

An Essay on Zarathustra's "Of the Vision and the Riddle"

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In this paper an extensive amount of evidence is presented that our genome, and in particular the DNA acts as a quantum computer. The human genome contains approximately 3 billion A-T and G-C base pairs, which reside in the 23 pairs of chromosomes within the nucleus of all our cells. And it is estimated that only a fraction (about 4%) of these base pairs is involved in the synthesis of proteins. The prevailing scientific view is that the remainder of the DNA is just "junk". Here is presented a great deal of evidence about the electronic as well as the quantum mechanical properties of DNA, and once it is accepted that the DNA is an electronic medium, which is operating over and above the mere synthesis of proteins, then it is but a short step to surmise that all that so-called junk DNA is actually capable of storing a sufficient amount of data to generate an entire universe. Given the fact then that our universe is computer generated and virtual, that makes us, indeed all living creatures, pseudophysical robots, and certain properties of our universe such as Gravity and Time purely fictitious. From this point of view then the famous discourse in *Thus Spoke Zarathustra* "Of the Vision and the Riddle" becomes readily explainable. Zarathustra talks about the Spirit of Gravity as a dwarf that has jumped on his back and is oppressing him. It then jumps off his back and he is able to see our supposedly physical life for what it is—a fiction, and illusion. Likewise the *now*, the current moment in time in which we are living is referred to as the "gateway" between a fictitious computer-generated past and a hypothetical, as yet undetermined future. An explanation is also given for "eternal recurrence". Nietzsche is prophesizing that genetic technology will advance to the point where we humans will be cloned from our DNA when we die, and we will be able to live an infinite number of lifetimes. We will be reincarnated.

Keywords: Nietzsche, Zarathustra, eternal recurrence, virtual world, fictitious forces, Time, Gravity

Introduction

One of the most enigmatic passages in all of philosophy is Zarathustra's discourse "Of the Vision and the Riddle" in *Thus Spoke Zarathustra*. What is here offered is an explanation of some of the specific concepts that Nietzsche alludes to in "Of the Vision and the Riddle", namely Gravity and Time, and also my interpretation of his "eternal recurrence" which is referred to more than once in Part Three of *Thus Spoke Zarathustra*, as well as in *Beyond Good and Evil*. The three essential concepts in "Of the Vision and the Riddle" are Gravity and Time and the dream that Nietzsche presents of the serpent that has crawled into the shepherd's mouth and is starting to choke him, whereupon the shepherd with supreme effort bites down hard on the serpent and manages to bite off its head. This latter vision is presented as a riddle that we have to interpret, and it does not take too much imagination to see this as an allusion to the serpent in The Garden of Eden. It will be recalled that God told

Adam that he may eat the fruit of any tree in the Garden of Eden except that of the tree of the Knowledge of Good and Evil, and that subsequently the serpent tempted Eve to persuade Adam to eat of this fruit which brought about the Fall of mankind in God's eyes, whereupon they committed the original sin and were banished from the Garden of Eden. The implication is clear from this dream of the serpent getting stuck in the shepherd's throat that the knowledge of good and evil is going to be profoundly unpalatable for human kind, and the only way to get through it is to simply "bite the bullet" and accept it as a fact and try to come to terms with it.

In the first instance we must ask ourselves why Nietzsche should be writing about his vision of Gravity and Time at all. Evidently he is trying to tell us here that there is something about these two concepts that is in some way remarkable or noteworthy. For the fact is that although everybody knows what is meant by Gravity and Time, physicists are at a loss to explain them. It is here submitted that the explanation behind Nietzsche's vision of Gravity and Time is that these are in fact fictional forces. In this scenario the world is a virtual reality, and we living creatures that inhabit it are pseudophysical robots. Of course it is one thing to say that the world is a computer-generated virtual reality but in order to give this claim any credibility it is necessary to locate the computer that is generating this virtual reality and also to pinpoint the precise location where the data is stored from which the virtual reality is generated. In this essay it is argued that our DNA is a quantum computer that generates the world as a virtual reality from within, and that the data are stored in the 97% of our DNA that mainstream scientists dismiss as "junk".

Quantum Biology

In this section, quantum mechanics as it applies to biology and biochemistry will only be discussed in the most general terms. Quantum mechanics is a mathematical theory that allows physicists to observe and predict what is happening at the atomic and subatomic level in matter. The core theory is Schrödinger's wave equation; this is a complex differential equation, the solution of which will enable a physicist to calculate the energy in a system. The hydrogen molecule, which consists of two hydrogen atoms bonded together, is actually the largest system for which Schrödinger's equation can be solved but, in theory, all molecules have a wave function, including the extremely complex aperiodic DNA molecule.

