

Deadtime Cosmology 100:

A sampling of pedestrian ontology in the midst of traffic jams (2014).



The marking of time:

At 6:01 PM, amid the rush hour snarl on 1st Avenue, I thought about last evening's PBS *Nova* documentary on the measurement of time... Of course, the *perception* of time is subjective and elastic. Yet are there unquestionable *facts* of duration?

Of course, eons before there was counting and segmentation of lunar, solar and sidereal cycles—there was observance of repetition: day/night, moon phases and seasonal change...

Long before the emergence of science, the marking of seasonal change was surely embedded in earliest humanoid consciousness. For those early ancestors on the Serengeti plains, survival depended on the perception of such cycles as flooding and desiccation or cyclical migrations of the herds upon they preyed...

As was noted in the *Nova* documentary, it was with the observation of regular patterns, gradually to be understood in symbolic numeration. Archeological evidence of recognising the 12 cycles of the moon and the accurate length of a solar year can be traced to pre-history. Still, even stripped of cultural overlay the ‘facts’ of time and marking of duration are relative to impermanent patterns. The trajectory and speed of the earth’s orbit is gradually altering and the earth itself will eventually be consumed by the sun which will itself burn out eons after self-conscious beings with the self-defined ability of ‘empirical verification’ will exist to bear witness. Thus, even basic facts of physics are history-bound...

Yet what of the vibration frequencies of molecules delectable by precisely attuned instruments: are measurements of atomic clocks not *facts* independent of history?

In the midst of this question, I was struck by the wonder of concepts *as* concepts—relatively independent of context. This very possibly of course, is the legacy ancient Greek philosophy. (As A.N. Whitehead put it: all western philosophy is: “*a series of footnotes to Plato*”. It is only with the emergence of ‘*logos*’ that there arises the facility to sift through or separate concepts from the dough of specific contexts...

When I looked over at the dashboard clock it was already 6:15 PM and I was moving briskly though light traffic along Hastings St. How did that 15 minutes vanish?

2003 May

On the cosmic hierarchy?

Today's diversion, beginning in the gridlock before the Broadway-Willington intersection, was a brief contemplation about the emergence of a concept of a 'supreme being' as a solution to the riddle: 'how did something come from nothing'?

It occurred that a useful analogy for the emergence of 'something from nothing' independent of the supposed necessity of a supreme being as 'prime mover' of the universe, might be that of the computer. Just as the computer, when switched on, must bootstrap itself up from base ones and zeros through several layers of base code of an operating system until running its 'live' program so too, might combinations of inorganic matter become self-replicating organic matter.

The first inorganic material—eventually to become single cell-bacteria and after eons, possibly brain cells of *homo sapiens*—began to form split seconds after the Big Bang. Just as there no electrical change agitating molecules in the silicon chip before the pressing if the 'on' button—before the Big Bang there was *nothing*. Perhaps the 'nothingness' before the Big Bang will remain a mystery forever beyond our feeble kenning. Still the leap of magical thinking needed to land from the Bang squarely into the lap of a Judeo-Christian deity is more astonishing than the Big Bang itself!

A lesser leap of imagination might conceive of an extraterrestrial being, whose superior intelligence may seem god-like to humans just as our intelligence would seem god-like to fellow terrestrial creatures. An imagined hierarchy of sentience would have a being which seems supremely superior to ourselves seeming to have the intelligence of a mosquito in the regard of a superior beings of a higher order. One might even imagine an ascending hierarchy of superior beings continuing *ad infinitum*, on the cosmic scale. As for deism projected from our little corner of the Milky Way Galaxy: by what audacity do *homo sapiens* suppose that an all-knowing all-power Supreme being—a king of god-kings—would hold in special favour a creature so far beneath him/her/it?

With a chuckle I slowed for the red light over Lougheed and Kensington. Thanks be to Jehovah—15 minutes of dead-time was reduced to a blink.

2003 May

Waiting for the train to pass:

In the mesmerizing blur of the oil cars of the train that stopped the traffic at Westwood just 5 minutes from home this afternoon, I was suddenly stuck by the fact of mortality: not mortality in the abstract but *my* mortality. In the irretrievable absence of this consciousness, trains will still shudder along these tracks. The world will not be the least altered by my permanent absence from it.

I reeled in the shock of that awareness until there came a sudden consolation: What significance has a single spark within a roaring conflagration? Given that the web of biological sentience is so immeasurably complex and vast—what matter to the whole of the loss of the merest transient wisp of it?

