

Re: "Algorithms" in Molecular Biology?

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- *From:* "John Edser" <edser@xxxxxxxxxxx>
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"Robert J. Kolker" nowhere@xxxxxxxxxxx wrote:–

dougwedel@xxxxxxxxxxx wrote:

Yet I wonder: do serious biologists talk in terms of "algorithms"? Can anyone direct me to such a discussion? And if not, why not?

Algorithms are artificial contrivances constructed by intelligent folks like us.

JE:–

IOW algorithm's are just synonyms for "simplified/over simplified models" which are mostly but not exclusively, mathematically based. Mathematics is not a science. Thus one particular question immediately asserts itself: what are these models simplified/oversimplified from? Models cannot be validly employed within the sciences unless an unambiguous answer is provided. Providing an answer to this question has been evaded within sbe for over 5 years now. The only possible answer is any theory which can be tested to three criteria

- 1) Verification.
- 2) Non verification.
- 3) Refutation.

It remains important never to confuse a non verification with a refutation simply because a non verification is NON DEFINITIVE. When employing these three tests only the refutation test is definitive. Without any possibility of refutation "anything goes" simply because everything remains 100% relative to just nothing specified. My detailed worked example within evolutionary theory is Hamilton's Rule where the unique fitness constant K which represents the Total Darwinian Fitness (TDF) of the actor remains deleted within Hamilton's Rule as a deliberate act of oversimplification (deletion of a critical constant term):

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$rb > c$

Here Hamilton et al have allowed organism fitness altruism to evolve using just a non definitive 100% relative irrefutable rule. This has allowed cause and effect to become reversed within the rule.

When the TDF fitness constant now becomes included providing a refutable proposition Hamilton's becomes:

$rb > K-c$

Where K = the TDF of the actor.

Now organism fitness altruism cannot evolve and cause and effect cannot be reversed. This critical correction forces Hamilton's rule to become relative to a unique constant allowable per Darwinian selectee depicted as K which counts the total number of STRICTLY fertile forms Hamilton's actor reproduced into the population concerned. Each Darwinian selectee (one fertile form) can only produce one total number of fertile forms that it has reproduced into one population. One relative selective event is produced whenever one TDF is compared by default to at least one other in the same population. These relative events occur automatically and immediately, after each TDF has be produced.

If all historical TDF totals were actually known then every evolutionary event could in theory, be repeated. If TDF could be accurately predicted then evolution could in theory, be predicted well before it actually happened.

What do molecules know and when did the find out? Just because something resembles and algorithm does not mean it is an algorithm. As the old joke goes you have Descarte before ze horse. Next thing you will be saying a dropped object is an algorithm for determining the time it takes an object to fall to the ground.

A correct "algorithm" here can be any simplification of Newtonian Mechanics theory where a variable (not a constant) becomes deleted e.g. the coefficient of friction may be deleted. It should be just obvious that any simplified/oversimplified model cannot contest or replace the theory the model was simplified/oversimplified from. Yet this is happening
UNCORRECTED, almost all the time within gene centric Neo Darwinism.

Regards,

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