


Creation and Evolution
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Faith and Science

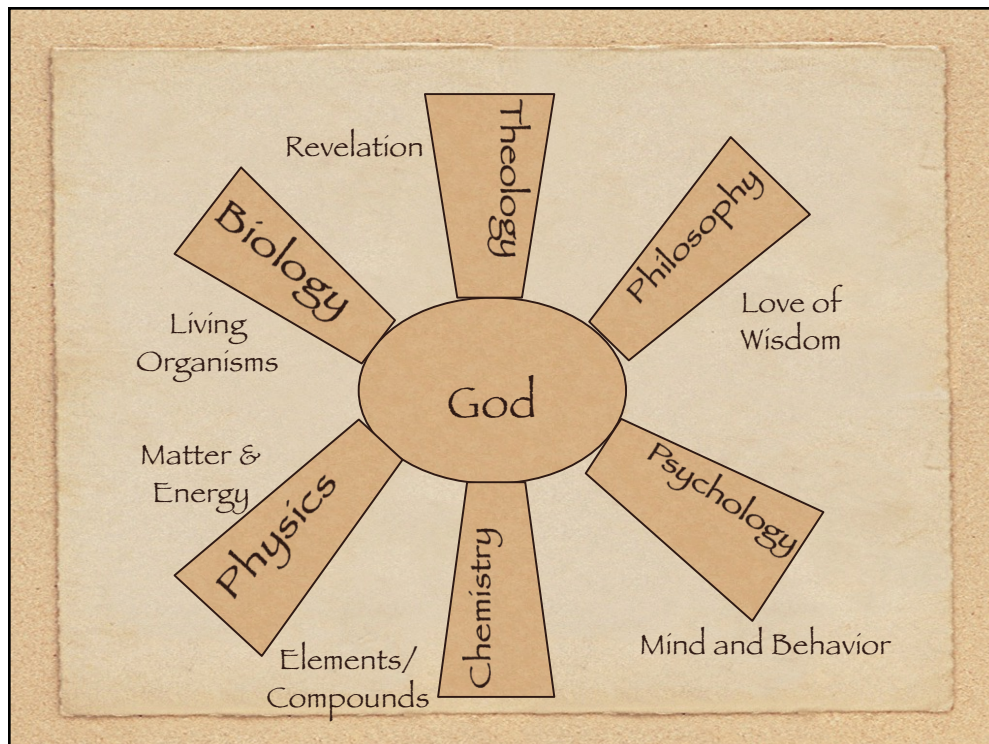
- **CCC 159:** Though faith is above reason, there can never be any real discrepancy between faith and reason.
- Since the same God who reveals mysteries and infuses faith has bestowed the light of reason on the human mind, God cannot deny himself, nor can truth ever contradict truth.”
- **Key:** Made in the image and likeness of God (Gn. 1:26), we seek to understand God and the world we live in via scientific inquiry because we want to know!

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Science and Religion

- **Catholic Catechism:** “Methodical research in all branches of knowledge, provided it is carried out in a truly scientific manner and does not override moral laws, can never conflict with the faith, because the things of the world and the things the of the faith derive from the same God.
- The humble and persevering investigator of the secrets of nature is being led, as it were, by the hand of God in spite of himself, for it is God, the conservator of all things, who made them what they are.” (CCC 159).
- **Key:** The Catholic Church has no fear of science or scientific discovery.

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Genesis 1 & 2

- The *Catechism of the Catholic Church* affirms the creation of the world, along with original holiness and fall of the first couple, as real historical events that Scripture describes in symbolic and figurative ways (CCC 337, 362, 375, 390, 396; cf Hahn, 14).
- Genesis 1-11 offers a *historical* account of primeval times such as creation of the cosmos by God, the creation of man and woman, the unity of the human race, the testing and fall of man from a state of grace and original innocence (Hahn, 14).
- However, Genesis 1-11 exhibit notable parallels with the *mythological* traditions of the ancient Near East. Genesis uses poetic imagery and symbolic representations of the mysteries that pertain to divine and human realities (Hahn, 15).

