and intellectually of the Old Testament”

- Prologue
 - Introductory narrative
 - Speech cycle 1 (Job, Eliphaz, Bildad, Zophar)
 - Speech cycle 2
 - Speech cycle 3 (with Elihu)
 - Hymn to Wisdom (ch 28)
 - The Lord's Answer (ch 38-40)
- Closing Narrative

Book of Job's structure of nature

- Prologue
 - Introductory narrative
 - Speech cycle 1 Earth, winds, stones, sea
 - Speech cycle 2 Plants, animals, vines, milk
 - Speech cycle 3 Heavens, moon, stars,

A Nature-Trail through Job...

The fire of God fell from heaven and burned the flocks and the servants”

...

... suddenly a mighty wind came across the wilderness and struck the four corners of the house...”

[Job was] grievous sores from the sole of his foot to the crown of his head.

Job afflicted by nature without and within ... and responds with a ‘creation narrative’

Would that the curses of days had laid a spell on it, those skilled at rousing Leviathan!

*...Would that the stars of its dawn had been darkened ...
and never seen the eyelids of the morning!*

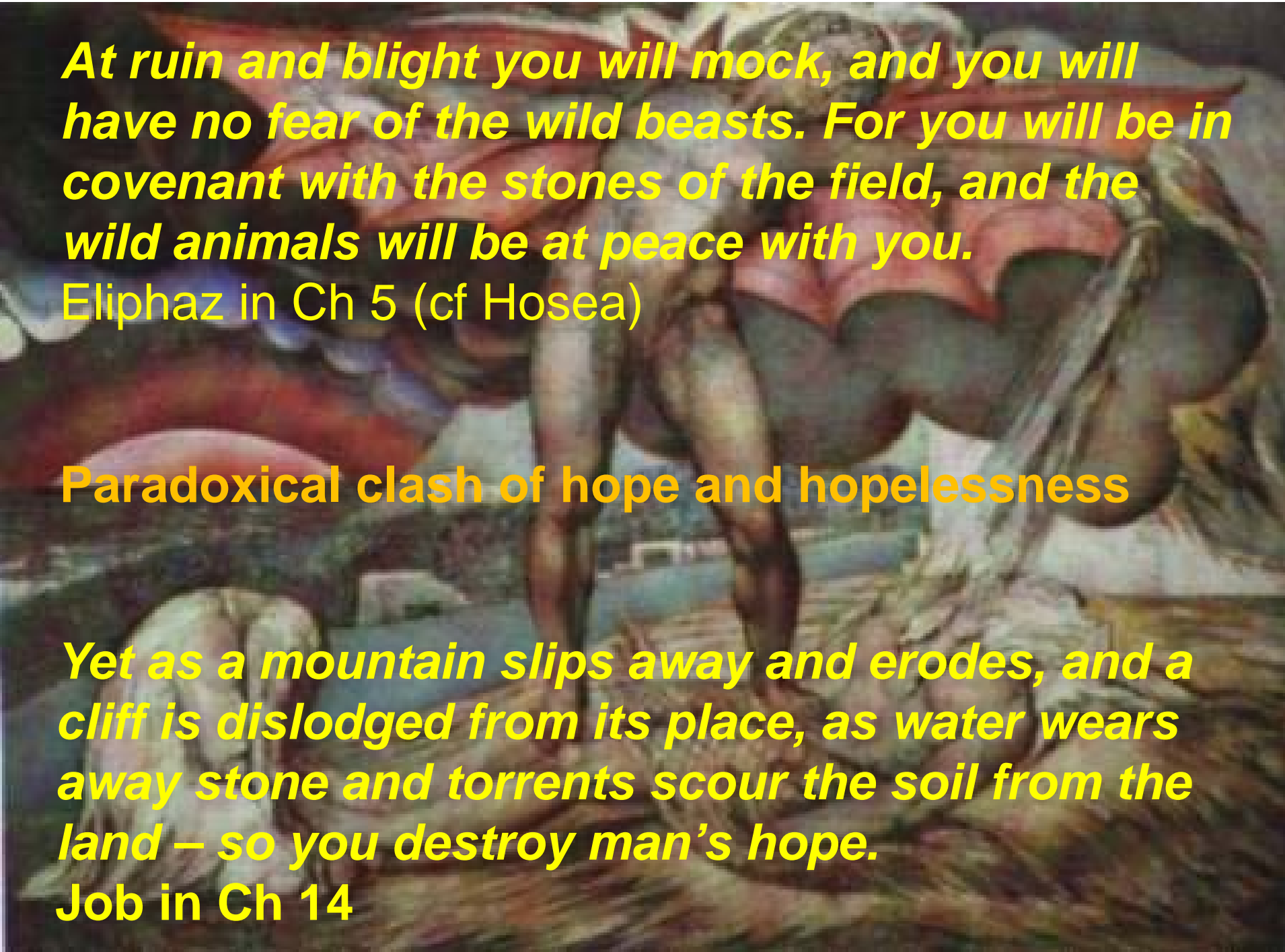
Job' accusations that his tormentors act like chaotic nature

