



The Book of Nature I

Foundations and History



Summary

- I. The book of nature in the Magisterium of the Catholic Church
- II. Metaphors and theology
- III. Prehistory: reading the starry sky
- IV. The theological prerequisites of a strong metaphor of the book of nature
- V. Highlights from the history of the metaphor from patristic to modern authors

Relevance: Magisterium

- *Fides et ratio* 19, encouraged us “to recognize as a first stage of divine Revelation the marvellous ‘book of nature’, which, when read, with the proper tools of human reason, can lead to knowledge of the Creator.”





St. John Paul II

- “for those who have attentive ears and open eyes, creation is like a first revelation that has its own *eloquent language*: it is *almost another sacred book* whose letters are represented by the multitude of created things present in the universe.” (General Audience, January 30, 2002)

Benedict XVI

- Verbum Domini, 7:
 - “While the Christ event is at the heart of divine revelation, we also need to realize that creation itself, the *liber naturae*, is an essential part of this symphony of many voices in which the one Word is spoken.”
-



Francis, *Laudato si'*

- “Saint Francis, faithful to Scripture, invites us to see nature as a magnificent book in which God speaks to us and grants us a glimpse of his infinite beauty and goodness.” (n. 12)
- ‘God has written a precious book, “whose letters are the multitude of created things present in the universe”.[54]’
- ‘The Canadian bishops rightly pointed out that no creature is excluded from this manifestation of God: “From panoramic vistas to the tiniest living form, nature is a constant source of wonder and awe. It is also a continuing revelation of the divine”.[55]’
- ‘The bishops of Japan, for their part, made a thought-provoking observation: “To sense each creature singing the hymn of its existence is to live joyfully in God’s love and hope”.[56]’
- ‘This contemplation of creation allows us to discover in each thing a teaching which God wishes to hand on to us, since “for the believer, to contemplate creation is to hear a message, to listen to a paradoxical and silent voice”.’ (n. 85)



A circular inset on the left side of the slide shows a long-exposure photograph of a starry night sky. The stars have formed into long, curved trails of light, creating a sense of motion and depth. The colors range from deep blues to bright whites. At the bottom of the inset, the silhouettes of green trees are visible against the dark sky.

For child and scientist

- Catechism of the Catholic Church, 2500:
- “Even before revealing himself to man in words of truth, God reveals himself to him through the *universal language of creation*, the work of his Word, of his wisdom: the order and harmony of the cosmos—which both the child and the scientist discover [...]”.

Mental prayer

- “Meditation is above all a quest. The mind seeks to understand the why and how of the Christian life, in order to adhere and respond to what the Lord is asking. the required attentiveness is difficult to sustain. We are usually helped by books, and Christians do not want for them: the Sacred Scriptures, particularly the Gospels, holy icons, liturgical texts of the day or season, writings of the spiritual fathers, works of spirituality, the great book of creation, and that of history the page on which the ‘today’ of God is written.” (CCC 2705)

Relevance: Metaphors in theology

- Example: “Body of Christ”
 - Church – communion – parts – vocations
 - Baptism: incorporation
 - Eucharist
 - Holy Spirit – like the soul of the body
 - The organism of grace: head and members



Metaphors: some consequences

- Synthesis – transmission – tradition
- Imagination – mental picture – intuitions
- A way of seeing / looking – suggests possibilities, perspectives
- Cannot demonstrate the truth of the metaphor – can be abused, can be misleading
- Book of Nature: key metaphor for science & religion/faith issues



Learning objectives

(this and following lectures)

- **How** the metaphor has been used in history – and **why**
- Its **roots and origins**: are there conditions of possibility for seeing nature (the visible world) as a book?
- Explore some of the suggestions it offers for **science & religion**
 - Knowledge of God and God's Revelation
 - Beauty and wonder in nature and science
- Identify & discuss its **limits and possible problems**
 - Purpose in nature? The moral dimension



Rest of today's lecture: history & foundations

- Heavenly tablets – rise and decline
- Stronger roots: Creation and Word + philosophy of *logos*
- Key elements of the original, patristic metaphor
 - *Logoi* of creation
 - *Theoria physike*: contemplation of nature
- Text samples from patristic to modern authors




Prehistory: reading the starry sky

Ancient Mesopotamia: the sky as a majestic tablet on which the gods wrote the destinies of men.