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Genesis 1 & 2

- **Genesis 1:** Presents the big picture of how God created the heavens and earth in six successive days (rested on seventh).
- **Genesis 2:** Using symbolic truths, the author then zooms in on a small part of the big picture by focusing on the creation of the first man and woman (pinnacle of creation).
- **Key:** In Genesis 1, we hear that man/woman is made in the image and likeness of God. In Genesis 2, we see what it means to be made in God's image and likeness (e.g., dominion and relationship).



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Tohu wa-bohu

- **Without form and void:** The earth is presented as an amorphous mass of material of land submerged in water (Hahn, 17).
- God will bring order out of chaos by His Word so that the earth becomes habitable for plants, animals, and human beings.
- **Without Form:** Days 1-3 will fix the problem “without form” by creating time and space for inhabitants.
- **Void:** Days 4-6 will “fill” each realm with “rulers” or “governors” (e.g., sun, moon, vegetation, animals, mankind).
- God builds the house (1-3), then fills it with inhabitants (4-6).

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Genesis 1

- **Genesis 1:2:** And the earth was without form and void...

Formlessness (tohu)	Emptiness (bohu)	Dimensions
Day 1: Day and Night	Day 4: Sun, Moon, and Stars	Time
Day 2: Sea and Sky	Day 5: Fish and Birds	Space
Day 3: Land and Vegetation	Day 6: Man and Animals	Life
Day 7: The Sabbath Rest		

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Genesis 2

- **Literal translation:** “And YHWH God formed the man, soil, from the ground.”
- **Wordplay:** Man (*‘adam*) is formed from the ground (*‘adamah*). Thus, we have a kind of “soil man” formed from the dust or clay of the ground.
- **Note:** Given that the ground is watered by the mist from the earth, the man is formed from the red gooey clay or mud.
- **Dust:** Symbolic of human mortality. In short, the man has a special relationship to the ground. He is created from it, his job is to cultivate it (2:5, 15) and upon death he returns to it (3:19).

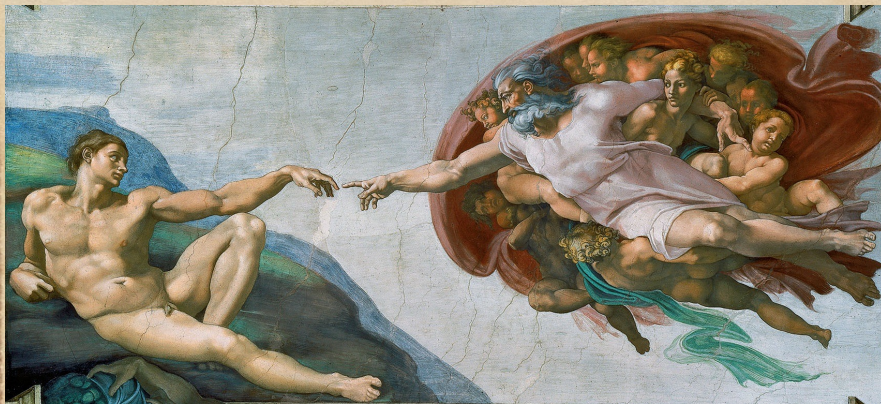
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Breath of Life

- **Breath of Life:** The animating principle that makes man a living creature like the animals.
- This “divine inbreathing” or “spark” makes man a “living being.” In verse 19, God also forms the animals from the ground. However, they do not receive the “divine inbreathing.” Therefore, there is a qualitative difference between the man and the animals.
- For the Hebrews, there is LIFE (breath of life) and life (without breath of life - what animals have).
- **Key:** After Adam eats from the tree of the knowledge of good and evil, he will have life, but not LIFE (breath of life).

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The Creation of Adam



Michelangelo – Sistine Chapel

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Story with an Edge

- Genesis was written in a world dominated by polytheism. People around Israel believed in many gods, oftentimes worshipped in created things (i.e. sun, moon, animals, etc.).
- Genesis says, “God is one.” Additionally, it says, “Our God created what you worship as gods (e.g., sun, moon).”
- **Key:** Genesis proclaims, “There is only one God, who transcends the natural world, created all things in a symphony of natural beauty and order.”
- **Hierarchy:** Inanimate things (sun, moon), animate creatures (plants animals), human race (crown of creation) (Hahn 17).



