

The Purpose of Life: Eating to Live or Living to Eat?

Stephen J Brewer, April 2015*

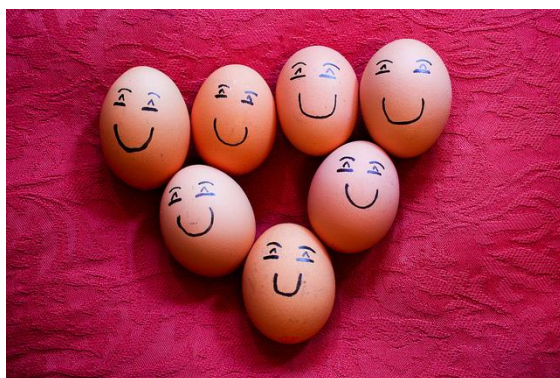
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Forget about some high moral or religious purpose, Max and Orin are debating something much more basic: the purpose of finding food and eating it! In ‘The Origins of Self’ both disagreed that evolution has no purpose by pointing out that animals do in fact have one: that of survival and reproduction. This purposeful agency drives the process of natural selection and hence evolution itself. Max, however, believes we can account for this solely in terms of a physical agency where the only purpose of eating is to survive and reproduce. Orin, on the other hand, believes that animals must also *enjoy* the experience of eating.

The two were ‘too busy’ to debate this issue face to face, so what follows is the result of separate interviews where Max and Orin expounded their views on the issue.

Interviewer: Max, you do accept that in order to explain evolution, living entities must pursue some form of goal.



“Eggspontial” Growth

Max: That’s true, but this goal is entirely physical in nature. Living machines only differ from other machines because they are self-replicating. They do this by gathering ‘parts’ from the environment and assembling them according to an inbuilt plan. They then release their progeny back into the environment where these children compete for ‘parts’ along with the parents. The number of progeny increases exponentially until one of the parts becomes exhausted and reproduction grinds to a halt.

Interviewer: How do these living machines evolve?

Max: We simply need a new ‘mutant’ self-replicator that can use an alternative to the used-up part. This mutant will self-replicate until another one of the essential parts runs out. Provided there are such mutants, this process continually selects for novel machines adapted to new environments. As this process of ‘natural selection’ continues, the environment becomes populated with an increasingly diverse mix of self-replicating machines.

Interviewer: Then how does this process lead to the incredibly complex living machines we see today?

Max: For example, by producing a mutant that integrates the processes of two systems, the more complex machine can reproduce when either part runs out. By integrating even more systems, reproduction occurs in an ever-widening range of environments. So, the process of natural selection and mutation interact to increase the complexity of these living machines.

Interviewer: In your view, is the primary driver in this evolutionary process natural selection or the self-replicator?



[Cyborg Through a Glass Darkly](#)

Max: This is where I believe the emphasis on natural selection is wrong. Evolution is an iterative process between these machines and their local environment. The self-replicating machines are the main agents because they cause the changes in the local environment. Also, it is the machines that produce the variants solving the problem they created. So, if I were to look for the 'driver' then it would be the machine. The environment is passive; the machine is active and therefore is the agent of change.

Interviewer: So is there a purpose to evolution?

Max: Evolution has no purpose, but the living machines do. A machine is an agent of change because it replicates itself. In contrast, the environment has no agency but is the passive component. Although Orin believes otherwise, there is no need for science to incorporate any purposeful desire to explain evolution. This aspect of our lives is irrelevant to this science. Instead, the purpose of the machine is what it does and a purely physical process can entirely explain evolution.

Interviewer: Thank you for providing such a clear and rational explanation for the process by which animals have evolved.

Now Orin, both you and Max agree that evolution requires the presence of purposeful living agents, but you argue that these aims are aesthetic! This seems an extraordinary claim to make.

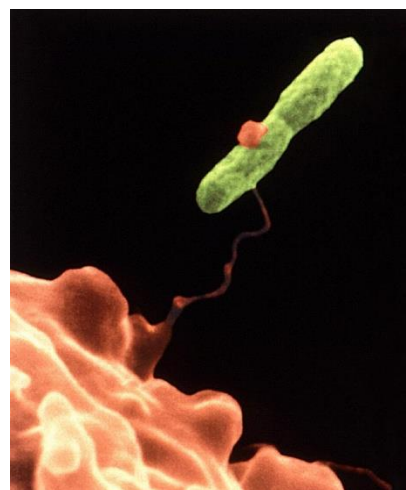
Orin: It is not one or the other; instead, I believe that life uses both aesthetic and what Max describes as physical goals. You require both to explain the evolution of life. However, you should not see 'aesthetic' as referring to a sophisticated love of fine art, classical music or gourmet meals. It is still, however, about having 'good taste', that is a liking for things that taste, look or sound good and disliking the opposite!