Quantum mechanics tells us that the electrons in atoms have a wave function, although they are normally thought of as particles, and this constitutes the essential weirdness of quantum mechanics: all particles at the quantum level have this wave-particle duality. A physicist who observes a particle will collapse the wave function and find a particle but, if the particle is not specifically observed, it will remain a wave. Schrödinger's wave function is mathematical, but the fact is that what we see all around us in nature also has this wave-particle duality. Light, and indeed all electromagnetic radiation, is an electromagnetic field and this has been quantized, so it also has wave-particle duality. This has profound implications for biological organisms, and indeed it has now been found that photosynthesis—the capturing of a photon by the chlorophyll molecule, whereupon it is delivered to the reaction center in the cell that turns light energy into electrical energy—involves quantum superposition. Electric current is also quantized, which is significant when we consider that the living cell is a complex electrical circuit, and an infinitely large number of processes in biology involve ions and other minute particles moving through holes in membranes. The act of observing them will collapse the wave function, and the biologist will see a particle go through a particular hole, but quantum mechanics tells us that, when they are not observed, a multi-particle wave function passes through all the holes.

Quantum mechanics also has manifold applications in electronics, principally because electronics involves nanotechnology that places restrictions on the wave functions of particles, particularly electrons in electric current, which in turn involve another strange feature of quantum mechanics, quantum tunneling. In the macroscopic world, if an object does not go through a barrier then the object in its entirety bounces back, but not so in the quantum world. Even though there is a high probability that an electron will not go through a barrier, there remains some probability that it will pass through the barrier nonetheless and appear on the other side. From these general considerations about the application of quantum mechanics, it will be appreciated that were we to find electron-dense nanostructures in biological organisms, we would enter the world of quantum biology—as we would also were we to find light and radio waves in general playing a large part in biology. In fact, not only are nanostructures ubiquitous in biology but, in the past decade or so, a new field of genetic research known as optogenetics and radiogenetics has emerged and has yielded already tens of thousands of research papers detailing the regulation of genetic processes using light and radio waves. Indeed, brain waves are simply extremely low-frequency (ELF) radio waves, placing us well within the realm of quantum biology.

Before providing specific examples to back up these general statements I return to Erwin Schrödinger, who gave us not only the wave equation that is the core feature of quantum mechanics, but also a quantum theory of genetic mutations. Schrödinger (1956) noted the high degree of permanence in hereditary properties. In the case of humans and other animals, the “phenotype”, the visible, and manifest nature of the individual, is reproduced without appreciable change for generations, across centuries if not millennia—in the case of some species (the crocodile and the tortoise, for example), even millions of years. This stability would be unlikely if mutations involved frequent, small, random variations in the genetic material.

Schrödinger then discusses the findings of Dutch botanist Hugo de Vries that in the offspring even of thoroughly pure-bred stocks of barley, a very small number of individuals—two or three in tens of thousands—exhibit small, “jump-like” changes, meaning not that the change is necessarily considerable, but that it represents a discontinuity, an absence of intermediate forms between the original and the new. De Vries called this phenomenon mutation. This discontinuity is significant, as it is in quantum theory where no intermediate energies occur between two neighboring energy levels. Figuratively, at least, we are discussing the quantum theory of biology, and such mutations are actually due to quantum jumps in the gene molecule. Schrödinger goes on to suggest the actual quantum mechanical processes that could be involved in the mutation of genes as discreet jumps. He attributes the permanence and durability of hereditary material to the fact that the DNA is an organic aperiodic solid (crystal). In inorganic crystals the same structure is repeated over and over, but in an aperiodic crystal every atom, and every group of atoms, plays an individual role, not entirely equivalent to that of all the others. This aperiodicity immensely complicates the wave function for the molecule, as well as the behavior of any forces or energy, such as electricity or phonons, that may be traveling through the crystal. But although aperiodic, the DNA molecule nonetheless has a very precise and fixed structure.

Schrödinger contends that the single event causing a mutation is an ionization (or similar process) occurring within some “critical” volume of the germ cell. He then discusses the fact that the DNA molecule is isomeric and that, as result, the molecule will of necessity have a certain stability: the configuration cannot change, unless at least the energy difference required necessary to “lift” it to the next level is supplied from outside. Thus, this level difference, which is a well-defined quantity, determines quantitatively the degree of stability of the molecule. So a mutation would be caused if part of the molecule received a burst of energy sufficient to cause the electrons to lift to a higher level; this is a purely quantum mechanical process. Further,

Schrödinger doesn't mention semi-conductor technology—for the simple reason that was unknown when he was writing—if the DNA molecule is a semi-conductor, such a burst of energy could lift the electrons into the conduction band, which means an electric current would pass through that part of the molecule.