Furthermore, throughout our brief passage, we are effectively absent to all but the most infinitesimal glimpse of potential awareness. Therein comes to mind the concept of *dasein*: ‘being in the world,’ presence’ as roughly grasped from Heidegger. How often, amid the immersion in the mundane and practical do we even glimpse the terror and glory of the living present? Perhaps even fleeting recognition of our ongoing ‘absence’ in life, should console fear of oblivion... A much more worthwhile anxiety ought to for the wasting of the moment...

Still, in the wake of that notion, the railroad barrier was lifting and the foot shifting from the brake to the gas pedal.

It was then that thoughts turned to supper: was there anything in the fridge that might be warmed up quickly?

2004 May

Speculating on beginnings:

In eschewing the CBC morning talk-show on the crawl down Highway One, my attention drifted to the *National Geographic* article on ‘mass extinction events’ read last night.

Glancing over at the lit-up high rises (some balconies already strung with Christmas lights) near Lougheed Mall, I was struck by the illusion of permanence upon which ‘civilization’ seemingly depends. How often does it occur that every breath drawn is utterly dependent on a fragile biosphere? A catastrophic disruption of the biosphere—whether suddenly or gradually—would cause all traces of humanity and our works could disappear... According to the article, 5 such mass extinction events have already been identified from the fossil record. In each such event, nearly all species were wiped out. Over eons, a changed biological order incrementally emerged from the minuscule percentage of species that came through each ‘filter’. Incredibly, *homo sapiens*, only 200,000 year evolved, are among the 1% of non-extinct creatures who have ever lived on this planet!

Even more staggering is the speculation that we are already in the midst of the 6th extinction event—this one caused by human activity. Perhaps it is a vain hope that we might “seed” terrestrial life in a new extraterrestrial environment beyond this planet. Perhaps the exquisitely complex interactions of air, water, soil, gravity, electromagnetism and yet unknown factors by which ecosystems evolved and are sustained—cannot be replicated beyond our planet. Perhaps after the 6th extinction, whether by a Heraclitean nuclear furnace or by slower poisoning—all that will bear testimony to our passing will be tiny projectiles and faint radio signals cast forlornly into the cosmos...

In the shivers of that thought, I signaled for the Grandview Ave. exit.

2005 November

In missing the starry sky:

In the slap of wipers at the start of another rainy drive to the evening shift, I looked over at the faded Maple Leaf flag on the pole beside the Canadian Superstore gas bar at the Westwood-Lougheed intersection. Was that flag ever taken down?

In its sad droop, I recalled the reassurance, inculcated from elementary school, that gloomy weather notwithstanding, we live a bountiful life in one of the most peaceable dominions that has ever existed. This point was especially penetrating in looking up from a social studies textbook depiction of Egyptian slaves commanded by whip-holding overseers, dragging massive stone blocks towards a half-completed pyramid.

In high school, that lesson was bolstered by the study of World War Two in which the democracies valiantly vanquished a regime which was crueler than the Pharaohs of ancient Egypt. The lesson was all the more pointed in that most of our fathers were veterans of that war...

Yet 2 generations on, what is the fruit borne of that heroic sacrifice for the preservation of democracy? How often do most inhabitants of this peaceable dominion exercise their freedom for anything greater than consumer choice? In having become vessels of pop-culture—regularly pumped up and sluiced out for the accrual of mountains of garbage—are we really still blessed with a quality of life superior to all commoners than came before us?

In that question, I tried to imagine ancient Egyptian slaves in looking up into the bright night sky... How often, in our long and pampered lives do we feel anything close to the depth of awe felt 3000 years ago, by slaves beholding immortals flickering through the dome of Osiris?

Sighing, I shifted the wipers into high mode. After 4 dreary months, when will finally come the first warm day of spring?

2006 Mar. 14

The latest jolt of excitement:

Thinking of the earlier news report of the latest atrocities of the Caliphate as I crawled down the freeway through Coquitlam at 6:00 AM, it occurred how the fearsome lads of ISIS— might be performing a role always assumed by certain subsets of young men. However despicable their zealotry—perhaps their intended assault on ‘western civilization’ can be seen as a performance of a role in natural selection that originated in the first slithering forth of multi-cellular life itself... However misguided and suicidal— the boys of ISIS are attempting to shake the world order at its very foundations... While they surely assume their purpose to be more noble— ironic that, unbeknownst to themselves, they should be functioning like the viruses that give immunity to the organism they infect...

At this point, it is impossible to even speculate how violent Jihadism will affect the course of history—let alone human evolution. Foremost to be borne in mind is that 99.9% of sperm is never fertilized while nearly all genetic mutations— the spur of evolution— are never passed on. Even in the awe of the magisterial intricacy of natural selection, one cannot deny its processes are wasteful and messy...

