

The Eternal Return: Genesis and Interpretation*

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1. Return of the Same?

Gilles Deleuze claims that “we misinterpret the expression ‘eternal return’ if we understand it as ‘return of the same’,” above all, he says, we must avoid “believing that it refers to a cycle, to a return of the Same, a return to the same,” and further, he contends that “*It is not the same which returns, it is not the similar which returns; rather, the Same is the returning of that which returns,—in other words, of the Different; the similar is the returning of that which returns,—in other words of the dissimilar.* The repetition in the eternal return is the same, but the same in so far as it is said uniquely of difference and the different.”¹ This interpretation, which was widespread in France and in the world, relies on one fragment by Nietzsche, and one fragment only. This fragment was published as “aphorism” 334 of Book Two of the non-book known as *The Will to Power*.²

It is worth mentioning that this so-called aphorism was put together by the editors of *The Will to Power*, who merged two posthumous fragments from 1881 in which Nietzsche compared his own conception of the eternal return of the same as a cycle taking place within time with Johannes Gustav Vogt’s mechanistic conception, which involved (besides the eternal return in time) the eternal co-existence of the same in space. This dialogue between Nietzsche and Vogt is clearly visible in the

* This article first appeared in French in 2000 (“Nietzsche et l'éternel retour. Genèse et interprétation,” in *Nietzsche. Cahiers de l'Herne* (Paris: l'Herne, 2000): 361-389.). A Brazilian edited version by Ernani Chaves was published in 2006 (“O Eterno Retorno. Gênese e Interpretação,” in *Cadernos Nietzsche* 20, (São Paulo, 2006): 69-114. A second Brazilian translation by Ernani Chaves and Rosistera Pereira de Oliveira, extending upon the original French version, was published in 2007 (“Cosmologia e filosofia do eterno retorno em Nietzsche,” in Scarlett Marton (éd.), *Nietzsche pensador Mediterrâneo. A recepção italiana*, ed. by Scarlett Marton (São Paulo: Discurso Editorial, 2007): 193-263). The present translation by Frank Chouraqui corresponds to the extended version and was revised by the author.

¹ See Gilles Deleuze, *Nietzsche and Philosophy*, tr. by Hugh Tomlinson (London: The Athlone Press, 1983), 48; Deleuze, *Nietzsche* (Paris: PUF, 1965), 41; and Deleuze, *Difference and Repetition*, tr. by Paul Patton (London: Continuum, 2004), 374.

² Among at least five different versions of *The Will to Power* available, Deleuze used Friedrich Würzbach’s collection in its French translation by Geneviève Bianquis, published by Gallimard in 1935. In 1962, while starting the translation of the new critical edition of Nietzsches works, Gallimard had stopped the re-edition of *The Will to Power* in order to make way for much more reliable texts. This made for a surprise when Gallimard itself re-edited a pocket version of this controversial text in 1995. For a history of this forgery, see Mazzino Montinari, “*La volonté de puissance*” n'existe pas, edited and with an epilogue by Paolo D'Iorio (Paris: éditions de l'éclat, 1996).

manuscript not only because the author refers explicitly to Vogt's most important work (*Force: A Realistic and Monistic Worldview*) just before these two posthumous fragments as well as between them; but also because the text itself quotes some concepts and refers to some technical terms taken from Vogt's book in quotation marks, such as "energy of contraction."³ Vogt declared that the world is made of one single and absolutely homogenous substance which is spatially and temporally defined, immaterial and indestructible, and which he called "force" (*Kraft*) and whose "fundamental mechanistic, unique and immutable force of action is *contraction*."⁴ After reading this passage and highlighting some others in the margin of his copy of Vogt's book, Nietzsche takes his notebook M III 1 and writes the fragment quoted by Deleuze:

Supposing that there were indeed an "energy of contraction" constant in all centers of force of the universe, it remains to be explained where any difference would ever originate. It would be necessary for the whole to dissolve into an infinite number of *perfectly identical* existential rings and spheres, and we would therefore behold innumerable and *perfectly identical* worlds COEXISTING [Nietzsche underlines this word twice] alongside each other. Is it necessary for me to admit this? Is it necessary to posit an eternal coexistence on top of the eternal succession of identical worlds.⁵

In the French version of the *Will to Power* used by Deleuze, the term "*Contractionsenergie*" is translated as "concentration energy" instead of "contraction energy," and the phrase "*Ist dies nöthig für mich, anzunehmen?*" is translated as "is it necessary to admit this" instead of "is it necessary for me to admit this?" and this does away with the whole meaning of the comparison. The effects of arbitrary cuts, of the distortion of the chronological order, of the oversights and approximations of the French translation of *The Will to Power* combined

³ Cf. posthumous fragments 11 [308, 311, 312, 313] of 1881, on pages 126, 128, 130 of Notebook M III 1. I quote the Colli/Montinari edition (Friedrich Nietzsche, *Werke. Kritische Gesamtausgabe* (Berlin/New York: de Gruyter, 1967-)) and use mostly the English translations published by Walter Kaufmann amending those translations in view of the German originals when deemed necessary. I refer to the Posthumous Fragments with the initials PF followed by the batch number (which is erroneously called "notebook" in the Cambridge and in the Stanford translations), the fragment number between brackets and the year of writing. This standard convention enables one to locate each fragment in a simple and easy way, in both the German original and in all translations of the Colli / Montinari edition.

⁴ Johannes Gustav Vogt, *Die Kraft. Eine real-monistische Weltanschauung. Erstes Buch. Die Contraktionsenergie, die letztursächliche einheitliche mechanische Wirkungsform des Weltsubstrates* (Leipzig: Haupt & Tischler, 1878), 655 p., the quote is on p. 20, with the hypothesis of the existence of some Contraktionsenergie discussed in detail on pp. 21, 26 and 27. Nietzsche's copy is kept at Weimar's Herzogin Anna Amalia Bibliothek de Weimar (shelf mark C 411). The fact that Nietzsche had access to this book in Sils-Maria in the Summer of 1881 at the time of his conception of the eternal return is confirmed by the letter to Franz Overbeck from August, 20-21st, in which the philosopher asks his friend to send him a number of books among which is Vogt's. Nietzsche pursues his dialogue with Vogt in PF 2[3] of 1882 and 24[36] of 1883-1884.

⁵ Nietzsche, PF 11 [311] of 1881.

lead to the obliteration of the dialogue between Nietzsche and Vogt and it looks as if Nietzsche were criticizing *his own* idea of the eternal return of the same as a cycle in this note scribbled in his notebook—which would make it an exception in his whole written work. Deleuze, whose entire interpretation relies on this sole posthumous note whilst ignoring all the others, comments: “The cyclical hypothesis, so heavily criticized by Nietzsche (VP II 325 and 334), arises in this way.”⁶ In fact, Nietzsche was not criticizing the cyclical hypothesis but only the particular form of that hypothesis presented in Vogt’s work. All of Nietzsche’s texts without exception speak of the eternal return as the repetition of the same events within a cycle which repeats itself eternally.⁷

If Deleuze’s interpretation holds that the eternal return is not a circle, then what is it? A wheel moving centrifugally, operating a

⁶ Deleuze, *Nietzsche and Philosophy*, 48. See also Deleuze, “Conclusions - sur la volonté de puissance et l’éternel retour,” in *Nietzsche*. Actes du colloque de Royaumont du 4 au 8 juillet 1964 (Paris: Les éditions de Minuit, 1967), 284: “more precisely the notes of 1881-1882 explicitly oppose the cyclical hypothesis” and Deleuze, *Difference and Repetition*, p. 7 and p. 372: “how could it be believed that he understood the eternal return as a cycle, when he opposed “his” hypothesis to every cyclical hypothesis?”

⁷ These observations should guard those philosophers who intend to build their own interpretation of Nietzsche upon *The Will to Power*, as most scholars have done until a very recent period. In my postface to Montinari, 1996, I had also insisted that Deleuze’s interpretation of the concept of the will to power too—which totally rests upon an other posthumous fragment which contains a grave deciphering error—is, in sight of the correct transcription of the manuscripts, now untenable. In his *Nietzsche and Philosophy*, p. 46-47, Deleuze explains: “one of the most important texts which Nietzsche wrote to explain what he understood by the will to power is the following: ‘the victorious concept ‘force’, by means of which our physicists have created God and the world, still needs to be completed: an inner will must be *ascribed* to it, which I designate as will to power.’ The will to power is thus ascribed to force, but in a very special way: it is both a complement of force and something internal to it [...] The will to power is thus added to force, but as the differential and genetic element, as the internal element of its production.” Unfortunately Nietzsche’s manuscript doesn’t read *innere Wille* (internal will), but *innere Welt* (internal world). It is therefore impossible to declare that the will to power is “both a complement of force *and* something internal” not least because this would lead into a form of dualism that Nietzsche’s monistic philosophy strives to eliminate at all cost. Indeed, from a philosophical perspective, Wolfgang Müller-Lauter had already shown that the passage used by Deleuze seemed suspicious insofar as it contradicted a number of Nietzsche’s other texts (see Müller-Lauter, “Nietzsches Lehre vom Willen zur Macht,” *Nietzsche-Studien* 3 (1974): 35 f.). A second glance at the manuscripts in the wake of the Colli-Montinari critical edition confirmed this analysis philologically. (In this case Deleuze quotes the Würzbach collection, Book II, § 309, which has been published as posthumous fragment 36[31] 1885 in the Colli/Montinari critical edition; according to Müller-Lauter, this fragment does not justify any deciphering difficulty and we would therefore not be dealing with a deciphering mistake but with a conscious correction on Peter Gast’s part, cf. Müller-Lauter, “‘Der Willer zur Macht’ als Buch der ‘Krisis’,” *Nietzsche-Studien*, 24 (1995): 258). For the sake of exhaustivity, let me recall that Deleuze explains his (unfortunately mistaken) view of the eternal return with reference to his (equally flawed) understanding of the will to power: “This is why we can only understand the eternal return as the expression of a principle which serves as an explanation of diversity and its reproduction, of difference and its repetition. Nietzsche presents this principle as one of his most important philosophical discoveries. He calls it *will to power*.” (Deleuze, *Nietzsche and Philosophy* (1962), 45).

“creative selection,” “Nietzsche’s secret is that *the eternal return is selective*” says Deleuze:

The eternal return produces becoming-active. It is sufficient to relate the will to nothingness to the eternal return in order to realize that reactive forces do not return. However far they go, however deep the becoming-reactive of forces, reactive forces will not return. The small, petty, reactive man will not return.

Affirmation alone returns, this that can be affirmed alone returns, joy alone returns. Everything that can be denied, everything that is negation, is expelled due to the very movement of the eternal return. We were entitled to dread that the combinations of nihilism and reactivity would eternally return too. The eternal return must be compared to a wheel; yet, the movement of the wheel is endowed with centrifugal powers that drive away the entire negative. Because Being imposes itself on becoming, it expels from itself everything that contradicts affirmation, all forms of nihilism and reactivity: bad conscience, *ressentiment*..., we shall witness them only once. [...] The eternal return is the Repetition, but the Repetition that selects, the Repetition that saves. Here is the marvelous secret of a selective and liberating repetition.⁸

There is no need to remind the reader that neither the image of a centrifugal movement nor the concept of a negativity-rejecting repetition appears anywhere in Nietzsche’s writings, and indeed Deleuze does not refer to any text in support of this interpretation. Further, one could highlight that Nietzsche never formulates the opposition between active and reactive forces, which constitutes the broader framework of Deleuze’s interpretation. For some years, Marco Brusotti has called attention to the fact that Deleuze introduced a dualism that does not exist in Nietzsche’s writings. To be sure, the German philosopher describes a certain number of “reactive” phenomena (for example, in the second essay of the *Genealogy of Morality*, § 11, he talks about “reactive affects” [*reaktive Affekte*], “reactive feelings” [*reaktive Gefühlen*], reactive men [*reaktive Menschen*]); but these are nonetheless the result of complex ensembles of configurations of centers of forces that remain in themselves *active*. Neither the word nor the concept of “reactive forces” ever appears in Nietzsche’s philosophy.⁹

We would like to pause for one moment to cast a philosophical glance on Deleuze’s interpretation as a whole.¹⁰ In his portrayal of Nietzsche,

⁸ Deleuze, “Conclusions - sur la volonté de puissance et l’éternel retour” (1967): 285; Deleuze, *Nietzsche* (1965): 37; Deleuze, *Nietzsche and Philosophy* (1962), 66; Deleuze, *Nietzsche* (1965): 38 and 40.