*But my brothers have been as treacherous as the wadis.
They are like seasonal streams that overflow,
that are dark with ice, swollen with thawing snow;
but no sooner are they in spate than they dry up, in the heat they vanish away. (Ch6)*

*You molded me like clay, do you remember? Now you turn me to mire again.
Did you not pour me out like milk? Did you not curdle me like cheese?
With skin and flesh you clothed me, with bone and sinews knit me together. (Ch 10)*

Job is about (lack of) law embedded in nature

*What he destroys will not be built, whom he imprisons will not be freed.
He holds back the waters, there is drought; he lets them loose, they overwhelm the earth. (Ch12)*



At ruin and blight you will mock, and you will have no fear of the wild beasts. For you will be in covenant with the stones of the field, and the wild animals will be at peace with you.

Eliphaz in Ch 5 (cf Hosea)

Paradoxical clash of hope and hopelessness

Yet as a mountain slips away and erodes, and a cliff is dislodged from its place, as water wears away stone and torrents scour the soil from the land – so you destroy man's hope.

Job in Ch 14

3rd Cycle climax and cosmology

Is not God in the height of the heavens? Does he not look down on the topmost stars, high as they are? Yet you say, "What does God know? Can he see through thick clouds to govern? Thick clouds veil him, and he cannot see as he goes his way on the vault of heaven!" Eliphaz Ch22



He it is who stretched out the North over chaos, and suspended the earth from nothing.

He wrapped up the waters in his clouds, but the clouds did not burst under their weight.

He covered the sight of his throne; he spread his cloud over it.

He drew a circle upon the face of the waters, as the boundary between light and darkness. Bildad Ch 26

The Lord's 'Answer' is also to the Hymn to Wisdom

Have you journeyed down to the springs of the sea, or walked about in the remotest parts of the abyss?

Have the gates of death been revealed to you, or have you seen the door-keepers of death's darkness?

Have you gazed on the furthest expanse of the underworld?

Say if you know its extent!

Who cuts a channel for the torrent of rain, a path for the thunderbolt, to bring rain on a land uninhabited, on the unpeopled desert, to satisfy a waste and desolate land, making the thirsty ground sprout with grass?

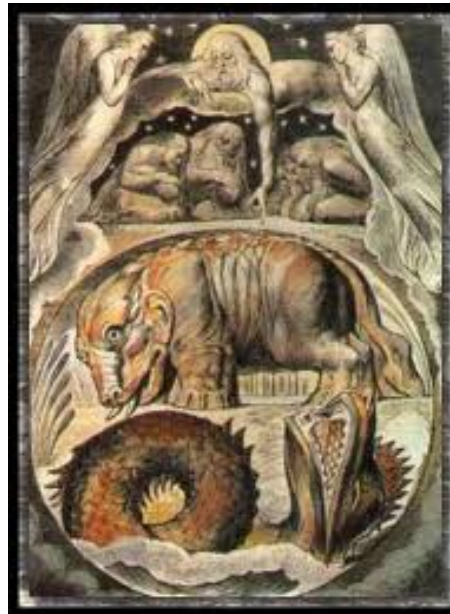
A challenge to simplistic encoding of morality in nature

Can you lift your voice to the clouds, and make a flood of waters answer you?

