Class Five: What is Man: Session Two

Review:

Genetic Isolability
Species

Taxonomy:

Inanimate v Animate

INANIMATE Characterized by:

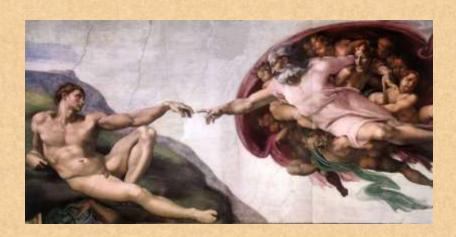
Matter and Form Singular Element Compound ANIMATE Characterized by:

Self Motion
Respiration (carbon dioxide/oxygen)
Healing
Reproduction

Nutrition (for health and growth)

Question Arises: How did Dead Matter Come to Life?







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Spontaneous Generation Versus Abiogenesis

How living things first arose from non-living things

Aristotle himself argued that some species arise spontaneously:

"So with animals, some spring from parent animals according to their kind, whilst others grow spontaneously and not from kindred stock; and of these instances of spontaneous generation some come from putrefying earth or vegetable matter, as is the case with a number of insects, while others are spontaneously generated in the inside of animals out of the secretions of their several organs." (History of Animals; 539a18-26).

Spontaneous Generation = The rising of life from previous living organisms that happens on a regular basis.



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1668 Francesco Reidi to test idea that life came from putrefying meat:

"I began to believe that all worms found in meat derived from flies and not from putrefaction. I was confirmed by observing that, before the meat became wormy, there hovered over it flies of that very kind that later bred in it. Belief unconfirmed by experiment is vain. Therefore I put a [dead] snake, some fish, and a slice of veal in four large, wide-mouthed flasks. These I closed and sealed. Then I filled the same number of flasks in the same way leaving them open. Flies were seen constantly entering and leaving the open flasks. The meat and fish in them became wormy. In the closed flasks were no worms, though the contents were now putrid and stinking. Outside, on the covers of the closed flasks a few maggots eagerly sought some crevice of entry.

"Thus the flesh of dead animals cannot engender worms unless the eggs of the living be deposited therein."



Franceso Reidi 1626-1697



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Then Pasteur (1859) devised an experiment which allowed filtered air TO ENTER but nothing in the air.

He devised glass flasks that remained open to the air, but were bent so that air could only enter by a *curved path* and not the microbes which were captured in the thinly bent necks.

But the materialists and atheists could not be convinced. Pasteur was later countered by biologists who claimed his experiments were invalid because they applied only to life as we know it in today's environment

"What Louis Pasteur and the others who denied spontaneous generation demonstrated is that life **does not currently** *spontaneously* arise in *complex* form from nonlife in nature; he did **not** demonstrate the *impossibility* of life arising in simple form from nonlife by way of a long and propitious series of chemical steps/selections. In particular, they did not show that life cannot arise once, and then evolve."

(Talk of Origins, John S Wilkins)



Louis Pasteur: 1822 - 1895



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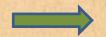
Abiogenesis: Origin of the very first life

Philosophers like Aristotle (although he believed in spontaneous generation) also argued that life was in a thing by the presence of a life force or soul which also gave it form. Life from life.

LIVING Things arise from nonliving matter because there is a "vital heat", a *pneuma*, which is already there, and the proportions of that and the other elements enclosed by the forming structure determine the kind of organism. SOUL and form are present as pneuma and "vital heat"

The "other" elements are those that are necessary to form a cell.

He did not answer how "pneuma" arrived in the matter. It is just there as a basic element.



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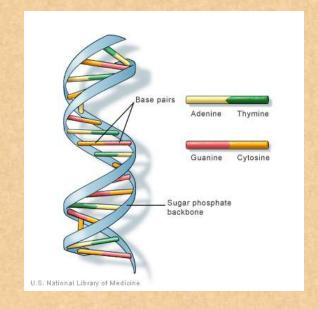
The Soul is the "Principle" of Life and "Form of the body." The two always go together.

"Form" is in the "in**form**ation" contained in the DNA

DNA is a string of nucelic acids that contain the genetic data necessary to form a body. The data is in the ordering of 4 nucleic acids (<u>adenine</u>, <u>cytosine</u>, <u>guanine</u>, <u>thymine</u>).

Every three nucleic acids is a **codon** for a specific amino acid.

Millions of three letter codons are used to build proteins over 20,000 different proteins in body. Everything made of proteins, eyes, nose, bones, teeth, organs etc.



Thus DNA is more associated with life (which science cannot explain) than it is with matter.



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Three species of life = Three species of soul

Vegetative (Plant)

Sentient (Animal)

Rational (Human)

In addition to these animals also have sentient abilities. They reproduce, heal, take in nutrition etc, but they also sense, remember and imagine which are sentient powers or powers associated with the senses. How do we know this?

Human beings have all the vegetative and sentient powers and in addition have one more, rational intellect which it is claimed only they possess.

