

Re: OOL X – The origin of the RNA world.

Source: <http://sci.tech–archive.net/Archive/sci.bio.evolution/2005–04/msg00533.html>

- *From:* Tim Tyler <tim@xxxxxxxxxxxx>
 - *Date:* Sun, 24 Apr 2005 16:07:56 –0400 (EDT)
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Robert Maas, see <http://tinyurl.com/uh3t> <rem642b@xxxxxxxx> wrote or quoted:

>> From: Tim Tyler <tim@xxxxxxxxxxxx>

>> ... if you look at the system at a random point in time, you are
>> likely to encounter it locked in a relatively stable state by
>> negative feedback mechanisms – without much sign of positive feedback
>> in sight.

>

> This appears to be nothing more than "catastrophe theory". Using a ball
> rolling over landscape metaphor: Most of the time the ball is resting
> at a relative minimum. But as the landscape changes, every once in a
> while, without any obvious warning, a relative minimum spills over a
> former pass, and the ball rolls over the edge and falls into a new
> relative minimum and oscillates wildly until it settles down at the
> minimum. No matter how stable things seem at the moment, next week
> there could be such a catastrophe. Such a spillover "catastrophe" would
> be some kind of environmental collapse causing an extinction event.
> Most of the time it's a small extinction event. Some times it's a major
> extinction event. Eventually it's almost sure to be a total annihilation
> event, after which there will be no more life on Earth. How is that
> like a comforting "goddess" as Lovelock wrote??

Such "catastrophic" shifts are part of Lovelock's theory.

The conservationist take on that side of things seems to be that
that any species that is **too** disruptive will face a series of
rapidly–changing environmental catastrophes – where the fluctuations
continue until the offending species is obliterated or mends its ways.

I suppose if such disruptive species tend to get wiped out by
"mother earth" ;–) there might be a tendency for non–disruptive
species to proliferate.

>> We can be confident from the fossil record that no such periods of
>> super–instability have occurred so far in the history of our planet.

>

> Well, doh, apply the weak anthropic principle: On all planets where
> such has happened already, there's nobody alive to look at the planet
> and see the record of that super–catastrophe.

Your description of a "super-catastrophe" involved all eukariotic life on Earth going extinct.

Such an event would certainly represent a set-back – but surely it would not preclude the subsequent development of advanced intelligence.

- >> I don't think Gaia is a particularly "futurological" theory, and so
- >> it probably doesn't have much to say about the possibility of such
- >> super-instability arising in the far future.
- >
- > Yes, that's my point: I take no comfort in "gaia" because it doesn't
- > give any reason to expect us to live another ten years much less have
- > descendants alive a billion years in the future. Basically "gaia" is no
- > better than the weak anthropic principle: We're alive now to observe
- > the past, which implies the past must have been survivable, but makes no
- > comparable implication about the future being survivable.
- >
- > We've been lucky so-far. That's no reason to expect the luck to continue.

Gaia is a theory about the state of life on earth. It's not supposed to be "comforting".

If anything those who support it often have exactly the opposite approach to the theory – they think it illustrates that an ecosystem pushed too far out of balance by a species is liable to react with cataclysmic environmental shifts that continue until the disruptive species is wiped out – or learns to live in better harmony with its environment.

Therefore – so the argument goes – why not realise this; and learn the lesson *before* the reprimands begin.

Jim Tyler <http://timtyler.org/> tim@xxxxxxxxxxx Remove lock to reply.

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• *Follow-Ups:*

- ◆ **Re: OOL X – The origin of the RNA world.**
◇ From: Robert Maas, see <http://tinyurl.com/uh3t>

• *References:*

- ◆ **Re: OOL X – The origin of the RNA world.**
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