Re: Stephen Wolfram vs. Charles Darwin on natural selection

Source: http://sci.tech−archive.net/Archive/sci.bio.evolution/2008−12/msg00022.html

- *From*: r norman <r_s_norman@xxxxxxxxxxxx>
- *Date*: Sun, 7 Dec 2008 14:32:03 −0500 (EST)

On Fri, 5 Dec 2008 13:47:14 −0500 (EST), Lorentz
<drosen0000@xxxxxxxxx> wrote:

> On Dec 4, 1:24=A0pm, r norman <r_s_norman@xxxxxxxxxxxx> wrote:
>
> > On Wed, 3 Dec 2008 12:05:35 −0500 (EST), Tim Tyler
> >
> > <seemy...@xxxxxxxxxxxxxx> wrote:
> >
> > > On Dec 3, 6:36 am, r norman
> > > <r_s_norman@xxxxxxxxxxxx> wrote:
> > >
> > > > On Mon, 1 Dec 2008 13:43:04 −0500 (EST),
> > > > Tim Tyler
> > > >
> > > > > Right − but Richard
> > > > > Dawkins made no claim of
> > > > > uniqueness.
> > > > > If you look at his
> > > > > specification, what it says is:
> > > > >
> > > > > ``It is important to specify
> > > > > that both books describe
> > > > > their
> > > > > =A0respective animals
> > > > > 'down to the same level of
> > > > > detail'.
> > > > > =A0Obviously, if we
> > > > > describe the millipede down
> > > > > to cellular
> > > > > =A0detail, but stick to gross

> anatomical features in the
> case
> =A0of the lobster, the
> millipede would come out
> ahead.
>
> =A0
> −http://www.skeptics.com.au/articles/dawkins.htm
> =A0
> −http://books.google.com/books?id=3D3DDwD4bjQozgYC&pg=3D3DPA10
>
> lpg=3D3DPA100
>
> Without any description =A0of just what
> detail must be included and ho=
>
> w
>
> unique the description must =A0be, the
> notion of complexity simply mak=
>
> es
>
> no sense whatsoever. [...]
>
> It is just like Kolmogorov complexity − where you need to
> specify the
> descriptive language. =A0The language isn't built into the
> whole idea −
> simply because there are many languages and different ones
> are
> appropriate under different circumstances.
>
> In Richard's example you DO need to specify the "level of
> detail" −
> but you DO NOT need to specify how unique the resulting
> description
> must be.
>
> So the question remains: =A0is "length of a description" at all a useful measure of complexity for an organism, even as a rough measure? =A0Is there any way of describing very different kinds of organisms "down to

> the same level of detail"? =A0
>
> > I think one can't until one defines what an individual is. A group of
> > organisms is more complex than an individual organism. The size of the
> > description may be the same for 8 paramecia or a volvox with 8 cells.
> > So if I see an increase in complexity, is it aa increase in complexity
> > per organism or a decrease in number of organisms?
> > Think siponophores. Is the siphonopore individual just a complex
> > jelly fish, or is it a colony of simple jellyfish?

Exactly. How can you compare the "level of detail" when describing all of life, from bacteria to highly specialized animals? Even limiting the problem to animals, what "level of detail" is needed to describe a parasite with greatly reduced organs and organ systems but with a complex life cycle involving multiple life stages with different required hosts? How does that compare with a social insect life a leaf cutter ant? I don't think the notion of comparing complexity makes any sense here.

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