⁹ Cf. Brusotti, “Die ‘Selbstverkleinerung des Menschen’ in der Moderne. Studie zu Nietzsches ‘Zur Genealogie der Moral’,” *Nietzsche-Studien*, 21 (1992): 83, 102, 103; Deleuze, *Nietzsche and Philosophy* (1962), 46-47 *passim*.

¹⁰ One may stress that Deleuze acted on a good intuition when titling his book *Nietzsche and Philosophy*. Indeed, it is definitely not “Nietzsche’s philosophy”: rather, it is “Nietzsche and Deleuze’s philosophy” or “Deleuze and Nietzsche’s philosophy” which this text deals with. For a sociological perspective on Deleuze’s interpretation in the context of the French philosophy of the Sixties, let us refer to this page by Louis Pinto: “the invention of new paths, which results from improvisation rather than calculation,

Deleuze elaborates an extraordinary philosophy of affirmation and joy, which clears existence of all reactive, negative and petty elements. He strives to locate a mechanism that—unlike the negation of negation, which characterizes Hegel’s (and Marx’s) dialectic—would produce the “affirmation of affirmation” in the eternal return:

The eternal return is this highest power, a synthesis of affirmation which finds its principle in the Will. The lightness of that which affirms against the weight of the negative; the games of the will to power against the labor of the dialectic; the affirmation of affirmation against that famous negation of the negation.¹¹

Deleuze opposes the historical course of the Hegelian notion that confronts, struggles and finally dialecticizes the negative and results in a consoling teleology leading to the triumph of the idea or the liberation of the masses with the centrifugal movement of the wheel, which simply ejects the negative. It is still a case of a consoling and optimistic teleology, which, instead of confronting the weight of history, the grief and the negative, makes it disappear in one centrifugal stroke of a magic wand. There is reason to worry that this be a case of repression, which, unable to dialecticize or accept the negative, simply seeks to exorcise it in one gesture of “creative selection.” But exorcism is a feat of magic and not of philosophy: it is unfortunately not enough to make the negative disappear. In all probability, the negative will come back with a vengeance.

In contrast to Deleuze’s “affirmation of affirmation”, which affirms only affirmation, Nietzsche conceives of the eternal return from a rigorously non-teleological perspective as the accomplishment of a philosophy strong enough to accept existence in all its aspects, even the most negative, without any need to dialecticize them, without any need to exclude them by way of some centrifugal movement of repression. It denies nothing and incarnates itself in a figure similar to the one Nietzsche, in *Twilight of the Idols*, draws of Goethe:

Such a spirit, who has *become free* stands in the middle of the world with a cheerful and trusting fatalism in the belief that *only the individual is reprehensible*, that everything is redeemed and affirmed in the whole—he *does not negate anymore*. Such a faith however, is the highest of all possible faiths: I have baptized it with the name of *Dionysus*.¹²

was neither obvious nor easy. For he who was specialized in scholarly commentary, the passage through the authors was more or less unavoidable, but only a few of them lent themselves to innovation. Instead of presenting oneself as a downright creator, one rather had to locate the author through whom innovation was best secured. The discovery of a new thinker being an uncertain undertaking, requiring certain credentials, the original interpretation, creative or re-creative of a household philosophical name seemed at first more accessible to a young writer” (Pinto, *Les Neveux de Zarathoustra. La réception de Nietzsche en France* (Paris: Seuil, 1995), 161).

¹¹ Deleuze, *Nietzsche and Philosophy* (1962), 186.

¹² Nietzsche, *Twilight of the Idols*, “Skirmishes of an Untimely Man” § 49.

2. Zarathustra, the Master of the Eternal Return

All of Nietzsche's arguments for a detailed theoretical explanation of the eternal return are contained in a notebook written in Sils-Maria during the summer of 1881. In the published work, the content of the doctrine remains unchanged but it is presented by Zarathustra according to very different strategies and philosophical forms of argumentation. We will start analysing the public presentation of the eternal return before discussing theoretical arguments in the third part of this article.

In the dramatic and dialogical structure of *Thus Spoke Zarathustra*, one needs to pay attention to the rhetorical progression that takes place between the moments where the thought of the eternal return is enunciated. Even more, we must pay attention to which characters announce the doctrine or which ones they announce it to. Nietzsche carefully stages Zarathustra's maturation process, his gradual assimilation of the eternal return and the effects that the doctrine has on the different human types to whom it is intended. Indeed, this is where lies the originality (and the force) of *Zarathustra's* style over forms like the treatise or the traditional philosophical essay. While reading Nietzsche's aphoristic works—and even more so the manuscripts—one must pay attention to the dialogue that Nietzsche, in the wake of his readings, establishes with his philosophical interlocutors. While reading *Zarathustra*, one must in the same way pay continuous attention to the narrative context, to the role played by some characters and to the nuances a word adopts when enunciated by or to different characters. Hence the double question which we must bear in mind throughout our analysis of the role of the eternal return in *Zarathustra*: who speaks? who listens?

2.1 Speaking Hunchback-ese to the Hunchbacks

Zarathustra being “the master of eternal return,” this doctrine pervades all four parts of the work. In certain passages, it is mentioned in an especially explicit fashion. I have chosen five such passages, which I would like to discuss briefly.¹³

The first passage dealing with the eternal return, even though Zarathustra is unable to mention it directly, is the chapter “On Redemption” from part two of *Thus Spoke Zarathustra*. There, Nietzsche opposes two conceptions of temporality and of redemption. On the one hand, the redemption which regards the transitory character of becoming as the demonstration of its original sin and valuelessness and seeks to liberate itself *from* timeliness in order to rejoin the immutable essence. On the other hand a conception of redemption *through* time that Zarathustra begins to lay out when he speaks of the will that wills “backwards” (*Zurückwollen*). Several intertextual keys point to

¹³ The most interesting and thorough reconstruction of the presence of the eternal return in *Zarathustra* is to be found in Marco Brusotti's book *Die Leidenschaft der Erkenntnis: Philosophie und ästhetische Lebensgestaltung bei Nietzsche von Morgenröthe bis Also sprach Zarathustra* (New York and Berlin: De Gruyter, 1997).

Schopenhauer as the representative of the first, nihilistic redemption embedded in a spirit of revenge against time. Schopenhauer wrote that:

In time each moment is, only in so far as it has effaced its father the preceding moment, to be again effaced just as quickly itself. Past and future (apart from the consequences of their content) are as empty and unreal as any dream; but present is only the boundary between the two, having neither extension nor duration.

Zarathustra however calls “mad” this Oedipal conception of temporality:

Everything passes away, therefore everything deserves to pass away! ‘And this is itself justice, that law of time that time must devour its children’: thus did madness preach.

Schopenhauer spoke of the existence of an eternal justice and of the necessity to deny the will to live:

The world itself is the tribunal of the world. If we could lay all the misery of the world in one pan of the scales, and all its guilt in the other, the pointer would certainly show them to be in equilibrium.

After our observations have finally brought us to the point where we have before our eyes in perfect saintliness the denial and surrender of all willing, and thus a deliverance from a world whose whole existence presented itself to us as suffering, this now appears to us as a transition into empty *nothingness*.¹⁴

Zarathustra replies:

No deed can be annihilated: so how could it be undone through punishment! This, this is what is eternal in the punishment ‘existence’: that existence itself must eternally be deed and guilt again! ‘Unless the will should at last redeem itself and willing should become not-willing—’: but you know, my brothers, this fable-song of madness!

Yet, this chapter does not focus solely on Schopenhauer but addresses an entire philosophical tradition that goes back to Anaximander, at least.¹⁵ The first pages of the second *Untimely Meditation* bear the mark of such a tradition; there, the young Nietzsche speaks of the weight of the “*Es war*,” the “it has been” which Zarathustra now intends to redeem through the active acceptance of the past. But even as his discourse now seems to lead him to enunciate the doctrine of eternal return, Zarathustra brutally interrupts himself:

‘Has the will yet become its own redeemer and joy-bringer? Has it unlearned the spirit of revenge and all gnashing of teeth? ‘And who has taught it reconciliation with time, and something higher than any

¹⁴ Cf. Arthur Schopenhauer, *The World as Will and Representation*, tr. by E.F. Payne (New York: Dover, 1969), § 3, § 63, and § 71.

¹⁵ In his lectures on *The Pre-Platonic Philosophers* as well as in the posthumous *Philosophy in the Tragic Age of the Greeks* (§ 4), Nietzsche had precisely stressed this aspect of Anaximander’s philosophy by likening it to Schopenhauer (cf. Nietzsche, *Les philosophes préplatoniciens*, ed. by P. D’Iorio and F. Fronterotta, tr. by Nathalie Ferrand (Combas: éditions de l’éclat, 1994), 22, 118, 123 and note 44 of p. 300).

reconciliation? ‘Something higher than any reconciliation the will that is will to power must will—yet how shall this happen? Who has yet taught it to will backwards and want back as well?’ —But at this point in his speech it happened that Zarathustra suddenly fell silent and looked like one who is horrified in the extreme.

Zarathustra fails to enunciate or even to name eternal return. And the hunchback (representing the scholar burdened by the weight of history and of his erudition) listened to him while covering his face with his hands because he already knew what Zarathustra was getting at. He responds: why didn’t you say it? “But why does Zarathustra address us in a different fashion than he addresses his disciples?” And Zarathustra, regaining his good spirits after a moment’s hesitation, replies: “But what is the surprise in this, with hunchbacks, surely, one must speak hunchback-ese.” Still, the hunchback is well aware of the fact that Zarathustra not only lacks the strength to announce his doctrine to others, but even more, that he does not even manage to confide in himself:

‘Good,’ said the hunchback. ‘And with students one may well tell tales out of school. ‘But why does Zarathustra speak otherwise to his students—than to himself?—’

2.2 *The Shepherd of Nihilism*

After the chapter “On Redemption,” where Zarathustra dares not expose his doctrine, the eternal return begins to be enunciated in part three of the work. In the first place, it is the dwarf who formulates it in the chapter “On the Vision and the Riddle.” Facing the “gate of the instant” which symbolizes the two infinities that stretch towards the past and the future, the dwarf whispers: “all truth is crooked, time itself is a circle.” The dwarf represents the spirit of gravity, and he embodies the herd morality, “the belittling virtue” which is the title of another chapter from part III. The dwarf can endure the eternal return without great difficulties because he has no aspirations; unlike Zarathustra he does not wish to climb the mountains that symbolize elevation and solitude. In two unpublished notes, from the summer and the fall of 1883, Nietzsche writes:

The doctrine is at first favored by the RABBLE, before it gets to the superior men.

The doctrine of recurrence will first smile to the rabble, which is cold and without any strong internal need. It is the most ordinary of life instincts, which gives its agreement first.¹⁶

Hence, the content of the doctrine is the same, but whereas the dwarf can endure it (because he interprets it according to the pessimistic tradition for which “nothing is new under the sun”), Zarathustra, who is the “advocate of life” regards the eternal return as the strongest

¹⁶ Nietzsche, PF 10[44] and 16[3] 1883.

objection to existence, and as the rest of the dream suggests, he does not yet succeed in accepting it.¹⁷ After the vision at the gate of the instant, the chapter is brought to an end by the enigma of the shepherd. Under the most desolate moonlight, in the midst of wild cliffs, Zarathustra glimpses at a shepherd who has a black serpent dangling from his mouth. The serpent represents nihilism, which accompanies the thought of eternal return, the condition by which one's throat is filled with all things most difficult to accept, all things darkest. Zarathustra, who cannot tear the serpent away from the throat of the shepherd, cries to him: "bite, bite!" The shepherd bites, spits the serpent's head into the distance, and, as if transformed, starts to laugh.