Schrödinger then enters into a discussion of the laws of thermodynamics and concludes it is conceivable that an isomeric change of configuration in some part of the DNA molecule, produced by a chance fluctuation of the vibrational energy, could actually be a sufficiently rare event to be interpreted as a spontaneous mutation. At the time Schrödinger was writing, chance fluctuations in temperature were the only event he could think of that could create a sufficient burst of energy to lift the electrons to a higher level and still be part of the normal processes operating *in vivo*. At that time, X-ray diffraction was also well known and Schrödinger goes on to discuss X-ray induced mutations where there was a very precise "X-ray coefficient", indicating the percentage of the offspring that will be mutated in a particular way, when a unit dosage of X-ray has been applied to the parents. In other words, mutations induced by X-rays were clearly not random—but nor, of course, were mutations induced by X-rays something that would occur in the living cell under normal conditions.

It has been known since the 1970s that the DNA absorbs and emits light. Biophotons are in the UV to low visible light range, with wavelengths from 200 to 800 nm (Popp, 2003). Fritz-Albert Popp, one of the pioneers in biophoton research, found that the DNA molecule will absorb light in the UV frequency and then emit light at different frequencies. He believed the light was being "scrambled" but in fact the UV photons were pushing the electrons within the DNA molecule above the energy threshold for their level and causing them to jump to a higher level. When these electrons then revert to their base or a lower level, they emit light at very precise frequencies according to the spectral lines of atoms developed in quantum mechanics. These spectral lines can be UV and visible light (Rattemeyer, Popp, & Nagl, 1981). The DNA base-pairs display maximum light absorption at a wavelength of 260 nm and proteins at 280 nm. It will be noted that these wavelengths are in the nanoscale range, and that they are also in the UV light range—which is to say, this light is not visible. The DNA does absorb light at higher levels, but this is usually caused by light scattering (Stulnig & Amberger, 1994). However, if a DNA molecule is exposed to light in the visible spectrum, it will "get excited and light up". Further, when a DNA molecule is in a "dark state"—its normal condition in the nucleus of a cell *in vivo*—it will from time to time naturally fluoresce and then revert to its darkened state in which nothing appears to be occurring (Dong et. al., 2016). However, it is known that plants, specifically onion roots, communicate with each other to induce genetic processes using UV light (Sun, Wanga, & Dai, 2010). It is also well known that large doses of UV light will damage the DNA and cause mutations, but it is quite apparent that even a single photon of UV light emitted from the DNA in one chromosome in the nucleus would be capable of initiating a genetic process in the DNA in another chromosome in the nucleus. UV photons are not visible, so to all intents and purposes the nucleus would appear to be in the "dark state" where nothing is happening. If communication within the nucleus of the cell is mediated via UV light, then the DNA would be capable of initiating mutations in exactly the manner envisaged by Schrödinger.

Thus, there is a quantum theory of mutation in the genetic material involving discrete jumps, one that means that mutations do occur by chance but are not random. According to quantum probability theory, only the mutations with the highest degree of probability will actually occur. However, if quantum biology is at work in our genetic material, determining the frequency and type of mutations, it should be possible to find quantum effects in the structure of the DNA itself and, indeed, throughout all of biology.

The molecular composition of DNA would suggest that it would be a semiconductor. The core DNA base pairs are made up of carbon atoms interspersed with nitrogen, oxygen, and hydrogen atoms. Carbon, like silicon, with four electrons in its valence shell is a classical semiconductor, and the nitrogen and hydrogen atoms would act as doping agents. To "dope" a semiconductor makes it conduct electricity more readily. In fact, the doping of carbon nanotubes and composite graphene structures with nitrogen is very common and comparisons have already been drawn with the DNA (Won, et. al., 2014). The hydrogen atoms play an important role in the doping process, as the hydrogen atom readily donates its sole electron to the nitrogen atoms; this means that, throughout the DNA molecule, the nitrogen atoms are slightly negatively charged, and the hydrogen atoms are slightly positively charged (Gerrard & Malcolm, 2007). This, in turn, means that the base-pair components of the DNA double helix themselves present as both a *p* and an *n* semiconductor; that is to say, they have both electrons and "holes" that are readily available for conduction. In addition, the DNA double helix has a sugar-phosphate backbone and, since the phosphate groups in the backbone are negatively charged, the DNA is usually surrounded by positive "counterions". The DNA is said to be "ideal for electron transfer" (Dekker & Ratner, 2004).

There has been a great deal of controversy whether the DNA molecule can be considered a metal, or a conducting nanowire, or even a superconductor (Dekker & Ratner, 2004). Basically, a metal has electrons always available in the conduction band and all that's needed is to apply a voltage and current will flow. With a semiconductor, there is a large gap between the energy levels of the valence band and the conduction band and energy must be applied to the material to make the electrons jump into the conduction band; only then will a current flow if a voltage is applied. A conducting nanowire is a conductor that is only a few nanometers in diameter. A superconductor is a metal with zero resistance which will allow current to flow indefinitely without losing any energy. In fact, levels of resistance have been measured in the DNA which vary widely from one MegaOhm (1 M Ω), which indicates that it conducts well, right up to 10 trillion ohms (10¹³ M Ω) for DNA molecules 40 nanometers or longer, which means that it is an insulator with infinite resistance (Dekker & Ratner, 2004). Overall, it seems certain that resistance in the DNA increases exponentially with distance and that long DNA molecules are true insulators (Dekker & Ratner, 2004).

