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# Schrödinger and Nietzsche on Life: The Eternal Recurrence of the Same

Babette Babich

Fordham University, babich@fordham.edu

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## **Schrödinger and Nietzsche on Life:**

### **The Eternal Recurrence of the Same**

Babette Babich

#### **The Now**

The phenomenological question of consciousness<sup>1</sup> usually associated with Husserl (although there are echoes of this in Augustine as in Marcus Aurelius, Kant and Schopenhauer) is the consciousness of the now, the present moment. I explore this consciousness for Erwin Schrödinger, which for him included reference to the Upanishads together with Nietzsche's central teaching or "thinking" of the eternal recurrence of the same.<sup>2</sup>

We are familiar with the physical and cybernetic framework of the question of life as Schrödinger himself posed it and indeed Schrödinger is celebrated as one of the first to pose this question using the framework of physics, itself increasingly the standard for the biological sciences today. Nietzsche, who is usually associated with the death of God and the will to power in the popular mind, also raised the question of life, drawing upon both Schopenhauer<sup>3</sup> and Kant as well as classical philosophy and letters.<sup>4</sup> In addition, Nietzsche's critically reflexive philosophical,<sup>5</sup> approach to the sciences — not unlike the approach Mary Midgely has always urged, most recently in her defense of Ruper Sheldrake's *The Science Delusion*,<sup>6</sup> as did indeed Paul Feyerabend, and others — meant that he directed his own questioning of life "to the physicists" as well as "the philosophers" whom he charges with dealing death as — "nothing," he writes, "escapes their hands alive." (TI, *Reason in Philosophy*).

Susan Sontag refers to Nietzsche in her diaries without giving the source. When I was asked about this reference, I surmised that Sontag assimilated two different loci, metonymically, as the mind works. The most important locus was the most evident one, shades of Poe's *Purloined Letter*. This was the "Thought of Death." (GS §278)

Susan Sontag's son, David Rieff closes his book, *Swimming in a Sea of Death*, with a reference to "the melancholy happiness"<sup>7</sup> Nietzsche tells his readers he "derives from the spectacle of human beings loving life"<sup>8</sup> all the while avoiding even the slightest "thought of death."<sup>9</sup> Nietzsche's point does not parallel Sontag's citation from Kierkegaard: "life must be lived prospectively but can only be understood retrospectively"<sup>10</sup> — nor Rieff's own melancholy addition that "by then, it is usually too late."<sup>11</sup> Instead, Nietzsche's ambition for all those human, all-too-human lovers of life was "to do something that would make the thought of life even a hundred times more appealing to them."<sup>12</sup>

The point exceeds the philosophical chestnut that as mortal beings, we are defined in our essence by our mortality and by our awareness of the same. Thus the poet Robert Burns' gave himself to reflect in a poem on his ruination of the chance for life of a small mouse, inadvertently, as he plowed the field. The Scots poet echoes Nietzsche's insight into life and brevity: whoever has not now *already* built a house, will no longer be building one. What distinguishes us, 'proximally and for the most part' as Heidegger says, echoing Nietzsche, echoing Seneca, is less that we are mortal and *can* think about death but that we don't think of it. And as Heidegger reminds us, the best way, the all-too-human way not to think of death is to insist that that we do think about. As everyone knows and everyone says: everyone dies. As Slavoj Žižek, as a Hegelian does not quite believe in the finality of things, underscores: "And so on and so on."

Nietzsche tells us this, as does indeed Pierre Hadot and the Austrian priest Ivan Illich and Heidegger and Schopenhauer, along with the ancients. Thus the classically philosophical insight that in our lack of concern with death we also lack a concern with life. In our (obviously Hobbesian) struggle to get ahead of everyone (this is the context of the aphorism which is set in Italy, at an emigrant's port), as we seek to outreach everyone *in medias res*, in and through our ambitions "to be the first in this future," we do not see that "death and deathly silence alone are certain and common to all in this future." (GS §278)

The classical focus on fate and its conflicts with desire echoes in Rieff's quote from the Marxist and Irish historian of science, J. F. Bernal from *The World, the Flesh & the Devil*: "there is 'the history of desire and the history of fate and man's reason has never

learned to distinguish them.”<sup>13</sup> Like Nietzsche and Schrödinger, Bernal contrasts religion with science and Buddhism.<sup>14</sup>

Nietzsche argues that science differs from religion in that science locates its promised fantasy of salvation not in the afterlife but in the world: the here and now.<sup>15</sup> Rupert Sheldrake’s above mentioned *The Science Delusion* is only a recent contribution to the blinders that tend to be required to believe in that same salvific science, a more pellucid example of which can be found in the gerontological phantasms of Kurzweil’s *The Singularity*.<sup>16</sup>

### **Schrödinger’s Cat and Nietzsche’s Madness**

Like Nietzsche, Schrödinger is surrounded with myth. Where Nietzsche’s myths turn on his will to power, his proclamation of the death of God, or his madness or supposed syphilis,<sup>17</sup> Schrödinger’s myths testify to his mathematical and quantum mechanical genius. Some of these myths turn on Schrödinger’s equation, others involve his quantum thought-experiment regarding a complicated way to kill a cat — the point being not the death of the cat (this ultimate outcome is given) but the uncertainty of knowing the life/death state of the cat in question at any specific time.

Now the cat, locked in his box, and no matter whether he is (still) alive or (already) dead, is unfortunate in any case. In this respect the cat is like every animal used in science and at every step of the way from their breeding and birth or still all-too-commonly from their ‘collection’ from the wild as well as pets taken from animal shelters to use in scientific experiments (pets are more docile because they — erroneously — expect kindness), and of course, virtually all of them are killed as part of the research project, and this is universally so when it comes to cats used in studies of perception and so many other things. A one-way street for the animals, scientific research on animals presumes a logic of death.

It is its’ verisimilitude, echoing both the gas chambers then and still used in the fatuously named animal ‘shelters,’ the practice of experimental science guarantees Schrödinger’s cat example its macabre force. By using the fact and time of death as an experimental

index or indicator describes what is done in all branches of science, especially in but not only the biological and psychological sciences, especially in these days of neuroscience but also in chemistry and physics, and also medicine and military science.<sup>18</sup> At issue is one state or the other: is the cat alive or dead? Schrödinger's humor is what puts a point on the significance and the paradox of quantum indeterminability which works as a thought experiment just because death is a quantifiable index: a ready-made gauge. Where would the chemist Robert Boyle have been with his air-pump — how would the dispute with Thomas Hobbes have been settled? — in the absence of an array of suitably suffocated mice and canaries as mute witnesses?<sup>19</sup>

Beyond the ailurophobic example of the cat — is 'it' alive or dead<sup>20</sup> — this question also illuminates the measurement paradox of the quantum state as Schrödinger. The furthest thing from a joke — although in popular culture, even in university contexts, it is nearly always greeted with hilarity — Schrödinger's thought experiment assumes the then and still current practice of experimental science, which depends upon an overwhelmingly massive utilization not only of cats but other animals "sacrificed" for the sake of science.

Schrödinger's "burlesque" example<sup>21</sup> offers a graphic illumination of the significance of quantum indeterminability.<sup>22</sup> Nietzsche would have reminded us that living experience is indeterminate from start to finish and not merely as one or the other of two, mutually exclusive "states" (and it is because Schrödinger can take these to be opposites that his experiment works as it does). By contrast, for Nietzsche, life includes every discrete continuum of stages of life as well as stages of death: "The living is only a species of the dead, and a very rare variety." (GS §109)

For the scientist (as for the military mind), half-dead however (the cat suffering in the box) counts as "alive." Elsewhere I have argued that this same military insensitivity informs Nietzsche's aphorism, "*From the military school of life*— What does not kill me, makes me stronger."<sup>23</sup> Having survived a siege, one can be urged to fight on in the morning or in the face the devastation of the loss of limbs, friends, family, etc.<sup>24</sup>

The issue of the "subject" (and correspondingly, the issue of objectivity) is only an issue for the scientist, the "observer."<sup>25</sup> Hence science refuses (no matter the results of its experiments) to attribute anything like "subjectivity" to its animal subjects — and this is

part of the issue that Mary Midgley has with the current mind-matter world view as we cited it at the start — and to this extent, brain science and cognitive psychology including (the term behavior is a dead or Cartesian-laden give-away) behaviourism, always neutralizes animals as objects that is: as things.<sup>26</sup> Nor does it matter in the end whether animals in experimental situations learn to speak, or to use language or tools, or recognize themselves in mirrors, or whatever we ask. For us, they remain things, and when the experiment is over we recycle them for other experiments and ultimately, such is our concern to examine their brains, “sacrifice” them.<sup>27</sup>

I have attended to the issue of animals because it brings some real-life context into contrast with the scientific ideal of Schrödinger *the myth*,<sup>28</sup> rather as if he were a power wrestler, corresponding to the Schrödinger equation as perfect symbolic signifier. In the case of Schrödinger’s *What is Life?* this same mathematical mystique characterizing the image of Schrödinger in science, popular culture, and philosophy (rather in that order) distracts us from reading what he says to us. Hence when we think of Schrödinger we do not think of the mythic traditions that concerned him, from the ancient Greeks to the Sufi and Vedic traditions, we think of his wave equation or his unfortunate cat example.

