i22 Which came first the chicken or the egg?

< the chicken, not as Butler quipped >

I feel most deeply that the whole subject is too profound for the human intellect.
A dog might as well speculate on the mind of Newton —Darwin,1860.[1]

The central purpose of evolution is the survival of DNA; not of the beings that are the DNA's temporary expression. This has been well argued by the ultra neo-Darwinian evolutionary biologist Richard Dawkins in *The Selfish Gene*, 1976.[2] The first living cells, the first plants and animals, emerged merely because they were better mechanisms for repeating that first ancient accident of replication. This is his modern twist on the misleading quip by Samuel Butler in *Life and Habit*, 1877, that: "A hen is only an egg's way of making another egg."[3] The same temporal sequence is implicit in the Bantu proverb *vera* Gerd de Ley, 1998: "The egg teaches the chicken how to breed."[4] In *On Food and Cooking*, 2004, Harold McGee cracks: "the egg came first."[5]

But the lie to these heresies (creation myths have the logic of fully formed adults created first, not eggs) is the very subject of post-Darwinian evolutionary understanding: spontaneous mutation. This gives us the answer to the Darwinian conundrum: Which came first the chicken or the egg? The answer is: the "chicken" (a reptile proxy as regards the egg). This can be reasoned as follows:

> Amphibian's eggs, like fish eggs, must be laid in water to survive. Accordingly, an amphibian laid an egg in water. Its hard-wired mental programming required it to do so. And this egg housed an embryo that would be born amphibian-style in water. But that embryo, unlike the amphibian laid-in-water egg that housed it, was a mutant and at conception it was the first "chicken." This first chicken hatched from an amphibian's egg, lived and looked like an amphibian, but when as an adult it reproduced it would reveal itself to be the first hen that, unlike its non-mutant amphibian sisters, would have eggs that *must* be laid on dry land. This first hen would have to break with its amphibian hard wiring to lay its "hen's" egg on the land. A true intellectual feat, because the mutation that created the apparatus to produce a hen's egg was unlikely to have as well programmed the brain of the hen to think to lay its egg on the land. Alternatively, the water in which the hen (the adult "first chicken") would perforce, by its still amphibian mental hard wiring, have laid its egg, was dried up. If that was so, the environment came to the rescue of the first terrestrial egg. The hen's egg is the first chicken's way of perpetuating itself! Sorry about that Samuel Butler. Thus we have the sequence: the first chicken, the first hen's egg, the second chicken, the ...

This information comes too late for William Harvey in his account of the developing embryo, *De generatione animalium*, 1651, to have qualified the statement "omne vivum ex ovo" — "everything comes from an egg." [6]

No, land vertebrates have come from an *adult* progenitor which laid the first land egg.

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*Possibly, a *truly* significant mutation can be understood to be an event (a cluster of unrelated point mutations) which *breaks* Dawkins' chain of surviving DNA. Not only is the chain broken, but the mutant organism must take unrelated action to ensure the survival of its progeny. Intellect is surely an emergent feature of life. Our self-awareness, for example, is the highest form of such emergent consciousness. This evolution of intellect is in no way controlled by antecedent genes that would only replicate to perpetuate themselves.

Dawkins' glum conclusion that, "The universe we observe has precisely the properties we should expect if there is, at bottom, no design, no purpose, no evil and no good, nothing but blind, pitiless indifference, [is] as that unhappy poet A. E. Housman put it: 'For Nature, heartless, witless Nature / Will neither know nor care.'"[7] Even so, should we not for the unlikely time of our existence celebrate the emergence of intellect? Evidently, mutation as a cluster event can break the plodding chain and emergence of the unanticipateable occurs.

The first "chicken" may well have continued to lead an essentially aquatic life. Did the environment take care of the problem of its egg drowning if laid in water? Did it *think* to lay its egg on the land now that it should? Unlikely. But we can. ❑