From: Stanley N Salthe
To: P F Henshaw;
Subject: Re: cosmos article - MEP finalities
Date: Tuesday, November 16, 2010 4:23:33 PM

Phil --

On Tue, Nov 16, 2010 at 12:56 PM, P F Henshaw <eco@synapse9.com> wrote:

> What I completely agree with is that our cultural images are not the things of nature. Consciousness really plays tricks on us representing everything that way.

Not just tricks. It molds our consciousness.

> I just think it's going too far to rule out the possibility that there might also be identifiable independent things of nature to study too.

They are 'out there', but what they are like independent of us is no one's guess.

> That's what I was addressing in the linked paper, how to get abstract definitions to become objective references to whole environmental systems in all their complexity.

I agree that you would have to struggle to get beyond our biological and cultural constructions.

> The method is to identify the functional (energy using) boundary of businesses as a whole system, by assessing the whole network of energy uses needed to make it a working unit of organization in the environment. That makes the natural system measurable and explorable, depending of course, on taking care to not see the physical system AS the abstract boundary you define, but as the whole system beyond your information that clearly is needed to be able to define a boundary .

A business is easier than a 'natural' object, because it is 'manmade'

> I'm fine with having understandings as a prime objective, by itself. I think you get a greater understanding if it can relate ideas to the less tangible subjects of self-organizing processes in nature. You could make a fishing analogy, with the captain saying "I'm never going to jump in the water and go swimming for fish ever again! Maybe they don't even exist." and the oarsman saying "Look captain, that's not necessary, just drop a line and hook in and wait a while, and they bite". ;-)

Fish bodies are 'out there' to be captured, but we have no ida about what they are doing or mean 'out there'. We know them as they relate to us.

STAN

> Phil
>
> HDS Systems Design Science ¸¸¸¸.·´ ¯ `·.¸¸¸¸

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Re:

From: Stanley N Salthe [mailto:ssalthe@binghamton.edu]
Sent: Tuesday, November 16, 2010 10:38 AM

To: P F Henshaw
Subject: Re: cosmos article - MEP finalities

Phil --

On Mon, Nov 15, 2010 at 9:22 PM, P F Henshaw <eco@synapse9.com> wrote:

Stan,

Thanks. I do seem to find some of the same struggle with others, including my collaborators. In trying to discuss tools for studying complex organization in nature it's hard to get people to agree if there is a material subject of nature for the tools to apply to. Scientists tend to consider organization in nature as a set of rules or explanations, arranged in connection with their others, not as physical things notable for our lack of information about how they work or are connected to other things. I need people to have their attention going back and forth between the two subjects, taking a view like Robert Rosen's two "parallel realities", the physical organization in the world we only see signs of (his "natural systems"), and an explanatory world assembled by cultural processes (his "formal systems").

You and I sometimes seem very much in synch on that, and sometimes miles apart. Do you see how we could clarify the process of going back and forth between discussing systems as physical objects and as from the view of principles and models? For me going back and forth is key to shaping explanations to the physical subjects of nature, and frustrated when unable to keep the two subjects apart.

Well, it seems to me, as a constructivist, that seeing physical things and objects out there as such is not really possible, because our culture and or theories inform us about how to investigate anything. Everything observed is 'theory laden'. This is one reason (since I'm not trying to do useful or salable work) why I have decided to spend my time theorizing rather than observing.

I have another nice paper, probably to be accepted for Sustainability soon, specifically on how to define complex environmental systems as objects of reference for science, fyi. It's specifically on how to define the boundary of a business as a physical system for measuring its total energy consumption.

So here we have another attempt to effect something rather than to just get an understanding (which is my game).

STAN

All the best,

HDS Systems Design Science ¸ ¸ ¸ ¸.´ ¯ `.¸ ¸ ¸ ¸

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Re:

From: Stanley N Salthe [mailto:ssalthe@binghamton.edu]
Sent: Monday, November 15, 2010 2:23 PM

To: P F Henshaw
Subject: Re: cosmos article - MEP finalities

Sounds reasonable to me. But, note, I do not oppose or denigrate your approach. Any application of models should be done your way.

STAN

On Sat, Nov 13, 2010 at 2:10 PM, P F Henshaw <eco@synapse9.com> wrote:

Yes, I guess you seem to be saying that outcomes can be seen as independent of the path of development. That may point to a basic difference between our approaches, between defining terms wide enough to fit all cases or narrow enough to distinguish individual differences.