This is the anticipation and the premonition of what Zarathustra himself will have to confront, and which will still take him years and years. Only towards the end of part III are we told, in the chapter titled "The Convalescent," that he succeeded at last, even though he paid for it with eight days of illness. In that chapter, the eternal return is enunciated anew, this time by Zarathustra's animals, whereas Zarathustra himself is still lacking the strength to speak.

Deleuze has correctly identified the rhetorical progression between the different formulations of eternal return at work in *Thus Spoke Zarathustra*. Only, he interprets those differences as the expression of a shift in the content of the doctrine: as if Zarathustra was gradually realizing that the eternal return is in fact not a circle that repeats the same, but a selective movement which eliminates the negative.

If Zarathustra recovers, it is because he understands that the eternal return is not this. He finally understands the unequal and the selection contained in the eternal return. Indeed, the unequal, the different, is the true reason of the eternal return. It is because nothing is equal, nor is anything the same, that 'it' recurs (Deleuze, "Conclusions - sur la volonté de puissance et l'éternel retour" (1967): 284).

Actually, if it is not Zarathustra who formulates his own doctrine, it is because he lacks the strength to teach it, even though he succeeds in evoking the thought of eternal return, using it as a weapon, and finally,

¹⁷ The difference between Nietzsche's eternal return and the cyclical theories of time established since the Ancient Times is precisely to be found in the new meaning of this doctrine in Nietzsche, where it becomes an instrument towards not a nihilistic deprecation of existence, but towards a stronger affirmation. Even if he did already know this doctrine beforehand, Nietzsche found out in the summer of 1881 in Sils-Maria for the first time that it did not necessarily involve a devaluation and a rejection of the ephemeral and that the return may even give back the seemingly ephemeral its value. Right after the revelation of this new sense of the return, Nietzsche wrote in his notebooks, in reference to *Ecclesiastes* "nothing new under the sun" in Marcus Aurelius' reworking: "this Emperor constantly shows himself the ephemeral character of all things so that he will not grant them too much importance and remain *calm*. I experience the ephemeral in a wholly different manner—it seems to me that all things have far too much value to be considered to be so fugacious—to me it is like pouring the most precious wines and ointments into the sea" (PF 12[145] 1881). A few years later, whilst transcribing this fragment in a notebook, he added this revealing sentence: "and my consolation is that everything that once was is eternal: —the sea brings it back to the surface" (PF 11[94] 1887-1888).

in accepting it when he finally cuts off the serpent's head himself. As a result, the animals dutifully remind him of *his* doctrine, the one *he* must teach:

For your animals know this well, O Zarathustra, who you are and who you are to become: behold—you *are the teacher of the eternal return*—that is now *your* fate [...]

Behold, we two know what you teach: that all things recur eternally and we ourselves with them and that we have already been here an eternity of times, and all things with us.

You teach that there is a Great Year of Becoming, a monster of a Great Year, which lust, like an hourglass, turn itself over anew again and again, that it may run down and run out ever new—

—such that all these years are the same, in the greatest and smallest respects—such that we ourselves are in each Great Year the same as ourselves, in the greatest and smallest respects. [...] I come again with this sun, with this Earth, with this eagle, with the serpent,—*not* to a new life, or a better life or a similar life:—I come eternally again to this self-same life, in the greatest and smallest respects, so that again I teach the eternal return of all things.”

Like the dwarf, and even more than him, the animals are not afraid of this doctrine for a simple reason: they are totally deprived of any historical sense. In the beginning of his second *Untimely Meditation*, “On the Uses and Disadvantages of Historical Studies for Life” Nietzsche had opposed the human with the animal. The animal is tied to the post of the instant, while the human is bound up and chained to the past and the weight of history. In the preparatory notes to this first section of the second *Untimely*, Nietzsche explicates the literary reference, which he conceals later, in the final text. The reference is to Giacomo Leopardi's *Night Song of a Wandering Shepherd in Asia*.¹⁸ As a pessimistic poet, whom both Schopenhauer and Nietzsche were very fond of, Leopardi had represented human life as the life of a shepherd who, while in the desert at night, speaks to the moon about the valuelessness of all things human.

My flock, you lie at ease, and you are happy,
Because you do not know your wretchedness!
How much I envy you!
Not just because you go
Almost without distress,
And very soon forget
All pains, all harm, and even utmost terror;
But more because you never suffer boredom

These are the verses quoted by Nietzsche in his notebook, and which he paraphrases in the final text. It is the same shepherd we encounter again in Zarathustra's dream, the shepherd of pessimism and nihilism (the poem's ending is “Whether in lair or cradle, / It may well be it always is upon / A day of great ill-omen we are born”), the shepherd

¹⁸ Cf. PF 29[97], 29[98], 30[2] of 1873-1874.

whose mouth nihilism has choked and who must find the strength to spit it out.¹⁹

However, Zarathustra, who is the advocate of life, has understood that by having the strength to accept the eternal return, it is possible to fight pessimism. The rhetorical progression in the formulation of the eternal return does not signify that Zarathustra encounters different doctrines, but faces us with different ways to apprehend the doctrine of the eternal return, each one corresponding to different degrees of the historical sense. All of this becomes clearer in the rest of the formulations of the eternal return (which Deleuze ignores like many others).²⁰

2.3 The Game of “Who to Whom”

Shortly after the chapter devoted to the convalescent, we find “The Other Dance-Song.” There develops a parodic game based upon a little intertextual hint. Life says to Zarathustra:

O Zarathustra! Please, don’t you crack your whip so terribly! For well you know: noise murders thoughts,—and just now such tender thoughts are coming to me!

This suffices to evoke the figure of Schopenhauer, the archenemy of noise, who had represented the dreadful condition of the philosopher in the midst of the urban bustle, in this passage from *Parerga and Paralipomena*:

I have to denounce as the most inexcusable and scandalous noise the truly infernal cracking of whips in the narrow resounding streets of towns; for it robs life of all peace and pensiveness. [...] With all due respect to the most sacred doctrine of utility, I really do not see why a fellow, fetching a cart-load of sand or manure, should thereby acquire the privilege of nipping in the bud every idea that successively arises in ten thousand heads (in the course of half an hour’s journey through a town). Hammering, the barking of dogs, and the screaming of children are terrible, but the real murderer of ideas is only the crack of a whip.²¹

¹⁹ Cf. Giacomo Leopardi, *The Canti*, tr. J. G. Nichols (New York: Routledge, 2003): 96-97. Maurice Weyembergh, commenting on this passage of *Zarathustra*, even wrote that “the entire doctrine of the eternal return is a war machine, an antidote against the idea expressed in [Leopardi’s] poem admirable last line: è funesto a chi nasce il dì natale” (Weyembergh, *F. Nietzsche et E. von Hartmann* (Brussels: Vrije Universiteit Brussel, 1977), 102).

²⁰ Deleuze repeatedly talks about *two* expositions of the eternal return in *Zarathustra*, cf. Deleuze, *Nietzsche* (Paris: PUF, 1965): 38, 39; “Conclusions - sur la volonté de puissance et l’éternel retour” (1967): 276, 283; *Difference and Repetition* (1968): 370: “In *Thus Spoke Zarathustra*, the question of the eternal return arises twice, but each time it appears as a truth not yet reached and not expressed: once when the dwarf speaks (III, “On the Vision and the Riddle”); and the second time when the animals speak (III, “The Convalescent”).”

²¹ Schopenhauer, *Parerga and Paralipomena*, tr. by E.F. Payne, (Oxford: Oxford University Press, 2000): II, chap. XXX, *On Din and Noise*, p. 643. See also among Nietzsche’s drafts for this chapter of *Zarathustra*: “against the noise—it beats thoughts

As regards the possibility of starting a new life, Schopenhauer wrote: "But perhaps at the end of his life, no man, if he be sincere and at the same time in possession of his faculties, will ever wish to go through it again. Rather than this, he will much prefer to choose complete non-existence" and: "If we knocked on the graves and asked the dead whether they would like to rise again, they would shake their heads."²² Eduard von Hartmann, Schopenhauer's pet monkey, drew an image quite typical of his philosophy from this passage. There, death asked a man from the average bourgeoisie of the time whether he would accept to live his life over again.

Let's imagine a man who is not a genius, who hasn't received any more than the general education of any modern man; which possesses all advantages of an enviable position, and finds themselves in the prime of life. A man with a full awareness of the advantages he enjoys, when compared to the lower members of society, to the savage nations and to the men of the Barbarian ages; a man who does not envy those above him, and who knows that their lives are plagued with inconveniences which he is spared; a man, finally, who is not exhausted, not blasé with joy, and not repressed by any exceptional personal misfortunes.

Let us suppose that death come and find this man and addresses him in these terms: "the span of your life is expired, the time has come when you must become the prey of nothingness. Yet, it is up to you to choose if you

to death" (PF 22[5] of 1883). This textual reference had already been used by Nietzsche in the first of his lectures *On the Future of Our Educational Institutions*: "You should know," said the younger man, turning to us, "that your noisy pastimes amount, as it happens on this occasion, to an attempt upon the life of philosophy" and in a reverse sense, it will be found in the third part of *Zarathustra*, "On the Virtue that Makes Smaller": "This is the new stillness I have learned: their noise about me spreads a cloak over my thoughts."

²² Schopenhauer, *The World as Will and Representation*, tr. by E.F. Payne (New York: Dover, 1969), vol. I, § 59, p. 324 and vol. II, chap. XLI, p. 465. This image is often used as the ultimate expression of pessimism and nihilism. It is found for example in Leopardi's short *Dialogue Between an Almanac Peddler and a Passer-by*: "PASSER-BY. Wouldn't you like to live those twenty years over again, and all your past years, beginning with the day you were born? / PEDDLER. Eh, my dear Sir, I wish to God I could. / PASSER-BY. But if you had to live exactly the same life all over again-with all its pleasures and all its pains? / PEDDLER. I wouldn't like that. / PASSER-BY. But what kind of life would you like to live over again? The life I've had, or a prince's, or who else's? Don't you think that I, the prince, or anyone else, would answer just like you, that having to live the same life over again, no one would want to go back to it? / PEDDLER. I think so. / PASSER-BY. You wouldn't go back either, unless you could in some other way? / PEDDLER. No, Sir; I really wouldn't (cf. Giacomo Leopardi, *Operette Morali. Essays and Dialogues*, tr. by Giovanni Cecchetti (Berkeley and Los Angeles: University of California Press, 1983): 479 ff.). From century to century, from the pessimistic 18th century to the decadent literature of the 19th century, Nietzsche encountered this type of argument in other writers, and for example, in his copy of the *Goncourt's Diary*, he underlined this passage from the entry of May 1st 1864: "One would be at pains to find a man who would want to live their life over again. Hardly could we find a woman who would want to live her nineteenth year again. This is judgment enough for life." (cf. Edmond et Jules Huot de Goncourt, *Journal des Goncourt. Mémoires de la vie littéraire. Deuxième volume, 1862-1865* (Paris : Charpentier, 1887), 193; Nietzsche's copy, which bears the underlined passage, is kept at Weimar's *Herzogin Anna Amalia Bibliothek*, shelf mark C 550-a).

wish to start again—in the same conditions, with full forgetting of the past—your life that is now over. Now chose!”

I doubt that our man would prefer to start again the preceding life-play rather than enter nothingness (Eduard von Hartmann, *Philosophie des Unbewussten. Versuch einer Weltanschauung* (Berlin: Carl Duncker’s Verlag, 1869): 534).