Can you send lightning bolts on their way, and have them report to you, 'Ready!'?

Six perspectives on creation in Job

- Enshrining retributive moral law
- Eternal Mystery
- Book of Nature
- Uncontrolled chaos
- Object of worship
- Way to wisdom



J.-P. De Puy:

- Exploitation
- Alienation
- Sacred
- Evil
- Desire

New Testament continuity of relational Creation-Wisdom.

*Therefore, if anyone is in Christ – new creation;
The old has gone, the new has come!
All this is from God, who reconciled himself through
Christ and gave us the **ministry of reconciliation**:
That God was reconciling the world to himself in Christ*

2Cor v17

J. Dunn on Romans 8 “All Creation groans...”:

“There is an out-of-sortness, a disjointedness about the created order which makes it a suitable habitation for man at odds with his creator.”

A Theology of Science:

Science is the

- **participative,**
- **relational,**
- **co-creative**

**work of healing the fallen relationship of
humans with nature.**

A Theology of Science: Characteristics

- Long history of relationship between human and non-human
- High view of human aptitude to re-imagine nature
- Dual structure: Wisdom and Knowledge
- Engaging with nature is ambiguous and painful
- Balance of order and chaos
- Centrality of the Creative Question
- The role and work of love

Consequences for us

1. There are no pre-determined histories or boundaries for science and technology – but theocentric
2. Our thought-relationship with nature is therapeutic
3. The Two Cultures – a healing of the academy?
4. New underlying narratives in public debate
5. A mutual task for inter-faith dialogue
6. Science and media – more engaged and thoughtful
7. The church can celebrate the humanity of science

Concluding Remarks

- Science is at the heart of and part of a Christian worldview
- The roots of science are very old and part of the “healing” story of the Bible
- Removing the false opposition of Science and Faith is going to be important. They are “of” each other.
- Strong call to leadership and voice



(1) An open participation in shaping nature: no pre-ordained boundaries

A question from Bruno Latour:

Everything happens as if modernists were unable to reconcile their idea of Science and Nature—... with the alternative reality that the connections of science and technologies are more pressing everyday, ..., requiring even more intervention, more assemblies, more scrutiny, more stewardship....

“The real question is to have the same type of patience and energy as God the Creator Himself”

David Bookless (Arocha):

Not anthropocentric, nor geocentric, but theocentric environmentalism (*Cambridge Papers* 2014)

(2) Science-Therapy?

- Playfulness
- Think 'love of wisdom of natural things' not 'science'
- To go 'ooo', or not to go 'ooo'?
- Citizen science
- The desire of the suffering



(3) Reconciling the Two Cultures?

Do not all charms fly
At the mere touch of cold philosophy?
There was an awful rainbow once in heaven:
We know her woof, her texture; she is given
In the dull catalogue of common things.
Philosophy will clip an angel's wings,
Conquer all mysteries by rule and line,
Empty the haunted air, and gnomed mine
Unweave a rainbow.

John Keats in *Lamia*

(3) Reconciling the Two Cultures?

G Steiner: *“Only art can go some way towards making accessible, towards waking into some measure of communicability, the sheer inhuman otherness of matter...”*

Real Presences

G K Chesterton: *“Art consists in limitation. The most beautiful part of every picture is the frame”*

Creativity with Constraint...?

