

## Re: New Discipline: Synthetic Biology

**Source:** <http://sci.tech-archive.net/Archive/sci.bio.evolution/2004-10/0097.html>

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**From:** Tim Tyler ([tim\\_at\\_tt1lock.org](mailto:tim_at_tt1lock.org))

**Date:** 10/05/04

Date: Tue, 5 Oct 2004 06:01:33 +0000 (UTC)

Anthony Cerrato <[tcerrato@optonline.net](mailto:tcerrato@optonline.net)> wrote or quoted:

> *"Tim Tyler" <[tim@tt1lock.org](mailto:tim@tt1lock.org)> wrote in message:*

> > *"Artificial life" was /never/ a term confined to computer  
> > simulations.*

> >

> > *It has /always/ been a term that referred to man-made  
> > organisms – of \*all\* sorts.*

> >

> > *Whether the orginsms in question have been in virtual  
> > worlds, made from metal, plastic, silicon, fullerenes, molecular  
> > nanotechnology – or other material – has never been  
> > specified in definitions of the term.*

> >

> > *Alife 1 – back in 1987 – had Eric Drexler, Richard  
> > Dawkins, Hans Moravec, and A. Graham Cairns-Smith giving talks –  
> > those guys are \*not\* computer scientists.*

>

> *Dunno 'bout that. Wikipedia:*

> [http://en.wikipedia.org/wiki/Artificial\\_life](http://en.wikipedia.org/wiki/Artificial_life)

>

> *gives the following statement:*

>

> *"Artificial life, also known as alife, is the study of life  
> through the use of human-made analogs of living systems. Computer  
> scientist Christopher Langton coined the term in the late  
> 1980s when he held the first "International Conference on  
> the Synthesis and Simulation of Living Systems" (otherwise  
> known as Artificial Life I) at the Los Alamos National  
> Laboratory in 1987."*

>

> *Note the phrase, "...is the study of life through  
> the use of human-made analogs of living systems."*

Not a terribly brilliant definition: artificial life is not a study of anything – it is a name for the systems in question.

To refer to a scientific discipline you would have to say "the study of artificial life".

...but apart from that I see no problem with the paragraph.

- > *This jibes with my readings which have always only discussed*
- > *alife in terms of electronic or electromechanical/simulation*
- > *or analog techniques, i.e., they do not usually include real*
- > *world or lab biology/synthesis, which was what I was*
- > *speaking of.*

...but they \*do\* include those things. They may not /usually/ do so today – for the simple reason that we can't /actually/ build most sorts of artificial living organisms today – but all forms of artificial living organisms are covered by the term.

- > *I also note the following definition (which specifically*
- > *includes the word, "simulation,") given in: The American*
- > *Heritage? Dictionary of the English Language, Fourth Edition*
- > *Copyright ? 2000 by Houghton Mifflin Company.*
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- >
- > *artificial life*
- > *n.*
- > *The simulation of biological phenomena through the use of*
- > *computer models, robotics, or biochemistry. Also called*
- > *Alife.*

Any definition of artificial life that claims defines artificial life as a form of simulation is \*miles\* off track.

Artificial life need not be a simulation of anything. Part of the point of it is to create new instances of living organisms.

These need not be copies of – or simulations of – existing living systems.

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