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Re:

From: Stanley N Salthe [mailto:ssalthe@binghamton.edu]
Sent: Saturday, November 13, 2010 10:23 AM

To: P F Henshaw
Subject: Re: cosmos article - MEP finalities

Phil --

On Fri, Nov 12, 2010 at 5:48 PM, P F Henshaw <eco@synapse9.com> wrote:

Oh, that was your comments then. Thanks. I unfortunately don't have a copy due to a software glitch it seems.

You say "The choice would go to that which mediates the energy flows fastest." What about the differences that are determined by the quality of organization as a system develops? Won't a system that starts off the fastest sometimes not get the furthest, and things like that? I notice that things that start off fastest (my own efforts too) often bumble their own process and don't get far.

When speaking about simple physical systems, as I thought you were, those that dissipate the energy gradient fastest will get most of it, excluding the others.

Don't you observe that slow development is sometimes more sound and well coordinated and can go further, for example, and rapid development may be full of inconsistencies and prone to failure?

In more complicated (living, social, systems) OK. But the general principle still holds with them.

Wouldn't that say a quantitative measure is incomplete, and point to a need to treat models based on quantitative measures as incomplete too?

For complicate systems, yes. But here, with equally well designed systems, that which works hardest (fastest) will in principle get most of the energy, and prevail in the search for more.

Then you'd need some reason and some method for looking beyond what a model makes predictable, if it's presumed to be incomplete, to examine the quality of the organization of the system and its match to its environment, wouldn't you?

OK.

Couldn't some qualities of development allow a system to exceed the normally

predictable maximum potential?

I can't follow this.

STAN

phil

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Re:

From: Stanley N Salthe [mailto:ssalthe@binghamton.edu]
Sent: Friday, November 12, 2010 2:58 PM

To: P F Henshaw
Subject: Re: cosmos article - MEP finalities

Phil --

On Fri, Nov 12, 2010 at 2:27 PM, P F Henshaw <eco@synapse9.com> wrote:

I didn't see your review of it I don't think. Do you know if it's posted, or if not, do you have a copy I could see?

I mean I refereed it for the journal. I presume you have already seen it.

My reference to upper and lower bounds is to the development of a dissipative system, referring the variations in the path of development for similar energy transfer systems, say the variety of storms and how much of a the heat of the day they individually entrain depending on the scale and efficiency of their convective column. Given the same gradient the systems that develop to exploit it show a variety within a general range, though sometimes also having singular exceptions too. The simpler the system the less variety might be one rule to consider.

The choice would go to that which mediates the energy flows fastest.

STAN

phil

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Re:

From: Stanley N Salthe [mailto:ssalthe@binghamton.edu]
Sent: Friday, November 12, 2010 9:35 AM
To: P F Henshaw
Subject: Re: cosmos article - MEP finalities

Hi, Phil --

On Thu, Nov 11, 2010 at 9:35 PM, P F Henshaw <eco@synapse9.com> wrote:

Stan,

Hi, hope all's well.

I liked your concept of prebiotic dissipative systems being characterized by convective structures. Convection often does have the quintessential "body form" of an input/output passageway involving organization that tunnels through a potential barrier. One of my puzzles about MEP tendencies is how to discuss the least upper bound and greatest lower bound of developmental processes.

Not quite sure of your reference here. In thermodynamics, of course, the greatest upper bound of a system is found when entropy produced > newly embodied energy in the form of the observed system. I would suppose the lower bound would be that where the dispersion of energy is visible as randomization. Physically, this is usually at the molecular level in material systems. But, see below.

Where there is a population of many different but similar processes to compare you do get a real envelope of variations on a theme. For individual development processes, how they maximize energy flow seems, to my eye, to involve "variation at the leading edge", a sort of exploratory probing of their environment like "foraging" that causes their path of development to wander in the region of MEP, between some least upper and greatest lower bound for the environment.

I agree with this image. Here your "bounds" seem to have different meaning, concerning rates of energy flows: upper bound is where turbulence wipes out the dissipative structure, and the lower where conduction takes over from convection.

Did you see my piece? At one time (I found the att'd email somehow, to refresh fyi) I thought you seemed excited and urged me to write up the idea of considering physical systems as having natural limits of scale that might require "=" signs in one's models to become "?" marks, prompting one to wonder about organization on other scales and the relatively undefined physical context of the system, looking for hints on what model would be useful next.

Yes,I saw it, and also reviewed it.

Best, STAN

Best,

Philip F Henshaw - HDS Systems Design Science ,,,,.·´¯`·.
,,,,

tel: 212-795-4844 680 Ft. Washington Ave NY NY 10040 www.synapse9.com

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"not what you know, but what your world is learning"

Re:

http://www.cosmosandhistory.org/index.php/journal/article/view/176/295