(4) Consequences for public discourse

- There are no pre-determined histories or boundaries
- Intellectual relationship with nature is therapeutic
- New underlying narratives need to play
- Religious communities can celebrate the deep

humanity of science

Bruno Latour

Everything happens as if modernists were unable to reconcile their idea of Science and Nature—which, remember, according to their narrative, is supposed to be farther and farther removed, as time passes, from law, subjectivity, politics and religion—with the alternative reality that the connections of science and technologies are more pressing everyday, more confusing, requiring even more intervention, more assemblies, more scrutiny, more stewardship.

Five aspects of the Lord's Answer to Job (that make it a real answer)

- Tackles “out of control” accusation: subverts “control”
- Releases reconciliation for Job *via* (de)centralisation
- Participative and invitational
- Affirms fundamental significance of physical nature
- Escatological
 - Context of linear history
 - Context of Hebrew vision of a healed world
 - The nature of wisdom in ch 28
 - underlying grasp of nature is important
 - Explicit openness in structure and content

The Church and Science?

13th Century Science

- Re-conquest of Aristotle
- Arabic Translation
 - Averroes
- ‘Natural’ Science and Scientific Method
- God’s Creation
- Reason and Rationality
- An Ordered Universe
- Observation



Aristotle: *Opera Logica*

Institute of
Medieval and
Renaissance Studies



The Church and Science?



Robert Grosseteste

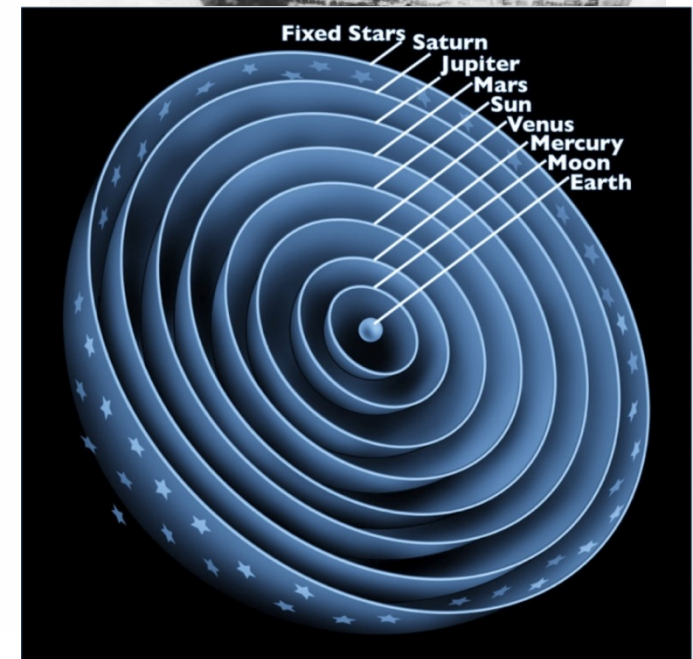
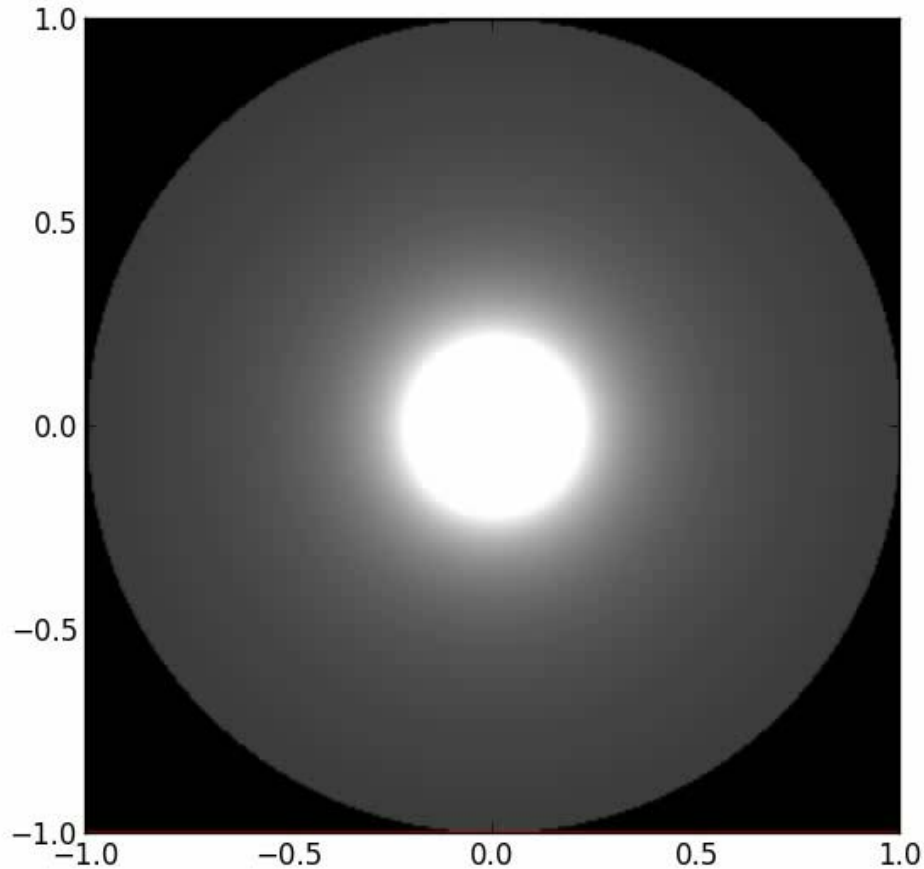
- Bishop of Lincoln 1235-1253