Schrödinger himself was not particularly worried about cats. His example was meant to illustrate that fundamental quantum physics challenges the ordinary assumptions of ordinary observation, that is: space and time, together with the identity of the observed. Hence Schrödinger reflects that quantum theory “tells us that what was formerly considered as the most obvious and fundamental property of the corpuscles, namely their being identifiable individuals, has only a limited significance.”<sup>29</sup> Thus the traditionally Laplacian expectation of an eventually calculable vision of the universe is demonically set on edge:

Only when a corpuscle is moving with sufficient speed in a region not too crowded with corpuscles of the same kind does its identity remain (nearly) unambiguous. Otherwise it becomes blurred.<sup>30</sup>

A consummate mathematician, Schrödinger emphasizes that what is at stake is what is called bi-locality:

And by this assertion we do not mean to indicate merely our practical inability to follow the movement of the particle in question; the very notion of absolute identity is held to be inadmissible.”<sup>31</sup>

With respect to what Patrick A. Heelan has called the “observable,”<sup>32</sup> at issue for Schrödinger is the subjective consciousness of the observer. The problem is consciousness and this is a *constitutive* problem:

...science in is the attempt to describe and understand Nature simplifies... The scientist subconsciously, almost inadvertently, simplifies his problem of understanding nature by disregarding or cutting out of the representation of the world that is to be constructed his own person, the knowing subject.<sup>33</sup>

This tendency to pretend to the God trick, or as Nietzsche puts it, to phrase questions in terms of what the world would look like *if one had cut one’s head off and if one could still take a look*), reflects the problem, and the idealization, of objectivity.

### **Nietzsche: *What is Life?***

In *The Gay Science* aphorism entitled *What is Life?* Nietzsche deploys his characteristic style of repetition punctuated by his customary thought slash. We get the rhythm of his refraction of the question, meaning that the reply to the question is and is not the answer, “Life — that is, continually shedding something that wants to die.” (GS §26) The rest of the aphorism gets more obscure, sentence by sentence, and it can be hard to know how to take what Nietzsche says here. And Nietzsche goes on to rephrase the claim: “Life — that is: being cruel and inexorable against everything about us that is growing old and weak — and not only about *us*.” (GS §26)

Does Nietzsche mean this? Is he no more than what fans of Ayn Rand and “easy-Nietzsche” — a kind of fascist, a Nazi *avant la lettre*? EZNietzsche, like FakeZizek on Twitter, would thus be little more than a 19<sup>th</sup> century Callicles or Hobbes — bristling British: nasty, brutish, and short. Whereby Nietzsche’s point would only be: and now we are back to our Sartrean seduction scene over apricot martinis or ‘just coffee’: got to catch youth while you may.

A reading of this kind is great for the post-humanists, the transhumanists, who wish to argue that Nietzsche was a transhumanist in advance (what, so they say, does his talk of the Overman *really* mean?),<sup>34</sup> which transhumanist persuasion is to be sharply distinguished from those transhumanists (like Nick Bostrom, for one) who are discomfited by the comparison and wish to keep Nietzsche at a massive distance (“easy” Nietzsche does seem to come with all those fascist, “easy” social Darwinian overtones mentioned at the start of the current section).<sup>35</sup>

Here we note, that Nietzsche contends against Darwin and is thus not a Darwinist,<sup>36</sup> and he contends contra Malthus and he is accordingly no Malthusian. For Nietzsche, the simplicity of Darwin’s argument, like that of Malthus, happens to miss the point when it comes to the question of life, which was for Nietzsche the question of the organic and the inorganic, the question of the vital and the dead, the question of excess and abundance and the question of lack and debility which for Nietzsche was always a sign of either a sickness unto death or that from which one might eventually and, given good luck, — which for Nietzsche entailed good climate, good air, good times — even convalesce. In a *Nachlass* note we read what Nietzsche says about “the organic,” when he names it “merely” and no more than “variety of the inorganic, and a very rare variety,” emphasizing that “the entire opposition between the organic and inorganic belongs to the phenomenal world.”<sup>37</sup>

The issue is similar to the point Schrödinger makes with respect to the subject when it comes to explaining the mind in his *Mind and Matter*. For Schrödinger, referring to what the brain factually is, as supposed by those who invoke “brain states,” the problem is that such brain states *do not and cannot tell* us anything at all about consciousness, if by that we don’t mean (but it turns out that we always do mean) the inevitably circular claim of electroencephalographic data findings regarded as signifying brain states.<sup>38</sup> For Schrödinger, we are no better off with our modern findings than we would be if we limited ourselves to observed behaviour. For Schrödinger, “real consciousness” refers to *your* consciousness of you, the subject and your subjective self, as *opposed* to that of your neighbor, as *opposed* to the consciousness of the person sitting next to you, behind you, two chairs away, the consciousness of a lover, the consciousness of a friend, an enemy, a stranger on the train.<sup>39</sup>

*We are not even*, this is Schrödinger's point, *conscious of ourselves* when it comes to our past selves, that is: as we were yesterday, last week, ten years ago, thirty years ago, as Nietzsche too made similar observations.

For Schrödinger, and his point may be found more musically in Augustine's famous book XI of his *Confessions*, one is never conscious of anything but the present and that changes from moment to moment. One is (no longer) consciousness of the past, one is not (yet) conscious of the future. And our collective sadness at the massacre of civilians including children in Pakistan and Syria (ah but we should also add Libya and Afghanistan and Iraq and so many, many other places, especially in Palestine and Africa) and deaths everywhere, indeed, even animal (especially noteworthy given all the animals we kill, that is the almost unimaginable scope of our rapacity, and for all the reasons we kill them — and I cannot even begin to speak of the trees and other plants as we never, never do) betrays our awareness that what is lost in death is every potential, every possible conscious moment: from now on in. For Nietzsche observes that science has no intention of limiting itself to the phenomenal domain. The physics that deposes the metaphysics of the schools turns out to be interested in nothing but the metaphysical domain:

That all appearance [*Erscheinung*] is material [*Materie*] is clear: therefore the natural sciences have a justified goal. Because to be material is to be appearance. But at the same time it turns out that that the natural sciences are only interested in what lies behind the appearance [*Shein*]: which it handles with high seriousness as reality."<sup>40</sup>

In the context of the Greeks, as Schrödinger argues<sup>41</sup> and hence with regard to the Pythagorean/Orphic tradition, that is Empedocles, Nietzsche reflects that such a logical, scientific sensibility was ancient Greek science, "everything inorganic has come to be on the basis of the organic, as dead organic material. Cadaver and human being."<sup>42</sup> Nietzsche converts this point and thus he speaks of will to power. One can have the autotelic organization or dynamism of organic matter *only if* as he writes "it is already present at hand in the suitable or relevant inorganic matter."<sup>43</sup>

And if this were a different essay, I would seek to draw a connection between Nietzsche, this would be the Irigaray move, as a thinker of the sea, and for me this recalls the eternal laughter of Aeschylus, the wave greedy for its prey, existence on the model of a beautiful sea creature sunning itself on the rocks, and all too literally a matter of wave and form:

The exchange of raising and sinking [*Hebung und Senkung*], the wave [*Wogen*] is the simplest type. The wave form is in almost all preliminary stages of nature: all movements disseminate themselves in this. Rhythm has dominion over the entirety of so-called dead existence [*sogennant todtes Dasein*].<sup>44</sup>

As a reader of Helmholtz and others, Nietzsche means this as scientifically as you please and he emphasizes the pulsing form of wave mechanics and human sensation, that “we experience impressions of light and sound as constant, although they are rhythmic”<sup>45</sup> and in this same sense he reminds us that we are not able to perceive movement, which must necessarily vanish in order to be perceived, leading to an exactly “static effect.”<sup>46</sup> But we „do not perceive movement.”<sup>47</sup> Nietzsche, the scholar of ancient philosophy that he was, probably repeats nothing more often than this.

Indeed Nietzsche reflects, the more science we have, the more theoretically advanced we are, the more we are able to come to perceive “movement, restlessness, happenings.”<sup>48</sup> This takes an enormous amount of time and even then:

the human belief in “things” has become so unshakably solidified, just like the belief in matter. But there are no things, everything is in flux [*alles fließt*] – thus speaks insight but the instinct contradicts it at every moment.<sup>49</sup>

As Nietzsche repeats, following Schopenhauer but also the science of his day (think again of Mach):<sup>50</sup> “Matter itself is an age-old, enflashed prejudice [*uraltes eingefleischtes Vorurtheil*].”<sup>51</sup> Nietzsche’s point here is that this prejudice is incorrigible — and this incorrigibility is the hardest aspect of Nietzsche’s epistemological, scientific thought.

When Nietzsche writes of life and death in *The Gay Science*, he remarks that we should avoid speaking of “laws of nature,” (GS §109) emphasizing that there are only necessities.<sup>52</sup> For Nietzsche, as we noted above, “Let us beware of saying that death is opposed to life. The living is merely a type of what is dead, and a very rare type.” (GS

§109) Translated back into what is taught in the life-sciences, the organic, the more organized, the autotelic motion, is a kind of inorganic, that is not so organized, that is more chaotic, heterotelic motility. Hence Nietzsche can claim that “matter is as much of an error as the God of the Eleatics,” that would be *nous*, that is mind, for the Eleatics that is being as we recall Heidegger teaching us to read Parmenides that is the same to think and to be.

This forms the basis of Nietzsche’s critique of causality. As he writes: we can only perceive what is perceptible in material events but and by contrast, “for that for which we have no sensibility” does not exist for us.<sup>53</sup> Anything that goes beyond the domain, the form, the sense of that sensibility, that is of our senses cannot be grasped or imagined. Thus “for us” and very literally “such a thing cannot exist.”<sup>54</sup>

To be sure we have microscopes, telescopes, electron microscopes, super-colliders, just in order to guess at those faster-than-light neutrinos and so on. But in order to give us information at all, these instruments give us information on our terms.<sup>55</sup> As we know, handily from theorists of technology like Ellul, like Mumford, like Heidegger, and before Heidegger like Friedrich Dessauer, Hegel’s student, our tools, our technologies, *extend our senses*.<sup>56</sup>

Here I pass over Nietzsche’s uncanny references to death in his *Thus Spoke Zarathustra*. *I teach you the overhuman* we read Zarathustra teaches the *Übermensch*.<sup>57</sup> What is significant in the current context is that death unites the two doctrines Zarathustra comes to teach: both overhuman and eternal return of the same. *Das Gleiche*.<sup>58</sup>

Same old, same old.

