

# FROM THE ETERNAL RECURRENCE TO THE MULTIVERSE: TOWARDS A POSTHUMAN COSMO-ONTOLOGY

Francesca Ferrando

## Abstract:

This article is conceived as an intellectual patchwork of visions and notions, which are considered focal to the development of a posthuman cosmo-ontology. It wishes to experiment in its form, as well as in its contents, in line with the post-dualistic attitude of the posthuman: the “how” is the “what”. It is inspired by Nietzsche's *Thus Spoke Zarathustra* (1883-85), as well as by lived practice and quantum physics. It focalizes on the significance of the eternal recurrence in relation to the reiteration of patterns of existence and to the hypothetical memory of spacetime. It is a work in progress, aiming to spark original connections and a different set of hermeneutical possibilities. Like pieces of a philosophical puzzle, each subchapter makes full sense after reading the complete article. It is advised to approach this text with scientific joy and existential curiosity.

## SPACETIME

I had a dream. One day in 2010, I woke up with this phrase in my mind: “You will be able to unravel time”. I had never heard the word “unravel” before, so I looked it up in the dictionary to see if it held any meaning: it did. It meant: to undo, to untangle, to solve. And still, what did that phrase mean? How could you unravel time? By only focusing on the “how”, I had no answer. So I changed my focus to the “what”: what is time? Time can be perceived as a human concept, a historical guideline, a cultural framework; and still, time cannot be discerned from space. According to Einstein's general relativity (1916), the concept of time depends on the spatial referential frame of the observer. Time should be addressed more specifically as spacetime. Before proceeding further, we should mention that spacetime is merely a convenient framework; it does not describe “what it really is”, but “what it is like”. In physics, spacetime refers to a mathematical model that combines space and time into a single continuum: time is added as a dimension of space<sup>1</sup>. For instance, due to a principle of physics known as time dilation (Einstein

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<sup>1</sup> For a physics overview of the spacetime continuum, see, among others: Greene, B. (2011). *The Hidden Reality*:

1916), astronauts in space are aging a bit more slowly than the people on earth. It is assumed that spacetime is curved (Wald 1994)<sup>2</sup>; such a curvature would be caused by the presence of matter, and would be responsible for gravity. And still... what does spacetime have to do with Nietzsche?

## ETERNAL RECURRENCE

*Thus Spoke Zarathustra:*

“All that is straight lies,” the dwarf murmured contemptuously. “All truth is crooked; time itself is a circle.”

“You spirit of gravity,” I said angrily, “do not make things too easy for yourself!” (...).

“Behold,” I continued, “this moment! From this gateway, a long eternal lane leads *backward*: behind us lies an eternity. (...) Must not whatever *can* happen have happened, have been done, have passed by before? And if everything has been there before – what do you think, dwarf, of this moment? (...) Must we not eternally return?

(Z: 3 “On the Vision and the Riddle”, p. 271)

I first engaged with Nietzsche's notion of the eternal recurrence when I was sixteen years old: the idea that each and every moment of my life could return eternally as the same, changed my life at the time, inspiring me to craft my existence as my most ambitious work of art, to which I could say “yes” eternally. As many Nietzsche's scholars, I interpreted the eternal return as a thought experiment, and I must admit that, at first, I was surprised when I realized that Nietzsche might have conceived it as a cosmological doctrine as well. Here, I will not enter the debate on whether he actually meant to present the eternal recurrence in one way or in both ways (Loeb 2012)<sup>3</sup>, but I would like to reflect on possible interpretations of it and take it as an inspiration to develop posthuman cosmo-ontological hypothesis, based on contemporary developments in the

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*Parallel Universes and the Deep Laws of the Cosmos*. Random House: New York. For a philosophical perspective on it, see: DiSalle, R. (2008). *Understanding Space-Time: The Philosophical Development of Physics from Newton to Einstein*, Cambridge University Press, Cambridge (UK).

