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# ASTROBIOLOGY IN THE PHILOSOPHICAL TRADITION. PAST AND MODERN PERSPECTIVES. IAC 2018 BREMEN

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## ASTROBIOLOGY IN THE PHILOSOPHICAL TRADITION. PAST AND MODERN PERSPECTIVES.

#### Interaction between Astrobiology – Society – Philosophy Present and Future Challenges – Neo-Philosophy



(Source: Science vs. Philosophy ... or maybe they are continuous by Nick Byrd. https://byrdnick.com/archives/12338/philosophy-is-continuous-with-science)

# I. Astrobiology as a controversial science linked to exoplanet research. Definitions and related terms.

#### - Astrobiology:

- Discipline linked to exoplanet research: 1995 Antropocentrism and Geocentrism casting doubt when Michel Mayor and Didier Queloz discovered exoplanet 51 Pegasi b, distance 50.1 light years using radial velocity methods.
- UNESCO's Database: Astrobiology not appearing / Exobiology does (Source <u>http://skos.um.es/unesco6/?l=en</u>)

#### - Lack of uniform consensus.

- Julian Chela Flores refers to Astrobiology as an interdisciplinary science. Is an opened question for science and philosophy.
- W.T.Huntress Jr. Astrobiology as the study of the origin, evolution and distribution and future of life in the universe.
- David C Catling. Defines astrobiology as the study of the origin and evolution of life on Earth and potential life structures and microbial links everywhere in the Universe

#### I. Definitions and related terms. (cont')

- Philosophy of Astrobiology:
- Roberto Aretxaga- Burgos: Discipline reflecting rationally on its condition of knowledge, its practice, results and consequences.
- Philosopher:
- Bernard–Henri Levy, a philosopher is one who develops, produces and organizes concepts (Levy, 2009).
- Life:
- There is no definition of life that is unanimously accepted (Source Chela Flores, 2011)
- Virus, crystals?
- Life is a self-contained, autopoietic chemical system (self-sufficient, exchanging energy with the environment in which it is found), capable of reproducing itself and experiencing evolution (Source, Chris Impey: The living costmos our search for life in the universe, 2007)
- Autopoiesis:
- The property of a living system that allows it to maintain and renew itself by regulating its composition and conserving its boundaries. (Merriam-Webster)

#### **II.** Astrobiology in the Philosophical Tradition

- Philosophy of Astrobiology in Modern Astrobiology Christiaan Huygens: Life beyond the solar system. Democracy in Cosmology featured in Cosmotheoros (published in 1698). Planets surrounded by Suns plus more than twenty extraterrestrial life forms.



(Image by Alejandra Acosta Source <u>http://litarco.blogspot.com/2017/11/mientras-</u> <u>exista-belleza-existen.html</u>)

### II. Astrobiology in the Philosophical Tradition (cont')

Philosophy of Astrobiology in Modern Astrobiology
Gavriil Adrianovich Tikhov (1940). "Father of Botanical Astronomy".
Variations of Mars' albedo (chromatic / brightness) due to colors of falling leaves from deciduous trees. Head of Astrobotany in Alma-Ata.



(Images from L to R. "Book: Astrobiology" (1953), The author, "Book: Is there life on other planets" (1955). Source Gavriil A. TIKHOV - 125 Anniversary on the birth http://planlab.tripod.com/Tikhov1.htm)

#### **III.** Astrobiology in Current Societies. Studies.

- Non-academic societies. From Inuit to Australian aborigines

General "universal triple structure": an earthly plane, an infernal, subterranean or underwater plane, and, finally a heavenly plane. (Source The Shamans Of Prehistory: Trance And Magic In The Painted Caves by Jean Clottes & David Lewis-williams • Ed Harry N. Abrams, 1998 • Isbn 0810941821 (Isbn13: 9780810941823) • Hardcover, 120 Pages)



(Aborigine Artist Donny Woolagoodja painting a Wandjina, an "entity" from Heaven, Image Source: www.contarhistorias.com.br/2013/02/contadores-de-historias-artistas.html)

#### **IV. Theoretical Non-terrestrial Human Origins.**

- Scientific experiment over altered state of consciousness.

 Carried in a laboratory, this table proves that human brain works using the same behavioral patterns under an altered state of consciousness. Therefore there is a potential base to compare different culture perspectives related to their vision of cosmos. Nomenclature from L 2 R: "Entoptic": Current Lab Inner optical hallucinations", "XIX to XX Century"s San Rock Art": Rock art from South African San Tribe, "Coso": 10K.Y.Old China Lake's Californian Rock Art and 73KYO Paleolithic Rock Art. (Source: The Mind in the Cave: Consciousness and the Origins of Art (2002) by archaeologist David Lewis-Williams)

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#### V. Overcoming matter to survive planetary extinction.

Vastly expanded human intelligence (predominantly nonbiological) spreads through the universe

Technology masters the methods of biology (including human intelligence)

Technology evolves

Brains evolve

**Epoch 3** Brains Information in neural patterns

DNA evolves

Epoch 2 Biology

**Epoch 1** Physics & Chemistry Information in atomic structures

#### The 6 Epochs of Evolution

Evolution works through indirection: it creates a capability and then uses that capability to evolve the next stage.

(Source: Ray Kurzweil's "The Singularity is Near" (2006). According to transhumanism merging humans and technologies might change our physical status)

**Epoch 6** The Universe Wakes Up

Patterns of matter and energy in the universe become saturated with intelligent processes and knowledge

Epoch 5 Merger of Technology and Human Intelligence The methods of biology (including human intelligence) are integrated into the (exponentially expanding) human technology base

**Epoch 4** Technology Information in hardware and software designs

#### VI. Conclusions. More food for thought. Opening Pandora's box.

Are Suns and Galaxies conscious beings? *The Equation proving changing behavioral patters within Galaxies* by Gregory L. Matloff in Can Panpsychism Become an Observational Science? (2016). The farther the slower (ancient thought). Kepler's Law violation. Stars are alive.



25\*10<sup>6</sup> Earth-like planets n the Milky way only... Are we starseeds? A Recurrent Genesis by JS (2018)

#### Thank you!

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