Jesus replied: “‘Love the Lord your God with all your heart and with all your soul and with all your mind.’ This is the first and greatest commandment.”
Matt 22:37,38.
Is Evolution Compatible with a Christian Worldview?
A Historical Perspective.

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Some points to keep in mind:

- Significant response to Evolution not necessary before Darwin’s *Origin of Species*

- “Science” then and now:
  independent individuals interested in natural philosophy built on the pagan classical Greek philosophers vs. major gov.-funded secular enterprise
St. Basil the Great

- 329-379, b. Caesarea, (now) Turkey
- studied in Athens
- Visited monasteries in Egypt, started his own monastic order back in Turkey
Remained only 5 years, but his influence was “enormous”-- all monks in the East today are “Basilian”

Became bishop of Caesarea in 370
- Spent most of his time fighting the Arian heresy

- Was very curious: contemplated nature from the behavior of sea urchins to bees

- Wrote the *Hexaemeron*, “On the Six Days of Creation” emphasizing the beauty and wonder of the created world as revelation of the splendor of God
“I want creation to penetrate you with so much admiration that everywhere, wherever you may be, the least plant may bring to you the clear remembrance of the Creator.”

“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.”
The Two Books concept:

Nature and Scripture

Also proposed earlier by Tertullian, ca. 160-220:

“We conclude that God is known first through nature, and then again, more particularly, by doctrine, by nature in His works, and by doctrine in his revealed word.”

Anthony the Abbot, 251-356:

“My book is the created nature, one always at my disposal whenever I want to read God’s words.”
Basil believed that Christians should utilize truth wherever it was to be found. Wrote *Address to Young Men on Reading Greek Literature*

This thought echoed centuries later in Wheaton College philosopher Arthur Holmes’ famous quote,

**All Truth is God’s Truth**
- 354-430, b. N. Africa
- Spent a decade in Italy
- Baptized by St. Ambrose, bishop of Milan
  April 25, 387
Bishop of Hippo, (now) Algeria after 395

- Wrote major Christian works such as
  *The Confessions*,
  *The City of God*,
  *Literal Commentary on Genesis*
Was ambivalent toward the value of studying the natural sciences in themselves

Referring to scholarly discussions on the form of the heavens, he said

“such subjects are of no profit for those who seek eternal happiness, and, what is worse, they take up very precious time that ought to be given to what is spiritually beneficial.”
However, he viewed the natural sciences as very valuable for scriptural interpretation and apologetics.

He promoted the **Handmaiden Formula**.

Idea that the natural sciences were of considerable value in their service to theology and the church.

* Adopted by Christian thinkers for centuries.*
Further developed the **All Truth is God’s Truth** concept

- A good Christian “should understand that wherever he may find truth, it is his Lord’s”
He was very concerned that the interpretation of scripture should be consistent with the known cosmology, physics, and natural philosophy of the time.

An example: his solution to the interpretation of the waters above and below the “firmament” in Genesis 1:6 and the earth being placed over the waters in Psalm 136:6.
He needed to reconcile these passages with the natural science of the day: Aristotle’s theory of the elements.

In this theory, all material things are made of combinations of the four elements earth, water, air, and fire.

It was thought that earth was the heaviest, followed by water, air, and fire, respectively. Therefore a spherical planet made of earth would be covered by successive layers of water, air, and fire.
Figure 1.2. The natural place of everything in the terrestrial (sublunar) region is illustrated by this ideal arrangement of the elements, which would be achieved if each were to be situated in its natural place. Note the spherical Earth, accepted by all educated medieval people. Beyond the sphere of fire is the sphere of the Moon, and beyond that the celestial region.
- His first approach was to argue for a possible figurative meaning, at least for Psalm 136

- He also proposed that the Psalm referred to promontories or rock roofs over caverns
To answer the question of waters above and below the firmament in the Genesis passage, he argued that water, in the form of water vapor, could float above the firmament, similar to clouds floating in air.
Even in his eagerness to reconcile scriptural interpretation with the natural science of the day, Augustine recognized that Christians should be careful to maintain an open mind with regard to scriptural interpretations impinging on scientific matters.
With wisdom he advised,

“In matters that are obscure and far beyond our vision, even in such as we may find treated in Holy Scripture, different interpretations are sometimes possible without prejudice to the faith we have received. In such a case, we should not rush in headlong and so firmly take our stand on one side that, if further progress in the search of truth justly undermines this position, we too fall with it.”
Augustine was also concerned that Christians have an accurate knowledge of natural science in order to be more effective in apologetics.