In the next 35 minutes nosing from the freeway, thoughts roamed towards the idea of ‘*abiogenesis*’ itself— how did non-organic material initially organize itself into self-replicating cells? Was that ‘miracle’ only a chance-occurrence after innumerable unproductive combinations and permutations?

Though science will hopefully continue to reveal mysteries of *abiogenesis*, it is still mind-boggling to consider that *exact* conditions had to be met with equal intricacy at all levels, from molecular to cosmic:

Apparently, in the formation of the solar system, *exact* gravitational forces were required for the accretion of a rocky planet of *exactly* the right mass for holding an atmosphere with *exactly* the required gaseous composition for the eventual emergence of life. Meanwhile, the orbit of this potentially life-giving planet had to be stabilized by opposing gravitational forces of rotating gas giants, Jupiter, Saturn, Uranus and Neptune. The young earth also had to be *exactly* the right distance from its solar star to allow it to rotate on its own axis which would allow a balanced distribution of light and heat. This, in turn would allow liquid water to form and flow on its surface.

In the greater cosmos, our solar system had to be in a unique position in the milky way galaxy (on the inside the 3rd spiral arm) to allow it to be shielded from lethal cosmic rays. This favourable positioning and absence of nearby cataclysmic events, such as explosions of supernovas for the last several million years had provided the relative stability needed for the generation of self-replicating matter... Yet just as mind-boggling as the favourability and exactitude of an array of cosmic features is the consideration of the precisely calibrated subatomic factors. Without the balance of electro-magnetic and nuclear forces—stable matter would not exist at all!

As always, such speculation left me tingling with excitement... Yet at that point, in passing the Superstore, on Grandview Ave., there arose a tangential concern:

Hasn't the same evidence that points to the vast arrays of exquisite calibrations required for the genesis of terrestrial life also been used to support creationism? The catchword for the glossier version of the classical 'argument from design' is, of course, *intelligent* design. In the classical version, the existence of God is extrapolated from the 'self-evidence' of a world too exquisitely designed to be brought to being by blind forces.

The refabricated version—rather more sophisticated than the belief that Adam and Eve gamboled with dinosaurs at the dawn of creation 6,000 years ago—attempts to turn the evidence of evolution on its head by (selectively) using examples of exquisite adaptation to refute Darwinism. So what is the best defense those who try to use science to promote superstition—along with an insidious political agenda? (e.g. hardly surprising that most creationists also deny human activity to be the primary cause of climate change).

Of course, the global scientific community, by an overwhelming majority, takes the empirical evidence of biology as proof of incremental adaptation of species through natural selection over eons. Even the handful of scientists (often well-funded by conservative think-tanks like the Discovery Institute) who promote 'intelligent design' need convoluted argument to leap from empirical data to Judeo-Christian theology.

Yet again, what argument would most effectively undercut their deceptions at the poisonous root?

Coming first to mind was an old catchphrase attributed to the 17th century philosopher Leibnitz in describing how an imperfect world could still be divinely created. For all of its 'evils'—ours is: '*The best of all possible worlds*'.... Perhaps his oft-quoted expression could be shorn of theology and refreshed in a new context: *i.e.*, Our observable universe is: '*the only universe presenting itself to us exactly as it is.*'

However improbable may seem our existence and the physics that sustain us—we have no other reality with which to compare the physical world as observed and studied. What may appear to be exquisite design in nature can only be observed *post facto* to its given existence. Alternative conditions would imply a different world—with alien physics. Such an imagined alien world could have no observers like ourselves observing or studying it—since we are interactively and exclusively bound to this world and to its physics. What is, *is*—exactly as it is...

It was only crossing the intersection of 12 Ave. and Commercial Drive, just a few minutes from the college parking lot, that another catchphrase suddenly seemed relevant. Oddly enough, it was the intriguing opening of sentence of the biblical book of John: '*In the beginning was the word...*'

The literal beginning, as understood in our sacred science, was the emergence of self-replicating cells from inorganic chemical soup. Perhaps metaphorically, the beginning was the emergence of

the ability of sentient beings to record the language by which self-consciousness, abstraction—and science itself—emerged...

One final question flitted into mind just before the right turn on the Glen Drive: once that processes of evolution were underway, was the eventual rise of ‘self-conscious and literate beings accidental—or inevitable?

In waiting for the light at Broadway, I avowed that I would continue to not merely speculate on—but to *research* such questions. So it was that just 30 seconds before the college parking lot a jolt of excitement was generated for the prospect of retirement...

2014 Dec. 15



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