Nietzsche himself took over this image in his first public formulation of the doctrine of the eternal return from the famous aphorism 341 of the *Gay Science*. This time it is a demon that, having accessed the most remote of all solitudes, asked man whether he would live his life again, just as it was. In “The Other Dance-Song,” Nietzsche plays at parodying Schopenhauer, Hartmann, and himself as this time it is not life, death, or a demon that brandish the eternal return as a dreadful scare-crow before the fortunate men, it is Zarathustra, desperate and on the brink of suicide, who announces the doctrine of eternal return *to life*. And he whispers it softly to her ears, through her beautiful blonde curls:

Thereupon, Life looked pensively behind her and about her and said softly:
“O Zarathustra, you are not true enough to me!

You have long not loved me as much as you say you do; I know you are thinking that you want to leave me soon.

There is an ancient heavy heavy booming-bell: at night its booming comes all the way up to your cave:—

—and when you hear this bell at midnight strike the hour, between the strokes of one and twelve you think—

—you think then, O Zarathustra, well I know, of how you wish to leave me soon!—

“Yes,” I answered hesitantly, but you also know that—” And I said something into her ear right through her tangled yellow crazy locks of hair.

“You *know* that, O Zarathustra? No one knows that.— —”

The first time that Zarathustra announces his doctrine, he addresses life itself. At that very moment, the midnight bells start ringing, accompanied by Zarathustra’s dance-song:

One!

O man! Take care!

Two!

What does deep midnight now declare?

Three!

I sleep, I sleep—

Four!

From deepest dream I rise for air

Five!

The world is deep

Six!

Deeper than any day has been aware

Seven!

Deep is its woe

Eight!
 Joy—deeper still than misery:

Nine!
 Woe says: now go!

Ten!
 Yet all joy wants eternity

Eleven!
 —Wants deepest, deep eternity

Twelve!

But what does this circular midnight song signify, held in this way between suicide and the dialogue with life? This question is elucidated by the last mention of the eternal return, in the last chapters of the fourth *Zarathustra*.

2.4 *The Ugliest Man and the Most Beautiful Moment*

The ugliest man, one of the superior men to whom the fourth part of *Zarathustra* is devoted, is the personification of historical sense. Consequently he is God's murderer and therefore, he understands how terrible history is and how unbearable the repetition of this series of meaningless massacres and vain hopes is.²³ The highest degree of historical sense implies the greatest difficulty in accepting the eternal return and this is precisely the task that Nietzsche appoints to the "feeling of humanity" in the superb aphorism 337 of the *Gay Science*:

The "humaneness" of the future. [...] Anyone who manages to experience the history of humanity as a whole as *his own history* will feel in an enormously generalized way all the grief of an invalid who thinks of health, of an old man who thinks of the dreams of his youth, of a lover deprived of his beloved, of the martyr whose ideal is perishing, of the hero on the evening after the battle who had decided nothing but brought him wounds and the loss of his friends. But if one endured, if one *could* endure this immense sum of grief of all kinds while yet being the hero who, as the second day of battle breaks, welcomes the dawn and its fortune, being a person whose horizon encompasses thousands of years past and future, being then heir of all the nobility of all past spirit—an heir with a sense of obligation, the most aristocratic of all nobles and at the same time the first of a new nobility—the like of which no age has yet seen or dreamed of; if one could burden one's soul with all of this—the oldest, the newest, losses, hopes, conquests, and the victories of humanity; if one could finally contain all this in one soul and crowd it into a single feeling—this would surely have to result in a happiness that humanity has not known so far: the happiness of a god full of power and love, full of tears and laughter, a happiness that,

²³ The fact that the ugliest man represents the historical sense (the assassin of God) is confirmed in the drafts of Book IV of *Zarathustra*: "the ugliest man, who needs to give himself a historical setting (historical sense) and incessantly looks for a new costume: he wishes to make his appearance bearable and finally goes into isolation so as to avoid being seen—he is ashamed. (PF 31[10] 1884-1885), see also PF 25[101] 1884 and 32[4] 1884-1885).

like the sun in the evening, continually bestows its inexhaustible riches, pouring them into the sea, feeling richest, as the sun does only when even the poorest fisherman is still rowing with golden oars! This godlike feeling would then be called—humaneness.²⁴

Overhumanity, Zarathustra exclaims. “I am all the names in history,” Nietzsche declares at the end of his conscious life, absorbed in the exaltation that shall lead him towards folly. Accordingly, the ugliest man (it is now his time to announce the doctrine) informs the superior men

²⁴ *The Gay Science* §337. Although many interpreters, (mostly under the influence of Martin Heidegger) consider *On the Uses and Disadvantages of Historical Studies for Life* fundamental to our understanding of Nietzsche’s conception of time, it may be worth repeating here that this text belongs to the first period of Nietzsche’s philosophy (according to a division established by Mazzimo Montinari at the beginning of his article: “Nietzsche-Wagner nell’estate 1878,” in *Richard Wagner e Friedrich Nietzsche*, ed. by Enrico Fubini, *Quaderni di Musica/Realtà*, 4, (1984): 73-85; in French “Nietzsche contra Wagner: été 1878,” in *Nietzsche. Cahiers de l’Herne*, ed. by Marc Crépon (Paris: l’Herne, 2000): 237-244)). As such, the second *Untimely* presents positions that Nietzsche gradually abandoned and in which he did not believe even at the time of their conception. Indeed, in a backward glance of 1883, Nietzsche wrote that “Behind my *first period* can be found the mask of *Jesuitism*, that is to say, the deliberate belief in illusion and its forcible establishment as a *basis of culture*” (PF 16[23] of 1883), that is to say, the affirmation of this that we do not believe in as a way of preparing the advent of a new culture based, in turn, upon the illusion and beautiful lie of Wagner’s operas. *The Birth of Tragedy* and the *Untimelies* are replete with Wagnerian terms and for example, the concept of “monumental history” is Nietzsche’s appropriation of the concept of the “absolute” or “monumental work of art” as Richard Wagner had expressed it in *A Communication to my Friends*: “—The *absolute artwork*, i.e. the artwork which shall neither be bound by time and place, nor portrayed by given men in given circumstances, for the understanding of equally definite human beings,—is an utter nothing, a chimera of esthetic phantasy.” Wagner, *Communication to my Friends*, trans. by William Ashton Ellis, 1994, in *The Artwork of the Future: Richard Wagner’s Prose Works*, Vol. 1 p. 275. Wagner sought to oppose the monumental work of art, which was a creation of Alexandrine scholars dating from after the death of Greek art, and the trend, which leaves “the real human need” dissatisfied, with a living art whose “hose attributes present as great a contrast to the fancied monumental artwork as the living Man to the marble Statue.” Wagner, 1994, p. 276). This does not cancel the fact that even in those works that belong to the Wagnerian period of Nietzsche can be found here and there—and in a fashion totally inconsistent with the general argumentative thread—certain anticipations on some themes and concepts that shall be developed and ripened later on, within Nietzsche’s genuine philosophy, beginning with *Human, All Too Human*. The philosopher, well aware of having “given birth to centaurs” in his youth wrote in 1876 “In the *Untimely Meditations*, I granted myself, here and there, some *exit strategies*” (PF 17[36] of 1876), which I regard as an allusion to some thoughts belonging outside of the dangerous circle of ideas of his Wagnerian phase and already opened up to the future of Nietzsche’s real philosophy. One of these exit strategies appears in this passage of the first paragraph of the second *Untimely* where Nietzsche, before building his general argumentative setup directed towards the non-historical and the supra-historical, writes: “The stronger the innermost roots of a man’s nature, the more readily will he be able to assimilate and appropriate the things of the past; and the most powerful and tremendous nature would be characterized by the fact that it would know no boundary at all at which the historical sense began to overwhelm it; it would draw to itself and incorporate into itself all the past, its own and that most foreign to it, and as it were transform it into blood.” (On the “generation of Centaurs” in the first phase of Nietzsche’s philosophy, see *Centauren-Geburten*.” *Wissenschaft, Kunst und Philosophie beim jungen Nietzsche*, ed. by Tilman Borsche, Federico Gerratana, Aldo Venturelli (Berlin/New York: de Gruyter, 1994)).

that “earthly life is worth living,” in the second-to-last chapter of part IV: “One day, a feast in the company of Zarathustra was enough to teach me to love the earth. ‘Is this life!’ I shall tell death, ‘well, once more!’” At this point, the old bell started sounding the hours at midnight, “the old midnight bell which had counted the heartbeats, the painbeats of your fathers” is another image that Nietzsche intends to be combining nihilism and all the woes of existence, and to whom Zarathustra opposes this reasoning, transforming and re-producing the Faustian sense of the instant:

Did you ever say yes to a single joy? O my friends, then you said yes to *all* woe as well! All things are chained together, entwined, in love.

—If you ever wanted one time a second time, if you ever said ‘you please me, Happiness! Quick! Moment!’ then you wanted it all back!

—All anew, all eternally, all chained together, entwined, in love, oh! Then you *loved* the world—

—you the eternal ones, love it eternally and for all time, and even to woe you say: “be gone, but come back!” *for all joy wants—eternity!*

The eternal return is the most radical response possible to theologies both philosophic and scientific, as well as to the linear temporality of the Christian tradition: in the cosmos of eternal return, there is no room for creation, providence or redemption. One is unable to either stop time or direct it: every instant flows away, but it is fated to return, identical, for better or for worse. *Who*, then, may have wished to live again the same life? Who is it that would relish in taking the arrow away from Chronos’ hands and slipping the ring on the finger of eternity? Goethe looked for an instant that he could urge thus: “stop here, you are beautiful.” Nietzsche, on his part, awaits a man who could declare to *every* instant: “pass away and return, identical, in all eternity!” This man is the overhuman, he is not an esthete, an athlete, or a product of some Aryan, slightly Nazi eugenics. He is he who can say ‘yes’ to the eternal return of the same on earth, while taking up the weight of history and keeping the strength to shape the future.

The notebooks indicate that this very reasoning applied to the individual Nietzsche, who had scribbled in the midst of his Zarathustrian fragments: “I do not want my life to *start again*. How did I manage to bear it? By creating. What is it that allows me to bear its sight? Beholding the overman who *affirms* life. I have attempted to affirm it *myself* — Alas.” And shortly after, on another page, he replied to his own question thus: “The instant in which I created the return is immortal, it is for the sake of that instant that I *endure* the return.”²⁵ Nietzsche, the man of knowledge had attained the climax of his life at the very instant in which he had grasped the knowledge he regarded as the most important of all. When, at the end of his life, he became aware of having attained this summit, he ceased to need an alter ego in order to affirm the life that forever returns and as a conclusion to the *Twilight of the Idols*, which are the very last lines published in his lifetime, he let these words be

²⁵ PF 4[81] and 5[1]205 of 1882-1883.

printed: “I, the last disciple of the philosopher Dionysus,—I the master of the eternal return.”

3. Genesis, Inter-Textuality and Parody

Let us therefore return to this instant in which the philosopher is seized by his abysmal thought. In *Ecce Homo*, Nietzsche himself recalls the date and the birthplace of the *Zarathustra*, born out of the thought of the eternal return:

I shall now tell the story of *Zarathustra*. The basic conception of the work, the idea of the eternal return, the highest formula of affirmation that can possibly be attained—belongs to the August of the year 1881: it was jotted down on a piece of paper with the inscription: ‘6,000 feet beyond man and time’. I was that day walking through the woods beside the lake of Silvaplana; I stopped beside a mighty pyramidal block of stone which reared itself up not far from Surlei. Then this idea came to me. (*Ecce Homo*, “Thus Spoke Zarathustra,” §1)

This rendering seems to characterize the thought of eternal return as ecstatic hallucination, as inspired knowledge, as myth. Moreover, as we said, nowhere in his published works does one find any theoretical exposition of a doctrine that Nietzsche considered to be the apex of his philosophy, and which exerted in his mind a profound turmoil in the summer of 1881:

Thoughts rose against my horizon, thoughts the likes of which I have never seen before—I do not wish to reveal anything about them, and maintain myself in an unshakeable calmness. [...] The intensity of my feelings makes me laugh and shiver at once—it happened already a number of times that I couldn’t leave my room for the laughable cause that my eyes were inflamed—for what reason? Everytime I had in my walks of the day before, cried too much, and not sentimental tears, but tears of excitement, singing and raving, full of a new view which is my privilege above all the men of this time (Letter to Peter Gast, August 14th, 1881).