<sup>2</sup> Wald, R. (1994). *Quantum Field Theory in Curved Spacetime and Black Hole Thermodynamics* (Chicago Lectures in Physics). The University of Chicago Press, Chicago.

<sup>3</sup> Loeb, S. P. (2012). “Eternal Recurrence”. In: Gemes, R. / Richardson, J. (eds.), *The Oxford Handbook of Nietzsche*, Oxford University Press: Oxford.

fields of quantum physics. I would also like to remark that I will only refer to Nietzsche's *Thus Spoke Zarathustra*, instead of other possible texts and passages on the eternal recurrence (such as his famous presentation in *The Gay Science*, 341), not only for an internal coherence of the present text, but more appropriately, for the extensive development of the subject and its visionary approach in Nietzsche's most poetic work, which perfectly suits the evocative purpose of this account.

As a cosmological pattern, the eternal recurrence can be traced back to Eastern philosophies and spiritual traditions related to Buddhism as well as Hinduism; within Western philosophy, we can see antecedents in Heraclitus, the Stoic philosopher Zeno, and in the Pythagorean tradition – all sources which Nietzsche was familiar with (Bishop 2004; Parkes 1991; Mistry 1987)<sup>4</sup>. Some other interpretations of the eternal recurrence can be found in different cosmogonic rituals around the world. For instance, Mircea Eliade, in *The Myth of the Eternal Recurrence* (1949) underlines how ancient societies tended to envisage events not as constituting a linear, progressive history, but as creative repetitions of primordial archetypes. In Eliade's words:

These “rituals imitate a divine archetype and their continual reactualization takes place in one and the same atemporal mythical instant. However, the construction rites show us something beyond this (...). Every construction is an absolute beginning; that is, tends to restore the initial instant, the plenitude of a present that contains no trace of history. (1949: 76)

***How could a moment contain the present, the past and the future at the same time?***

*Thus Spoke Zarathustra:*

Eternally the ring of being remains faithful to itself. In every Now being begins; round every Here rolls the sphere There. The center is everywhere. Bent is the path of eternity. (Z: 3, “The Convalescent”, 33)

The moment is the matrix of creation: most patterns of existence will be repeated insuring

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<sup>4</sup> Bishop, P. (eds.) (2004). *Nietzsche and Antiquity: His Reaction and Response to the Classical Tradition* (Studies in German Literature Linguistics and Culture). Camden House: Rochester, NY.

Parkes, G. (ed.) (1991) *Nietzsche and Asian Thought*. University of Chicago Press: Chicago.

Mistry, F. (1987). *Nietzsche and Buddhism*. Walter de Gruyter & Co: Berlin et al.

continuity, some will be slightly modified, few might be radically revisited. Oral historical matriarchal lineages of time and herstories of bodies are also precious sources to be investigated. For instance, Julia Kristeva, in her essay “Women's Time” (1979)<sup>5</sup>, argues that female subjectivity is divided between cyclical, natural time (repetition, gestation, menstruation) and monumental time (eternity, myth of resurrection, the cult of maternity). She is actually pointing out to Nietzsche as her direct source for such a definition of temporal dimensions.<sup>6</sup> These modalities are set off against the time of linear history from where women have been the casualties, the outsiders of the socio-symbolic time contract.

### REITERATION AND REPETITION

Doing some interesting philosophical seminars in jail, a friend of mine received this answer from a prisoner, who had killed both his wife and her lover, when he accidentally found them having a sexual intercourse. He said: “In that moment, I thought that killing them was what I was supposed to do. Everyone expected me to do so. If I did not, I would have not been able to look into the eyes of my family and friends. I did not feel like killing them, but that was the only way I knew to deal with the situation. And so I did”. Repetitions of behavior. That was the only way he knew to deal with that situation. Patterns of existence. Such a perspective can be applied to many other notions and categories. Judith Butler in “Gender Trouble: Feminism and the Subversion of Identity” (1990)<sup>7</sup>, defines gender as performative and reiterative. As she explains:

The action of gender requires a performance that is *repeated*. This repetition is at once a reenactment and reexperiencing of a set of meanings already socially established; and it is the mundane and ritualized form of their legitimation. (178)

More than a noun, gender is a verb: to gender, gendering. This is an example to stress that gender, as well as infinite other micro and macro patterns, are reenacted through the gerundive condition of lived practice. By performing our existence, or more simply saying, by the ways we

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<sup>5</sup> Kristeva, J. (1979). “Women's Time”. In: T. Moi (ed.) (1991). *The Kristeva Reader*. Oxford: Blackwell, 188-213.

<sup>6</sup> In Kristeva's words: “we confront two temporal dimensions: the time of linear history, or *cursive time* (as Nietzsche called it), and the time of another history, thus another time, monumental time (again according to Nietzsche), which englobes these supra-national, socio-cultural ensembles within even larger entities” (1979: 189).

<sup>7</sup> Butler, J. [1990] (1999). *Gender Trouble: Feminism and the Subversion of Identity*. Routledge: New York et al.

live, we are creating patterns of existence. Here, it can be of interest to mention Jung's archetypes as universal, archaic patterns and images of the collective unconscious (1959)<sup>8</sup>. But how these sort of fluid archetypes would have formed? In order to address this question, I will now go back to our physics scenario, focusing on modalities of existence, in order to delve into the “how”, which is also the “what” of our possible futures.

## MULTIVERSE

Some years ago, when I was working on posthuman ontology, and specifically, on the subject of the multiverse, the eternal recurrence started to haunt my thoughts: I could not think of the multiverse without thinking of the eternal recurrence of the same...

*Thus Spoke Zarathustra:*

The soul is as mortal as the body. But the knot of causes in which I am entangled recurs and will create me again. I myself belong to the causes of the eternal recurrence. I come again, with this sun, with this earth, with this eagle, with this serpent - *not* to a new life or a better life or a similar life: I come back eternally to this same, selfsame life, in what is greatest and in what is smallest, to teach again the eternal recurrence of all things (Z: 3, “The Convalescent”, 333).

First of all, let me clarify that by “multiverse”<sup>9</sup> I am referring to the scientific investigations on matter from the micro to the macro levels of materialization, which recently brought different fields, from quantum physics to cosmology and astrophysics, to the same hypothetical conclusion: this universe might be one of many. Here, I should also mention that the multiverse “is not a theory, but a prediction of certain theories”, as cosmologist Max Tegmark stresses (2010: 558)<sup>10</sup>. For instance, the math of String Theory,<sup>11</sup> in order to function, requires a distinct

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<sup>8</sup> Jung, C. G. (1959). *The Archetypes and the Collective Unconscious*, Volume 9. Bollingen Foundation: New York.

<sup>9</sup> Tegmark, M. (2010). “Many Worlds in Context”. In: Saunders, S., Barrett, J., Kent, A., Wallace D. (eds.) (2010). *Many Worlds? Everett, Quantum Theory and Reality*. Oxford University Press: Oxford et al., 553-581.

<sup>10</sup> Tegmark, M. (2010). “Many Worlds in Context”. In: Saunders, S., Barrett, J., Kent, A., Wallace D. (eds.) (2010). *Many Worlds? Everett, Quantum Theory and Reality*. Oxford University Press: Oxford et al., 553-581.

<sup>11</sup> Tegmark, M. (2010). “Many Worlds in Context”. In: Saunders, S., Barrett, J., Kent, A., Wallace D. (eds.) (2010). *Many Worlds? Everett, Quantum Theory and Reality*. Oxford University Press: Oxford et al., 553-581.

feature, which is extra-dimensions of space (Randall 2005; Bars et al. 2010)<sup>12</sup>, consequently advancing the hypothesis that this specific dimension is only one of the many occurring. To go back to our initial point: was Nietzsche, somehow tapping into this kind of memories of the future? Could he be referring to a specific dimension of spacetime, when approaching the notion of the same?

