

Re: specialization momentum

Source: <http://sci.tech--archive.net/Archive/sci.bio.evolution/2005-06/msg00568.html>

- *From:* "g" <gillawton@xxxxxxxxxxxxxx>
 - *Date:* Mon, 27 Jun 2005 01:44:16 -0400 (EDT)
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"g" <gillawton@xxxxxxxxxxxxxx> wrote in message news:...

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> "g" <gillawton@xxxxxxxxxxxxxx> wrote in message news:...

>>> The Concept of Momentum of Specialization

>>> By Gil Lawton

>>> June 25, 2005

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> Title: Part II, MoS and the 'differentiation dilemma' in current stem

> cell research

> By: Gil Lawton

> Date; June 26, 2005

self snip down to j.

> > j. What we have at this point then is equivalent to a specialization

> momentum dance. Morphological change would follow the classical law of

> physics relating to momentum of an object of mass, provided it is not

> influenced by any internal influences. But in the case of evolution we

> have things changing externally ALL the time (and, more subtly perhaps, in

> respect to any piece of mass in the universe. Let us assume (although it

> is not a certainty) that we

> would not get mutations if it were not for our little organism's getting

> struck by a muon coming in from outer space, or a beta particle from radio

> active decay in a rock. Again, the point here is not to answer every

> question that could be asked about everything, but to construct a possible

> conceptual base for going on to examine those questions in a way such that

> two people are referring to the same concepts when they share knowledge

> (or creative speculation) with one another.

>

self snip of all after paragraph j.

ERRORS IN ORIGINAL ARE MISLEADING, SO REWRITE FOLLOWS:

j. What we have at this point then is equivalent to a MoS dance among five actors, one of those actors being the EXTERNAL MILIEU. It, too, is changing in this early era of evolution, even as it has continued ever since, and continues today. Parallels are consistent for each actor, but the "effective forces" acting upon each actor are different, because the YN filters for each are determined by what it senses for (i.e., what would pass as providing an advantage in going toward a source of light, would not be an

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advantage for detecting and going toward a sound, for example). {For any who might need a quick review on Newton's three laws of motion and mass: I. Every object in a state of uniform motion tends to remain in that state of motion unless an external force is applied to it; II. The relationship between an object's mass and its acceleration a , and the applied force F is $F = ma$. (for more read up on acceleration vectors); III. For every action there is an equal and opposite reaction.} It may take some getting used to, to hold in this in the mind, but it could be depicted in form of a graph, on which there are five vertical lines running parallel to one another, passing through the same period of evolutionary time, with little arrow points drawn here and there to indicate where the momentum might have sped up or slowed down for one at different points than for any other. Each actor marches to its own opportunity drummer, and each drummer can increase or decrease the pace, at any time. Also, it is important to keep in mind that after different Y experiences, the rate is influenced by what is the size of the "next step" (which might take more than one mutation to get either a Y or an N. This is comparable to, say, the amount of time and effort it takes an Olympic diver to climb the latter, how much time and effort to make his approach to the end of the board, and how much time and energy it takes him, after leaving the board, to enter the water. Each new increment of advantageous change can have a 1:1 statistical likelihood, or a 1:10 likelihood, or a 1:1,000 likelihood, or even more difficult odds. But even enormous odds get their turn at occurring, within a few hundred millions of years. And even a drunk can get a cabbie to stop, if the night is long enough. (:>) (And, also, this paragraph obviously needs to be broken into at least three in a later rewrite.)

g

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