E.R. Curtius: “Here, thousands of years before our era, **writing** and the book have a sacred character, are in the hands of a priestly caste, and become the medium of religious ideas. Here we encounter ‘divine,’ ‘holy,’ and ‘cult’ books. Writing itself is felt to be a mystery and the scribe is accorded particular dignity. [...] To the Babylonians **the stars were ‘the writing of the sky’.**”

Biblical echoes

- “The heavens shall be **rolled up like a scroll**, and all their host shall wither away” (Isaiah 34:4)
- “Then the sky was divided **like a torn scroll** curling up” (Revelation 6:14)



Origen of Alexandria (3rd century), commentary Gen 1:14

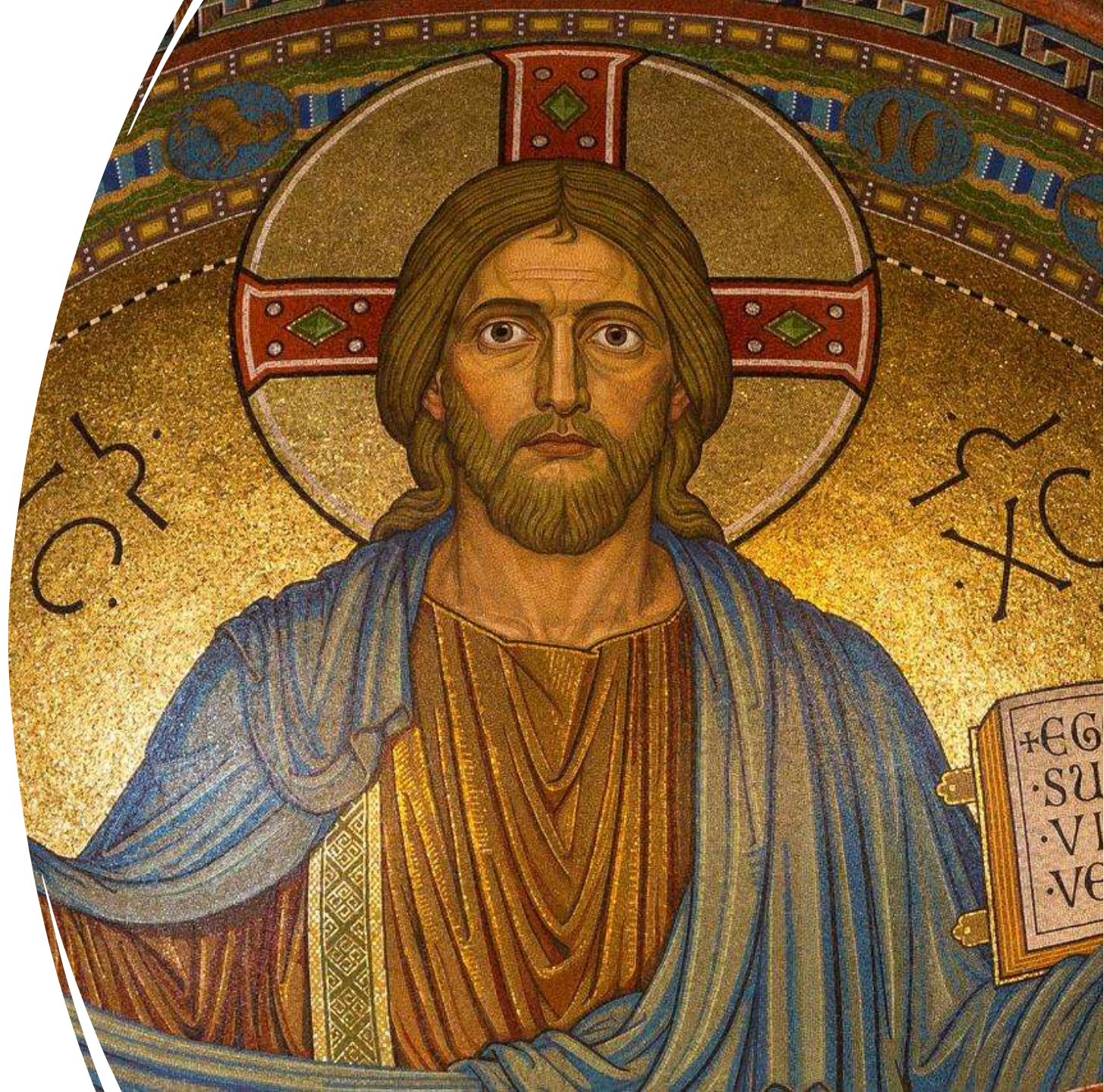
- “And let [stars] be for signs.”
- Origen's theses:
 - (i) divine omniscience preserves human free will;
 - (ii) stars indicate but do not produce human affairs;
 - (iii) men are unable to accurately interpret the stars;
 - (iv) God has given the stars as signs for superior powers, that is, angels.

The heavens as a book (Origen cont.)