## MODES OF EXISTENCE

Let's now go back to repetitions and patterns of existence. If we think of ourselves as materializations related to one specific vibrational dimension, we can hypothesize such a dimension as holding specificities related to the ways existence manifests in such a dimension, which would imply something like *an ontic nature-culture of spacetime*. In other words, the nature of spacetime would not be something static, but correlated to the events manifesting within it, thus related to a dimensional “culture”, made, among other factors, by enactments and modes of existence. The crucial question behind this hypothesis is:

### *Does spacetime hold memory?*

Spacetime has been defined as the set of all (possible) events in one universe. Each point in spacetime represents an event. Think, for instance, of spacetime as a blackboard, and events as points on it.<sup>13</sup> To label a point on the blackboard, you have to imagine laying down a grid: this grid represents the set of possibilities related to each event. Spacetime is not a blank canvas: as we have previously seen, its own curvature is an effect of the materiality manifesting within it. So, how does each event affect the spacetime of one specific dimension? Does the repetition and reiteration of modalities of existence mark spacetime in a way that such patterns, the more they are performed, the more they are likely to be repeated? In a simple way, think the way you walk or drive home. The more you take a road, the more likely you will be to take such a road. And if you have children, or if you have a guest and you showed them your way, they will most

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<sup>12</sup> Randall, L. (2005). *Warped Passages: Unraveling the Mysteries of the Universe's Hidden Dimensions*. HarperCollins: New York.

Bars, I., Terning, J., Nekoogar, F., Krauss, L. (2010). *Extra Dimensions in Space and Time (Multiversal Journeys)*. Springer: New York.

<sup>13</sup> Tegmark, M. (2010). “Many Worlds in Context”. In: Saunders, S., Barrett, J., Kent, A., Wallace D. (eds.) (2010). *Many Worlds? Everett, Quantum Theory and Reality*. Oxford University Press: Oxford et al., 553-581.

probably take those same roads: few would actually try different paths. Let's now offer a monumental example. The pattern of war keeps coming back within human recorded history. Could it be possible that this specific vibrational dimension is more prone to it? Let me develop this point further. On one level, we could hypothesize that war, once present as an event in the memory of spacetime, has been repeated enough to become a common pattern of this vibrational dimension. Here, I would like to specify that we should not think of such patterns as fixed, nor as existing in any separate way: their manifestations would only take place in the performativity of each event, in the moment. The significance of each re-enactment, though, cannot be underestimated. Each repetition implies a tuning into, and a recreation, of specific modal genealogies; each repetition carries a vibrational impact, every event is related to a certain grid of possibilities. Here, I wish to open a parenthesis to clarify the notion of vibration. In order to do so, I will take a step back. From a physics perspective, anything which has mass and volume is considered matter. For instance, humans are made out of matter, as well flowers, robots and clouds. The way matter appears on the large scale might be misleading, if taken as its ultimate state. Matter, on a subatomic level, is not static or fixed, but is constantly vibrating, relational and irreducible to a single determined entity: any reductionist approach has historically and scientifically failed.<sup>14</sup> According to the String Theory,<sup>15</sup> an active research framework in Quantum Physics, matter, at a subatomic level, may be composed by tiny vibrating loops of energy, defined as strings. This type of scenario does not entail a dualism between the strings and their vibrations. The two terms are inseparable: the strings are manifesting in a specific mode because they are tuned to a definite vibration, as much as definite vibrations are manifesting through the specific tuning of the strings. In ontological terms, such a view, implies a pluralistic monism, or a monistic pluralism. Going back to our modes of existence, could we infer that specific vibrational states of the strings manifest specific patterns more easily than others?

### *The “DNA” of Energy*

In this hypothetical scenario, vibrational ranges could be seen as a sort of “DNA” of energy, which would carry specific information that may be enacted or left in potential by the

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<sup>14</sup> On the history of modern physics, see, amongst others: Segrè 1980; Heilbron 2005.