Note here that Nietzsche does not say the same as, things taken again and again, day in, day out, *das Selbe*. *Das Gleiche*. You, you yourself return not as you are now, with everything you take yourself to be: you as you imagine yourself to have been and you as expect yourself to become.

Much rather what returns is what was. Nietzsche doctrine of eternal recurrence emphasizes the return of everything that has been: the past, the same as it was and every tiny and major aspect of it: the same old, same old. The grass<sup>59</sup> grows at the end of the

twilight of the gods.<sup>60</sup> The same grass grows at Auschwitz, at Buchenwald, where we have laid waste to Baghdad, and in Afghanistan, soon, and in Libya. And then there is Korea and Vietnam, Verdun, Dresden.

### **Nietzsche and Schrödinger on the Subject**

Our engagement with Schrödinger's *What is Life?* has had us talking about death. Thus Nietzsche reflects in the passage that initially caught Sontag's attention: *all these people* waiting at the port (here Nietzsche's reference is Genoa), all of them poised to emigrate effectively form "a brotherhood of death." The image, the born, the ship about to embark is classic and refers to both Epictetus and Marcus Aurelius and indeed and to be sure to Lucian's Charon, the same ghostly ferryman featured in the same dialogue from which Nietzsche takes his Overman: *The Downward Journey*.

In *The Gay Science* aphorism, *The Thought of Death*, this tacit brotherhood is the *only* brotherhood there is for living subjects of consciousness, for subjects of desire, for subjects such as ourselves all of us, born to mortality and thus bound to die, whether we think about it or not. Nietzsche's point is the philosophical point that living subjects abjure the thought of death: it is the furthest thing from their minds.

We abjure death, we deny it, and we choose life instead, as Sontag also chose life and did so until and of course — though we ourselves have no less difficulty grasping this notion when it applies in our own individual case — that choice was no longer hers. For his part, the economically (or dismally) minded Schopenhauer reflected that life was a business that did not cover its costs, a business that from an economic point of view, a business point of view, made absolutely no sense "as an enterprise," and therefore was the only thing that really compelled reflection.<sup>61</sup> Nietzsche added more biology and more thermodynamic statistics borrowed from Lord Kelvin — William Thomson — to the same reflection, recognizing that abundance and waste was the way of life — and of death. Hence he could argue with the best of 19<sup>th</sup> century cosmology, that a dancing star was born of chaos, excess, confusion. Thus Schrödinger quotes Tagore in an Irish climate: "The butterfly counts not months but moments, and has time enough."<sup>62</sup>

If one takes the philosophical point of view, if one has a classical formation and if one also happens to be a theoretical and mathematical cosmologist, one also knows that the subject conscious of his own consciousness, the subject lying on his roof, the subject moved by poetry and by bodily desire is still, and in every possible sense of the word, looking at eternity.

We look out into eternity and find ourselves looking backwards.

We think, we ‘solve,’ the problems of the heavens themselves simply by thinking of the universe in terms of what we call, using physicist’s metaphorical language, the Big Bang. Like Goethe’s teasing Prometheus, as Nietzsche quotes this in his first book, and the little steps that are the sins of women, if that is so, we do not mind it, with one big leap, the men get there. Here the point is to skip over *everything in between*. Talk of the beginning, like talk of the end does that.

And yet and already and since the turn of the last century, as Schrödinger reminds us in 1943, biology has become the province of physics.<sup>63</sup>

So what is life?

As *physis*, as *natura*, the answer is already patetn: life is emergent order, life is what becomes of itself, what becomes out of itself, organizing itself in itself, by itself. And what would be the difference between that and a crystal? Little enough say the scientists — and to this day the parallel sticks because on the molecular level we have indeed to do with crystal formations — and yet ...

*And yet* we have come to know better, although that better knowing doesn’t always penetrate scientists writing for the popular press and it certainly takes its time before it reaches philosophy, especially that of the uncritical scientific kind, that is analytic philosophy of the sort (and there are other kinds) that tends to dominate today, as what we also call “mainstream” philosophy. And as Evelyn Fox Keller, who is herself as respectably mainstream as anyone, but who is pro-science (as I happen to be pro-science) without being scientific (as I myself also happen not to be scientific) has written:

For almost fifty years, we lulled ourselves into believing that, in discovering the molecular basis of genetic information, we had found the ‘secret of life’; . . .

And we marveled at how simple the answer seemed to be. But now, in the call for a functional genomics, we can at least read a tacit acknowledgement of how large the gap between genetic ‘information’ and biological meaning really is.<sup>64</sup>

To the question “what is life?” Nietzsche’s reply is given, not unlike Schrödinger, in *economic* terms, terms for Nietzsche borrowed from Schopenhauer but also terms attuned to the cosmological balance of thermodynamic law. And if life can be regarded as kind of business or energy equation, in terms of energetic efficiency, increasing negative entropy means, as Nietzsche puts it, “shedding something that wants to die.” (GS §9)

Thus to be able to step lightly through life, to be able to live, is to be able to lose what one does not need, what does not serve one. And when the organism loses this ability, it is already dead. In the capitalist West of days gone by, businesses declare bankruptcy, in the the West of the capitalist of the current world order insists on public bailouts. In a Western religious context, spiritual advice tells us that if it hinders you, drop it. “Life is shedding something that wants to die.” (Ibid.)

Nietzsche who died himself as a relatively young man (old enough to be old to his mind — or to the mind of anyone younger than he was — but ‘young’ as Schrödinger would have judged him) failed to master that one trick of life. Nor did he manage to die as he taught in his Zarathustra: “at the right time.” (*Z, On Voluntary Death*) In this way, and not unlike the great majority of us, Nietzsche became “too old for his victories” (as his Zarathustra also says with regard to suicide: many become “too old for their truths and their victories” (ibid.) and as Heidegger quotes Nietzsche in turn in his *Being and Time*.<sup>65</sup>

For Schrödinger, the trick of life is not a matter of aesthetic timing. Instead, the living organism has to “suck in” order — countering, offsetting entropy. Here what is important is that this uptake is quantifiable to the extent that entropy itself, as Schrödinger reminds us is not a

hazy concept or idea, but a measurable physical quantity just like of the length of a rod, the temperature at any point of a body, the heat of fusion of a given crystal or the specific heat of any given substance. At the absolute zero point of temperature (roughly -273°C) the entropy of any substance is zero.<sup>66</sup>

One lives by offsetting disorder:

Thus the device by which an organism maintains itself stationary at a fairly high level of orderliness (= fairly low level of entropy) really consists continually sucking orderliness from its environment.<sup>67</sup>

To this extent, negative entropy counteracts what it is in you **that wants to die**, and as Nietzsche emphasizes, something in a living entity drives not to pleasure (as the utilitarians suppose) but the opposite of pleasure, *unlust*, as this goes along with and is part of the passions themselves.

Or as Nietzsche says still more alluringly for the fitness buffs among us — this is what his Zarathustra will mean when he urges the creators to “become hard,” that is as he writes here in *The Gay Science*, as it is of course and as advertised, the “prelude” to Zarathustra: “to be cruel and inexorable against everything about us that is growing old and weak.” (GS §26) Nor does Nietzsche shy away from the point, it is one of the themes of *The Gay Science*, whereby simply to live, this is the ineluctably Jainist metaphor is “Constantly being a murderer? — and yet old Moses said: “Thou shalt not kill.” (Ibid.)

The nisis is an intriguing thing. The point at this juncture is that life and death already include a connection with sex, of course: because as Nietzsche alludes to the Buddhists, if a child is born to you, the fetter forged, the demon born to you, is not only an obligation, you caused it — you care for it — but is also the symbol of your own death, your own insignificance.<sup>68</sup>

Nietzsche stresses abundance: increasingly we are come to another kind of insight as we human beings deal death all around us. Hijacking life, we call it science. Abusing life, we “raise” domestic animals, caring for them, feeding them, automatically to be sure, in factory farms which is their life as they know it: all of us, a nation of witches raising animals in cages, like Hansel and Gretel, we fatten them for the kill. Nor do we breach the question of animal subjectivity, animal consciousness as they die, as they go to their deaths. What is the subject? What is consciousness?

We deal death. *Our life*, as Heraclitus and the other Preplatonic philosophers remind us, *is their death*. This is no peaceful notion, strife, hatred: as we live life, everything around

us dies its death. Anaximander calls this the crime of existence. But the Greeks knew that bloodshed costs, that life lost has its price. Thus we need, Nietzsche claimed this too, purification. But after so many years we are so distant from this that it perhaps it makes no sense to imagine it.

Maybe that is why the most popular focus for most philosophy is ethics, virtue ethics, wisdom ethics, practical ethics, political theorizing: we do what we do, more than ever, worse than ever and ask for justification.