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We Learn

- **A Few Points about Human Beings so Far:**
 - **Created:** We did not create ourselves and we do not rule the universe by ourselves.
 - **Limited:** We are destined to return to the earth.
 - **Good:** Earth is good; we are not created from negative forces (i.e., blood of demonic god).
 - **One:** We are all formed from God's *one* earth. There are not different kinds of “blood and soil” as the Nazi's believed. There is one humanity in the many human beings (contra racism). ~Ratzinger, *In the Beginning*, 42-44.

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Modern day Garden of Eden?

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Evolution

- There is much discussion surrounding evolution because it touches on the most central beliefs about ourselves and the world. In other words, it hits close to home!
- Evolutionary theories attempt to answer questions about the origins of the universe, life, and more particular, human beings.
- The Book of Genesis offers a historical account of the origin of the universe and human beings in poetic and symbolic language. Its main interest is that God created a harmonious, diverse, and hierarchical world for His glory and the good of every creature. Genesis is not concerned with the detailed questions of how and when God created the universe. This is left to science and discovery!

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Evolution - Three Positions

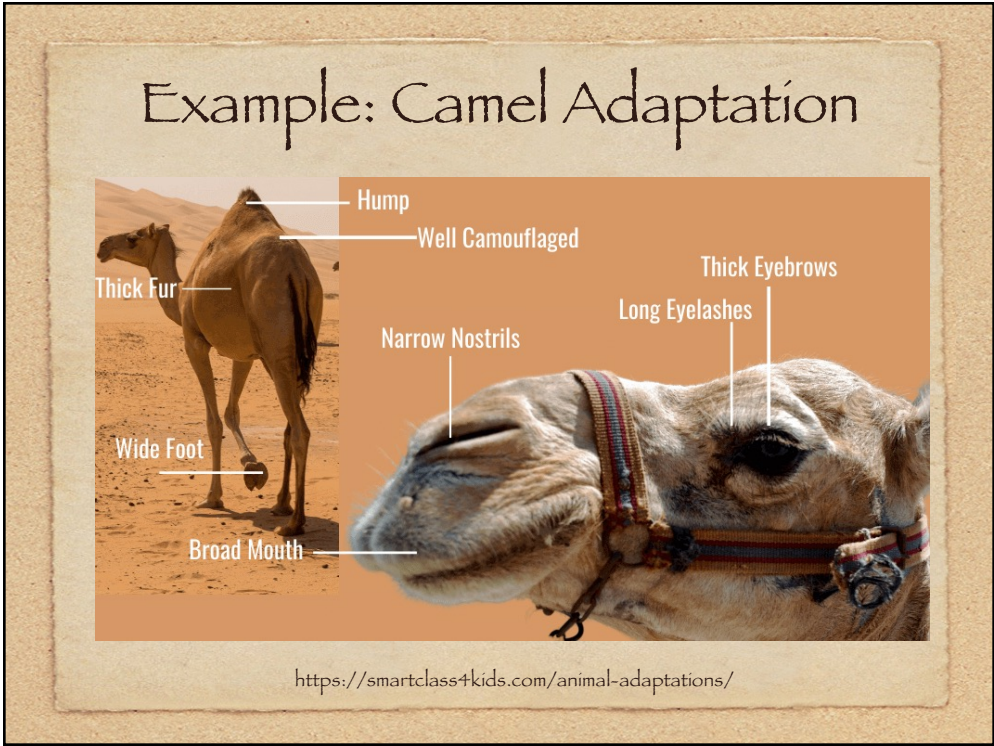
- **Special or Instantaneous Creation:** A given thing does not develop, but was instantaneously and directly created by God. The universe was created 6,000 to 10,000 years ago. This position is often held by fundamentalists.
- **Developmental Creation (Theistic Evolution):** God created the world not in a perfect state, but rather in a "state of becoming" wherein created things develop from a previous state or form to more perfected states under His providence.
- **Atheistic Evolution:** A thing developed due to random forces alone. The universe is roughly 13.8 billion years old, life on earth 4.5 billion years old. Modern man is about 200,000 years old.