He wanted to avoid the situation of ignorant statements by Christians harming the credibility of the gospel message.
He wrote that non-Christians know

“something about the earth, the heavens, and the other elements of this world, about the motion and orbit of the stars and even their size and relative positions, about the predictable eclipses of the sun and moon, the cycles of the years and the seasons, about the kinds of animals, shrubs, stones, and so forth…”
“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 a Christian and laugh it to scorn...”
“If they find a Christian mistaken in a field which they themselves know well, and hear him maintaining his foolish opinions about our books [scriptures], how are they going to believe those books in matters concerning the resurrection of the dead, the hope of eternal life and the kingdom of heaven, when they think their pages are full of falsehoods on facts which they themselves have learnt from experience and the light of reason?”
Augustine also further developed the Two Books concept.

"Some people, in order to discover God, read books. But there is a great book: the very appearance of created things. Look above you! Look below you! Note it. Read it."
Roger Bacon

- ca. 1220 - ca. 1292
- Earned advanced degrees at Universities of Oxford and Paris
- 1240s: taught at the U of Paris
- Called “the first scientist”
One of the first professors to teach on the scientific works of Aristotle

1250s: expanded to mathematical and “experimental” science

Joined new Franciscan order
1260s: wrote 3 treatises at the Pope’s request, promoting reforms of Christian learning based on the newly rediscovered natural sciences of the classical tradition.
Reminded Christians of Augustine’s claim that All Truth is God’s Truth

Argued strongly for the Handmaiden status of the natural sciences
Francis Bacon

- 1561-1626
- English lawyer, statesman, intellectual reformer
- Viewed as the champion of the concept of “modern science”
- His ideas led to the founding of the Royal Society

http://emsworth.files.wordpress.com
Proposed an entirely new system of learning based on empirical principles and the active development of new arts and inventions, with the goal of creating practical knowledge for “the use and benefit of men” and the relief of the human condition.
- 1603 Knighted
- 1604 Appointed King’s Counsel
- 1616 Made a member of the Privy Council
- 1618 Made Lord Chancellor
- 1621 Arrested and charged with accepting bribes, pled guilty, removed from office
- Wrote *Magna Instauratio* or Great Renovation (or Edifice)
- Part I, *De Augmentis Scientiarum* or Dignity and Advancement of Learning
- Part II, *Novum Organon*, King James proclaimed it “like the peace of God, which passeth all understanding”
- *Essayes, or Counsels*
- *The New Atlantis*
Bacon’s Understanding of the Two Books

“To conclude, therefore, let no man…think or maintain that a man can search too far or be too well studied in the book of God’s word, or in the book of God’s works; divinity or philosophy; but rather let men endeavor an endless progress or proficiency in both.”
Bacon’s Development of the Two Books

- He gave careful consideration to the relationship of the Two Books.

- Has been misinterpreted to argue that there should be a strict separation between science and theology.
Problems with Confusing the Two Books

- First error: using natural philosophy (science) to derive religious or metaphysical truth

- Second error: using scriptures (spiritual truth) to derive natural philosophy (scientific truth)—in particular the use of the books of Genesis and Job
Proper Domains of the Two Books

- Scripture (learned through revelation):
  - the nature of God
  - the will of God
  - “book which gives life”
  - eternal
Proper Domains of the Two Books

- Nature (learned through observation):
  - wonder
  - the existence of God (refutes atheism)
  - God as Creator
  - God is supremely powerful
  - God governs the world
  - providence of God
  - power of God manifested in a well-ordered universe
  - omnipotence of God
  - God is wise, prescient, good
  - God is an object of adoration
  - temporary
Metaphor of the Temple

- knowledge from nature = Outer courts
- knowledge from scripture = Inner courts ("holiest place of all")
- Both parts of the Temple are sacred
Bacon saw the “Great Instauration” as the *divine plan* for a new age in which human knowledge would see monumental advances.

Later Enlightenment writers sought to represent Bacon as a deist or atheist.

But it is clear from his writings that he was coming from a Christian perspective, although he rejected most of Calvinism and affiliated rather with the writings of the Church Fathers such as Augustine.
“It is an assured truth and a conclusion of experience, that a little or superficial knowledge of philosophy may incline the mind of man to atheism, but a farther proceeding therein doth bring the mind back again to religion…when a man masseth on farther [he] seeth the dependence of causes and the works of Providence…”
Galileo Galilei

- 1564-1642, b. Pisa, Italy

- Galileo affair regarded as the stereotypic battle between religious intolerance and scientific freedom

- Galileo was a strong proponent of the heliocentric model of the solar system over the geocentric model
Models of the Solar System

- **Geocentrism**
  
  Based on the Greek philosopher Aristotle and astronomer Ptolemy

- Spherical immobile earth at center of the universe, with sun circling earth as a planet
- **Heliocentrism**
- Sun at center of universe with earth and other planets orbiting
- Promoted by Nicolaus Copernicus, 1473-1543, Polish church official and astronomer, who wrote *On the Revolutions of the Celestial Orbs*
- Viewed mostly as a curiosity although heliocentric mathematical models of planetary movements were acknowledged to be more accurate
- Heliocentrism was a minority opinion among astronomers and educated people.