It is therefore not surprising that a large part of the Nietzsche scholarship has seen the eternal return as a myth, an hallucination, in any case as a paradoxical and contradictory theory, a construct of classical influences and reminisces of scientific doctrines wrongly understood. However, the critical edition by Colli and Montinari leads us to question everything again on this point as well as many others, and to leave behind the hermeneutical and philosophical enthusiasms in order to focus on more modest exercises in reading Nietzsche’s text. Just like thoughts never surge from nothing, this text is not without context. The page inscribed with the thought of the eternal return is known to the scholarship, and has been abundantly quoted and even reproduced in facsimile. However, the notebook containing that page is largely ignored. This notebook does not register the stroke of lightning of an ecstatic revelation. Instead, it contains a series of rational arguments in support of the hypothesis of the eternal return.

M III 1—such is the reference number of this in-octavo notebook kept in Weimar’s Goethe-Schiller archives—is made up of 160 pages, carefully covered in about 350 fragments belonging (except for a few rare exceptions) to the period from the spring to the fall of 1881. It is a secret notebook. Nietzsche did not use its content in any of the published works (it contains only the preparatory versions of a few aphorisms of the *Gay Science* and two of *Beyond Good and Evil*). The reason is that Nietzsche intended to use its contents for a scientific exposition of the thought of the eternal return.²⁶ Given the fact that the arguments in support of the eternal return in the notebooks of the subsequent years all pertain to those first reflexions, we are faced with one of the rare cases in which Nietzsche’s thoughts on a precise issue do not undergo any modifications.²⁷

Yet, this notebook, however important and unused in the published works, fell victim to a series of editorial misfortunes and remained unpublished until 1973, when it was published integrally and in a chronologically reliable shape, while the editions anterior to Colli and Montinari’s “do not allow one to form an opinion, however approximate, of this notebook and its specific character.”²⁸ Before 1973, it was

²⁶ On August 14th, 1882, after the publication of the *Gay Science*, Nietzsche wrote to Peter Gast: “I’ve kept about one quarter of the original material (for a scientific treatise).”

²⁷ Colli and Montinari correctly wrote elsewhere that Nietzsche “had kept Notebook M III 1 with him for the entire final period of his creative activity” (cf. Colli / Montinari, 1972, p. 60). There is no doubt that the philosopher had the Notebook in his hands in the Fall of 1888, but it also bears signs of having been re-read in 1883, 1885 and during the Spring of 1888. For example in the letter Gast from September 3rd 1883, Nietzsche writes that he found again the first sketch of the eternal return. We can assert that there was another re-reading of this Notebook in the summer of 1885 from the fact that PF 36[15] from 1885 is a reworking of PF 11[292, 345] of 1881, 36[23] from 1885 of 11[150, 281] from 1881, 35[53] from 1885 of 11[70] from 1881 and so on. Finally, the recapitulation of the doctrine in PF 14[188] of the spring 1888 is entirely derived from M III 1. In 2009, a facsimile reproduction of this notebook was published in the *Digitale Faksimile Gesamtausgabe*, <http://www.nietzschesource.org/DFGA/M-III-1>.

²⁸ Cf. Colli / Montinari, 1972, pp. 59-60. Even the first complete edition of M III 1 for the French and Italian publication of Nietzsche’s works of 1967, was still chronologically unreliable. Montinari confessed failing to grasp which of the two layers (one written only on the left hand pages starting from the end of the notebook, and the other, which uses a different sort of ink and starts at the beginning of the notebook on the right-hand pages) was to be regarded as the earlier one. He admitted resolving to publish the fragments simply from beginning to end, therefore ignoring the two layers. However, seven years later, in 1973, he was in a position to publish the definitive German edition in which it was established that the layer written from the end to the beginning was older than the notes written in the reverse order. In 1982, the French translation was re-edited according to the new and definitive ordering of the material (*Le Gai Savoir. Fragments posthumes été 1881 - été 1882*, edition revised and augmented by Marc B. de Launay, Paris, Gallimard 1982) and in the Preface, (p. 9) we are informed that Montinari solved the problem of the date of the two layers thanks to the “comparison of the ink used by Nietzsche’s in M III 1 and that used in the letters written at the same period.” The Italian edition has been revised by Mario Carpitella and Federico Gerratana according to the correct chronological order and enriched by a new revision of the text based upon the manuscript having allowed for a correction of the rare transcription mistakes.

—Let you beware that death is what is opposed to life. The living is but a variety of what is dead, and a rare one at that.
 —Let you beware that the world continuously creates something new.
 Do I speak like a man under the spell of a revelation? Then just keep from listening and treat me with scorn.
 —Are you of the kind who still need gods? Doesn't your reason feel disgust at letting itself be fed in such a gratuitous and mediocre way?
 Let you beware that there exists laws in nature. There are only necessities, and therefore there is no one to command, no one who transgresses."³⁰

Apparently, it is a matter of a polemic against those who considered the world as a living being, unfolding through a recursive structure of speech: "Let you beware [*Hütet euch zu sagen*] ..." What does that mean? Why does Nietzsche turn against those who thought that the world is a living thing, and who is this warning sent to? And why is Nietzsche using such a rhetorical structure? And above all, what does it all have to do with the doctrine of eternal return?

In order to address these questions, I think that one cannot dispense with addressing not only what Nietzsche wrote during that summer in Sils-Maria, but also what he was reading before and after the famous first sketch of the eternal return. One needed to move from the Goethe-Schiller Archive, where Nietzsche's manuscripts are kept, to the Duchess Anna Amalia Library of Weimar, where Nietzsche's personal library is kept, so as to retrieve the volumes that made up, in the summer of 1881, the portable library of this wandering philosopher. Reading these volumes all at once, while letting myself be guided by Nietzsche's handwritten annotations in the margins allowed me to appreciate that I was finding myself facing a larger debate which one needed to reconstitute and whose arguments and protagonists Nietzsche knew very well.

After the discovery of the two principles of thermodynamics began a debate about the dissipation of energy and the thermal death of the universe which framed the modern renewal of the debate between the linear and circular conceptions of time.³¹ Scientists such as Thomson, Helmholtz, Clausius, Boltzmann and—by way of Kant, Hegel and Schopenhauer—philosophers such as Dühring, Hartmann, Engels, Wundt and Nietzsche have tried to address this problem by using the force of scientific argumentation and of philosophical discussion. Whoever believed in an origin and a final end to the motion of the universe (be it

³⁰ The reference is to page 55 in Nietzsche's numbering, page 49 in the archive numbering. The central part of this text was published as PF 11 [142] of 1881 in the Colli-Montinari edition. The rest however, as a draft of *Gay Science* §109 was not published in the PF of Summer 1881, but only in the critical apparatus to the German edition of the *Gay Science* (KSA vol. 14, pp. 253 f.); here, the editorial choice to distinguish between preparatory sketches (*Vorstufen*) and posthumous fragments (*Nachgelassene Fragmente*) betrays its own shortcomings. On this problem, see Wolfram Groddeck, "'Vorstufe' und 'Fragment'. Zur Problematik einer traditionellen textkritischen Unterscheidung in der Nietzsche-Philologie," in *Textkonstitution bei mündlicher und bei schriftlicher Überlieferung*, ed. by Martin Stern (Tübingen: Niemeyer, 1991), 165-175.

³¹ For a complete reconstruction of this debate in its different phases, see Paolo D'Iorio, *La linea e il circolo* (1995), 27-182 and 365-371.

in the physical form of the gradual loss of heat, or in the metaphysical form of a final state of the “world process”), relied on the second principle of thermodynamics or on the demonstration of the thesis of Kant’s first cosmological antinomy. On the contrary, those who refused to admit a final state to the universe used Schopenhauer’s argument of infinity *a parte ante*—according to which if a final state were possible, it should already have established itself in the infinity of time past—to propose henceforth a number of alternative solutions. Scientists would propose the hypothesis that energy could have re-concentrated after a cosmic conflagration, thus reversing the tendency towards dissipation. Those belonging to the monistic and materialistic tradition relied on the first principle of thermodynamics and on the infinity of matter, space and time, and regarded the universe as an eternal succession of new forms. A certain critical agnosticism was widespread among scientists and philosophers, oftentimes through a reaffirmation of the validity of Kant’s antonymic conflict, this movement avoided to take a stand on specifically speculative issues. Other German philosophers, like Otto Caspari, or Johann Carl Friedrich Zöllner, had reintroduced an organicist and pan-psychical conception of the universe, investing atoms with the ability to escape any state of balance. Indeed, it is probably one of Otto Caspari’s works, *The Correlation of Things* (*Der Zusammenhang der Dinge. Gesammelte philosophische Aufsätze* (Breslau: Trewendt, 1881)), which awakened Nietzsche’s interest for all things cosmological, in that summer of 1881, in Sils-Maria.

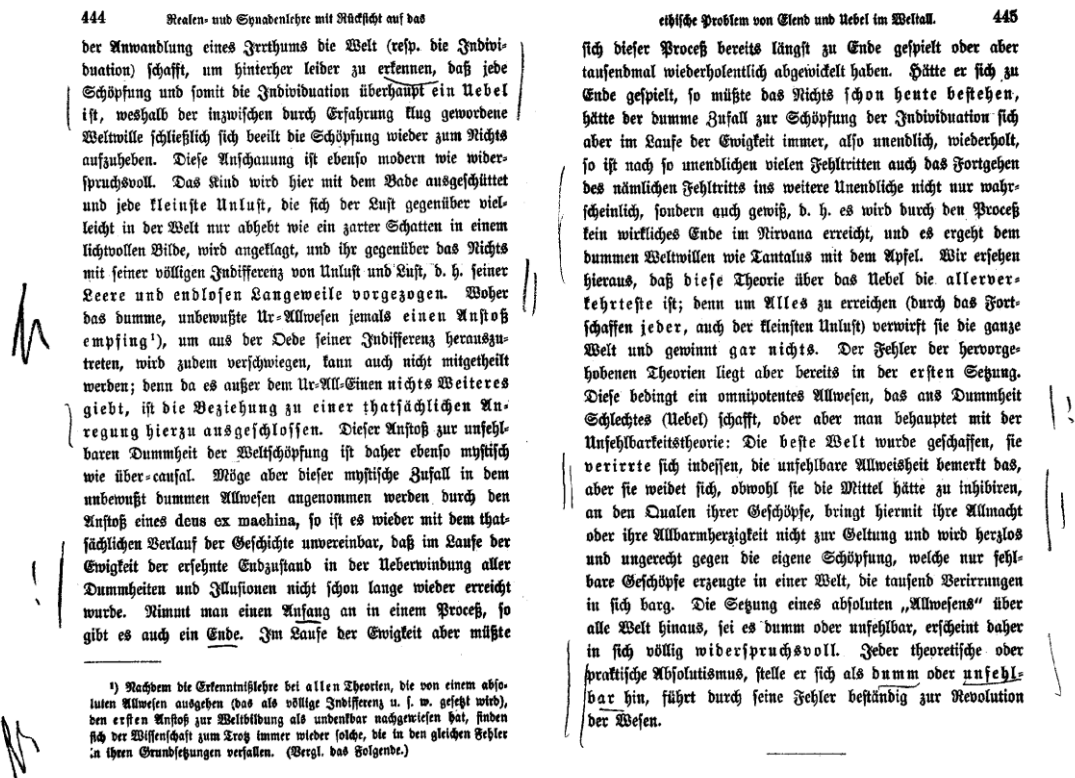


Figure 2: Otto Caspari, *Der Zusammenhang der Dinge*, pp. 444-445. Weimar, Herzogin Anna Amalia Bibliothek, C 243.