### **Schrödinger's Eternal Recurrence and the Subject**

the human being who has never realized the strange features  
of his own condition has nothing to do with philosophy  
— Schrödinger

Schrödinger emphasizes the philosophical interests he began with, coupled too with a keen interest in the Presocratic philosophers and bridging Nietzsche and Schopenhauer's own interest in the Indian philosophies of the Vedanta. In his epilogue, after shocking the reader with the declaration that, so he suggests, summarizes the general insight of all mystic traditions, here including the Upanishads as he names them here as well as the *Cherubic Wanderer* (whom he does not name):

In Christian terminology to say: 'Hence I am God Almighty' sounds both blasphemous and lunatic. But ... in itself, the insight is not new. The earliest records to my knowledge date back some 2,500 years or more. From the early great Upanishads the recognition *ATHMAN* = *BRAHMAN* upheld in (the personal self equals the omnipresent, all-comprehending eternal self) was in Indian thought considered, far from being blasphemous, to represent the quintessence of deepest insight into the happenings of the world. Again, the mystics of many centuries, independently, yet in perfect harmony with each other (somewhat like the particles in an ideal gas) have described, each of them, the unique experience of his or her life in terms that can be condensed in the phrase: *DEUS FACTUS SUM* (I am become God)."<sup>69</sup>

The French physician and philosopher of science, Michel Bitbol recognizes this as central for Schrödinger, characterizing the equation *Atman = Brahman*, as nothing less than Schrödinger's "second" equation.<sup>70</sup>

Who or what is the subject? What are the implications of Schrödinger's "second equation": "*Atman = Brahman* (the personal self is identical with the omnipresent, all-comprehending eternal self)"? As Schrödinger continues to reflect, you are what you know yourself to be and thus your memory tells you who you are, whenever you reflect or attempt to tell yourself yourself, as Nietzsche puts it in his own reflections on the nature of consciousness, as we count backwards, recollecting "the twelve trembling bell-strokes of our experiences, our lives, our being — ah!" and this ah, "ach!" in the original, is how we know that we have to do with Nietzsche, "ah! And miscount ourselves in the process ..." (GM, *Preface*, i)

For Nietzsche, necessarily, incorrigibly, you are and can be no closer to those memories of yourself, of your life as you lived it. "We are unknown to ourselves, we knowing-ones, we ourselves to ourselves." (Ibid.) For Nietzsche, even assuming (as he does assume) an aesthetic justification of existence, a world of creative play, even noting that we have a consciousness of this play, whether played by a cosmic *Ur-Künstler* or some divinity, we are still and only *played* whereby and to be sure "our own consciousness regarding this our significance is hardly other than the warriors painted on a canvas have of the battled depicted upon it." (BT §5)

We could almost be speaking of Arjuna and Krishna in conversation.

But Schrödinger's reflection on subjective identity uses the same Schopenhauerian image of figures painted on a canvas, reflecting on the stranger from Vienna that he is in the strange land that is Irish Dublin, and refers to the present and to our possible consciousness of our selves. Schrödinger's point here is that you are your recollections but that you are no closer to those memories of yourself, your life as you lived it, to the people that you used to know, than a figure painted on a canvas and both Nietzsche and Schrödinger borrow it from Schopenhauer, who himself doubtless takes it from somewhere else,

Here for Schrödinger, the point is to refer to the present, the now that stays, or stands as the mystics say in a parallel with eternity, as this was also Goethe's reference to the present that is our only happiness:

each of us has the indisputable impression that the sum total of his own experience and memory forms a unit, quite distinct from that of any other person. He refers to it as 'I' and What is this 'I'? If you analyse it closely you will, I think, find that it is just the facts little more than a collection of single data (experiences and memories), namely (experiences and memories), namely the canvas upon which they are collected. And you will, on close introspection, find that what you really mean by 'I' is that ground-stuff upon which they are collected. You may come to a distant country, lose sight of all your friends, may all but forget them; you acquire new friends, you share life with them as intensely as you ever did with your old ones. Less and less important will become the fact that, while living your new life, you still recollect the old one.<sup>71</sup>

Schrödinger is highlighting the difference between the you, the subject you are now — as we claim this subject to “have” subjectivity, but like the late Thomas Szasz, Schrödinger points more to doing or being than to *having* — *and* the you you were, the you that was you. Again, he distinguishes the self you are from your former self:

“The youth that was I,” you may come to speak of him in the third person, indeed the protagonist of the novel you are reading is probably nearer to your heart, certainly more intensely alive and better known to you. Yet there has been no intermediate break, no death.

Ultimately the point of the thought experiment here concerns birth and rebirth and thus the irrelevance of personal identity to it all, rather like the differently tuned experiment that brings in Nietzsche's demon at the conclusion of the *Gay Science* with respect to what Nietzsche calls the greatest weight, that is the thought that, so he says, would if you ever began to grasp it, crush you utterly, change you utterly.

even if a skilled hypnotist succeeded in blotting out entirely all your earlier reminiscences, you would not find that he had killed you. In no case is there a loss of personal existence to deplore. Nor will there ever be.<sup>72</sup>

To illustrate this, we may have recourse to Nietzsche's pale criminal. We encounter him in one form or another throughout Nietzsche's writing: in *The Gay Science*, and in *Thus Spoke Zarathustra* and again in *Beyond Good and Evil* and in *The Genealogy of Morals* in one or more guises. A lawyer appointed to represent our criminal, or anyone guilty of a crime would do well, as advocate, to teach him the one emotion Nietzsche claims does not grow or bloom in jail, that is the feeling of remorse and that is just because of the point Schrödinger makes about consciousness and in prison there are all kinds of other things to worry about. This distraction is the ineluctable, incorrigibility of the present although with good preparation from one's lawyer one can work around even that. After the crime, the criminal has no remorse (and this is coming at the phenomenon from the other side of the crime) while, as Nietzsche points out, beforehand, as it were, he also has no presentiment of crime as such, because in neither, before the crime he is about to commit (this is why premeditation matters so much) and after the crime the crime with which he is charged, is he the same as the one who commits the crime. In other words, more simply expressed: he does not know why he killed, save out of what Nietzsche with a strange precision called the joy of it, which the prisoner may well recall, yet without the same consciousness of the deed that is the consciousness that concerns Schrödinger and Nietzsche. Johnny Cash's parodic line in the song Folsom Prison gives some voice to self-distancing, even in an inculpatory mode: *but I killed a man in Reno just to watch him die*.

Exculpatory or not, the point here is that Johnny Cash takes the prisoner's side in this (and every prisoner who heard him sing understood this) in a precisely Zarathustran fashion: there is no why *and you are guilty*.

Like the rose — and Georges Bataille takes this argument to the extreme of extremes in his *Inner Experience* but above all in the *Tears of Eros* — the murderer is without why.

For most of us, this is impossible to believe and yet the Greeks who invented the mind also invented courts of law. For Schrödinger, lovers know something about the consciousness of the other. To the extent that they do love, one might talk as John Dewey does about art as the pinnacle of existence, as the high point of sex. Bataille is quite overt about this, Nietzsche not so overt but this is what the Apollonian and the Dionysian are about. The whole point of the erotic encounter is that it is a vision intense, imaginary,

fantasy, union with the other. It is just this that Lacan denies by saying that there is no sexual relation, but Lacan —womanizer that he was — hardly means by this that there are no sexual encounters: no sex, far from it. Lacan means exactly what he says (just as Szasz who says, contra psychiatry, that there is no mental illness argues not against mental troubles or sorrows or problems but against the organic claim that ties the last to physical, bodily, objectively diagnosable illness). What Lacan means, and he tends to be right in this regard, is that there is little *relating* going on in the sexual relations that go on constantly, all that “constant craving” as this characterizes popular advertisement culture on so many levels.<sup>73</sup>

Schrödinger however always maintained the poet’s insight that two *can be one*. To understand this, note both that such a union between lovers is rarely attained and that even those consummations that are attained do not remain as such — a disappointment that inspires the whole of Goethe’s *Faust*. Thus most or many or almost all erotic relations are relations between those who remain others to one another: only the barest hint of oneness and apart from that no transcendence one to another.

And just to the extent that Schrödinger’s was the soul of lover,<sup>74</sup> Schrödinger could not but share the same belief (bad or good) faith Sartre underscores above. To this same extent Schrödinger believed every lie he ever told (and it was surely true when he spoke it) and his real secret was, like any seducer, that he managed to persuade the women he loved to deal with the other women he also loved — or wanted to love. This is the Machiavellian art of managing to have his ladies, his wife included, accept his infidelities. The point here is that the only way to do this, and this contrasts with many lesser men with lesser souls and lesser minds, is by telling the truth. Thus, and this is also how such ‘management’ works — it’s good to give a loved one something else to do besides sit by the phone — Schrödinger was tolerant in turn, allowing the women in his also to be unfaithful to him (his wife, Annemarie Bertel, had love affairs of her own, notably with Hermann Weyl, where the only thing that matters is that she stayed with Schrödinger, true to their marriage vows, until he died).

Erotic registers, like a list of traffic tickets, are incomplete violations apart from those we know, and the womanizer counts on the limitations of what beloved can know or even imagine.

Read like a police report, i.e., just the facts, we can read that Schrödinger seduced Hildegunde March, the wife of Arthur March, with whom he had one of his daughters, and that he went on to seduce many more, having two additional daughters by two additional Irish women.

We say, as Schrödinger's philosophically conventional biographer says, and as it makes far more sense to say, this was just the way it was *fin de siècle Vienna*, you know, like the late Stephen Toulmin and the still living Allan Janik's account of *Wittgenstein's Vienna*, for people like Wittgenstein and what we suppose ourselves to know of his homoerotic persuasion. Vienna, where, gateway to the orient as it is, they inscrutably managed to get their eros into high art, extraordinary images.

Paul Feyerabend, who also hailed from Vienna, knew what it was to know nothing about the one thing about which everyone might speak (this is the erotic, and Feyerabend throughout his life spoke as a man who was physically unable to do much with the erotic domain after his injury as a relatively young man). But because of this perhaps Feyerabend was more sensitive than most to the conditions of knowledge, that is what is needed to speak of knowledge or to make judgments about it. Thus Feyerabend challenged scientists and academics who condemn astrology, observing that their rejection could not be taken seriously. The same scientists and scholars knew (*and wanted to know*) nothing about astrology. Thus, again as Feyerabend pointed out, these same scientists lacked a scientific knowledge of the subject — one way or another. Feyerabend's argument is scientifically enlightened with respect to astrology (note that this hardly makes him an adherent),<sup>75</sup> and he extended it to the example of Western medicine and Eastern acupuncture, arguing that one needed knowledge to judge such traditions.

Scientifically speaking, critically speaking, you'd need to know a science cold, its history and its claims, the doing of that science, before claiming the right to name it hokum, tying it to a metaphorical stake and burning it as pseudoscience.