<sup>15</sup> Between the late Sixties, early Seventies, many physicists independently contributed to this theory. For a comprehensive account on String Theory, see for instance: Greene 1999.

manifestations of existence performing within that specific frequency. Such a “DNA” would have evolved through all the events enacted by all the manifestations occurring within that specific vibrational frame. The eternal return can be an interesting way to access this type of hypothesis. More specifically, the eternal recurrence of the same could be conceived as related to the patterns of existence, which keep repeating themselves in a specific vibrational dimension. If so, we might be able to unravel them by repeated processes of material awareness, which would imply a quantum cosmo-ontological sensitivity. Such a possibility complies with a posthuman type of agency where not only the human and the non-human realms bear signification, but also modalities of existence: the “what” is the “how”. Such an agency, which exceeds the notion of a mono-dimensional individual existence, is necessarily related to the understanding of posthumanism as a praxis (Ferrando 2012)<sup>16</sup>. How we exist is who we are, in the same way as what we eat is what we become: food, for instance, chemically turns into our own flesh. In such a frame, the multiverse can be perceived not only as an ontology, but as a path of self-discovery, once the self has been recognized as the others within,<sup>17</sup> ultimately turning into a relational dance of ontic manifestations and events.

*Thus Spoke Zarathustra:*

For me – how should there be any outside-myself? There is no outside. But all sounds make us forget this; how lovely it is that we forget (...).  
“O Zarathustra,” the animals said, “to those who think as we do, all things themselves are dancing (...). In every Now being begins; round every Here rolls the sphere There. The center is everywhere. Bent is the path of eternity.” (Z: 3, “The Convalescent”, 329-30)

## CONCLUSIONS

Can we unravel time? Maybe. What we can do is to start by unravelling repetitive patterns of

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<sup>16</sup> Ferrando, F. “Towards a Posthumanist Methodology. A Statement”, *Frame: Journal For Literary Studies*, 25.1, Utrecht University, May 2012, 9-18.

<sup>17</sup> Here, I would like to bring to mind Nietzsche's hypothesis on the subject as a multiplicity:

The assumption of one single subject is perhaps unnecessary; perhaps it is just as permissible to assume a multiplicity of subjects, whose interaction and struggle is the basis of our thought and our consciousness in general? A kind of aristocracy of “cells” in which dominion resides? To be sure, an aristocracy of equals, used to ruling jointly and understanding how to command? *My hypotheses: the subject as multiplicity.* (WP: 3 § 490: 1885) (1967: 270)



existence within spacetime. A posthuman approach will be of help. Posthumanism invites to think inclusively, comprehensively and relationally, radically stretching the boundaries of human comprehension, in a genealogical relocation of humanity within multiversality (“post-humanism” as a criticism of humanism, anthropocentrism and universe-centrism), and alterity within the self (“posthuman-ism” as a recognition of those aspects which are constitutively human, and still, beyond human comprehension). The human, within this type of framework, turns into a network of energies, alliances, matter and perspectives, relating to any other forms of existence; allied through different material outcomes, and possibly, in different quantum dimensions, in a radical onto-existential re-signification of being. In this type of posthuman ontological scenario, the final deconstruction between immanence and transcendence takes place, inviting the situated actors to envision their own networks in relation to, but also beyond, any specific space-time complexion. The eternal recurrence of the same could thus be perceived as a technology of the multiverse, related to specific vibrational ranges and dimensions. So if this universe is closed, do not worry: you can always use the rainbow!

*Thus Zarathustra meditated, in the cosmic dance of vibrational recurrence...*

## REFERENCES

Bars, I., Terning, J., Nekoogar, F., Krauss, L. (2010). *Extra Dimensions in Space and Time* (Multiversal Journeys). Springer: New York.

Bishop, P. (eds.) (2004). *Nietzsche and Antiquity: His Reaction and Response to the Classical Tradition* (Studies in German Literature Linguistics and Culture). Camden House: Rochester, NY.