- “**Like a book that prophetically contains future events**, the heavens entire, being as it were one of God’s books, may contain future events.”
- “Perhaps also the passage, ‘The heavens shall be rolled together as a book [scroll],’ shows that **the words therein indicative of the future shall be brought to completion**, and, so to speak, fulfilled, as the prophecies are said to be fulfilled by the event. And thus the created stars will be for signs, according as it is said, ‘Let them be for signs.’”
(Philocalia 23)

The decline of an image

- Sky – symbolic power – mysteries – secrets
- Christian theology of creation and revelation:
 - Gradual distinction between the starry sky and the heaven of God
 - Divination is moral wrong
 - Public revelation given in history
 - Fullness of creation and revelation in Christ



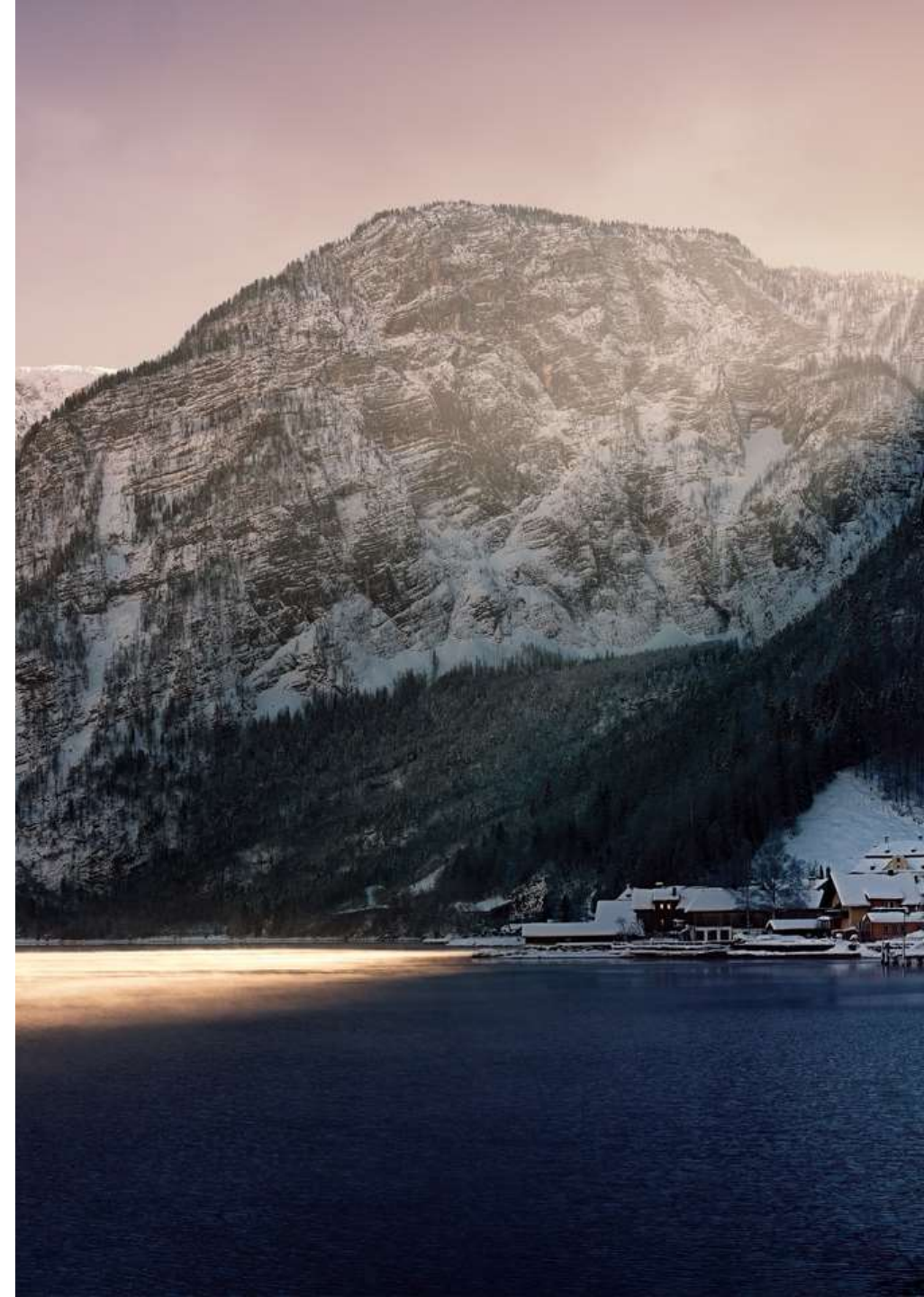
Beyond the heavens: biblical foundations

- Creative Word: creation by the Word – by a speech act
- “Then God said, ‘Let there be light’, and there was light...” (Gn 1:3)
- *Dabar Yahweh* – the Word of the Lord, which both communicates and brings into existence
- Intuition: creatures are like *echoes* or *incarnations* of this creative Word



Loci classici of natural theology

- “From the **greatness and beauty** of created things comes a corresponding **perception of their Creator.**” (Wisdom 13:5)
- “For the wrath of God is revealed from heaven against all ungodliness and wickedness of men who by their wickedness suppress the truth. For what can be known about God is plain to them, because **God has shown it to them.** Ever since the creation of the world **his invisible nature**, namely, his eternal power and deity, **has been clearly perceived** in the things that have been made. So they are without excuse. (Romans 1:18-20)



