



The Scientific Revolution: Its Classical and Christian History

with Dr. Ted Davis

Lecture 8: Athens and Jerusalem: Greek Natural Philosophy and the Early Church

Outline:

Athens and Jerusalem: Greek Natural Philosophy and the Early Church

- The fundamental problem of faith and learning—“Athens and Jerusalem”—was first articulated by Quintus Septimius Florens Tertullianus, known as **Tertullian** (c. 155-c. 230), a native of Carthage. Perhaps the son of a Roman soldier, he knew Greek, Latin, law, philosophy & medicine. He converted to Christianity in mid-life, he became a priest.
- A famous passage: “What indeed has Athens to do with Jerusalem? What concord is there between the Academy and the Church? What between heretics and Christians? Our instruction comes from the porch of Solomon, who had himself taught that the Lord should be sought in simplicity of heart. Away with all attempts to produce a Stoic, Platonic, and dialectic Christianity!” —*The Prescription against Heretics*, chap 7 (ca. 220 AD)
- Although Tertullian held that reason “is a thing of God” (On Repentance), it can easily go astray. Philosophy can lead it into heresy. “The philosophers are the patriarchs of the heretics.” Reason should be used only in the service of the church.
- Given the hostility of Greco-Roman culture to Christianity, should Christians participate in education? “Christianity is an intellectual religion and cannot exist in a context of barbarism.”—Henri Irénée Marrou, *History of Education in Antiquity*, p. 316
 - For the Christian education is not optional.
- Leaders in the early church faced a dilemma: Education was essential for the preservation and propagation of the faith. However, existing schools were pagan, employing pagan teachers and materials. What are they to do? We find a range of attitudes, in addition to the confrontational stance of Tertullian.
- Titus Flavius Clemens, known as **Clement of Alexandria** (c. 150 - c. 215), taught in the school for catechants at Alexandria. He believed philosophy is essential for defending the faith vs heresy and for developing doctrine. **He held that God is the source of all truth, including parts of pagan learning.**
 - **Clement** taught (in his *Stromateis*) that Moses was the master of the Greeks—that they had learned everything from Moses. **Just as the**



Hebrews were commanded to “despoil the Egyptians” as they fled, so Christians should take that which is rightfully theirs from pagan authors!

- Flavius Iustinus, known as **Justin Martyr** (ca. 100 – ca. 165), born in Samaria but of Greek descent. A Christian convert who saw Platonism as consistent with the Bible, esp. because it teaches the **immortality of the soul** and he **creation of the world**. Justin believed that the Greek philosophers had studied the Old Testament; thus, Greek philosophy could contain truth. He also believed that reason is the logos of John’s gospel. Therefore, any person who thinks participates in the divine gift of the logos.
- **Origen** (185 - ca. 254), an Egyptian who taught at Alexandria, was very learned in Greek philosophy. He taught the full range of ancient philosophers and poets, except atheists.
- **Jerome** (c. 345 - 420), who translated the Bible from Hebrew and Greek into Latin—the “Vulgate” Bible because it was in the “vulgar,” or common, tongue. As a teacher, Jerome forbade priests to waste time reading pagan authors.
 - Nevertheless, Jerome said that Christians should treat pagan learning as a captive woman who can be taken to wife once her head was shaved, her eyebrows cut off, and her nails pared.
- **Augustine, Bishop of Hippo** (354- 430), a highly educated North African who became the greatest theologian of his age following his conversion to Christianity. He was deeply influenced by Platonism, which he saw as compatible with Christianity. **He held that faith cannot be understood without reason, but reason without faith is worthless—for it cannot know the beginning of truth, the existence of God.** “Faith seeking understanding”
 - Concerning Greek natural philosophy and cosmology, of which he had an excellent grasp, sometimes he downplayed its importance for Christians. It was irrelevant to salvation, took time from the study of Scripture, and the use of astronomical knowledge in astrology was vain and illegitimate.
 - Nevertheless, knowledge of nature could be useful in helping us understand the meanings of certain biblical texts and for the necessities of life. We mustn’t love natural philosophy, but we shouldn’t hesitate to use it properly.
 - Thus, he offered this famous advice in one of his mature works: “Often even a non-Christian knows something about the earth, the heavens, and the other elements of this world, about the motion and orbits of the stars and even their sizes and distances,... and this knowledge he holds as certain from reason and experience. Now it is a disgraceful and dangerous thing for an infidel to hear a Christian, presumably giving the meaning of Holy Scripture, talking nonsense on these topics; and we should take all means to prevent such an embarrassing situation, in which people show up vast ignorance in the Christian and laugh it to scorn.”—On the Literal Meaning of Genesis, 1.19.39