- Roman Catholic church was reacting to the Protestant Reformation. Half of Europe had converted to Protestantism in the preceding century.
- Church focused on control of orthodox belief
- Interpretation of scripture was to follow church tradition, under the control of the Church
1615 wrote letter to Castelli, published as *Letter to the Grand Duchess Christina of Tuscany*

- Outlined his views on biblical interpretation of matters in the natural sciences
The primary purpose of the scriptures is “the service of God and the salvation of souls”, not scientific understanding.

“in discussions of physical problems we ought to begin not from the authority of scriptural passages but from sense experiences and necessary demonstrations; for the holy Bible and the phenomena of nature proceed alike from the divine Word, the former as the dictate of the Holy Ghost, and the latter as the observant executrix of God’s commands.”
“I do not feel obliged to believe that the same God who has endowed us with senses, reason and intellect has intended us to forego their use and by some other means to give us knowledge which we can attain by them. He would not require us to deny sense and reason in physical matters which are set before our eyes and minds by direct experience or necessary demonstrations.”
The intention of the scriptures “is to teach us how to go to heaven, not how the heavens go.”
Some scriptures in question

- Ecclesiastes 1:5 “the sun rises and the sun sets, and hurries back to where it rises.”

- Psalm 93:1 “The world is firmly established; it cannot be moved.”
The real issues

- 1. Interpretation of biblical passages addressing cosmology
- 2. Question of epistomology: what is the source of cosmological (and other scientific) truth? Scientific observation and reasoning, or scripture?
Galileo and The Inquisition

- 1616 heliocentrism declared false and heretical. Specifically false:
- That the sun is at rest in the center of the universe
- That the earth is in motion around it
- Galileo forbidden to hold, teach, or defend heliocentrism
The human factor

- Galileo alienated the Jesuits

- Galileo insulted the Pope, Urban VIII, in *Dialogue on the Two Chief World Systems*

- Galileo was right but he wasn’t diplomatic
The Inquisition tries Galileo

- 1633 Galileo found guilty of “disobedience and flagrant insubordination”
- He was sentenced to imprisonment, later commuted to house arrest
- Galileo forced to recant his belief in heliocentrism and remained under house arrest for the remaining nine years of his life
C.S. Lewis
on Evolution

- 1898-1963
- Wrote:
  - The Chronicles of Narnia
  - MereChristianity
  - The Screwtape Letters
- Many others
Lewis accepted an evolutionary origin for man’s biological body--which God then endowed with self- and God-consciousness.
“far earlier in the story of creation, God had raised vegetable life to become the vehicle of animality, and chemical process to be the vehicle of vegetation, and physical process to be the vehicle of chemical.”
Lewis offered a hypothesis that “for long centuries God perfected the animal form which was to become the vehicle of humanity and the image of Himself. He gave it hands whose thumb could be applied to each of the fingers, and jaws and teeth and throat capable of articulation, and a brain sufficiently complex to execute all the material motions whereby rational thought is incarnated. The creature may have existed for ages in this state before it became man…Then in the fullness of time, God” endowed this anthropoid “with a new kind of consciousness…which knew God, which could make judgments of truth, beauty, and goodness”.
While Lewis accepted evolution as a valid scientific theory, he opposed a broader interpretation leading to "evolutionism" and philosophical naturalism.
Billy Graham on Evolution

- 1918-

- "I don't think that there's any conflict at all between science today and the Scriptures..."
...I think that we have misinterpreted the Scriptures many times and we've tried to make the Scriptures say things that they weren't meant to say, and I think that we have made a mistake by thinking that the Bible is a scientific book. The Bible is not a book of science....
...The Bible is a book of redemption, and of course, I accept the Creation story. I believe that God did create the universe. I believe He created man, and whether it came by an evolutionary process and at a certain point He took this person or being and made him a living soul or not, does not change the fact that God did create man...
...I personally believe that it’s just as easy to accept the fact that God took some dust and blew on it and out came a man as it is to accept the fact that God breathed upon man and he became a living soul and it started with some protoplasm and went right on up through the evolutionary process. Either way is by faith and whichever way God did it makes no difference as to what man is and man's relationship to God."
SUMMARY:
Historical Christian Principles
Relating Science and Christian Faith

- Handmaiden Formula
- All Truth is God’s Truth
- The Two Books
- How to go to heaven, not how the heavens go
Ending Thought

- “In essentials, unity.
  In nonessentials, diversity.
  And in all things, charity.”
  St. Augustine
Resources

  http://www.asa3.org/ASA/topics/evolution/commission_on_creation.html.
- Basil the Great. On the Hexaemeron.  
- Basil the Great. Address to Young Men on Reading Greek Literature.  
- Galileo Project, The.  
  Eerdmans, Grand Rapids. (posthumous).