The fullness of revelation

- “In the beginning was the Word, and the Word was with God, and the Word was God. He was in the beginning with God; all things were made through him, and without him was not anything made that was made.” (John 1:1-3)
- “And the Word became flesh and dwelt among us, full of grace and truth; we have beheld his glory, glory as of the only Son from the Father.” (John 1:14)
- “He is **the image of the invisible God**, the first-born of all creation; for **in him all things were created**, in heaven and on earth, visible and invisible, whether thrones or dominions or principalities or authorities—all things were created through him and for him.” (Col 1:15-16)



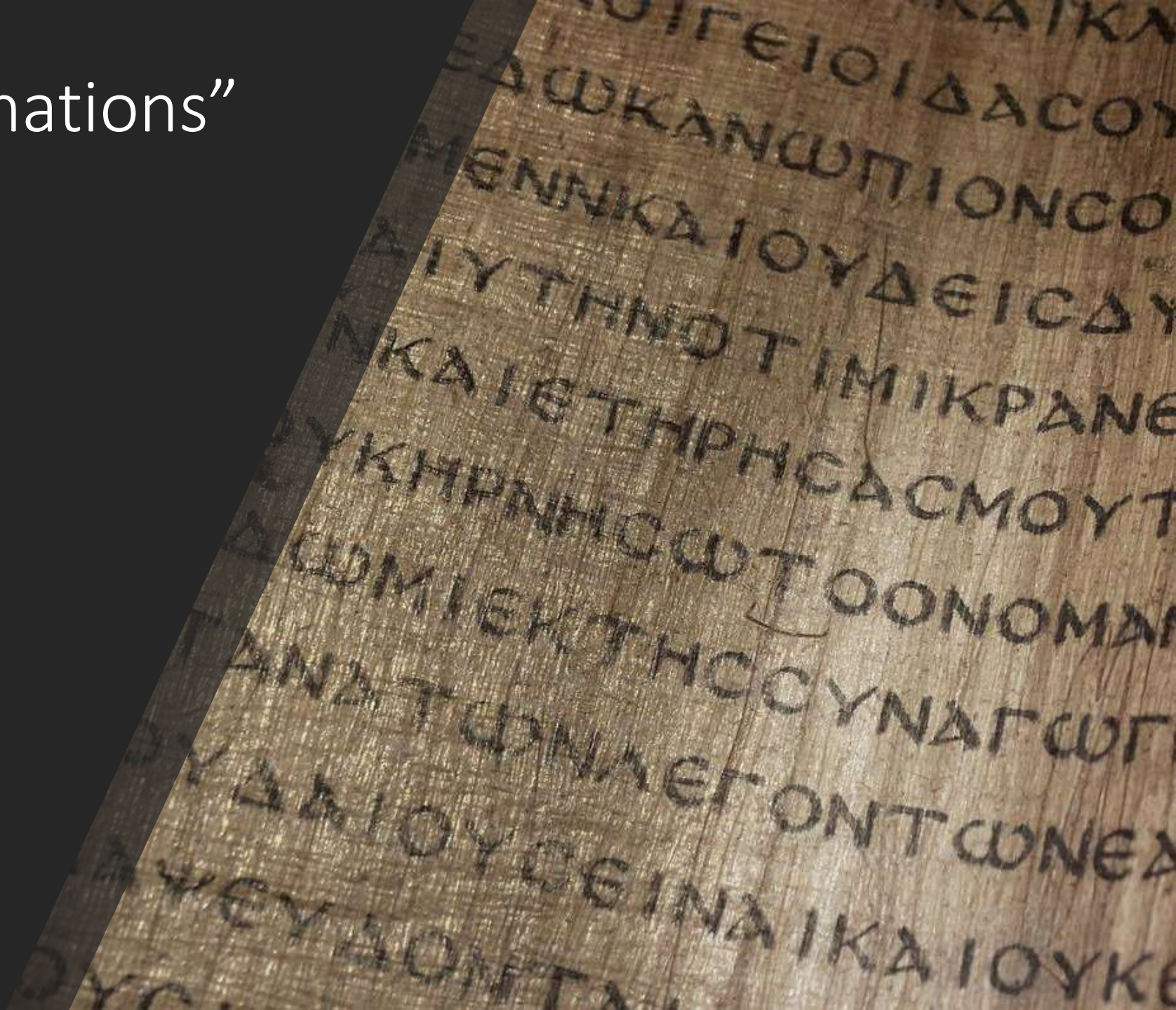
The objective condition: *logoi* of creation

- Greek *logos*: meaning, purpose, cause, reason, principle, word (etc.)
 - ***Logos ut ratio***: reason, purposefulness, harmony (*cosmos*)
 - ***Logos ut verbum***: word, communication, message – *from someone to someone*