- Augustine's overall attitude toward Greek science was widely shared by patristic authors. Often it is summarized in this language today: **"Theology is queen of the sciences [learning], and philosophy [science] is her handmaiden."**
- This handmaiden view derives from **Philo of Alexandria** (ca. 20 BC – ca. 50 AD), a Jewish Platonist philosopher.
- **Philo** wrote about this in an allegory of Hagar and Sarah, based on the story in Genesis chap 16, in which Sarah encourages Abram to impregnate her servant. Keep in mind that "Sarai" and "Sarah" mean "noblewoman" or "princess," and the Bible describes Hagar as Sarai's "handmaid" (Genesis 16:1, KJV).
 - To avoid the negative moral implications of this story, Philo (and some early Christian scholars) interpreted it as an allegory about forms of knowledge. In that context, he said that "philosophy is the handmaid (doule) of wisdom (sophias)," where wisdom meant the Jewish Scriptures.
- Later, Christian authors transformed this into the famous phrase, **"Theology is queen of the sciences [learning], and philosophy [science] is her handmaiden."** Expressed in whatever terms, the concept was used down to the time of Galileo, by figures such as Clement, Augustine, Bonaventure, and many others. Even Galileo partly accepted it, though he challenged the view that theology could simply lord it over astronomy.
 - Hexameral treatises by patristic authors nicely illustrate the "handmaiden" model at work.
 - The story of creation in Genesis takes place over a period of six days. The Greek word hexameron comes from the words for "six" and "day," so commentaries on Genesis used to be called hexameral treatises.
 - Probably the most influential was written by **St Basil the Great** (ca. 330-379), Bishop of Caesarea: Homilies on the Hexameron. Basil uses Greek philosophy to support the Bible. For example, he sees Plato's Demiurgos as the biblical creator. Likewise, he accepts Aristotle's four elements and approves of Aristotle's belief that there is only one world.
 - **An interesting question for Basil:**
 - **How many heavens are there?** Aristotle speaks about a single heaven—the sphere of the fixed stars. However, he thinks the Bible talks about two heavens. One was the heaven created "in the beginning."
 - The other was the "firmament" created on the second day, when God separated the waters "above the firmament" of heaven from those "under the firmament," and "God called the firmament Heaven."
 - Basil thought the waters "above the firmament," must be a third heavenly body, in between the other two heavens.
 - **Thus, Basil inspired the later conception of three heavens:**



- The sphere of fixed stars
- The crystalline sphere of solid water, above the stars
- The empyrean heaven, where the angels dwell
- **Athens and Jerusalem: A brief outline of the early history of Christian schools**
 - By ca. 180, a compromise was in place: basic education will come from the classical schools, with doctrine coming from the church.
 - Not until the 4th century do we find a really new kind of Christian school, completely devoted to religion: the monastic school.
 - These use only the Bible and the church fathers, even to teach reading.
 - Found at first in Egypt, then roughly two centuries later in Europe.
- Two other types of Christian schools also appeared in Europe in the 6th century:
 - **Episcopal schools**, around cathedrals. Bishops and their staff are the teachers. These later became the universities, as the curriculum expanded.
 - **Presbyterial schools**, to educate future priests in rural areas. Like cathedral schools, but with fewer resources, these later became village schools.
- It was not until the 6th century, however, that the first Christian natural philosopher appeared:
 - **John Philoponus** (c. 490-ca. 570), a professional philosopher at Alexandria, was the first Christian who actually contributed to natural philosophy (did science) —rather than simply taking conclusions from natural philosophy and bringing them into theology, or simply rejecting them as contrary to it. He wrote very learned, original commentaries on treatises by Aristotle, using reason and experience to advance alternative ideas of motion. And, he wrote a carefully reasoned work against Aristotle's claim that the world is eternal.
- Thus, all Christian authors who responded to Greek natural philosophy prior to the 6th century, did so without being practitioners of the subject themselves. It was not until the rise of the universities in the 12th and 13th centuries, that we begin to find a large number of Christians actually doing natural philosophy.
 - **Why not?**
 - **A big cultural problem unrelated to faith was the relative lack of patronage for science in the ancient world.** Astronomers had value to rulers, because they could cast horoscopes, but outside of Athens and Alexandria the practice of science was rarely supported or encouraged, either by governments or by the schools.
 - For Christians, however, there were further problems.
 - The faith did not begin as a politically popular idea.
 - Christians were persecuted for centuries. They don't have the luxury to do natural philosophy.



- Next in this course, we will discuss aspects of these two parallel stories:
 - (1) The fate of ancient Greek science in both parts of the old Roman empire (the Greek East and the Latin West), down to the 12th century
 - (2) The creation of universities in Europe (mid-12th century and later) and the interaction between faith and reason (incl. science) in the High Middle Ages