Learning astrology, reviewing the data, is not what the scientists who condemn it bother to do (which was Feyerabend's point as it was also Mary Midgley's point in her review on behalf of Sheldrake as we cited this at the start) nor is it what more humanistically oriented academics do. Instead, and based on what we take ourselves to know, these are

prejudgments and this is how prejudice works, we condemn whole traditions that simply happen to be other than the ones we know and can judge. This otherness is how western science condemns eastern science, how modern science condemns medieval science (correcting this was the obsession of Pierre Duhem's later life), and indeed ancient Greek science.<sup>76</sup> This otherness is why Western medicine calls everything else 'alternative' medicine, language that institutes its approach as canonic. Here the hermeneutic issue is that this is how prejudice works. Its limitations means that it is anything but scientific, meaning one who seeks to know by testing ('tasting' as Nietzsche points out), one who is open to experience, i.e., enlightenment.

### **Resumé and Conclusion**

Talking about Schrödinger and honoring what de Nicolás has had to tell us about Indian philosophy, about consciousness, we have had recourse to aesthetic elegance and, in the case of Schrödinger, to sexual inclinations and passions or dedicated excess(es), as well as to his famous wave equation and to his first time use of the word "code" when talking about the transfer of genetic information. The last reference remains tricky because Schrödinger was not necessarily arguing in his own text that the same genetic coding that matters to us was necessarily interior to the cell, as we take it to be where we take genes to be, simply because for Schrödinger what was at stake was the relation between the inside of the cell and the outside of the cell.

The issue was a matter of economy, as Avenarius and Mach would say and as Schrödinger emphasized the relevance of this notion. For Schrödinger, the point would only be that the code, however it worked,<sup>77</sup> was impingent on the system as such: it came from without. When scholars want to complement Schrödinger they find themselves setting his idea of the code *into the cell* rather than beyond it as he actually argues — and as his point requires. Here to conclude I note only that the problem remains: how does the inside get outside, how does the code code, how, in other words, does nucleotide transcription really work, *in vivo*?

What we exclude by way of our focus on Schrödinger's poetry and his supposed depression and his supposed erotic abandonment, as Gumbrecht underscores, even to his vacations, or by mentioning his sartorial elegance, or (at the time) scandalous sensuality

and even by focusing on his mathematical ingenuity, is Schrödinger's enduring concern with the subject (him- or herself) as Schrödinger was concerned with consciousness and time. And both consciousness and time are philosophical issues.

What is striking about consciousness for Schrödinger, and here he echoes Husserl and Heidegger as much as Nietzsche, is its extraordinary *temporality*:

consciousness is always now. There is really no before and after for mind. And it is never multiple, not even when it is you, not even when you dialogue with yourself, that is why Aristotle can speak of thinking as the soul's converse with itself, because such a thing is possible, you do not know, in the sense of experience, both sides.<sup>78</sup>

Thus Schrödinger emphasizes

the empirical fact that consciousness is never experienced in the plural, only in the singular. Not only has none of us even experienced more than one consciousness, but there is no trace of circumstantial evidence of this ever happening anywhere in the world.<sup>79</sup>

This point was one Schrödinger was at pains to make thus he writes:

When in the puppet-show of dreams we hold in hand the strings of quite a number of actors, controlling their actions and their speech, we are not aware of this being so. Only one of them is myself, the dreamer. In him, I act and speak immediately, while I may be awaiting eagerly and anxiously what another will reply (...). That I could really let him do and say whatever I please does not occur to me (...)<sup>80</sup>

Nietzsche offers a related reflection, when he writes of appearance as a "a dance of spirits and nothing more," he also reflects, and this is he learned from Schopenhauer as much as from Kant enlightenment about appearance changes no part of it: "...I woke up in the midst of this dream but only to the consciousness that I am dreaming and that I must go on dreaming, lest I perish, as a somnambulist must go on dreaming lest he fall..." (GS § 54)

When you set about to think about a problem or question, you may not instantly see a solution (in fact sometimes you still don't, not even after thinking about it for hours, days, years). Sometimes, like Descartes, and for thinkers like Schrödinger, an insight can

come to you readymade, as if or literally in a dream. Like a leaf, as Nietzsche uses the metaphor, it floats whole, into your lap.

Arjuna and Krishna — again.

Poincaré offers a statistical, very Schrödinger like, mathematician's proof of eternal recurrence.<sup>81</sup> Poincaré's point was Nietzsche's point, which is not to say that Nietzsche had the mathematical prowess to work out a similar proof.<sup>82</sup> Nietzsche's concern with respect to the eternal recurrence and personal identity was not mathematics but consciousness. Thus he also emphasized, with regard to the pale criminal, that one has little other than conviction or belief that would link one to one's own past acts. Personal identity even in this life, as Nietzsche (and Sartre as we saw above), follow Schopenhauer's reflections on human nature, is a matter of consciousness and identity with one's past consciousness is tied to belief.

In other words, what we know as personal identity is not guaranteed after death and yet continuity is.

This too Nietzsche seeks to foreground with his own talk of eternal recurrence.<sup>83</sup> Nietzsche's concern with respect to the eternal recurrence and personal identity was not mathematics but consciousness. Thus he also emphasized, as already noted with regard to the pale criminal, that one has little other than one's convictions or beliefs to link one in the present to one's own past acts. Personal identity even in this life, as Nietzsche (and Sartre as we saw above), follow Schopenhauer's reflections on human nature, is a matter of consciousness and identity with one's past consciousness is tied to belief.

Schrödinger the modern man gives this illustration of this Schopenhauerian point: your consciousness is not identical with — you *are not*, you *do not have*, you *do not share*— the consciousness of your younger self. Thus when it comes to consciousness you have more chance of sharing consciousness at the real pinnacle of existence, erotic love — which is not just about sexual climax but the oneness Schrödinger describes (perhaps he should have written Valentine's day cards?) when he writes

those true lovers who, as they look into each other's eyes, become aware that their thought and their joy are numerically one — not merely similar or identical; but they, as a rule, are emotionally too busy to indulge in clear thinking, which respect they very much resemble the mystic.

But the point of difference remains. It is the same one Derrida tries to make, without referring to either Schrödinger or Schopenhauer or the Upanishads when he writes about the person who promises to love and the person he now is, and it is the hard-gentle words Schrödinger is reported as having offered one of his lovers when he points out what she herself also would know, we were once as one. That was then and that then is not now. Between the two of them together reflecting on the truth of that truth could not but have broken resistance. Because the endearing thing about Schrödinger was that he liked as much as possible to keep his loves, even while moving on to other lovers.

Seduction, anti-seduction, a dynamic play between lovers who have lost their love which never really works as planned. Passed-over lovers never quite believed Schrödinger's rhetoric but had to concede the truth of what he said. For everything follows from that disjunction — if what one means by love is union — and every lover, every poet with the soul of a lover knows that what one means by love is union. Two are one (or as Nietzsche varies that, loving himself as we know that he did, one can become two, but even that passes:

*Da, plötzlich, Freundin! wurde eins zu zwei—  
—Und Zarathustra ging an mir vorbei*

In point fact, intriguingly, it is when you love that you love so very much that you *want* to promise forever, that you *want* nothing so much as to hitch your love to your future self, whether it wants it or not and even though it *certainly* will not want it.

Remember Nietzsche's little aphorism love of god likewise.

Love of one is a piece of barbarism: for it is practiced at the expense of all others,  
Love of God likewise. (BGE §67)

For Schrödinger, to go back to mind and eternity, you, the subject, lose nothing by the fact that you lose your subjective, personal identity just because you, qua subject, lose it all the time. As Nietzsche says every bit of our consciousness, especially our higher consciousness, depends upon forgetting: to be *morally, ethically* human we must get ourselves a memory and we do create a memory for ourselves in our ethical and civic laws, which we burn into ourselves. This is also the assault on the body: only that which is inscribed with pain, says Nietzsche, and this is so important for Freud's theory of the unconscious and trauma, *can be* remembered. And we do remember, as Nietzsche says,

five or six I will nots, and thus commandments to be remembered are negative and thus commandments include a threat, a promise of vengeance, of loss.

It is for this reason that we say when we marry not I will love you forever but yes I will, meaning yes I will not: I will cleave to you only, renouncing all others till the end of time, all others, no matter who they are, no matter how true or right for me they may be.

You do not know the *you* you were for Schrödinger because you do not have consciousness of that you: you are not aware of that you, and even your memory which is what you do have, even the vividness of your memory, fades. This is the reason we tell a grieving friend that *time heals all wounds*, just as the marvelous Fiona Shaw, the actress explains in that over-long and over-wrought academic film, namely Terry Malick's *Tree of Life*. Because, and of course it is true: time heals all wounds because in time we forget. Yet the consciousness of grief, like the consciousness of erotic, ecstatic erotic love (i.e., true love) does not want to hear or permit that it, this pain, this love, shall pass, but wants instead to burn its Eros, but above all its loss, its pain, its grief into memory. The American Indians of the northern plains, cut off a finger to create such a memory for themselves, and although Nietzsche does not refer to them explicitly here, this is the point that he likewise seeks to make. We do something much gentler when we put on a wedding ring to remind ourselves of a promise we have made.

For Schrödinger, there is no difference between you that says I and the universe: you are already everything *and* you do not know it, except that you can master the trick of thinking this identity, as Nietzsche also mused. In this sense we know that we are those who have figured out that we are figures in the dream of a god who dreams.