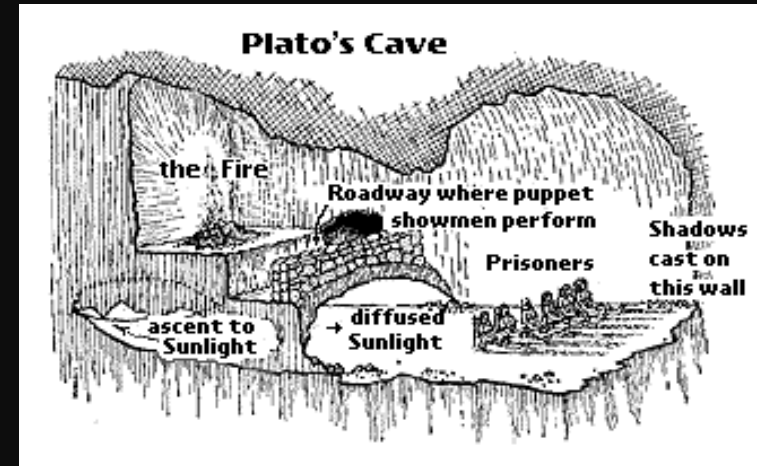
Different “incarnations” of the Word

- Creation
- Scriptures
- Christ
 - The Church, saints



The "intelligible world"

- Platonic *Myth of the Cave* (Republic VII)
- True knowledge: beyond the sensible
- Philo of Alexandria (1st century): "the intelligible world" (*cosmos noetos*) vs. "sensible world"
- Augustine:
 - The words of Scripture are "a world"
 - The works of creation are "a book"



The subjective condition: contemplation

- *Theoria physike*
- An activity
- A gift
- Ascesis
- Holy Spirit



The need for *theoria*

- “whoever sees me sees the one who sent me” (ὁ θεωρῶν ἐμὲ θεωρεῖ τὸν πέμψαντά με, John 12:45)
- “whoever has seen me has seen the Father” (John 14:9)
- Contemplation: “the activity of the spirit that knows **the intelligible reality** of things without stopping at their **sensible appearance.**” (Jean Daniélou)

Highlights from history: Origen

- Commentary on John 4:35, “Behold, I say to you, Lift up your eyes and see the fields, for they are already white for harvest.”
- “But perhaps, too, the white fields that are ready for harvest to those who lift up their eyes are all the beings that are perceptible to the senses, including heaven itself and the beings in it. This would be true because **the purpose (λόγος) of being [or: the word that is in each thing] is clear to those who, by being ‘transformed into the same image from glory to glory’ [cf. 2 Cor 3:18], have assumed a likeness of those eyes that have seen how each of the things that have been made was good.**”

The art of spiritual interpretation

- Origen's commentary on Romans 1:20
- “Paul the apostle teaches us that the invisible things of God are understood by means of things that are visible, and that **the things that are not seen are beheld (*contemplentur*) through their relationship and likeness (*ratione et similitudine*) to things seen**. He thus shows that this visible world teaches us about that which is invisible, and that this earthly scene contains certain patterns of things heavenly.”
- “Thus it is to be possible for us to mount up from things below to things above, and **to perceive and understand from the things we see on earth the things that belong to heaven.**”
- “Therefore, **everything [...] that is visible can be referred to the invisible [...]** in such a way that the created world itself founded upon such a dispensation should be understood through the divine wisdom that teaches us invisible realities from visible things [...] and transfers us from earthly things to heavenly ones. Moreover, **these *logoi* are found not only in all created things, but divine Scripture itself has also been composed by means of this art of wisdom.**”

Anthony of Egypt

- “One of the sages of that time came to Antony the just and said: Father how can you endure being deprived of the comfort of books?”
- "And he said: ***My book, philosopher, is the nature of [created] beings, and it is there when I want to read the words of God.***"



Basil the Great

- Homilies on the Hexaemeron (a Genesis 1 commentary)
- Opening homily: before the writing of the Genesis narrative, **Moses**, having been banished from Egypt, went to Ethiopia and “devoted himself for forty entire years to **the contemplation of creation.**”
- This was his preparation, because “the world was not devised at random or to no purpose, but to contribute to some useful end and to the great advantage of all beings, if it is truly a **training place for rational (*logikos*) souls and a school for attaining the knowledge of God**, because **through visible and perceptible objects it provides guidance to the mind for the contemplation of the invisible.**”