Formam primam corporalem, quam quidam corporeitatem vocant, lucem esse arbitror. Lux enim per se in omnem partem se ipsam diffundit, ita ut a puncto lucis sphaera lucis quamvis magna subito generetur, nisi obsistat umbrosum. Corporeitas vero est, quam de necessitate consequitur extensio materiae secundum tres dimensiones, cum tamen utraque, corporeitas scilicet et materia, sit substantia in se ipsa simplex, omni carens dimensione ...

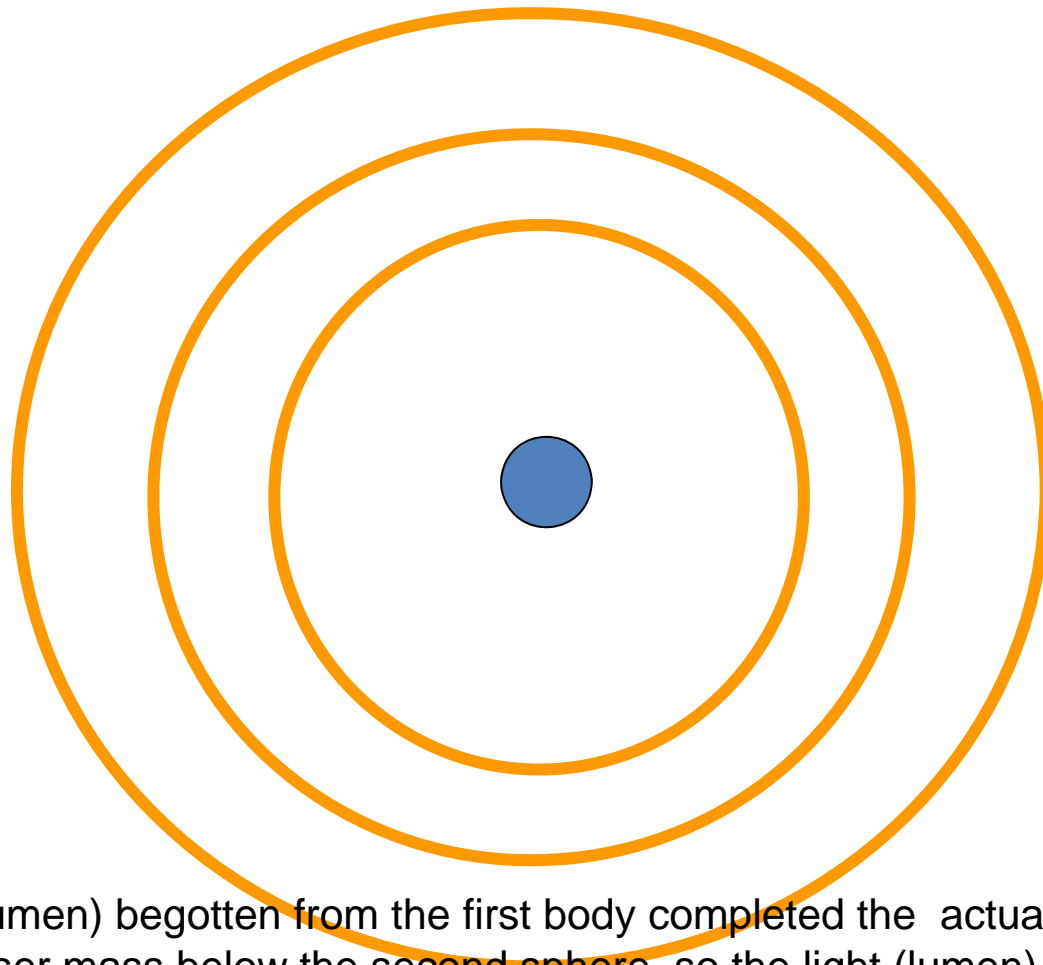
A Medieval Big Bang Cosmogeny

Robert
Grosseteste

De Luce (c.1225)

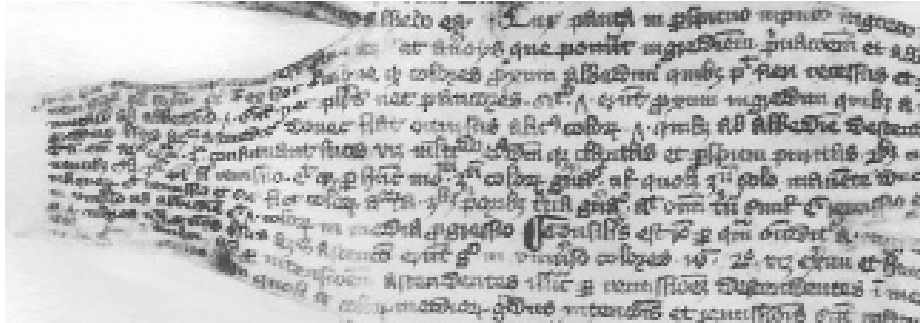


A “Luminocentric” Cosmogony



Just as the light (lumen) begotten from the first body completed the actualization of the second sphere and left a denser mass below the second sphere, so the light (lumen) begotten from the second sphere completed the actualization of the third sphere, and through its gathering left below this third sphere a mass of even greater density. This process of simultaneously gathering together and separating continued in this way until the nine heavenly spheres were completely actualized and there was gathered together below the ninth and lowest sphere the dense mass which constitutes the matter of the four elements.

Three Dimensions of Colour



Sequitur etiam ex hoc sermone, quod colores proximi albedini, in quibus potest fieri recessus ab albedine et permutatio, septem sunt, nec plures nec pauciores...

Cum enim albedinis essentiam tria constituent, scilicet lucis multitudo, eiusdemque claritas et perspicui puritas, duobus manentibus cuiuslibet trium potest fieri remissio, eritque per hunc modum trium colorum generatio; vel quolibet trium solo manente, duorum reliquorum erit remissio, et sic fiet aliorum colorum a tribus prioribus trina generatio; aut omnium trium simul erit remissio.

It also follows from this statement, that the colours nearest to white, which can be reduced from white and its alteration, are seven, no more nor fewer...

For although the essence of whiteness is constituted in three things, that is the strength of the light, its brightness and the purity of the glass, with two of these three things remaining there can be diminution, and there will be in this way the generation of three colours; or, with one remaining, there will be diminution of the other two, and so there will be the generation of three other colours from the former three; or there will be the diminution of all three at once.