For Nietzsche, you can learn to bless life, love fate, *amor fati* or not. In any case, what is significant is the long run, the highest feeling, eternity. Thus when he writes contra the usual role of the promises of the afterlife in an early unpublished note, "My teaching says, Thus to live that you would *wish* to live again is the task — you will do so in any case."<sup>84</sup>

Thus you will, in any case, be reborn, again and again. But reborn, your consciousness is no more connected to your consciousness than your consciousness is identical with the consciousness of drinking this morning's cup of coffee, provided you were conscious

enough after last night's party (assuming there was a party, assuming you were invited) to remember to have a cup of coffee to begin with. As Nietzsche reflects on pride and memory: "I have done that' says my memory. That I cannot have done — says my pride and remains inexorable. Finally — memory yields." (BGE §68)

You are no longer present to the past self that you were, you are not conscious of the past. Once again, we turn to the young Schrödinger:

I venture to call it [the mind] indestructible since it has a peculiar time-table, namely mind is always now. There is really no before and after for the mind. There is only now that includes memories and expectations.<sup>85</sup>

We may, or so I believe, assert that physical theory in its present stage strongly suggests the indestructibility of Mind by Time.<sup>86</sup>

Or

"It is by observing and thinking this way that one may suddenly experience the truth of the fundamental idea of Vedânta. It is impossible that this unity of knowledge, of feeling and of choice that you consider as YOURS was born a few years ago from nothingness. Actually, this knowledge, this feeling and this choice are, in their essence, eternal, immutable and numerically ONE in all men and in all living beings (...). The life that you are living presently is not only a fragment of the whole existence; it is in a certain sense, the WHOLE"<sup>87</sup>

Nothing of what Schrödinger says here is without seeming paradox, and it is not for nothing that he suggests that Western science and understanding can do with an "infusion" of Eastern wisdom.<sup>88</sup> But he says this with respect to the notion of the subject, the *you* that you are and indeed with respect to the objects you take to exist around you. And thus not at all abstract, the issue for Schrödinger is as personal as it was for Nietzsche, which is to say that what Schrödinger says is all about his own being, the "I" but that means that it is about you, yourself and what makes you you (rather than, as Schroödinger also reflects some other being, your brother or your father. Thus for Schrödinger as for Nietzsche, *you will be reborn*, that he argues is certain, but to say that could not possibly be to say that you will *remember* this life or any part of it.

[As] inconceivable as it seems to ordinary reason, you—and all other conscious beings as such — are all in all. Hence this life of yours which you are living is not merely a piece of the entire existence, but is in a certain sense the whole; only this whole is not so constituted that it can be surveyed in one single glance.

This, as we know, is what the Brahmans express in that sacred, mystic formula which is yet really so simple and clear: *Tat tvam asi*, this is you. Or, again, in such words as ‘I am in the east and in the west, I am below and above, I am this whole world.’<sup>89</sup>

Note that you are no longer conscious of the start of these reflections now that it is nearing its end: unless you took notes as you went along. But even then you are merely recognizing the note, reconstructing your earlier awareness. The eternal recurrence is *not* what Woody Allen says it is, it does not mean that he or anyone else will have to sit through the ice capades again and again, it is not the wretched Michael Keaton film *Ground Hog Day* — I mention these two physically fairly unattractive movie stars, cast as they are, as Woody Allen is fond of casting himself, as romantic leading men, in order to point out that they are the subjects rather than the objects of desire in their romantic comedies.

For *all subjects*, this is the meaning of what it is to be a subject, *are unattractive* by definition. The subject is not the desired, the subject is not the judged and evaluated. The subject is the subject who desires, who judges, evaluates, or as Nietzsche said, wills (where it matters very much indeed that only men are those who will for Nietzsche) because the subject is the observer and thus conscious as such, rather than being the object of consciousness (at the same time, it should go without saying that none of us should be learning the meaning of Nietzsche’s eternal return from a movie).

To put this in Schrödinger’s words,

Without being aware of it, and without being rigorously systematic about it, we exclude the Subject of Cognizance from the domain of nature that we endeavor to understand. We step up with our own person back into the part of the onlooker who does not belong to the world, which by this very procedure becomes an objective world.<sup>90</sup>

Instead, like a speck of dust, as the demon says, the hourglass of existence is turned upside down, again and again. That is to say, so Nietzsche argues at the end of his 19<sup>th</sup> century and we may think of this as an harmonic oscillator, the universe is so cycled.

This cycling is Empedoclean, Heraclitean, Anaximandrian, and Parmenidean but it is perhaps above all a Vedic notion. This is the Atman and as Nietzsche says — more modern than any of us, making the same point Neils Bohr makes about his horse shoes and about superstition in the realm of the Real — shaking his head: *du wirst es jedenfalls*.

This is you, as Schrödinger says, repeating Descartes's point most powerful point about the need for creation/conservation, and it is you in any case.

Say yea or nay to recurrence, as Nietzsche says, "you will do so in any case" — what eternally recurs recurs in any case. For Schrödinger:

"It is certain that the earth will give birth to you again and again, for new struggles and for new sufferings. And not only in the future : it resuscitates you now, today, every day, not just once but several thousand times, exactly as it buries you every day several thousand times (...). (For) the present is the only thing which has no end"<sup>91</sup>

— Endnotes —

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<sup>1</sup> This essay grows out of a text presented as a graduate lecture at Fordham University for students from Fordham and the University of Antwerp in mid-September, 2011. Both Antonio De Nicolás and Patrick Heelan were mentioned on this occasion with reference to Fordham and to Stony Brook.

<sup>2</sup> This doctrine is introduced by way of the penultimate aphorism ("The Greatest Weight" [GS §341]) of the first published version of *The Gay Science*, which ends with the section *Incipit tragödia* (GS §341) that recurs verbatim as the first section of *Thus Spoke Zarathustra*. Thus connections between Nietzsche's books tends to be elusive (Nietzsche's famous aphoristic style seems to lead literary and philosophic scholars to ignore their genesis and read them periodically, insisting on three periods (divided like Gaul or the persons in the one God, I am not sure which). What is certain is that authors read Nietzsche's texts in isolation from one another, which further fuels — and blinds source scholarship. At any rate, and to date scholars have tended not to read *The Gay Science* and *Thus Spoke Zarathustra* together. I argued for this in several places and I differ from other scholars in that I contend that this is further complicated by the importance of Nietzsche's first book on tragedy for *The Gay Science*. See Babich, "Gay Science: Science and *Wissenschaft*, *Leidenschaft* and Music" in: Keith Ansell-Pearson, ed., *Companion to Nietzsche* (Cambridge: Blackwell, 2006), pp. 97-114 as well as "The Science of Words or Philology: Music in *The Birth of Tragedy* and The Alchemy of Love in *The Gay Science*" in: Tiziana Andina, ed., *Revista di estetica*, n.s. 28, XLV (Turin: Rosenberg & Sellier, 2005), pp. 47-78.

<sup>3</sup> The context in Nietzsche's second *Untimely Meditation*, namely, "Schopenhauer as Educator" is also one of Nietzsche's earliest expressions of life affirmation and the question that leads to his notion of the eternal return. Nietzsche, *Kritische Studienausgabe* (Berlin: de Gruyter, 1980), Vol. 1 p. 362.

<sup>4</sup> Reading Nietzsche on the theme of life is an inherently esoteric undertaking given Nietzsche's own discipline of ancient philology, i.e., what we call classics today. This esoteric dimensionality was especially close to Nietzsche via his friend and colleague, the Heidelberg philologist, Erwin Rohde, who was not only an expert on the 2<sup>nd</sup> century satirist, Lucian as well as the Greek concept of soul or spirit and mind, as author of the two-volume, *Psyche*. See Rohde, *Psyche: The Cult of Souls & The Belief in Immortality Among the Greeks*, introduction by W.K.C. Guthrie, trans. W.B. Hills (New York: Harper & Row, 1966); originally: *Psyche: Seelencult und Unsterblichkeitsglaube der Griechen* (Tübingen: Mohr 1894).

I have shown that Lucian is critical for our understanding of the very seriously comic or parodic dimensions of Nietzsche's Zarathustra just to the extent that Lucian's dialogues thematize death and the afterlife, as the phantasms of metaphysics, and in this fashion the vanities of worldly life. Yet Lucian, who once enjoyed overwhelming popularity, counts as both a common-place and esoteric referent because, as the late Annette Baier pointed out with reference to David Hume for whom Lucian is also significant, we

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no longer read Lucian.. Parodic themes recur in Nietzsche's Zarathustra, who also, à la Lucian, own account of Empedocles not merely flies into a volcano but to hell (and back). See Babich, « Le Zarathoustra de Nietzsche et le style parodique. A propos de l'*hyperanthropos* de Lucien et du surhomme de Nietzsche, » *Diogène. Revue internationale des sciences humaines*, 232 (October 2010): 70-93. See also, foreground Empedocles and Hölderlin in English, Babich, "The Time of Kings: Nietzsche's Zarathustra, Nietzsche's Empedocles." In: Horst Hutter and Eli Friedlander, ed., *Becoming Loyal to the Earth: Nietzsche's Teaching as a Therapy for Political Culture* (London: Continuum, 2013).

<sup>5</sup> Nietzsche's theoretico- cosmological concerns are well known and he had read the theorists of his day, especially Robert Mayer and Ernst Mach and many others, as has been detailed for many, many years now. See my own discussion of this engagement in *Nietzsche's Philosophy of Science*, where I also emphasize the earlier contributions of Reinhard Löw, Wolfgang Müller-Lauter, Abel Rey, and especially Alwin Mittasch in particular and if only for his reading of the importance for Nietzsche of J. R. Mayer, among others.

<sup>6</sup> See Mary Midgley's review of Rupert Sheldrake's *Science Delusion* (London: Coronet, 2012), "We must find a new way of understanding human beings" which begins with this crucial reflection as Midgley writes here: "The unlucky fact that our current form of mechanistic materialism rests on muddled, outdated notions of matter isn't often mentioned today" and continues to argue, precisely on the very ontic and ontological terms of both evolution and the — often summarily dismissed — facts of perception that "We must somehow find different, more realistic ways of understanding human beings – and indeed other animals – as the active wholes that they are, rather than pretending to see them as meaningless consignments of chemicals." Midgley, *The Guardian*, 27 January 2012.

<sup>7</sup> Nietzsche, *The Gay Science*, §278.

<sup>8</sup> Rieff, *Swimming in a Sea of Death*, p. 174.

<sup>9</sup> Nietzsche, *The Gay Science*, §278.

<sup>10</sup> David Rieff, *Swimming in a Sea of Death: A Son's Memoir* (New York: Simon and Schuster, 2008), p. 177-78.

<sup>11</sup> David Rieff, *Swimming in a Sea of Death*, p. 179.