Nietzsche's copy of the book shows a great amount of underlining, especially in a passage from the chapter entitled "The Problem of Evil in Reference to Pessimism and to the Doctrine of Infallibility", of pages 444-445. Addressing Schopenhauer and Eduard von Hartmann's mystical pessimism according to which the world is the creation of a stupid and blind essence (which, after having created the world by mistake, comes to the realization that it had made a mistake and strives to return it to nothingness) Caspari stresses that it is nothing short of mystical to imagine that the world may have been borne out of a an originary and undifferentiated state. Where would it have drawn the first impulse? But, continues Caspari, even if the world had received this first impulse from some *deus ex machina*, there is no doubt that, in the temporal infinity of past time thus far, it would have either attained the end of the process (but this is impossible because the world would then have ended), or it would be necessarily bound to repeat indefinitely this original mistake, and the entire process that accompanies it. But then, what is the process of the world? We must now take one more step back and understand further the process of the world according to von Hartmann.

3.2 Eduard von Hartmann: Avoiding the Repetition

Eduard von Hartmann's *Philosophy of the Unconscious* (1869),³² offered a philosophical system based upon the minute description of a destructive world process, directed towards a final state. In Hartmann's view, the "unconscious" is a unique metaphysical substance made of the combination of a logical principle, the idea, and an illogical principle, the will. Before the beginning of the process of the world, pure will and the idea remained in an a-temporal eternity, free of willing or not willing to actualize itself. The will then decided, without any rational basis, to will. It then engendered an "empty will," full of volitional intention but deprived of any content (Hartmann calls this the "moment of the initiative"), and finally, when the empty will managed to unite with the idea, the process of the world commenced.

Ever since, the idea does nothing else than strive to correct the unfortunate and illogical act of the will. By way of the development of consciousness, it allowed human beings to understand the impossibility of reaching happiness in the sense of the full flourishing of the will to live. The history of the world therefore passed through the three stages of illusion until, having reached a senile state, it finally recognizes the vanity of all illusion and desires only rest, dreamless sleep and the absence of pain as the best possible happiness (Eduard von Hartmann,

³² The success of this work written between 1864 and 1867 was enormous and its author, of age twenty-seven at the time, enjoyed unexpected fame. The eleventh edition, published in 1904, contains the list of 103 titles of books, articles and reviews devoted to it. The twelfth edition came out in 1923 (cf. Weyembergh, *F. Nietzsche et E. von Hartmann* (1977), 4 and Gerratana, "Der Wahn jenseits des Menschen. Zur frühen E. v. Hartmanns-Rezeption Nietzsches," *Nietzsche-Studien*, 17 (1988): 391). In 1877, D. Nolen wrote at the beginning of his preface to the French edition: "The success of the book whose translation we now deliver to the French public may be regarded as the most important philosophical event in Europe of the last ten years."

Philosophie des Unbewussten. Versuch einer Weltanschauung (Berlin, Carl Duncker's Verlag, 1869): 626).

At this stage, the idea, in its cunning, has accomplished its task: it created a quantum of "will to nothingness" which suffices to annihilate the will to live. The moment in which the collective decision will lead to the destruction of the whole universe is imminent and, when this grand day comes, the will shall return to the bosom of the "pure power in itself," it will be, once again, "what it was *before* any volition, that is to say, a will that can will and not will" (Hartmann (1869): 662). Hartmann hopes, of course, that at this point, the unconscious will have lost all will to produce that vale of tears again and to recommence again the senseless process of the world.

On the contrary, interpreting Schopenhauer's concept of will as a "not being able to not will," as an eternal willing creating an infinite process in the past and in the future, would lead one to despair, because this would suppress the possibility of a liberation from the senseless impulse of the will. But fortunately, says Hartmann, while it is logically possible to admit the infinity of the future, it would be contradictory to regard the world as deprived of a beginning and extending infinitely in the past. Indeed, if this were case, the present moment would be the completion of an infinity, which Hartmann explains in the third edition of his work, is contradictory. It is remarkable that in this "demonstration," Hartmann introduces (without mentioning his source and more importantly without stressing their antinomic context) the arguments used by Kant in his demonstration of the first cosmological antinomy. Kant's demonstration goes as follows:

Thesis: 'The world has a beginning in time, and in space it is also enclosed in boundaries.' Proof: 'For if one assumes that the world has no beginning in time, then up to every given moment in time an eternity is elapsed, and hence an infinite series of states of things in the world, each following another, has passed away. But now the infinity of a series consists precisely in the fact that it can never be completed through a successive synthesis. Therefore an infinitely elapsed world-series is impossible, so a beginning of the world is a necessary condition of its existence, which was the first point to be proved (Kant, *Critique of Pure Reason*, tr. by R. Guyer and A. W. Wood (Cambridge: Cambridge University Press, 1998): B 454, p. 470).

Hartmann knows Schopenhauer's critique of Kant's argument, which demonstrates that it is in fact possible and not contradictory to develop an infinity in the past from the present and that it is therefore not logically necessary to postulate a beginning of the world:

The sophism consists in this, that, instead of the beginninglessness of the series of conditions or states, which was primarily the question, the endlessness (infinity) of the series is suddenly substituted. It is now proved, what no one doubts, that completeness logically contradicts this endlessness, and yet every present is the end of a past. But the end of a beginningless series can always be *thought* without detracting from its beginninglessness, just as conversely the beginning of an endless series can also be *thought*. (Schopenhauer, *The World as Will and Representation*, tr. by E.F. Payne (1969): II, 494)

However, Hartmann objects that the regressive movement postulated by Schopenhauer is possible only in thought: it remains nothing more than an “ideal postulate” with no real object and which “does not teach us anything about the real process of the world that unfolds in a movement contrary to this backwards movement of thought” (Hartmann, *Philosophie des Unbewussten*, third edition (1871): 772). Hartmann affirms that if unlike Schopenhauer one admits the reality of time and of the world process, one must also admit that the process must be limited in the past and therefore that there must be an absolute beginning. In Hartmann’s mind, failure to do so would result in positing the contradictory concept of an accomplished infinity: “The infinity that from the point of view of regressive thinking, remains an ideal postulate, which no reality may correspond to, must, for the world, whose process is, on the contrary, a progressive movement, open up to a determinate result; and here the contradiction comes to light” (Hartmann (1871): 772). What really “comes to light” in this passage is the fact that Hartmann does not provide a demonstration but *a petitio principii*. Indeed, the concept of the world process analytically contains the concept of a beginning of the world. In all rigor, it is therefore impossible to demonstrate these concepts with reference to each other. Secondly, Hartmann’s view that one is bound to accept the reality of the world process even if one rejects the ideality of Schopenhauer’s time is mistaken. Hartmann believes that if time is real there must be a world process with both an absolute beginning and an absolute end. Without any justification, Hartmann jumps from Schopenhauer’s negated time to oriented time.

With regard to the end of the world, Hartmann commits to the same fallacy because he uses the idea of progress to demonstrate the end of the world and ... vice versa. As a result, our philosopher absent-mindedly stumbles out of demonstration into mere postulation again: “If the idea of progress is incompatible with the affirmation of an infinite duration of the world stretching back into the past, and since in this past infinity, all the imaginable progress may have already happened (which is contrary to the idea of actual progress itself) we cannot assign an infinite duration into the future either. In both cases, one suppresses the very idea of progress towards a pre-determinate goal; and the process of the world resembles the labor of the Danaids.” (Hartmann (1869): 637) Nietzsche quotes this passage as early as the *Untimely Meditation* on history (1874), and takes a stab at exposing the admirable dialectics of this “Scoundrel of all scoundrels,” whose consistent arguments illustrate the absurdities intrinsic in any teleology.³³

Hartmann’s view is that the world process leads into a final state absolutely identical to the initial state. However, it follows from this that even as the cosmic adventures of the unconscious come to a close, we are still haunted by the specter of a new will and of another beginning of the world process. This exposes a serious internal flaw of

³³ Cf. second *Untimely*, § 9 and PF 29[52] of 1873: “Hartmann is important because he kills, by his consistency, the idea of a process of the world.”

Hartmann's system insofar as it jeopardizes the possibility of a final liberation from existence and suffering. This is why in the last pages of his work, "On the Last Principles," he painstakingly calculates the degree of probability of a reawakening of the volitional faculty of the unconscious. Insofar as the will is entirely free, unconditioned and a-temporal, the possibility of a new volition is left to pure mathematical chance and is therefore $\frac{1}{2}$. Hartmann further stresses that if the will were embedded in time, the probability of the repetition would amount to 1 and the process of the world would be *bound* to begin again, in an eternal return which would completely preclude the possibility of a final liberation. Fortunately, this is not the case since—according to Hartmann's remarkable logic—the world-process develops through time, but the original will is outside of time. In fact, one may even affirm, along the lines of Hartmann's peculiar theory of probability, that every new beginning gradually reduces the probability of the next beginning: let n be the number of times that the will is realized, the probability of any new realization is $\frac{1}{2} n$. "But it is clear that the probability $\frac{1}{2} n$ diminishes as n increases, in a way that suffices to reassure us in practice" (Hartmann (1869): 663).

3.3 Dühring and Caspari: Necessity and Rejection of the Repetition

We can now better understand the meaning of the polemic between Caspari and Hartmann contained in the pages 444-445 of *Der Zusammenhang der Dinge*, which I have mentioned above. There, Caspari took over the argument of the infinity *a parte ante* in order to claim that if a final state were possible, it should have already been reached in the infinity already past and all motion would therefore have come to a stop. Yet, such hasn't been the case, since the world is still in motion. Indeed, far from diminishing with every repetition, the probability of a new beginning is always equal to 1 and this will necessarily produce the repetition of the same process. Thus Hartmann's world process moves a circle instead of evolving towards one goal. But for Caspari this infinite circular movement represents the greatest ethical perversion and amounts in and of itself to a definitive refutation of the whole of Hartmann's philosophy. Here is a translation of the central passage of these two pages of Caspari's:

Assuming that it be possible, by way of some *deus ex machina*, to suppose that this mystical event indeed existed at the heart of the stupid and unconscious essence of the world. It remains that this event would be incompatible with the effective unfolding of history and that in the course of eternity the highly desired final state where all stupidities and illusions are overcome has already occurred a long time ago. If one makes the hypothesis that in a process there is a *beginning*, then there also has to be an *end*. Consequently, in the course of eternity, this process must have already unfolded a long time ago or else it was repeated a thousand of times. If it had unfolded until the end, then nothing should be here today. If, on the contrary the stupid chance which engendered the creation of individuation repeated itself forever, that is to say to the infinite in the course of eternity, then, the continuation, after an infinite number of

missteps, of the same missteps in the infinite future, is not only probable but assured. That is to say that through the process, one would not attain any true end in Nirvana, and that the stupid will of the world would be victim of the same thing as Tantalus with his apple. This demonstrates that *this* theory relative to evil in the world is *the most absurd*, since in order to possess everything (through the elimination of all suffering, down to the smallest), it rejects the whole universe and gains *absolutely nothing* (Caspari, *Der Zusammenhang der Dinge* (1881): 444-445).