In fact, DNA does conduct electricity over longer distances but only if the molecule is immersed in water or in a phosphate buffer solution (Armitage, Briman, & Gruner, 2003; Slinker, Muren, Renfrew, & Barton, 2011). This is actually its natural state in vivo, where the nitrogen elements are hydrophobic, and the sugar-phosphate backbone is hydrophilic. The hydrophobic negatively charged nitrogen atoms are what causes the DNA to twist into its characteristic helix shape, thereby preventing water from getting into the middle of the molecule, while the negatively charged sugar-phosphate backbone is actually soluble in water (Zhao, 2011; Westhof, 1993). It has been found that DNA can only act as a conducting nanowire if it retains its helical structure (Slinker et al., 2011; Brown, 2011). When the DNA is in aqueous solution, the negatively charged sugar phosphate backbone becomes an electron-rich liquid medium that is an excellent conductor of electricity (Turro, Barton, & Tomalia, 1991; Biever, 2003). This explains reports that DNA acts as a metal for conducting electricity (Brown, 2011). The nitrogenous base-pairs, being hydrophobic, would continue to act as a semiconductor separately from the metal-like conduction of electricity in the surrounding water, which explains reports that DNA is a conducting nanowire, as well as the fact that it is conducting an alternating current (AC).

A nanowire conducting alternating current (AC) will emit radio waves at the same frequency as the electric current. The DNA in vivo is a transmitter of radio waves and, further, will act as a receiver or antenna,

receiving radio waves of whatever frequency whereupon an alternating current of the same frequency will be generated in the nanowire. Additionally, a semi-conducting nanowire can explain how the DNA can intermittently emit UV photons to communicate with itself in other chromosomes in the nucleus, as there would be electrons dropping back from the conduction band into their "holes" in the valence band, thus emitting UV as well as visible light.

A recent study notes some curious facts about the electromagnetic properties of DNA (Zhao & Zhan, 2012). For example, link DNA is said to "zig-zag" back and forth between "stacks" of these mini-coils, while the histone cores of the mini-coils are reported to link with each other. There is said to be a "permanent dipole moment" between each mini-coil that generates "electric dipolar oscillation" between them. The capacity for mutual induction of electromotive force (emf) in the nucleosomal fiber would be virtually infinite. In addition, the current that has been detected in the nucleosomal fiber is "oscillating"; that is to say, it is an alternating current with frequencies between 2 and 50MHz. The frequencies are said to vary from region to region in the chromatin depending on the "DNA-protein complexes in that region". As this is essentially an alternating current, it is suggested that the mere fact of the DNA synthesizing the superparamagnetic histone core, coiling itself around the core, and then all these coils "clustering" into "stacks" in the nucleosomal fiber, would be sufficient to generate a self-perpetuating current (Zhao & Zhan, 2012).

Another curious item that emerges from the same study is that when the chromatin is not in M-phase—that is, when the chromosomes are not tightly compacted for the purpose of cell division—the chromosomes appear to relax or unwind in the nucleus; it is during this phase that the non-coding sections of the DNA (the "junk DNA") adopt the quaint custom of "chromosome kissing", whereby these "introns" on several different chromosomes will be seen to approach each other based on their oscillating natural frequencies. What sort of electrical forces and emf are being generated during these chromosome kissing sessions is anybody's guess. Given, however, the electromagnetic complexity of nucleosomal fiber it is possible that the forces would be significant. At the very least, the mere proximity to each other of several chromosomes with their respective potent "junk" electromagnetic fields would be sufficient to generate a current. Interestingly, epigenetic features appear to be involved here as well (Zhao & Zhan, 2012).

More than 20 years ago, Roger Penrose found quantum effects in the microtubules in neurons and surmised that this had something to do with generating consciousness. Neurons, like all living cells, emit light as they work. Neurons contain many light-sensitive molecules, including porphyrin rings, flavin rings, pyridinic rings, lipid chromophores, and aromatic amino acids. In particular, mitochondria—the structures inside cells that produce energy mitochondria—contain several prominent chromophores. The presence of these light-sensitive molecules suggests that they might be influenced by biophotons originating in the DNA. A study suggests that microtubules can act as wave guides, channeling light from one part of a cell to another (Rahnama, Bokkon, Tuszynski, Cifra, Sardar, & Salari, 2010). In other words, they act as optical fiber, channeling light signals to all the cells in the brain. It is known that electrical signals are too slow to do this effectively; light signals, however, could instantaneously coordinate electrical activity in different parts of the brain mitochondria—that is to say, trigger action potentials in neurons in diverse regions. Using light to trigger action potentials in neurons is how optogenetics started, and there are now thousands of research papers on genes and other structures in the cell being activated by light as well as radio waves of lower frequencies. The fact is that these microtubules are ubiquitous in living cells, even plant cells. Microtubules are actually nanotubes; it is a moot point whether they act as a semi-conductor of electricity, but they do have positive and negative ends,