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Catholic Position

- What does the Church hold? There are parameters.
- **Cosmological Evolution:** The universe was specially created out of nothing. Vatican I defined that everyone must "confess the world and all things which are contained in it, both spiritual and material, as regards their whole substance, have been produced by God out of nothing" (canon 5).
 - **Key:** The universe is of finite age, i.e., it has not existed for all eternity. It leaves to science its age (1,000s or billions?)
- **Biological Evolution:** The Church does not have an official position on whether life forms developed over time. If they did develop, they did so under the impetus and guidance of God. Ultimately, their creation is ascribed to Him.

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Evolution of Cats

- In less than 20 years, cats evolved from playing with yarn to texting and creating software applications.
- In the next 20 years, it's expected that they will rule the world for their sinister purposes.



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Scientific Studies

- Until recently, *homo sapiens* was thought to have evolved approximately 200,000 years ago in East Africa. This estimate was shaped by the discovery in 1967 of the oldest remains (two skulls) at a site in Ethiopia's Omo Valley.
- In June 2017, however, all of this changed. A multiyear excavation site revealed that *human sapiens* was present at Jebel Irhoud, Morocco. They found skull fragments and a jaw bone dated about 315,000 years ago.
- **Key:** Science should remain open to the prospect that we may have evolved elsewhere in Africa (Rafferty, Just How Old is Homo Sapiens? Britannica. <https://www.britannica.com/story/just-how-old-is-homo-sapiens>).

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Catholic Position

- **Human Evolution:** Man's body could have developed from previous biological forms, under God's guidance. However, the soul was created immediately by God.
- **Key:** Our souls did not evolve, nor are our souls inherited from our parents as our bodies are.
 - **Parent:** I have five children and they could not be more different from each other! Why? While they may have similar physiological features, they have unique souls.
- **Cardinal Ratzinger:** Human beings are not the product of haphazard mistakes, but rather something willed; they are the fruit of love – “Yes Father, you willed me.”

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Evolution

- ***Humani Generis* (1950):** The Church does not forbid that, in conformity with the sciences and sacred theology, research and discussions, on the part of men experienced in both fields, take place with regard to the doctrine of evolution, in as far as it inquires into the origin of the human body as coming from pre-existent and living matter – for the Catholic faith obliges us to hold that souls are immediately created by God (Paragraph 36).
- **Key:** Research and discussions can inquire how God created the body mediately (i.e., indirectly, over time via an evolutionary process). However, the evolutionary process cannot explain the human soul that is uniquely created by God. The Church rejects atheistic evolution or that human beings can be reduced to biological development alone.

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Evolution

- **St. Pope John Paul II:** With man, we find ourselves facing a different ontological order – an ontological leap, we could say.
- **Key:** Certain aspects of a human being such as self-consciousness, self-awareness, moral conscience, self-determination (free will), ascetic and religious experience (i.e., the spiritual dimension) are not the product of an evolutionary process.
- **Pope Benedict XVI:** The theory of evolution seeks to understand and describe biological developments. But in doing so, it cannot explain where the ‘project’ of human persons come from, nor their inner origin, nor their particular nature. To that extent we are faced with two complementary – rather than mutually exclusive – realities.

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Evolution

- **Cardinal Ratzinger (1981):** We must have the audacity to say that the great projects of the living creation are not the products of chance and error. Nor are they the products of a selective process to which divine predicates can be attributed in illogical, unscientific, and even mythic fashion.
- The great projects of the living creation point to a creating Reason and show us a creating Intelligence, and they do so more luminously and radiantly today than ever before. Thus we can say today with a new certitude and joyousness that the human being is indeed a divine project which only the creating Intelligence was strong and great and audacious enough to conceive of.

