Finding New Life:
How Definitions of Life Shape Faith and Science
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What does “life” mean to you?

Pornography definition: I don’t know what it is but I know it when I see it. (Jacobellis v. Ohio, 378 US 184 (1964), Justice Stewart concurring)

Visceral definition: Can I eat it? Can it eat me?

Biblical Definitions: breath

Old Testament Hebrew (~500 BC):
- nephesh (נְפֶשׁ): that which has the breath of life Gen 2:7, Person, Inmost self used of animals in Gen 2:19
- ruach (רוּחַ): Spirit or breath of God Gen 1:2

New Testament Greek (~100 AD):
- pneuma (πνεῦμα): The Spirit of God Mt 12:18, unclean spirits, a person’s breath Mk 15:38
- psyche (ψυχή): that which is animate Mt 16:24-26

Select Passages:
the spirit (pneuma) is willing but the flesh (sarx) is week Mt 26:41, Mk 14:38
“For what will it profit them to gain the whole world and forfeit their life (psyche)?” Mark 8:36
“I am the living bread that came down from heaven. Whoever eats of this bread will live for ever; and the bread that I will give for the life (zoe) of the world is my flesh.” John 6:51
“I came that they may have life (zoe), and have it abundantly.” John 10:10
“For Christ also suffered for sins once for all, the righteous for the unrighteous, in order to bring you to God. He was put to death (thanatos) in the flesh (sarx), but made alive (zoon) in the spirit (pneuma)” 1 Peter 3:18
“the body (soma) without spirit (pneuma) is dead; so is faith (pistis) without works (ergon)” James 2:26

Aristotle’s Definition: the proper activity of living things is a soul (psyche)
nutritive soul – plants
motive/sensitive soul – animals
rational soul – humans (384-322 BC)

Aquinas Definition: the form and activity of a living thing (plants and animals)
AND the form and activity of humans including intellect.
Aristotelian nutritive and motive souls PLUS Platonic rational souls separate creations (1225-1274)

Mechanical Definitions:
must be in terms of particles and universal forces
Pierre Gassendi (1592-1655), Rene Descartes (1596-1650)
Successful Modern Definitions:

**Evolutionary Definition:** capable of adaptation / undergoing Darwinian evolution

Autocatalytic (self replicating) definitions arise with Hagedoorn (1911) and Troland (1917)

Adaptive formulation attributed to Sagan (1970) and "The NASA Definition" à la Joyce (1994)

Maintenance Definition: capable of maintaining local order

Metabolic definitions arise with Oparin (1924) and Haldane (1929)

Entropic attributed to with Schrodinger (1944)

Less Popular Modern Definitions:

Chemical and Biochemical Definitions are currently out of favor as there is no known difference between biological and abiological reactions *per se*. Clearly reactions proceed much faster in biological systems do to catalysts. See Maintenance Definition.

Information Definitions are currently out of favor because of difficulties related to semantic v. thermodynamic uses of “information.” The thermodynamic element is captured in the Maintenance Definition. Alternatively, if information is viewed algorithmically as the adaptive element is captured by the Evolutionary Definition.

Vital Force Definitions are currently out of favor because no evidence has been found for causation based outside the four basic forces.

Big questions in moving definition of life into the mechanical philosophy:

- How do we relate value to the definition of life?
- What do we mean by purpose? Function?
- Are humans exceptional?

If we accept the Evolutionary Definition:
- Does value = success?
- Is evolution progressive?
- Is competition evil? Does it require suffering?

If we accept the Maintenance Definition:
- Is life futile?
- Are there individuals?
- Is disorder evil?

For more information:

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