which creates an electromagnetic field within them (Kim, Kao, Hasselbrink, & Meyhöfer, 2007). Microtubules are the internal scaffolding inside cells, providing structural support but also creating channels along which negatively charged proteins move on account of the electromagnetic field. Another feature ubiquitous to living cells is microfilaments, which are actually nanowires that conduct electricity (Lovely, 2018). There are many other electron-dense nanostructures in the brain (Smythies & Edelstein, 2013); the living cell is a complex electronic circuit, and there are quantum effects everywhere one looks in biology.

Gravity and Time

The following then are references to Time and Gravity in Zarathustra's vision:

"Stop, dwarf!" I said. "I! Or you! But I am the stronger of us two—you do not know my abysmal thought! That thought – you could not endure!" Then something occurred which lightened me: for the dwarf jumped from my shoulder, the inquisitive dwarf! And he squatted down upon a stone in front of me. But a gateway stood just where we had halted. "Behold this gateway, dwarf!" I went on: "it has two aspects. Two paths come together here: no one has ever reached their end. "This long lane behind us: it goes on for an eternity. And that long lane ahead of us—that is another eternity." They are in opposition to one another, these paths; they abut on one another: and it is here at this gateway that they come together. The name of the gateway is written above it: "Moment". "But if one were to follow them further and ever further and further: do you think, dwarf, that these paths would be in eternal opposition?" "Everything straight lies," murmured the dwarf disdainfully. "All truth is crooked, time itself is a circle." "Spirit of Gravity!" I said angrily, "do not treat this too lightly! Or I shall leave you squatting where you are, Lame-foot—and I have carried you high! Behold this moment!" I went on. From this gateway Moment a long, eternal lane runs back: an eternity lies behind us. "Must not all things that can run have already run along this lane? Must not all things that can happen have already happened, been done, run past?"

"And if all things have been here before: what do you think of this moment, dwarf?" Must not this gateway, too, have been here—before?" And are not all things bound fast together in such a way that this moment draws after it all future things? Therefore—draws itself too? "For all things that can run must also run once again forward along this long lane." And this slow spider that creeps along in the moonlight, and this moonlight itself, and I and you at this gateway whispering together, whispering of eternal things—must we not all have been here before? "—and must we not return and run down that other lane out before us, down that long, terrible lane—must we not return eternally?" Thus I spoke, and I spoke more and more softly: for I was afraid of my own thoughts and reservations. (Hollingdale, 1973, pp. 176-180)

So let's see if we can make some sense now of the passage already quoted above. Prior to this the narrator

walked gloomily through a deathly-grey twilight, gloomily and sternly with compressed lips... A path that mounted defiantly through boulders and rubble, a wicked, solitary path that bush or plant no longer cheered: a mountain path crunched under my foot's defiance. Striding mute over the mocking clatter of pebbles, trampling the stones that made it slip: thus my foot with effort forced itself upward. Upward—despite the spirit that drew it downward, drew it towards the abyss, the Spirit of Gravity, my devil and archenemy. Upward—although he sat upon me, half dwarf, half mole; crippled, crippling; pouring lead-drops into my ear, leaden thoughts into my brain. "O Zarathustra," he said mockingly, syllable by syllable, "you stone of wisdom! You have thrown yourself high, but every stone that is thrown must—fall... Condemned by yourself and to your own stone-throwing: O Zarathustra, far indeed have you thrown your stone, but it will fall back upon *you!*" Thereupon the dwarf fell silent; and he long continued so. But his silence oppressed me; and to be thus in company is truly more lonely than to be alone! (Hollingdale, 1973, pp. 176-180)

So Zarathustra is walking upwards along this mountain track and the "spirit" of gravity is weighing him down and oppressing him. Zarathustra goes on, "But there is something in me that I call courage: it has always destroyed every discouragement in me. This courage at last bade me stop and say: "'Dwarf! You! Or I!' For courage is the best destroyer—courage that *attacks*: for in every attack there is a triumphant shout. Man, however, is the most courageous animal: with his courage he has overcome every animal. With a triumphant

shout he has even overcome pain: human pain, however, is the deepest pain. Courage also destroys giddiness at abysses; and where does man not stand at an abyss? Is seeing itself not—seeing abysses?" (Hollingdale, 1973, pp. 176-180)

This is the point where the dwarf jumps from his shoulder. He is no longer weighed down and oppressed by the spirit of gravity. He is no longer subject to physical laws. He then proceeds to tell the dwarf about time. 'Everything straight lies,' murmured the dwarf disdainfully. 'All truth is crooked, time itself is a circle.' Zarathustra appears to be telling us that both time and gravity are a fiction. The only thing that is real in this computer-generated virtual reality is the *now*. The gateway. Stretched out from the now, forwards and backwards, is a fictional history that extends backwards to an eternity, and forwards is a fictional and hypothetical future that likewise extends to eternity.