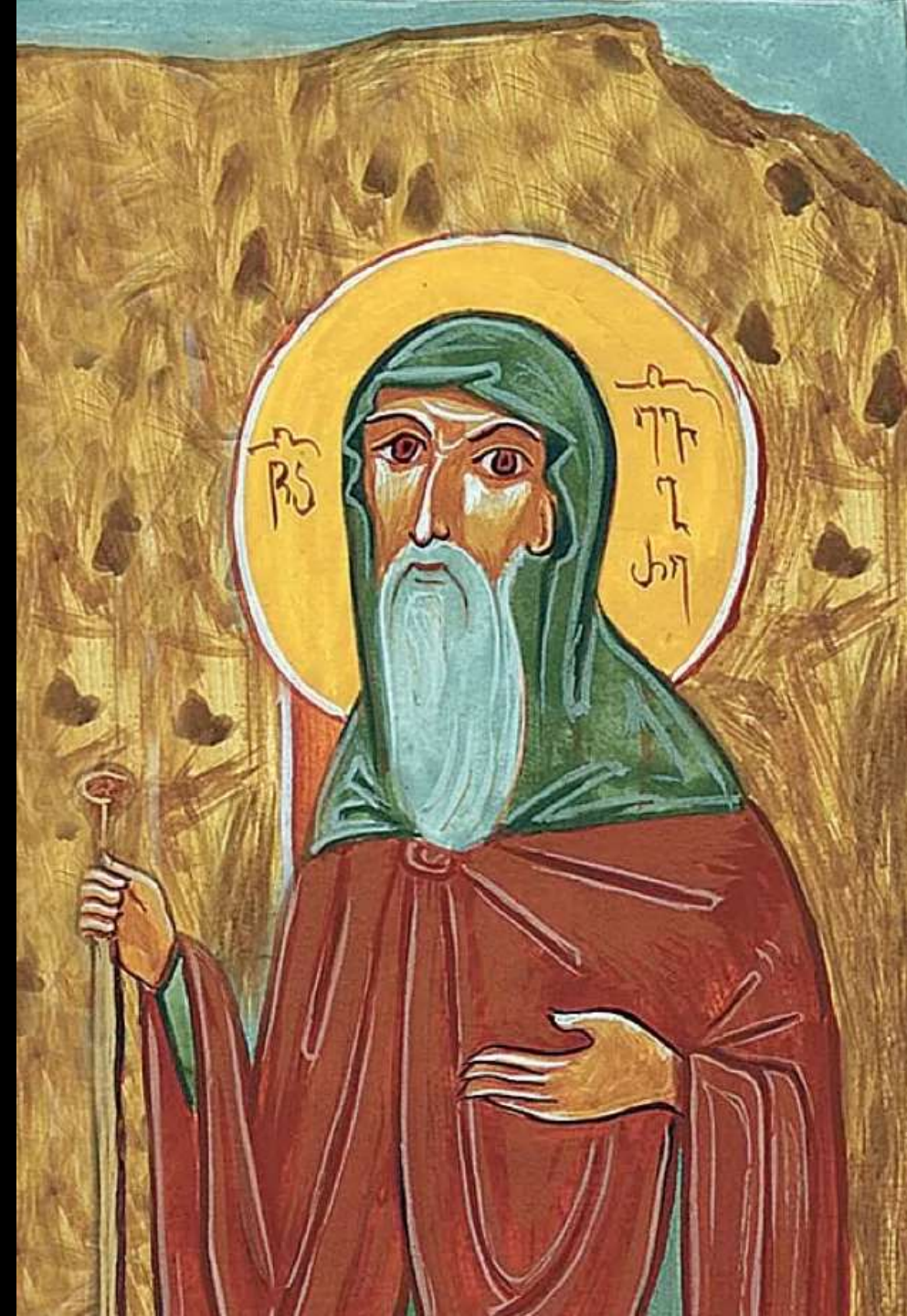


Basil's *Hexaemeron* – reading the book of nature

- Contemplation of the *logoi* of creation:
- “We were made in the image and likeness of our Creator, endowed with intellect and reason, so that our nature was complete and we could know God.
- “In this way, **continuously contemplating the beauty of creatures**, through them *as if they were letters and words*, we could read **God’s wisdom and providence** over all things.”

Evagrius Ponticus (d. 399)

- Discipline of Basil and others. Became a monk and an ascetic (Jerusalem, Egypt).
- Scholion (= a marginal note) on Psalm 138:16(2) (LXX), “in your book all shall be written”:
- **“The book of God (βιβλίον θεοῦ) is the contemplation of bodies and incorporeal [beings] in which a pur[ified] mind (*nous*) comes to be written through knowledge. For in this book are written the *logoi* of providence and judgement, through which book God is known as creator, wise, provident, and judging . . .”**



Creation as a “letter” from God

- Evagrius' *Letter to Melania* (a wealthy Roman widow who became a patroness of the ascetic movement in Egypt and Palestine)
- “You know, good Sir [sic], that if those who are far apart from each other, separated by a long distance, want to know or to make known to each other, their respective intentions and secrets (which should not be learnt by everyone, but only by those who have a mind akin to their own), they do this by means of letters.”
 - Distance: sin
 - Rectitude of intention

- “In this way, though they are far apart, they are near each other; though being separated, they see and are seen; though remaining silent, they speak and hear . . .”
- **“Now all these things which are done through letters, are a kind of symbol of the things which in truth are done by those who are far apart from God. For those who are far from God have made a separation between themselves and their Creator by their loathsome works. But *God, out of his love, has provided creation as a mediator: it is like letters. He did this through his power and wisdom, that is, by the Son and the Spirit*, in order that men might come to know and draw closer to his love for them. . .**
- "Just as someone who reads letters, by their beauty senses the power and ability of the hand and the finger which wrote them together with the intention of the writer, thus he who looks upon creation with understanding, perceives the hand and the finger of its Creator as well as his intention, that is, his love."