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Evolution

- **Cardinal Ratzinger (1981)**: The human being is not a mistake but something willed; he is the fruit of love. He can disclose in himself, in the bold project that he is, the language of the creating Intelligence that speaks to him and that moves him to say: "Yes, Father you have willed me."
- In short, scientific discovery cannot explain the 'divine project' of the human being alone. Human beings cannot be understood by materialistic causes alone.
- Instead, the disciplines of philosophy and theology, which reflect on the "why" or the meaning of what it means to be human from a divine and spiritual dimension is needed.

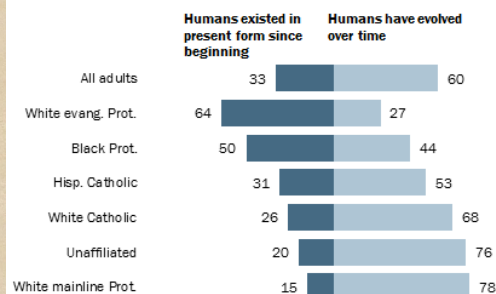
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Evolution

- Views about Human Evolution broken down by religion
- **Catholics believe:**
- Roughly one-third existed in present form since beginning
- Roughly two-thirds humans have evolved over time

Views About Human Evolution, by Religion

% of U.S. adults saying that humans and other living things have existed in their present form since the beginning of time, or humans and other living things have evolved over time



Source: Pew Research Center survey March 21-April 8, 2013, Q54. Those saying "don't know" are not shown. Whites and blacks are those who are non-Hispanic. Hispanics include those of any race.

PEW RESEARCH CENTER

<https://www.pewresearch.org/religion/2013/12/20/public-views-on-human-evolution/>

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Evolution

- **Biology:** Seeks to understand the how and when
- **Theology:** Seeks to understand what (nature) and why.
- Problems quickly begin when science and theology leave their areas of expertise and make claims about questions beyond the competency of their discipline.
- Science cannot answer the questions such as “What is man’s nature” (body/soul) or “why does man exist?”
- Theology leaves the questions of how and when animals and man have evolved over time to the natural sciences.

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Against Polygenism

- **Polygenism:** The theory that, since evolution is an established fact, all human beings now on earth do not descend from one human pair (Adam and Eve), but from different original human ancestors.
 - In other words, we did not descend from a single set of parents, but rather a pool of early human couples, indeterminate in number.
 - **Acts 17:26:** God made from one the whole human race to dwell on the entire face of the earth.
- **Monogenism:** The doctrine that the human race derived from one original human couple, identified in Scripture with Adam and Eve.

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Against Polygenism

- **Humani Generis** (1950): “When, however, there is question of another conjectural opinion, namely polygenism, the children of the Church by no means enjoy such liberty.
- For the faithful cannot embrace that opinion which maintains either that after Adam there existed on this earth true men who did not take their origin through natural generation from him as from the first parents of all, or that Adam represents a certain number of first parents.

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Against Polygenism

- **Humani Generis** (1950): Now, it is in no way apparent how such an opinion can be reconciled that which the sources of revealed truth and the documents of the teaching authority of the Church proposed with regard to original sin which proceeds from a sin actually committed by an individual Adam in which through generation is passed onto all and is in everyone as his own” (*Humani Generis* 37).
- The story of creation and fall of man is a true one, even if it is written in a style different than modern literary techniques.
- **Key:** The Church gives us a big sandbox to play in, but once you go outside the box, you leave Catholic faith and truth.

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Fun Quotes

- **Albert Einstein:** Science without religion is lame, religion without science is blind.
- **Fred Hoyle:** I have always thought it curious that, while most scientists claim to eschew religion, it actually dominates their thoughts more than it does the clergy.
- **Galileo:** Science tells us how the heavens go. Religion tells us how to go to heaven.
- **Albert Einstein:** God does not play dice.
- **Isaac Newton:** Gravity explains the motions of the planets, but it cannot explain who sets the planets in motion.

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Goldy the Scientist



<https://knowyourmeme.com/memes/i-have-no-idea-what-im-doing>

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