Interviewer: OK, using your wide definition, we might accept that humans try to satisfy a vast range of aesthetic goals, but what does this have to do with evolution?

Orin: It has everything to do with how *we* survive and reproduce since it is desire that draws us into the world to seek pleasurable experiences and avoid the bad ones. Without this 'taste for life', we would do nothing when we got hungry, simply starve to death. The trick is to go about satisfying these aesthetic desires without being killed in the process.

Interviewer: This may well be true for humans and even other animals at the top of the evolutionary tree, but how can you claim that our primitive evolutionary ancestors had aesthetic aims?

Orin: Well, there are so many examples of even primitive animals knowing what they need and going for it. Just think of how plants head for sunlight while their roots burrow into the soil for water. Then lower down the scale, amoebas will follow the source of food chemicals to engulf their prey, but will withdraw themselves from acids or heat. Even bacteria move towards sources of food. These observations strongly suggest that primitive organisms experience their environment and react to its 'taste'.



[An amoeba capturing a bacterium](#)

Interviewer: But most life-scientists don't see it this way, they would say you've taken anthropomorphism to a totally unjustified extreme. There is no proof that such primitive animals taste their world.

Orin: This 'lack of proof' is always true when we are talking about subjective feelings. I can know my own feelings but I cannot be sure if mine are the same as yours or for that matter if you are having any feelings at all. What I can observe is that you react in a similar way to me in similar circumstances. Therefore, when we see animals reacting, we assume they too must be feeling some urge making them act. Why is this so wrong?

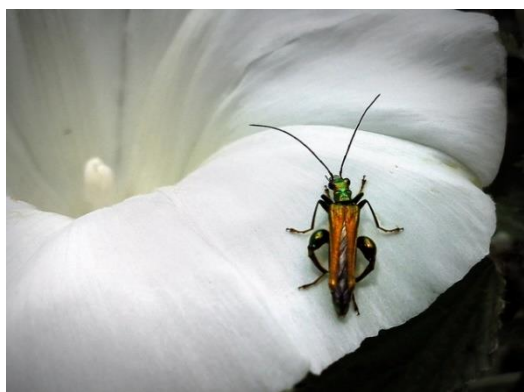
In any case, the strong argument is a philosophical one concerning science itself. The Theory of Evolution requires that complex organisms have emerged from simpler ones and so we can trace our ancestors back to a primordial organism. This means the potential for what we are now must always have been present. If not we have an inexplicable break in the chain.

Interviewer: So why is that a problem?

Orin: If there are such breaks, we have to say, 'we have no idea how that happened so our enjoyment of food must be a brute fact or even a miracle' and science can go no further. There can be no such gaps if evolutionary science is to understand where we come from and how we got here. We might not presently understand how, but the faith of science is that in the future it will be bridged. When we do identify the process that allows subjective feelings to emerge from physical states, we will explain how primitive animals are able to 'taste' the world. There are many promising ideas for this such as how inputs of energy change the state of chemicals so that they enter, what chemists call the 'excited state'.

For now, we have this gap. Unfortunately, this led many scientists to claim that animals do not enjoy such experiences and even our feelings are illusionary with no power to make us act. This so obviously flies in the face of how we and other animals are driven by desire to satisfy our appetites, it is as silly as saying gravity is just an illusion. After all, even if our desires were illusions, we still need to find the source; otherwise, it too seems to appear by magic.

Interviewer: What then is your explanation of evolution?



[The Aesthetics of Life](#)

Orin: When we see that both physical and aesthetic aims drive life we have all the necessary components to explain how simple self-replicators can evolve into fully conscious animals. At the very lowest stages the physical is predominant and the aesthetic goal negligible, but by the time we get to humans, the aesthetic goal dominates just about everything we do. We feel hunger as a longing, and enjoy not just satisfying that hunger, but the hunt for food itself.

Interviewer: Orin, I thank you for providing such a controversial perspective on this issue.

Max and Orin have now stated an argument that is at the forefront of evolutionary science and philosophy. In the end, the question seems to boil down to whether you believe that animals 'eat to live or live to eat'!

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