<sup>12</sup> Nietzsche, *The Gay Science*, §278.

<sup>13</sup> J. D. Bernal as cited by David Rieff, *Swimming in a Sea of Death*, p. 78.

<sup>14</sup> "Desire, the strongest thing in the world, is itself all future, and it is not for nothing that in all the religions the motive is always forwards to an endless futurity of bliss or annihilation. Now that religion gives place to science the paradiscial future of the soul fades before the Utopian future of the species, and still the future rules. But always there is, on the other side, destiny, that which inevitably will happen, a future here concerned not as the other was with man and his desires, but blindly and inexorably with the whole universe of space and time. The Buddhist seeks to escape from the Wheel of Life and Death, the Christian passes through them in the faith of another world to come, the modern reformer, as unrealistic but less imaginative, demands his chosen future in this world of men." In: J. D. Bernal, *The World, the Flesh & the Devil: An Enquiry into the Future of the Three Enemies of the Rational Soul*, (Bloomington: Indiana University Press, 1969), p. 7.

<sup>15</sup> Thus Nietzsche agrees with Bernal as does the so-called French Freud, Jacques Lacan. But we should remember not only that this sentiment appears in Epictetus and Marcus Aurelius, and is thus a mainstay of Stoicism. See on Nietzsche and ancient science, Babich, xxx

<sup>16</sup> I discuss Kurzweil in Babich, "On Machines as the Masters of Humanity: Martin Heidegger, Günther Anders, and the Singularity of Digital Technology" in: *Journal of the Hannah Arendt Center for Politics and Humanities at Bard College*, 2 (2012): 122-144.

<sup>17</sup> I address this in Babich, "Reading Lou von Salomé's Triangles," *New Nietzsche Studies*, Vol. 8, Nos. 3 & 4 (2011 / 2012): 82-114, see especially the discussion leading to the last footnote, here p. 114. As we will return to this issue below, it is worth noting that Schrödinger had a greater statistical likelihood of having had syphilis as that the usual avenues for infection include intimate contact and, unlike Nietzsche, Schrödinger boasted so many erotic conquests that his biographers vie for different ways to talk about this.

<sup>18</sup> The praxis of experimental science depends upon the violent, as a matter of course, and overwhelmingly massive in terms of sheer numbers life and death utilization of cats — but also dogs, rats, mice, pigs, sheep, primates, goats, etc. And we have singularly little sympathy for cats, especially in science but also in general and the numbers of cats killed (ignoring Asian markets for the moment) are proportionately much higher than surrendered or impounded animals like dogs in US shelter systems. Even the most modest

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statistic as offered by the ASPCA rates the proportion of cats killed as between twenty and thirty percent higher than dogs (note that almost all other animals, birds, rodents, rabbits are simply euthanized to start with and note too that, implausible as this many seem there are no reliable statistics to be had). The ASPCA, like the similarly named Humane Society or indeed PETA, is also responsible for many of these deaths as the great majority of animals “rescued” by the ASPCA are killed in shelters which, to be sure, should not be called *shelters* but ‘execution holding facilities’ or ‘centers for domestic animal genocide’ or some other more true to function descriptor.

<sup>19</sup> See here, and the authors do not make this point themselves even as they simply report it, Steven Shapin and Simon Schaffer, *Leviathan and Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1985).

<sup>20</sup> Schrödinger’s cat has a life of its own in popular discourse, particularly as this is made iconic on the internet given the popularity of the ‘lolkatz’ example of the same (‘lolkatz’ are images of cats with various sentiments, as the authors suppose cats would have them, largely articulated from what is presented as the cat’s point of view).

<sup>21</sup> Schrödinger, „Die gegenwärtige Situation in der Quantenmechanik,” [Part One] *Die Naturwissenschaften*, 23/48 (29 November, 1935): 807-812.

<sup>22</sup> Where would the chemist Robert Boyle have been with his airpump, how would the dispute with Thomas Hobbes have been settled in the absence of an array of suffocated mice and canaries? Cf., again, Shapin and Schaffer, *Leviathan and Air-Pump*.

<sup>23</sup> Nietzsche, *Twilight of the Idols*, Streifzüge §8.

<sup>24</sup> I discuss Nietzsche’s aphorism here: Babich, *Words in Blood, Like Flowers*, pp. 109-110 but see too Tracy Strong’s creative appropriation of my discussion in his introduction to Nietzsche’s *Twilight of the Idols*, Richard Polt, trans. (Hackett), p. ix.

<sup>25</sup> See here, Patrick A. Heelan’s unpublished manuscript, *The Observable*.

<sup>26</sup> Midgeley, *Animals and Why They Matter: A Journey Around the Species Barrier* (Atlanta: University of Georgia Press, 1983).

<sup>27</sup> I take this up in my essay “‘What Makes Human Beings into Moral Beings?’ On the Evolutionary Significance of Ethics,” *Revista Voluntatis: Estudos sobre Schopenhauer*, Vol. 2, No. 2 (February 2012): 3-30 and this emphasis formed a public commentary I offered on a talk on mirror neurons in the Fall of 2012 at Fordham University.

<sup>28</sup> This is the academic aura — “Das ist der Schrödinger” — as this awe accompanies what I have elsewhere called the “great man” cult in physics as in philosophy and so on in the academic world. See Babich, “Great Men, Little Black Dresses, & the Virtues of Keeping One’s Feet on the Ground,” *MP: An Online Feminist Journal*, Volume 3, Issue 1 (August 2010): 57-78. But if this overenthusiasm for ‘great men’ may be found across the board in the academy (the names vary from discipline to discipline and change every half decade or so, it is instructive that it is only scientists (and former times religious men) who manage to make the move from esoteric chic to exoteric fame. Think of Einstein and think too of all the other names you knew once — and perhaps no longer recall today.

<sup>29</sup> Schrödinger, *Nature and the Greeks*, p. 18.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> See again, Heelan’s *The Observable*. Cf. Heelan, *Quantum Mechanics and Objectivity: A Study of the Physical Philosophy of Werner Heisenberg* (The Hague, Nijhoff, 1965). See too in this connection, the video interview with Patrick Heelan, “On Axiomatic Systems, Apples, God, and Hilbert Spaces,” [http://www.youtube.com/watch?v=S4NG2qniGqs&list=UUJqCWvIqA\\_bX5tcVpaNFe8w&index=7&feature=plcp](http://www.youtube.com/watch?v=S4NG2qniGqs&list=UUJqCWvIqA_bX5tcVpaNFe8w&index=7&feature=plcp)

<sup>33</sup> Schrödinger, *Nature and the Greeks*, p. 92.

<sup>34</sup> See again, Sorgner, “Nietzsche, the Overhuman, and Transhumanism,” and Babich, “Nietzsche’s Post-Human Imperative” and so on.

<sup>35</sup> See for instance, Nicklas Boström, “Transhumanist Values,” in: *Review of Contemporary Philosophy*, 4: (2005) and for further references, especially for these, the notes to Babich, “Nietzsche’s Post-Human Imperative.”

<sup>36</sup> I have always argued this on the basis of what Nietzsche says about Darwin, but Nietzsche’s writings on Darwin are manifestly difficult enough that some readers do not think at all hold that he is an anti-Darwinist, see John Richardson. Greg Moore splits the difference, but more recent studies begin to speak

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to the complexity of the question and the impossibility of reading Nietzsche as a Darwinist. Or one can just go read for oneself the things Nietzsche says about Darwin.

<sup>37</sup> Nietzsche, KSA 11, 25 [356], p. 106.

<sup>38</sup> An exception here may be found in the careful reflections in M. R. Bennett and P.M.S. Hacker, *Philosophical Foundations of Neuroscience* (Oxford: Blackwell, 2003).

<sup>39</sup> In the context of Schrödinger's reflections on consciousness, the *appearance* of the person sitting next to you tells you a great deal about their consciousness inasmuch as the person next to you may appear dejected, seem sad, strike you as bored or anxious, etc. Schrödinger's point is that all that is always and only the barest surface of what their consciousness is really all about.

<sup>40</sup> Nietzsche, KSA 7, p. 130. The problem here for Nietzsche is that as he later writes just prior to his famous time-atom fragment, KSA 7, 26 [11], p. 175 as he writes, "The opposition between material and representation [*Vorstellung*] does not exist. The material is given only as sensation." Whereby every conclusion that goes beyond sensation is illicit. "Jeder Schluß hinter sie ist unerlaubt." (Ibid.) Cf. Ibid., 9, 11 [69], p. 467.

<sup>41</sup> But also like Afrikan Spir to name a name that would have mattered to Schrödinger and that has become ineluctably esoteric for our sensibilities.

<sup>42</sup> Nietzsche, KSA 7 23 [24], p 553.

<sup>43</sup> Nietzsche, KSA 11, 26 [274], p. 221.

<sup>44</sup> Nietzsche, KSA 8, 9 [1], p. 131.

<sup>45</sup> Nietzsche, KSA 8, 9 [1], p. 131.

<sup>46</sup> Ibid.

<sup>47</sup> *Empfindung ist eine Zeichen eine statischen wahrnehmbar gemachten d.h. aufgehobene Bewegung. Die gewöhnliche Vorstellung, das die Empfindung der direkte Ausdruck einer in uns erregten Bewegung sei, ist falsch. Die Bewegung als solchen empfinden wir nicht.*" (ibid.).

<sup>48</sup> Nietzsche, KSA 8, 23 [26], p. 413.

<sup>49</sup> Ibid. Indeed even Boscovich whom Nietzsche usually praises is criticized here for his reification of his own insight, clinging to a fixed notion of what he calls the *Klumpchen atom*, something thing-like, "stuff" or "matter." Cf. Nietzsche, *Beyond Good and Evil*, §12. I discuss this, among other things, in Babich, *Nietzsche's Philosophy of Science: Reflecting Science on the Ground of Art and Life* (Albany: State University of New York Press, 1994).