Augustine

- Commentary on Matthew 11:25 (God's hiding things from the wise and the understanding):
- How the invisible things of God have been revealed: through the things that have been made.
- "Others, in order to find God, will read a book. Well, as a matter of fact there is a certain great big book, **the book of created nature** (*magnus liber ipsa species creaturae*). Look carefully at it top and bottom, **observe it, read it**. God did not make letters of ink for you to recognize him in; he set before your eyes all these things he has made. **Why look for a louder voice? Heaven and earth cries out to you, «God made me.»**"





Reading the Two Books together

- Augustine's "Literal Explanation of Genesis"
- External factors (non-biblical sources of knowledge): the notion of light in Gen 1:3.
- This light is described before the creation of the sun and the moon, and natural knowledge tells us there cannot be physical light without a source of such light → Augustine concludes that the notion of light in this passage cannot refer to material light

Question of credibility

- **“There is knowledge to be had” about the sensible world**, and it is “quite disgraceful and disastrous” that non-Christians, who may be learned in these matters “should ever hear Christians spouting what they claim our Christian literature has to say on these topics, and talking such nonsense that they can scarcely contain their laughter when they see them to be *toto caelo*, as the saying goes, wide of the mark.”



After the patristic period: themes

- Continuity and change
- Effects of sin
- Growing separation of the Two Books
- Apologetics: erosion of the roots?



Medieval book of nature

- Flowering of the metaphor, and of symbolism
- Leading figures:
 - John Scottus Eriugena (9th century)
 - Hugh of Saint Victor
 - Bonaventure



New emphasis on sin

- Franciscan spirituality – Saint Bonaventure (13th century)
- “Before sin, man had the knowledge of created things and through their images he was led to know God, to praise, to worship and to love him. The purpose for which living beings exist, is to lead us to God. When human beings fell because of sin, they lost such knowledge and so there was no one who could bring all things back to God. **Thus this book, that is the world, seemed dead and destroyed.**”
- “Therefore, there was a need for **another book through which the previous book had to be enlightened**, in order to acknowledge the true meaning of things. This book is nothing but Sacred Scripture, which contains metaphors, images and teachings about the book of the world. In this way, the book of Scripture restores the whole world, and allows the latter again to lead us to know, to praise and to love God.” (Collationes in Hexäameron, XIII, 12).



Raymond of Sabunde: an influential transformer

- *Liber Creaturarum seu Theologia naturalis* (15th century)
- Huge influence: editions, translations
- Ambitious thesis: the knowledge of the book of Nature allows us to understand, in a true and infallible way, and without much effort, all truths about created things, man and God...
 - Including our moral perfection and eternal salvation
- Each creature is a letter, written by the finger of God. All these letters and words together form a kind of manuscript, in which the human creature constitutes the most important word.