So that's why Zarathustra admonished the Spirit of Gravity not to take this moment in time too lightly or he will leave him squatting like a lame-foot, and before he has carried him high. Recall that prior to that moment in his visionary dream, the dwarf had landed on top of him and was oppressing him, and had instilled in him a fear of heights. The dwarf had just jumped down from his shoulders, which had literally lifted a weight off him, and now Zarathustra is going to press on regardless accepting the fact that the force of gravity is fictional, and thus a Lame Foot.

So things that can run have already run along this lane, they have passed through the Gateway and consolidated this moment, and thus transformed the moment into lived history from uncertain future.

Must not this gateway, too, have been here—before? "And are not all things bound fast together in such a way that this moment draws after it all future things? Therefore—draws itself too?" For all things that can run must also run once again forward along this long lane. (Hollingdale, 1973, pp. 176-180)

This is no more than a restatement of the fact that our future is pre-determined by the spirit in the gene. And I and you at this gateway whispering together, whispering of eternal things—must we not all have been here before? "—and must we not return and run down that other lane out before us, down that long, terrible lane—must we not return eternally?" which is likewise merely a restatement of the importance of the fiction of time to give the pseudo physical world a dynamic notion of continuity as well as fake history detailing the physical changes to the virtual world that gives the virtual world credibility in the geological layers of the volcanic rocks, as well as a place in the fossil records to be found in the geological layers of that seemingly physical world. Planet earth is a perfect example of a virtual world, and in fact it's this world that now can demonstrate a very chronological pedigree.

Chronological dating, or simply dating, is the process of attributing to an object or event a date in the past, allowing such object or event to be located in a previously established chronology. This usually requires what is commonly known as a "dating method". Several dating methods exist, depending on different criteria and techniques, and some very well-known examples of disciplines using such techniques are, for example, history, archaeology, geology, paleontology, astronomy, and even forensic science, since in the latter it is sometimes necessary to investigate the moment in the past during which the death of a cadaver occurred. These methods are typically identified as absolute, which involves a specified date or date range, or relative, which refers to dating which places artifacts or events on a timeline relative to other events and/or artifacts. Other markers can help place an artifact or event in a chronology, such as nearby writings and stratigraphic markers. But it is all computer-generated, and it is all virtual.

And the following excerpts are from Graham Parkes's invaluable interview with Andrzej Jachimczyk posted on the Nietzsche Society's website:

You can really categorise nature mystics by the fact that they are biocentric. It's really trees and animals and life that they relate to, or whether they go into the inorganic world as well, and Nietzsche certainly did.

Nietzsche was always impressed by stone in cities and rocks and landscape. And it's his thoughts about the inorganic and rocks, what he calls the dead world and in his notes he states that we really don't understand the dead world. The living he says are just a species of the dead, and he states that in order to go over into that dead world we have to make ourselves completely real, and there is a certain awareness of himself that he got in the presence of rock.

To me there's no surprise or accident or coincidence about where that thought about rock came from. And the most life affirming thought that can be thought according to Nietzsche as he was standing beside this rock which most people would think is lacking in life.

He thought that geology was completely reordering our sense of time and history, and geology has initiated us into the secularity of time. The great central life of the earth where you see the rock exposed, the centre exposed, ideas that he apparently got from Thoreau.

It's quite an interesting theme in Nietzsche that most people aren't really interested in, but I think it's important.

The east Asian conception of rock the Chinese for instance were obsessed about rock, unworked rock, unhewn. For them rock has all this Qi energy especially large rock formations that have a very high concentration of this Qi energy. As long as you do it right there's something about large rocks that vitalizes you. And this term energy is the appropriate one.

It is similar to the energy the pre-Socratics Anaximenes that this rock is actually all air this one basic, and at one end it is dense slow moving like rock and at the other the most rarefied fast moving invisible breath the total opposite, and everything is just the combination or degree of this Qi in between.

The Chinese have the yin and yang, the polarity of opposites, but when you talk about Nietzsche and the will to power, where it's all will to power and nothing besides, that it does echo that pre-Socratic notion that everything is just a continuum, or degree of concentration of this one magical force, because it's not really a stuff or substance it's more in the nature of a spirit, it is something below the material versus the immaterial, matter versus spirit, something even deeper than that, influenced by Chinese Taoism etc. the Chinese call it chi and I think that's basically what Nietzsche calls will to power. (source of quotation given above)

Those rocks that Nietzsche loved so much are just mental images of rocks literally. And this is why Nietzsche was adamant that appreciating nature is like a death with waking eyes. It's all just virtual!