Here, Caspari enters the polemic that opposed Eugen Dühring and Eduard von Hartmann, the most famous German philosophers of the time, with regard to the possibility of a new beginning of the world-process, after the final state.³⁴ In the “schematism of the world,” a section of his *Cursus der Philosophie*, Eugen Dühring rejected the infinity of space and the regressive infinity of time, and he maintained only the possibility of the infinity of future times (Dühring, *Cursus der Philosophie als streng wissenschaftlicher Weltanschauung und Lebengestaltung* (Leipzig: Koschny, 1875): 82-83). However, once he had outlined the “real image of the universe”, he had interrupted the construction of his system in order to sketch out the false image of the universe, which arises when “unreflective imagination projects an eternal play of mutations into the regressive infinity of time. It would seem possible that, just as we went from the originary undifferentiated state of movement and matter, one could, in the future, return to a state identical to the original state and—Dühring suggests, in an allusion to Hartmann—“there would even be a way of thinking, for which this coordination between the beginning and the end may appear greatly attractive” (Dühring (1875): 83). But if the world-process leads into a state identical to the original state, Dühring continues, Hartmann’s probabilistic calculus is powerless to avoid any new beginning and the “absolute necessities of the real” warrant that an infinite repetition of the same forms must *necessarily* occur.³⁵ At this point, Dühring introduces an ethical objection, namely that this “gigantic extension of the temporal interval” would indeed lead mankind to a state of general indifference towards the future, and would sterilize its vital impulses: “it is obvious that the principles that make life attractive do not accord with the repetition of the same forms.” (Dühring (1875): 84) Dühring therefore rejects Hartmann’s philosophical system because it leads into an anti-vital view of the world that is, into a desolate repetition of the same during an infinite future. For Dühring, like for Caspari later, the eternal return of the same is the ethically undesirable consequence that makes

³⁴ Caspari already mentioned this polemic on pp. 283-287 of his *Zusammenhang der Dinge*, where he summarized the arguments of the two “dogmatists” regarding the necessity of a beginning of the world and their rejection of the infinite *a parte ante*.

³⁵ Let me stress in passing that Dühring, unlike Caspari, does not rely on the infinite *a parte ante* to bring out the necessity of the repetition in Hartmann’s system. On the contrary, he sees Hartmann’s system as the very product of this form of infinity. This may be explained by the fact that Dühring seeks to protect *his own* process of the world, his own teleology, from the destructive force of the argument from the infinite *a parte ante*.

Hartmann's philosophy altogether wrong, trivial and absurd. Dühring brings his charge to a close with a severe warning:

Let us beware [*Hüten wir uns*], in any case, from such futile absurdities; because the existence of the universe, given once and for all, is not an indifferent episode between two nocturnal states, but the only solid and shining foundation upon which we could apply our deductions and previsions (Dühring (1875): 85).

On July 7th 1881,³⁶ Nietzsche had received in Sils-Maria Dühring's *Course of Philosophy*, which his sister had sent him. In his copy, he drew a line and an exclamation mark in the passage where Dühring warned us against the eternal return: *hüten wir uns*. The parody is in the making...

³⁶ Nietzsche subsequently re-read this work in the summer of 1885 (see the letter to Gast of July 23rd) and Dühring is also mentioned in 1884 and in 1888 with regard to the cosmological problem (PF 26[383] 1884 - with Hartmann and Mainländer - and 14[188] 1888).

tionen verbürgte. Aus dem, was zählbar ist, kann auch nur eine erschöpfbare Anzahl von Combinationen folgen. Aus dem aber, was seinem Wesen nach ohne Widerspruch gar nicht als etwas Zählbares concipirt werden darf, muss auch die unbeschränkte Mannichfaltigkeit der Lagen und Beziehungen hervorgehen können. Diese Unbeschränktheit, die wir für das Schicksal der Gestaltungen des Universums in Anspruch nehmen, ist nun mit jeder Wandlung und selbst mit dem Eintreten eines Intervalls der annähernden Beharrung oder der vollständigen Sichselbstgleichheit, aber nicht mit dem Aufhören alles Wandels verträglich. Wer die Vorstellung von einem Sein cultiviren möchte, welches dem Ursprungszustande entspricht, sei daran erinnert, dass die zeitliche Entwicklung nur eine einzige reale Richtung hat, und dass die Causalität ebenfalls dieser Richtung gemäss ist. Es ist leichter, die Unterschiede zu verwischen, als sie festzuhalten, und es kostet daher wenig Mühe, mit Hinwegsetzung über die Kluft das Ende nach Analogie des Anfangs zu imaginiren. Hüten wir uns jedoch vor solchen oberflächlichen Voreiligkeiten; denn die einmal gegebene Existenz des Universums ist keine gleichgültige Episode zwischen zwei Zuständen der Nacht, sondern der einzige feste und lichte Grund, von dem aus wir unsere Rückschlüsse und Vorwegnahmen bewerkstelligen.

4. Ein universeller Zerstreuungszustand der Materie, der sich mit demjenigen der Gase vergleichen lässt, ist das Bild, zu dem eigentlich schon die Ionischen Naturdenker für die von ihnen gesuchte Urbeschaffenheit des Weltalls gelangt sind. Wenden wir uns aber von Anaximenes über mehr als zwei Jahrtausende hinweg zu den neusten Vorstellungen, so hat besonders seit der Mitte des 18. Jahrhunderts die Annahme eines Urnebels eine neue Rolle gespielt, indem die Gravitationsidee und daneben auch die Wärmeausstrahlung den Leitfaden bildeten, um aus der ursprünglich gasförmigen Masse die festen Gebilde entstehen zu lassen. Die zweite Hälfte des 19. Jahrhunderts ist aber in dieser Richtung mit einem neuen Hilfsmittel ausgestattet, indem die Erkenntnis der Wärme als einer molecularen Form der mechanischen Kraft und überhaupt die Einsicht in die Unveränderlichkeit des mechanischen Kraftvorraths gestattet, die Rückschlüsse auf die früheren Zustände des Universums weit bestimmter zu gestalten. Die Brücke, welche man zwischen Gravitation und Wärme geschlagen hat, und die Aussicht, in der exactesten Weise alle Formen der Naturkräfte auf ihre me-

Figure 3: Eugen Dühring, *Cursus der Philosophie*, p. 85. Weimar, Herzogin Anna Amalia Bibliothek, C 255.

3.4 The Ass-Talk of Biological Atoms

Before we return to Nietzsche, it is worth recalling Otto Caspari's intention: he used the argument of the infinity *a parte ante*, in order to oppose another range of claims—scientific more than philosophical—which predicted the end of the world by thermal death. In 1874, he had published a pamphlet entitled *Thomson's Hypothesis of a Final State of Thermal Balance in the Universe Considered from a Philosophical Point of View*, in which he attacked the mechanistic and materialistic cosmologies of the time and opposed it with an organic and teleological

vision of the totality of natural phenomena. In this pamphlet, Caspari described the universe not as a physical mechanism but as a great living organism or a “community of ethical parts.” Since the dividing line between organic and inorganic had been abolished in principle by the recent discoveries of biology, Caspari tried to move from a vision of the organic as a machine to a vision of the cosmos as an organism. He therefore used the objections put forward by Robert Mayer, Friedrich Mohr and Carl Gustav Reuschle against Thomson, Helmholtz and Clausius, and above all he recalled the polemic of Leibniz against Descartes as a way to simplify and reduce the ongoing debate to his own view.

In his famous work entitled *On the Conservation of Force* (1847), Hermann von Helmholtz had divided the totality of the energy in the universe between potential energy and kinetic energy and affirmed the reciprocal convertibility of the two. In 1852, William Thomson pointed out that there exists a sub-ensemble within kinetic energy, heat, which, once it has been generated, is no longer entirely convertible into potential energy—or into any other form of kinetic energy. Considering that the (partial) reconversion of heat into labor is possible only in situations that present a disparity in temperature, and that heat tends to pass from warmer to cooler bodies by spreading on an even temperature level through space, Thomson concluded that the universe tends towards a final state where any energetic transformations, every movement and every form of life will cease:

We find that the end of this world as a habitation for man, or for any living creature or plant at present existing in it, is *mechanically inevitable*.³⁷

Caspari used the argument of the infinity *a parte ante* to oppose the prediction involved by Thomson’s mechanism: “it is not difficult to show that the universe, which has existed in all eternity, would have already come to a state of total equilibrium of all its parts” (Caspari, *Die Thomson’sche Hypothese von der endlichen Temperatúrausgleichung im Weltall, beleuchtet vom philosophischen Gesichtspunkte* (Stuttgart: Horster, 1874): IV). Hence, if every mechanism reaches a state of equilibrium and if the universe has not yet reached it in the infinity of past time, it follows that the universe cannot be considered to be a mechanism, but a community of parts whose movements do not abide to a mechanical law but to an ethical imperative. Caspari’s atoms (which bring to mind those in Leibniz’s *Monadology*) resemble some sort of biological monads, endowed with internal states. For Caspari, every atom obeys the ethical imperative to participate in the conservation of the general organism and its movement does not only follow the simple physical kind of interaction but also an *a priori* law ensuring that thermal

³⁷ Cf. William Thomson (Lord Kelvin), “On Mechanical Antecedents of Motion, Heat, and Light,” in *British Association Report*, II, 1854, reprinted in *Mathematical and Physical Papers* (Cambridge: Cambridge University Press, 1882-1911): II, pp. 37, see also Thomson “On a Universal Tendency in Nature to the Dissipation of Mechanical Energy,” in *Transactions of the Royal Society of Edinburgh*, April 19th 1852, 20 (1850/1853), 3, pp. 139-142; reprinted in *Mathematical and Physical Papers*, I, pp. 511 ff.

equilibrium, which is the unavoidable result of all purely mechanical interaction, is avoided:

In order to resolve the difficulties mentioned earlier, we must return to Leibniz at least with regard to the possibility to conceive of atoms as *biological atoms*, that is to say, as a sort of monad, which on the one hand are obviously subject to real physical interactions, and on the other obey the law of internal atomic self-conservation. This law compels them to follow certain directions of the movement thereby preventing the formation of those tendencies of movement which, because of their unlimited growth, would lead the whole universe (considered purely mechanically), to a state of complete equilibrium of all its parts; a state to which the whole universe, once the ability to conserve motion has been exhausted in every one of its parts, would be condemned to forever (Caspari, *Die Thomson'sche Hypothese* (1874): V).

Therefore, the universe is not a watch in need of rewinding or some steam engine on the verge of a fuel failure. On the contrary, it is, says Caspari after Leibniz: "A watch that rewinds itself, comparable to the organism that seeks its own nourishment [...]. The universe is not in itself a pure, dead, mechanism. Leibniz, against Descartes exclaimed: 'No!' the universe is entirely made up of an independent force, which it does not draw from without" (Caspari, *Die Thomson'sche Hypothese* (1874): 8-9). In Nietzsche's copy, this last sentence received merely a marginal mark, but the last part of the preceding quotation is graced with a big "*Esel*" ("Ass") followed with two exclamation marks.

immer wieder im Wesentlichen zu den Streitigkeiten zurück, die Leibniz und Descartes miteinander von physikalischen und mathematischen Gesichtspunkten mit so großem Scharfsinn geführt haben. Daß wir nun diesen, wie oben angedeutet, in gewissem Sinne noch heute nicht ganz beendigten Streit völlig zu Gunsten Leibniz's entscheiden, kann vom naturphilosophischen Gesichtspunkte niemals zugegeben werden; denn die Erfindung des Princips der sog. prästabilierten Harmonie, ist, wie der Verfaßer in einer früheren Arbeit ausführlich nachzuweisen sich bemühte, (vergl. hierüber Leibniz' Philosophie beleuchtet vom Gesichtspunkte der physikalischen Grundbegriffe, p. 159 ff.) zwar vom mathematischen Gesichtspunkte ein sehr geistvoller, aber in physikalischer Beziehung dennoch nicht anerkennenswerther Ausweg aus den gegebenen Schwierigkeiten. Denn mit Anerkennung einer solchen Harmonie sind die Grundgesetze der Wechselwirkung, der physikalischen Reibung und das Gravitationsgesetz u. s. w. nicht mehr erklärlich. Und dennoch sehen wir uns genöthigt, um die genannten Schwierigkeiten zu heben, wenigstens insoweit auf Leibniz zurückzukommen, daß wir die Atome zu sog. biologischen Atomen, d. h. zu einer solchen Art von Monaden erheben, welche einerseits zwar der realen physikalischen Wechselwirkung unterliegen, nebendem aber dem Gesetze einer inneren atomistischen Selbsterhaltung gehorchen, das ihnen vorschreibt, zugleich gewisse Normen der Bewegungsrichtung zu befolgen, durch welche die Summationen aller solcher mechanischer Tendenzen der Bewegung in größerem Maßstabe verhindert werden, die, unbeschränkt anwachsend, endlich das mechanisch angeschaute Ganze in die völlige Gleichgewichtslage aller Theile bringen würden, zu welchem Zustande das Universum alsdann, hinsichtlich seiner Selbsterhaltung der Bewegung in allen Gliedern erstarben, für immer und ewig verurtheilt wäre. (Vergl. zugl. des Verf. Ausführungen hierüber in der Zeitschrift „Das Ausland“ Jahrg. 1873 No. 31 p. 618 ff.) Bei dieser Gelegenheit möge zugleich daran erinnert sein, daß wohl Leibniz wie kaum ein anderer Forscher mit einer gleichen Verechtigung, auf's tiefste erkannte (was übrigens auch vorurtheilslos von hervorragenden Physikern der Neuzeit zugegeben wird, vergl. hierüber Helmholtz: Handbuch der theoretischen Physik von Thomson und Tait B. I. Th. 2 p. 2 ff.), daß die Anschauungen der Mechanik zunächst nur dazu dienen sollen, Approximationen zu schaffen, durch welche es gelingt, tieferen Einblick in bestimmte gegebene Einzel-

Esul!!