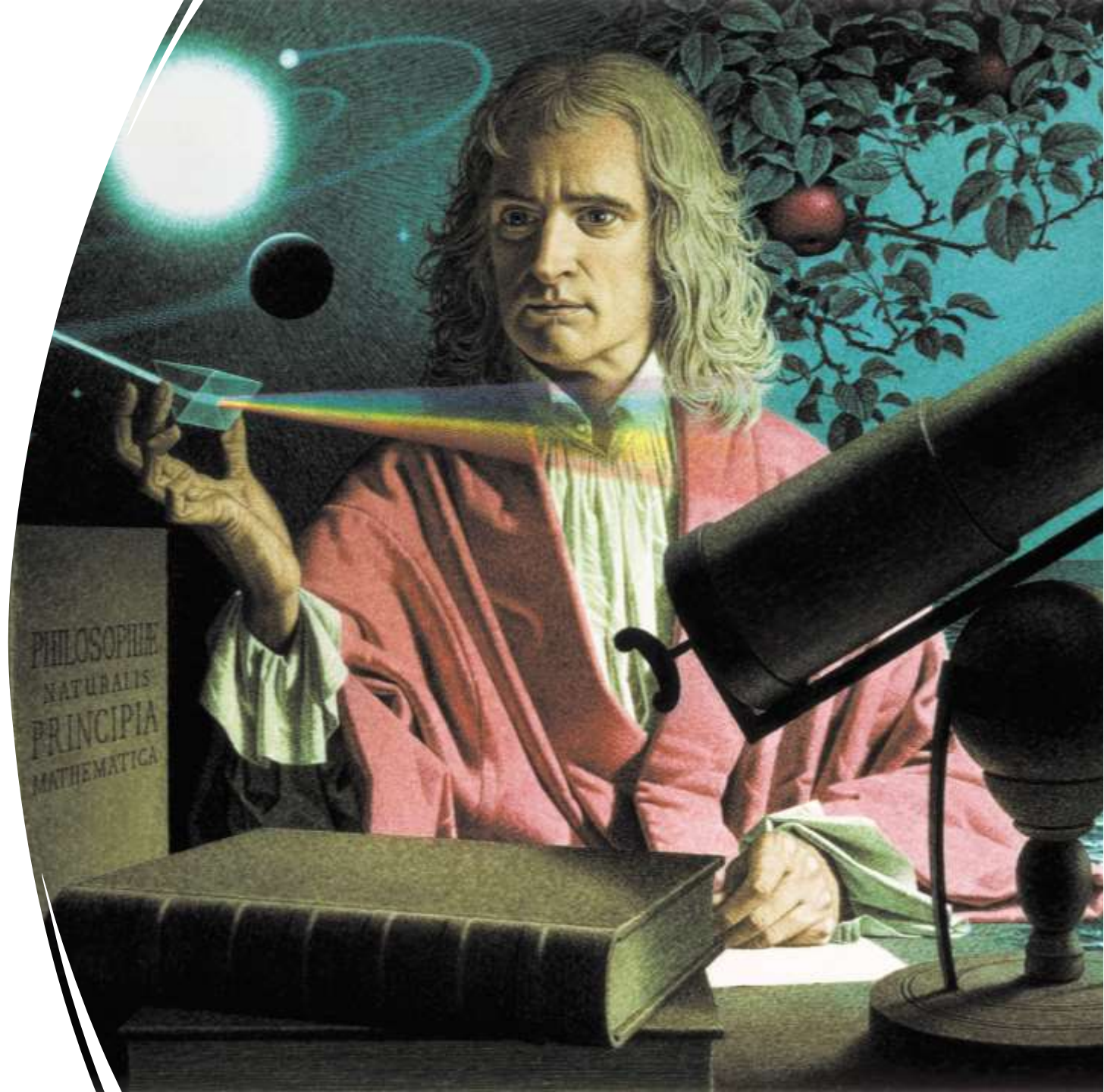
The Two Books in Raymond of Sabunde

- The Book of Nature is prior to Scripture – in time, and perhaps even in importance (more fundamental): like a door to enter the Bible and a light to illuminate its words.
- Difference: **The knowledge of the book of Nature is available to everyone.** The book of Scripture can be read only by clerics.
- **But the Bible is valuable:** inspired and written to help us read the book of creatures properly, since we were like the blind.
- **We need both books. They do not contradict each other.** They do not differ in their content: all that is present in the first, we also find in the second.



Echoes in the modern era

- Study of nature as recovery of 'Adamic knowledge'?
- Decoding the 'secrets' of nature
- Question: contemplative attitude or exploitation?





New trend: separation and conflict

- Philippus Paracelsus (1493-1541) and the 16th century naturalists: a “lay turn”
 - the world can be read directly
 - the Architect and the Maker of the world can be praised and worshipped directly
- Confidence in growing natural science
 - distrust of Church, Bible etc.



Polemics: Galileo Galilei (1564-1642)

- The Book of Nature is **written in a mathematical language**. Its characters are triangles, circles and geometric figures.
- **Only scientists** can read it:
- “Philosophy is written in this grand book, the universe, which stands continually open to our gaze. But the book cannot be understood unless one first learns to comprehend the language and read the letters in which it is composed. It is written in the language of mathematics, and its characters are triangles, circles and others geometric figures without which it is humanly impossible to understand a single word of it; without these, one wanders about in a dark labyrinth.”
- Natural scientists as the priests of nature? – Johannes Kepler (1571-1630)

A positive vision: The English apologetic tradition

- Robert Boyle (1627-1691)
- The Book of Nature is a large and beautiful rolled tapestry that we cannot see all at once. We must be content to wait for **the discovery of its beauty and its symmetry**, little by little, as it gradually unfolds showing itself.
- Knowledge of the Book of Nature does not hinder the Christian faith, but favors it:
 - The Christian virtues of **humility, gratitude, and reverence**, are fostered by a deeper encounter with the works of the Creator, an encounter now promoted by science.



The Physico-Theology movement

- John Ray, *The Wisdom of God* (1691)
- William Derham:
 - *Physico-theology, or a Demonstration of the Being and Attributes of God* (1723)
 - *Astro-theology, or demonstration of the being and attributes of God, from a Survey of the Heavens* (1731)

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William Paley, Darwin, and evolution

- Watchmaker analogy (argument from design): *Natural Theology, or Evidences of the Existence and Attributes of the Deity* (1802)
- Challenged later by Darwin (and *that* debate continues)
- Note reaction of St. John Henry Newman, 1870: “I believe in design because I believe in God; not in God because I see design.”



Contemporary revival of the metaphor

- Attractive to scientists (e.g. John Polkinghorne)
- *Nouvelle théologie* movement (e.g. Henri de Lubac)
- Inspiration for the renewal of natural theology (e.g. Alister McGrath)
- Proposal: back to the roots – and look into the future