<sup>50</sup> I offer a discussion of Mach, along with an array of other references in Babich, "Early Continental Philosophy of Science," In: Keith Ansell-Pearson and Alan Schrift, eds., *The New Century Volume Three: Bergsonism, Phenomenology and Responses to Modern Science: History of Continental Philosophy* (Chesham: Acumen, 2010), pp. 263-286.

<sup>51</sup> Nietzsche, KSA 8, [150], p. 458.

<sup>52</sup> Nietzsche returns to this more famously, more explicitly, turning directly to the physicists themselves in the first aphorisms of *Beyond Good and Evil*.

<sup>53</sup> Nietzsche's term is *Sinne* "Wofür wir keine Sinne haben" which means sensibility, but it also means very basically sense, and we have five of them.

<sup>54</sup> Nietzsche, KSA 9, 11 [75], p. 470.

<sup>55</sup> See Patrick A. Heelan: "Husserl, Lonergan, and Paradoxes of Measurement," *Journal of Macrodynamic Analysis*, 3 (2003): 76-96 as well as Heelan, "The Phenomenological Role of Consciousness in Measurement," *Mind and Matter*, 2/1 (2004): 61-84.

<sup>56</sup> And transhumanist speculators on the transcendent possibility of the supposed singularity, are nowadays (this comes and goes in the modern era) wanting to continue the same project of extension, including and going beyond our bodies, our minds entire, our lives. But all such projected extensions or fantasies work by reduction, as Nietzsche already teased when he spoke of men of knowledge who became through their specific disciplinary extensions, so many giant ears, or eyes, or hands, or feet.

<sup>57</sup> This indeed and of course, all about death, read backwards as a reference to Nietzsche's classical philological formation as we noted at the outset. In another context, I would take up Nietzsche's fingernail reflections, another metaphor to go with Nietzsche's metaphor for the gateway, *Augenblick* in *Thus Spoke Zarathustra*. See Babich, "Le Zarathoustra de Nietzsche et le style parodique" as well as Babich, "The Philosopher and the Volcano," *Philosophy Today* (Summer/Fall 2011): 213-231. Especially in the French version of this text, "Le Zarathoustra de Nietzsche et le style parodique," I discuss Nietzsche's aphorism, *On Growth After Death* (GS §94), which in turn invokes Fontenelle's own evocation of Lucian via

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Fontenelle's *Dialogue of the Dead*. Fingernails and death are crucial for German gods and the particular qualities of the ship that sails before the final battle, Ragnarok: "The ship that is called Naglfar also becomes lose. It is made of the nails of deadmen; wherefore it is worth warning that when a man dies with unpared nails, he supplies a large amount of materials for the building of this ship, which both gods and men wish may be finished as late as possible." Snorri Sturluson, *The Prose Edda: Norse Mythology*, Rasmus Björn Anderson, trans. (Chicago: Scott, Foresman, 1901, [1879]), p. 58.

<sup>58</sup> Cf. for a discussion of Lucian and eternal return, Babich, « Le Zarathoustra de Nietzsche et le style parodique. »

<sup>59</sup> This is the point Kant makes when he speaks of a Newton of a blade of grass. And we may think we are long past that, but with everything we can do, with all the genomics we have, with all the plans the singularity mongers have (plans to live forever), it transpires that we cannot make a single blade of grass and that what we call synthetic 'organisms' are cobbled together, like so many micronized Frankenstein monsters, out of the fragments of once living beings. We hijack life, our experimental methods push the organism to its limits, and we watch the awkward life that results, the crippled lives that result, and we gloat and ignore the suffering and the early deaths, when we do not 'sacrifice' the products just to 'see' what we have made.

<sup>60</sup> Völuspa, 59.

<sup>61</sup> Schopenhauer, this is the point here, thought about such things as the son of a successful businessman, that means a business who is practically good at economics — which is called the dismal science, as we know today and to our pain, because it is so difficult to be good at it.

<sup>62</sup> I refer here to the often cited discussion between the poet Rabindranath Tagore and the physicist Albert Einstein.

<sup>63</sup> See Babich, "Early Continental Philosophy of Science" in: Keith Ansell-Pearson and Alan Schrift, eds., *The New Century Volume Three: Bergsonism, Phenomenology and Responses to Modern Science: History of Continental Philosophy* (Chesham: Acumen, 2010), pp. 263-286 and on the dominance of physics in science, including other non-physics or not-P sciences, as I call them here, see Babich, "Towards a Critical Philosophy of Science."

<sup>64</sup> Evelyn Fox Keller, *The Century Of The Gene* (Cambridge: Harvard University Press, 2000), p. 7. See too Andrew Torrance, "Gene Concepts, Gene Talk, and Gene Patents," *MINN. J.L. SCI. & TECH.*, 11(1) (2010): 157-191. Regretably neither Keller nor Torrance mention Latour or, perhaps most relevant in this context Fleck even as he include an epigraph from Keller on what she does not term (although it is) a hermeneutic of laboratory life: "It's been a growing conviction of mine that biologists have a whole other way of talking to each other in the lab than they do to the public." For her part, however, Keller does mention her Cambridge, Mass colleague, Richard Lewontin.

<sup>65</sup> Heidegger, *Being and Time*, Macquarrie and Robinson, trans. (New York: Harper and Row, 1962), p. 306. SZ: 264.

<sup>66</sup> Schrödinger, *What is Life?*, p. 71.

<sup>67</sup> Schrödinger, *What is Life?*, p. 73. Schrödinger goes on to remark on the very triviality that catches the philosopher of science, Evelyn Fox Keller's good notice: "Indeed, in the case of higher animals we know the kind of orderliness they feed upon well enough, viz. the extremely well-ordered state of matter in more or less complicated organic compounds, which serve them as foodstuffs. After utilizing it they return it in a very much degraded form — not entirely degraded, however, for plants can still make use of it. (These, of course, have their most power supply of 'negative entropy' the sunlight)." *Ibid.*, pp. 73-74

<sup>68</sup> You are no longer the child you once were, yesterday's news (not that this will not be true if you put off having children or forget as many academics do, but not Schrödinger, to have them in the first place.

<sup>69</sup> Schrödinger, *What is Life?*, p. 87; trans. altered.

<sup>70</sup> On Schrödinger see again, Bitbol, *Schrödinger's Philosophy of Quantum Mechanics* as well as *Physique et Philosophie de l'Esprit*.

<sup>71</sup> Schrödinger, *What is Life?*, pp. 89-90.

<sup>72</sup> Schrödinger, *What is Life?*, p. 90.

<sup>73</sup> See chapters four and five in Babich, *The Hallelujah Effect*.

<sup>74</sup> Recall here Nietzsche's beautiful Night Song: "it is night. Now awaken all the songs of those who love. And my soul too is the song of a lover." Nietzsche, *Thus Spoke Zarathustra*, II: *Das Nachtlid*.

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<sup>75</sup> Ironically, iconically so, Feyerabend once featured his own horoscope as frontispiece to one of his books. Paul Feyerabend, *Erkenntnis für freie Menschen. Veränderte Ausgabe* (Frankfurt am Main: Suhrkamp, 1980). Frontispiece, p. 2.

<sup>76</sup> See on Duhem and medieval cosmology, the several essays I have written on the history of continental philosophy of science, in particular, Babich, "Philosophies of Science: Mach, Duhem, Bachelard," in: R. Kearney, *Continental Philosophy in the 20<sup>th</sup> Century* (London: Routledge, 1994), pp.175-221, esp.: pp. 187-194.

<sup>77</sup> Erwin Chargaff as I knew him in my early years at Fordham in Manhattan would and did know more about that in Schrödinger's day — as would Richard Lewontin among others we might name today.

<sup>78</sup> Schrödinger, "Mind and Matter," in: *What is Life?*, p.135.

<sup>79</sup> Schrödinger, "Mind and Matter," in: *What is Life?*, p. 130. Cf. "What is Life," p. 88.

<sup>80</sup> *Ibid.*, p. 131.

<sup>81</sup> Babich, "Towards a Critical Philosophy of Science" and also in Babich, "Early Continental Philosophy of Science."

<sup>82</sup> This is not limited to Nietzsche's contemporaries and Milič Čapek, who used to teach at Boston University when I was at Boston College, also wrote on this. See note below.

<sup>83</sup> Elsewhere I have observed that Poincaré offers a statistical, very Schrödinger like, proof of eternal recurrence, see, again: Babich, "Towards a Critical Philosophy of Science" and also in "Early Continental Philosophy of Science." Poincaré's point was Nietzsche's point, which is hardly to say that Nietzsche had the mathematical prowess to work out a similar proof.

<sup>84</sup> Nietzsche, KSA 9, 11 [163], S. 505.

<sup>85</sup> *Ibid.*, p.145.

<sup>86</sup> *Ibid.*, p. 165.

<sup>87</sup> Schrödinger, *Mein Leben, meine Weltansicht* (Munich: Deutscher Taschenbuch Verlag, 1985 [1925]),

<sup>88</sup> "Unter solchem Anschauung und Denken kann es geschehn, dass urplötzlich die tiefe Berechtigung jener vedantischen Grundüberzeugung aufleuchtet: Unmöglich kann die Einheit, dieses Erkennen, Fühlen und Wollen, das du das deine nennst, vor nicht allzulanger Zeit in einem angebbaren Augenblick aus dem Nichts entsprungen sein; vielmehr ist dieses Erkennen, Fühlen und Wollen wesentlich ewig und unveränderlich und ist numerisch nur eines in allen Menschen, ja in allen fühlenden Wesen." And he continues: „Aber auch nicht so, dass du ein Teil, ein Stück bist von einem ewigen, unendlichen Wesen, eine Seite, eine Modifikation davon, wie es der Pantheismus des Spinoza will.“ Schrödinger, *Mein Leben, meine Weltansicht*, p. 71.

<sup>89</sup> *Ibid.*

<sup>90</sup> *Ibid.*

<sup>91</sup> *Ibid.*, p. 72.