Nietzsche had a preoccupation with rock and geology. As the world is virtual there is no physical core to the Earth whether it is dirt or rock or lava. There are only images of dirt or rock or lava if you care to go drilling.

For Nietzsche there is no past and there is no future. As Nietzsche says above, time is circular. In other words the arrow of time is purely illusory. Not only is there no movement in either direction forwards or backwards, but time is literally stationary, time is just the turning of pages in the book of Your Life that you are currently reading whilst sitting stationary in your chair. The story is unfolding, but you as a physical person are going nowhere. And just like life itself you can flip back to earlier episodes or chapters in the book, just like your long-term memory, but you are absolutely precluded from flipping forwards to see how it ends, even though those later chapters are there already written. And again just like life, you are more or less forced to be patient and enjoy reading each page at a time.

That's what Nietzsche means that the gateway is that moment in time when your past coincides with your future. In the book analogy the gateway is the particular word that you have your eyes focused on now. That word is the moment in the book of your life. And just as the data for that book are on the hard drive of a computer in the publisher's offices, the data for your own life are stored in your DNA that is effectively the publisher of your life as a pseudo physical robot. Your soul and long-term memory is stored in the DNA when

you pass. You should just live for the moment. And above all you should give thanks that God has given you this shot at immortality, in the sense of eternal new editions of the eBook Your Life.

Eternal Recurrence

Sing and bubble over, O Zarathustra, heal your soul with new songs, so that you may bear your great destiny... behold you are that teacher of the eternal recurrence... And if you should die now, O Zarathustra: behold, we know too what you would thus say to yourself... "Now I die and decay... and in an instant I shall be nothingness... But the complex of causes in which I am entangled will recur—it will create me again! ... I shall return ... not to a new life or a better life or a similar life: I shall return eternally to this identical and self-same life ... to teach once more the eternal recurrence of all things, to speak once more the teaching of the great noontide of earth and man, to tell man of the Superman once more ..." (Hollingdale, 1973, pp. 176-180)

The heaviest burden. What if a demon crept after you one day or night in your loneliest solitude and said to you: "This life, as you live it now and have lived it, you will have to live again and again, times without number; and there will be nothing new in it, but every pain and every joy and every thought and sigh and all the unspeakably small and great in your life must return to you, and everything in the same series and sequence—and in the same way this spider and this moonlight among the trees, and in the same way this moment and I myself. The eternal hour-glass of existence will be turned again and again—and you with it, you dust of dust—Would you not throw yourself down and gnash your teeth and curse the demon who thus spoke? Or have you experienced a tremendous moment in which you would have answered him: "You are a god and never did I hear anything more divine!" If this thought gained power over you it would, as you are now, transform and perhaps crush you; the question in all and everything: "do you want this again and again, times without number?" would lie as the heaviest burden upon all your actions. Or how well disposed towards yourself and towards life would you have to become to have no greater desire than for this ultimate eternal sanction and seal?" (Hollingdale, 1973, pp. 176-180)

I teach you the Superman. Man is something that should be overcome... The Superman is the meaning of earth. Let your will say: The Superman shall be the meaning of earth... All gods are dead: now we want the Superman to live—let this be our last will one day at the great noontide. (Hollingdale, 1973, pp. 176-180)

What Nietzsche is saying here is that the day is coming when genetic technology will literally enable humans to overcome death and the human condition. Humans will become supermen in the sense that, by being re-cloned over and over again, they will actually achieve a form of eternal life right here on earth. God is dead in the sense that there will no longer be the need for us to believe in an afterlife. Humans will become "the meaning of earth", just like Nietzsche says.

Nietzsche wrote *Beyond Good and Evil* after *Thus Spoke Zarathustra* and he makes only one reference to eternal recurrence. Yet that one reference to the eternal recurrence is a very emphatic one. It occurs in Section 56, where Nietzsche writes of:

the ideal of the most exuberant, most living and most world-affirming man, who has not only learned to get on and treat with all that was and is but who wants to have it again as it was and is to all eternity, insatiably calling out *da capo* not only to himself but to the whole piece and play, and not only to a play but fundamentally to him who needs precisely this play – and who makes it necessary. (Tanner, 1973, p. 18)

It is difficult to see what else this can be referring to other than a human who, after having lived one lifetime, is actively seeking to be reincarnated in order to live it all over again.

