

KARLSRUHE

INTERLUDE, INFINITELY REGRESSING

I offer no original scholarship, no reports about or interpretations of recently discovered or uncovered or understood materials. I offer only obsessive ruminations on a subject that's haunted me for years and that's been somewhat in the news recently. You'll forgive me if I also intersperse some observations, distractions, really – extraterrestrial, verbal, translational, poetical, serio-comic, all with serviceable segues – that are somewhat but only somewhat marginal to the subject. Such as, you may be aware coherent electronic signals are regularly sent out into outer space by NASA on the chance they may reach some alien intelligent life in the beyond that will respond in kind. A committee in fact is convened that decides what kind of signals to send – a number sequence, the Fibonacci series, a digitalized piece of music. When the question which composer's music to send came up and someone mentioned Bach, the suggestion was promptly vetoed – on the grounds that it might be taken as boasting....

Actually what sent *me* out into outer space – along with the music of Strauss, I think they decided on – was a theory propounded but not originated by Francis Crick, the great Nobel Prize DNA biologist. It was Crick who, re-examining the prevailing theories of the origins of life on the planet, concluded there wasn't enough time between the cooling of the Earth some four billion years ago and the Pre-Cambrian period three hundred thousand years later to explain the appearance during that period of fossils all bearing the same DNA. He decided the only explanation was that some form of alien life rode in from outer space and seeded the Earth with those first living cells. The process has the unlikely name *direct panspermia*, about which more later.

I used the term *outer space* just before. Just the other day I came across the expression *deep space*. For reasons you'll see in a minute, I do like, even prefer, that locution.

Moving with Crick into deep space, I'm reminded that Time, once you perceive it as linear, isn't the only dimension that shuffles off to infinity in both directions. You've heard or you will hear Henry tell that Time was not always conceived as linear. By the same token, Space, which intuitively *had* always been conceived of as linear – think Columbus – is now sometimes viewed as non-Euclidean curved. Thus travel out one direction in space may very well wind back on itself and bring you back where you began....

Another theory of Time. The physicist John Wheeler wrote, "Time is what keeps things from happening all at once." Something to contemplate ... or not.

Time present, time past. Time and the past, the themes of this conference. Some of you may recognize this quote:

Deep is the well of the past. Should we not call it bottomless?
[paragraph] Indeed we should, if – in fact, perhaps only if – the past subjected to our remarks and inquiries is solely that of humanity, of this enigmatic life-form that comprises our own naturally lusty and preternaturally wretched existence...

Et cetera. These are the opening words of Thomas Mann's magisterial *Joseph and His Brothers*. Mann goes on in his ponderous profound way, well worth looking into. I'd located a second hand copy of the book, knowing what I wanted to quote, and I was surprised to read, as I just did, *Deep is the well of the past*, instead of what my memory recalled, *Very deep is the well....* That's when I realized I didn't have the Lowe Porter translation of 1934 in hand that I'd first read way back when but a more recent one, done by John E. Woods, in 2005. At that point I wasn't even sure whether I was *remembering* correctly – maybe Lowe Porter didn't have the *very* either! But she does. I wonder if you have a preference between the two versions. So I ask the biased question, Do you think the past is deep, or *merely* very deep? Imagine! A thousand page work to

translate, and already a dilemma with the first word of the first sentence – or should I say the very first word of the very first sentence!

I'm still trying to locate a copy of the original German – maybe it won't be that difficult to find one in Karlsruhe.*

(* Three weeks after returning from Karlsruhe, I have in my hand, courtesy of abebooks.com, a copy of the first part of *Joseph und seine Bruder*. I turn to the opening German sentence. Astonishing, the sentence reads, “Tief ist der Brunnen der Vergangenheit.” No *very* in the original. Astonishing....)

Back to Crick and the subject that haunts me. I remember for years whenever I questioned a Darwinian biologist how it was possible for human beings to have evolved with such seeming perfection by the random non-teleological mutations by which evolution works – the reply always fell back on the amount of time available, three billion years or so, an unimaginable amount of time. It seemed to me, though, despite that unimaginable amount of time, the improbabilities were equally if not immeasurably more unimaginable. Interesting then that mathematicians and physicists are among the most skeptical readers of the neo-Darwinian prescription. Random mutations are 99.9% malignant – malformations, monstrosities – it's the 0.1% that work that supposedly give an organism an advantage that subsequent natural selection perpetuates. Contemplating those respective probabilities, the astronomer Fred Hoyle (by the way, a panspermia advocate) likened the Darwinian process to a hurricane blowing through a junkyard and coming up with a Boeing 747, and the mathematician Marcel Schutzenberger thought that random natural selection had as much chance of producing complex life as throwing into the air the 5000 parts that make an automobile and having them land in the configuration of a functioning Mercedes! You'll not, for whatever it's worth, the astronomer flew, the mathematician drove....