Butler, J. [1990] (1999). *Gender Trouble: Feminism and the Subversion of Identity*. Routledge: New York et al.

DiSalle, R. (2008). *Understanding Space-Time: The Philosophical Development of Physics from Newton to Einstein*, Cambridge University Press, Cambridge (UK).

Einstein, A. [1916]. “The Foundation of the General Theory of Relativity”. Trans. Parret, W., Jeffrey, G. B. In: Einstein, A., Lorentz, H. A., Minkowski, H., Weyl., H. (1952). *The Principle*

- of Relativity: A Collection of Original Memoirs on the Special and General Theory of Relativity*. Dover: New York, 109-164.
- Einstein, A. [1916] (2009) *Relativity: Einstein's Theory of Spacetime, Time Dilation, Gravity and Cosmology*, Red and Black Publishers, St. Petersburg (FL).
- Eliade, M. (1949). *The Myth of the Eternal Recurrence*. Princeton University Press: Princeton, NJ.
- Greene, B. (1999). *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory*. Norton: New York.
- Greene, B. (2005) *The Fabric of the Cosmos: Space, Time, and the Texture of Reality*. Vintage, New York.
- Greene, B. (2011). *The Hidden Reality: Parallel Universes and the Deep Laws of the Cosmos*. Random House: New York.
- Heilbron, J. L. (2005). *The Oxford Guide to the History of Physics and Astronomy*. Oxford University Press: New York et al.
- Kaku, M. (2005). *Parallel Worlds: The Science of Alternative Universes and Our Future in the Cosmos*. Penguin: London.
- Kristeva, J. (1979). "Women's Time". In: T. Moi (ed.) (1991). *The Kristeva Reader*. Oxford: Blackwell, 188-213.
- Loeb, S. P. (2012). "Eternal Recurrence". In: Gemes, R. / Richardson, J. (eds.), *The Oxford Handbook of Nietzsche*, Oxford University Press: Oxford.
- Mistry, F. (1987). *Nietzsche and Buddhism*. Walter de Gruyter & Co: Berlin et al.
- Nietzsche, F. W., [1882] (1974). *The Gay Science: With a Prelude in German Rhymes and an Appendix of Songs*. Trans. Kaufmann, W., Random House: New York.
- Nietzsche, F. W., [1883-5] (1976). *Thus Spoke Zarathustra*. In: *The Portable Nietzsche*. Trans. Kaufmann, W., Penguin Books: New York, 103-439.
- Nietzsche, F. W., [1901/1906] (1967). *The Will to Power*. Trans. Kaufmann, W., Hollingdale, R. J., Random House: New York.
- Parkes, G. (ed.) (1991) *Nietzsche and Asian Thought*. University of Chicago Press: Chicago.
- Randall, L. (2005). *Warped Passages: Unraveling the Mysteries of the Universe's Hidden Dimensions*. HarperCollins: New York.

- Segrè, E. (1980). *From X-Rays to Quarks: Modern Physicists and Their Discoveries*. Freeman: New York.
- Smolin, L. (2006). *The Trouble with Physics, the Rise of String Theory, the Fall of a Science, and What Comes Next*. Houghton-Mifflin: New York.
- Susskind, L. (2006). *The Cosmic Landscape: String Theory and the Illusion of Intelligent Design*. Time Warner Book Group: New York.
- Tegmark, M. (2010). “Many Worlds in Context”. In: Saunders, S., Barrett, J., Kent, A., Wallace D. (eds.) (2010). *Many Worlds? Everett, Quantum Theory and Reality*. Oxford University Press: Oxford et al., 553-581.
- Jung, C. G. (1959). *The Archetypes and the Collective Unconscious*, Volume 9. Bollingen Foundation: New York.
- Wald, R. (1994). *Quantum Field Theory in Curved Spacetime and Black Hole Thermodynamics* (Chicago Lectures in Physics). The University of Chicago Press, Chicago.