The Riddle

But there a man was lying! And there! The dog, leaping, bristling, whining; then it saw me coming—then it howled again, then it cried out—had I ever heard a dog cry so for help? And truly, I had never seen the like of what I then saw. I saw a young shepherd writhing, choking, convulsed, his face distorted; and a heavy, black snake was hanging out of his mouth. Had I ever seen so much disgust and pallid horror on a face? Had he, perhaps, been asleep? Then the snake had

crawled into his throat—and there it had bitten itself fast. My hands tugged and tugged at the snake—in vain! they could not tug the snake out of the shepherd's throat. Then a voice cried from me: "Bite! Bite! Its head off! Bite!"—thus a voice cried from me, my horror, my hate, my disgust, my pity, all my good and evil cried out of me with a single cry. You bold men around me! You venturers, adventurers, and those of you who have embarked with cunning sails upon undiscovered seas! You who take pleasure in riddles! Solve for me the riddle that I saw, interpret to me the vision of the most solitary man! For it was a vision and a premonition: what did I see in allegory? And who is it that must come one day? Who is the shepherd into whose mouth the snake thus crawled? Who is the man into whose throat all that is heaviest, blackest will thus crawl? The shepherd, however, bit as my cry had advised him; he bit with a good bite! He spat far away the snake's head—and sprang up. No longer a shepherd, no longer a man—a transformed being, surrounded with light, laughing! Never yet on earth had any man laughed as he laughed! O my brothers, I heard a laughter that was no human laughter—and now a thirst consumes me, a longing that is never stilled. My longing for this laughter consumes me: oh how do I endure still to live! And how could I endure to die now! (Hollingdale, 1973, pp. 176-180)

So this is the riddle that we have to solve. Who is the shepherd, who or what is the snake, and who is the first person narrator that heard this unearthly laughter.

The last one is easiest that's Nietzsche relating what the man from the Blissful Islands told him about Zarathustra's vision while they were on board ship together.

And who is the shepherd? Well that's really easy. The shepherd represents humanity of whatever religion or creed, with the implication that they are a bunch of mindless sheep.

So what is the snake? Well that too is obvious if you know the story of Adam and Eve. The snake is the forbidden fruit that humanity just has to grit their teeth and bite down on and just wear it. The Knowledge of Good and Evil. In fact the knowledge of good and evil couldn't be simpler. Our evil impulses spring from the trauma of birth. The fetus in the womb is dreaming about the conditions in the womb, the fetal envelope, the touch, taste, and smell of the amniotic fluid. This forms the fetus's first object of desire. For the first nine months of gestation we know only sensual bliss, and then we are cast out into a hostile and alien environment. For the first time we experience anguish and even hatred for our new surroundings. The cutting of the umbilical cord leaves a physical and emotional scar that remains with us throughout life. There are many ways in which we can overcome that anguish and trauma. Most of us quickly find compensation from the proximity of the mother's body, and in particular of course the breast. These are the ones who have a happy transition from life in the womb to life in the real world. But there are also a significant number of newborns who do not find that initial compensation. The trauma and the anguish remain. They develop abnormal desires and behaviors such as aggressiveness, the pursuit of power, sadomasochism, and the like. All of these latter inclinations can end up in evil conduct later in life (Bartholomew, 2017).

Recall Zarathustra's words that he emphasizes are coming from within him: Then a voice cried from me: "Bite! Bite! Its head off! Bite!"—thus a voice cried from me, my horror, my hate, my disgust, my pity, all my good and evil cried out of me with a single cry.

Solve for me the riddle that I saw, interpret to me the vision of the most solitary man! For it was a vision and a premonition: what did I see in allegory? And who is it that must come one day? Who is the shepherd into whose mouth the snake thus crawled? Who is the man into whose throat all that is heaviest, blackest will thus crawl? The shepherd, however, bit as my cry had advised him; he bit with a good bite! He spat far away the snake's head—and sprang up. No longer a shepherd, no longer a man—a transformed being, surrounded with light, laughing! Never yet on earth had any man laughed as he laughed! (Hollingdale, 1973, pp. 176-180)

The explanation for the knowledge of good and evil couldn't be simpler, but the fact is that there are

elements in human society who will take this explanation very badly. In the *Gay Science* Nietzsche says:

I greet all signs that a more manly, warlike age is coming, which will above all, bring valor again into honor! For it has to prepare the way for a yet higher age, and assemble the force which that age will one day have need of—that age will carry heroism into knowledge and wage war for the sake of ideas and their consequences. (Hollingdale, 1973, pp. 176-180)

O my brothers, I heard a laughter that was no human laughter—and now a thirst consumes me, a longing that is never stilled. My longing for this laughter consumes me: oh how do I endure still to live! And how could I endure to die now! Thus spoke Zarathustra. (Hollingdale, 1973, pp. 176-180)

Nietzsche has a premonition of the strife and conflict this knowledge of good and evil is going to ignite in the human race and he delights in the trials and tribulations that are ahead. But he predicts that reason will ultimately prevail.

Then he Zarathustra aka the loneliest man, really on account of the fact that he is in on the secret of gravity, that it's a phony force, but he is precluded from sharing it with mankind. Then Zarathustra seems to express pity for mankind for their suffering in this representation, but expects that they will face with courage the prospect of an infinite number of representations to come.

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