Apparently a respected Swedish biologist took up the challenge. Plugging in numbers and crunching them, he calculated that if flat photosensitive tissue were subjected to

random mutations, it could be expected to take on the spherical shape of an eyeball in a mere ... 300,000 years! And you have at least two billion to play with!

Why an eyeball? It seems Darwin himself wrote that if you can imagine as wondrous an organ as the eyeball coming about through natural selection, it would be a piece of cake for all the other organs to come about the same way. This from chapter 6 of *Origin of Species*, 1843, quote:

To suppose that the eye, with all its inimitable contrivances for adjusting the focus to different distances, for admitting different amounts of light, and for the correction of spherical and chromatic aberration, could have been formed by natural selection seems, I freely confess, absurd in the highest possible degree.

Darwin goes on, I won't take your time, to persuade himself that the idea is *not* absurd – though I must say I found Charles's logic a bit fuzzy. But still, without the intricate millions of nerve cells connecting it to the conscious brain, the eyeball is, to use Shakespeare's vivid image, so much "vile jelly"! The improbabilities multiply in that this supposedly happens to a creature who somehow has already acquired by the same random means a tongue and larynx to make noises with and two ears to hear those noises. The improbabilities become, we're out in deep space again, astronomical.

My skepticism about strict Darwinism has led me to write a series of poems I call the *Darwin Suite* – all, you'll see, in a skeptical vein, all rather different. I'll read three short ones. The first poem concerns Crick's panspermia. There was a challenge here to find a word or words to rhyme with *panspermia*. I think you'll hear the rhyme in the last couplet.

Francis C. Crick recognized clearly
That even with benign change happening yearly,
Between the cooling of Earth and those telltale fossils
No matter how many times the primordial soup jostles
This came to him while downing a highball—
There just wasn't time to form a perfectly formed eyeball
In despair he cried out, "Alas and alack!
What else could have kept evolution on track?"

I'm loath to give up, I think I'll disinter me a
Theory, though farfetched, called 'Direct Panspermia.'"

I also wrote a short poem after visiting an anatomical museum in NY – you know, one of those exhibitions displaying preserved, sectioned real human bodies using a new technique making them look like made of plastic. In the various body slices, you see the central nervous system, the blood circulation network, the lymph system, the digestive system, and so on – all astonishingly compact, all cohabiting, as it were, beneath the skin. It boggles the mind, my mind was boggled. You may also recall it was a British cleric, the Reverend William Paley, who at the beginning of the nineteenth century proposed the *gedankexperiment* whereby if you were walking in the woods and you came across a watch and didn't know its function, you'd nonetheless conclude after looking at the mechanism driving the watch's hands that it had been "designed," that is, there existed a watchmaker. Likewise, the argument went, there must exist a designer for the more or less perfectly designed human being. Now Richard Dawkins, he who popularized the selfish gene, drew on that image and called one of his popular books *The Blind Watchmaker*, in order to show that Darwinian processes alone – random mutations together with natural selection – *could* create that more or less perfectly designed human being, hence the *blind* watchmaker. This little poem was written after touring the anatomy museum. The poem was all of three words long, the title much longer than the poem itself. It's as though then the poem were the title and the title the poem. I reversed title and poem and added each to the other for the effect.

A Comment, after Visiting an Anatomy Museum, on the Blind Watchmaker's Putative Ability to Achieve, Though it Take a Billion Years, a Fully Realized Human Being – Central Nervous System, Blood Circulation Network, Body Musculature, Etc.

Maybe ... a Bulova

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A comment, after visiting an anatomy museum, on the Blind Watchmaker's putative ability to achieve, though it take a billion years, a fully realized human being – central nervous system, blood circulation network, body musculature, etc.

Back to the eyeball. There's as you know another iris in the human anatomy, the iris of the anal sphincter – as functional and as happily with us in its way as the eyeball. The *Darwin Suite* continues with a poem about that organ – I call it “My End is My Beginning.” I dedicate it to the writer, mathematician, and Darwinian skeptic David Berlinski, whom I'm greatly indebted to for some of my ideas.

My End is My Beginning

for David Berlinsky

forget the eyeball
evolution's astonishing
masterpiece that's
now soberly seen as
the neat consequence
of chance and necessity
and contemplate perchance
that other body iris
the lowly low as you can get
anal sphincter

even as you imagine that after
a million years of drizzling shit
into an indifferent universe
mammals acquired
by random mutation and
the sheerest damnable luck
a coiled puckered muscular end
that apparently has endured
in all likelihood because
of its rare adaptational advantage

To paraphrase my compatriot Leonard Cohen, “There ain't no cure, there ain't no cure, there ain't no cure for ... Infinite Regress.”

Thank you.