Figure 4: Otto Caspari, *Die Thomson'sche Hypothese* (1874): V, Weimar, Herzogin Anna Amalia Bibliothek, C 379.

Indeed, after having read Caspari's first book, *The Correlation of Things*, Nietzsche went on to read his pamphlet against Thomson's hypothesis, as well as a series of studies, which he found discussed in *The Correlation of Things*. Nietzsche's writings and his readings indicate that, even before 1881, his level of awareness of cosmological problems was fairly broad.³⁸ However, it is during the summer of 1881, at the time

³⁸ As early as 1866, Nietzsche found these problems discussed in a chapter of the first edition of Friedrich Albert Lange's *History of Materialism* (*Geschichte des Materialismus und Kritik seiner Bedeutung in der Gegenwart* (Iserlohn: J. Baedeker, 1866). In his course on "the pre-platonic philosophers" (1872), he had transposed Heraclitean becoming to the cosmic level, quoting the passage on Helmholtz from Lange's book, which was devoted to the dissipation of energy and taken from the famous lecture *On the Reciprocal Action of the Forces of Nature* (cf. Nietzsche, *Les philosophes préplatoniciens* (1994), 149, 313, who quotes Hermann von Helmholtz, "Über die Wechselwirkung der Naturkräfte und die darauf bezüglichen neuesten Ermittlungen der Physik" (1854, in *Vorträge und Reden*, (Braunschweig: Vieweg, 1896):

when his idea of the eternal return “surges over the horizon,” that Nietzsche devotes himself more intensively to these types of readings. In my opinion, the main source of these new reflections is precisely Caspari’s *The Correlation of Things*, which Nietzsche’s editor delivered to him in St Moritz (see the letter to Schmeitzner of June 21st 1881). Caspari’s chapter entitled “The Contemporary Philosophy of Nature and its Orientations,” which is a study of Gustav Vogt and Alfons Bilharz’s philosophy of nature, gave Nietzsche access to a presentation of the current state of cosmological debates as well as some bibliographical references. Further, in his letter to Overbeck of 20-21st August 1881, Nietzsche begged his friend to send him the following works, which he found mentioned in Caspari.

I would like to ask you to buy me a few volumes in bookstores:

1. O. Liebmann, *The Analysis of Reality* [quoted by Caspari (1881) on pp. 215 and 223].
2. O. Caspari, *The Hypothesis of Thomson* (Stuttgart: Hörster, 1874) [quoted by Caspari on pp. 33 and 51].
3. A. Fick, “Cause and Effect” [Quoted by Caspari, in quotation marks, on p. 39 and as a “memorable work,” on p. 51].

I, 50-83), from Lange (1866), 388-389). In Strauss’s *New and Old Faith*, which he read in 1872, Nietzsche found the template of a materialistic cosmology based upon the first principle of thermodynamics. During the same year, he could have found a model of an organic solution to the problem of thermal death of the universe as well as a discussion on the conformation of space in Zöllner’s book *On the Nature of Comets* (Johann Carl Friedrich Zöllner, *Über die Natur der Kometen. Beiträge zur Geschichte und Theorie der Erkenntnis* (Leipzig, Engelmann, 1872), 299 f. and 313 f.); Nietzsche had borrowed this work from the Basel library on November 6th, 1872 and later, on March 28th, 1873, on October 2nd, 1873 and on April 13th, 1874. On March 28th, 1873, he also borrowed Friedrich Mohr’s *General Theory of Motion and Force* (1869), where he had access to an in-depth analysis of the problems of the mechanistic theory of heat. Balfour Stewart’s book was entirely devoted to *The Conservation of Energy* (1875) and Nietzsche acquired the German translation of it on January 20th and started a summary of it in Notebook U III 1, in the summer of 1875 (cf. PF 9[2]). As regards Kant’s Cosmological Antinomy, Nietzsche found a detailed rejection of it in Schopenhauer (in the critique of Kant’s philosophy of the appendix to *The World as Will and Representation* and in *Parerga und Paralipomena* (1851), I, § 13, pp. 98 f.). As I recalled above, Nietzsche had mocked the paralogisms with which Hartmann attempted to demonstrate the necessity of a world’s end in the second *Untimely* (1874), § 9. Nietzsche could have encountered a critique similar to his own in Bahnsen who recalled at length the Schopenhauerian argument according to which “everything that could have happened in an infinite length of time must have already occurred long ago” before shedding light on Hartmann’s *petitio principii* (Julius Bahnsen, *Zur Philosophie der Geschichte. Einer kritische Besprechung des Hegel-Hartmann’schen Evolutionismus aus Schopenhauer’schen Principien* (Berlin: Dunker, 1872), 82; Bahnsen’s book was borrowed by Nietzsche in Basel on December 5th 1871, April 26th and March 5th 1872). Further, on May 26th 1875 Nietzsche had acquired Dühring’s *Cursus der Philosophie*, which he pledged to read over the summer (cf. PF 8[3] of 1875). The dates of Nietzsche’s borrowings from Basel are taken from the catalogue published in 1994 by Luca Crescenzi, “Verzeichnis der von Nietzsche aus der Universitätsbibliothek in Basel entliehenen Bücher (1869-1879),” in *Nietzsche-Studien*, 23 (1994): 388-441.

4. J. G. Vogt, *Force*, Leipzig, Haupt and Tischler 1878 [quoted by Caspari on pp. 28-29, discussed at length on pp. 41-48].

Liebmann, *Kant and his Epigones* [Quoted by Caspari on p. 58]. [...]

Does the Zurich reader's association (or the library) hold the "Philosophischen monatshefte"? I would need volume 9 from year 1873 [quoted by Caspari on pp. 80, 82 and 93] and also of year 1875 [quoted by Caspari in the same way, without volume number, on pp. 128 and 134]. Then the review *Kosmos*, volume I [quoted by Caspari on pp. 36, 51, 146, 180, 182, and 378].

Is there a complete edition of the Discourses by Dubois-Reymond? [quoted by Caspari on pp. 20, 420 and 486].

Nietzsche also requested Afrikan Spir's book, *Thought and Reality*, which he was used to re-reading periodically when dealing with speculative questions.³⁹ As soon as he received these books, he immersed himself in the reading of Caspari's pamphlet against Thomson and his first reaction, as we saw, was to call Caspari's hypothesis of biological monads supposedly able to warrant the conservation of movement "ass-talk." One encounters this reaction both in the margin to Caspari's writing and in a fragment written in the notebook M III 1 ("The most profound mistake possible is to affirm that the universe is an organism. [...] How? The inorganic would be the development and the decadence of the organic!? Ass-talk!!"), which is followed by another fragment in all likelihood aimed at Caspari: "*Absolute equilibrium* is either in and of itself impossible, or the modifications of force enter into the cycle before any equilibrium, in itself possible, is reached. —Attributing to being the 'instinct of self-preservation'! Madness! And attributing to the atoms 'the striving towards pleasure and displeasure'!"⁴⁰

³⁹ On Nietzsche's readings of Spir in 1873, 1877, 1881, 1885, see D'Iorio, "La superstition des philosophes critiques. Nietzsche et Afrikan Spir," *Nietzsche-Studien*, 22 (1993): 257-294. One must note that Caspari's work contained, beyond a number of books that Nietzsche had no knowledge of and which he ordered from Overbeck, quotations and discussions of the cosmological passages from books he had already encountered, for example the works of Strauss, Hartmann, Dühring and Zöllner. On pages 101 and 116-117, for example, Caspari quotes the passage from Strauss's *The Ancient and New Faith* as well as a very nice example of an anti-teleological cosmology. In the study "Hartmann, Dühring et Lange, Philosophers of the Present," Nietzsche found a refutation of Hartmann's dogmatism and of Dühring on the question of the infinite *a parte ante* and of the origin of the world, along with the critique of Vaihinger. On page 256 and then on pages 423 ff., Nietzsche could also find a discussion of the form of Zöllner's four-dimensional space etc. With the addition of Proctor's *Our Point of View in the Universe* (Heilbronn: Henninger, 1877), Mayer's *Mechanics of Heat* (Stuttgart: Cotta, 1867), and *Dühring's Course of Philosophy*, we can obtain a picture of the themes and interlocutors Nietzsche talked of and with during his long walks near the lake of Sils and in the evening, at home, in the tranquility of the world's most fascinating place, in the middle of an "eternal heroic idyll" (cf. PF 11[24] of 1881, the letters to Gast of 10 and of April 16, 1881, the letter to Elisabeth Nietzsche of July 7th, 1881 and the letter to Gast of July 8th, 1881).

⁴⁰ The first fragment quoted was only published in the critical apparatus to the *German* edition of the *Gay Science* (KSA vol. 14, p. 253), the other is PF 11[265] of 1881. Attributing internal states and a sense of self-preservation to atoms is one of the foundations of Caspari's philosophy. Such positions were fairly widespread at the time, for example in Zöllner, Fechner, and Fick. See Caspari (1881), be it only on pp. 126-

On August 26th, Nietzsche wrote a new plan for a book on the eternal return in M III 1 entitled “Noon and Eternity” (PF 11 [195]). Nietzsche takes over his cosmological reflexions in the very next fragments. There, he pursues his constant dialogue with Caspari and develops a harsh critique of his organicism. Caspari pointed out that Democritus’ atomistic theory—which, in Dante’s formulation, “sets the world on chance”—is either a hidden teleology or a theory contradicted by the experience (Caspari, *Der Zusammenhang der Dinge* (1881): 124). Indeed, Caspari contends that a world governed by chance, which had succeeded in avoiding the state of maximum equilibrium so far, could not be called totally blind; on the contrary it must have been directed by some form of teleology. If conversely no teleological principle were guiding it, then it should *already* have reached this state of maximum equilibrium and of motionlessness. In this case, however, the world would still be motionless, and experience demonstrates that the opposite is the case.

Nietzsche refers to these arguments in the posthumous fragment 11[201] when he writes that organicism is a “hidden polytheism,” and a modern shadow of God. There, he directs the objection of infinity *a parte ante* against Caspari: if the cosmos could have become an organism, it would have done so by now.

In the modern scientific realm, what corresponds most to the belief in God is the belief in the whole as an organism: this disgusts me. Turning what is absolutely rare, unspeakably derivated, the organic, which we perceive only on the crust of the earth into the essential, the universal, the eternal! This is humanization of nature all over again! And the monads, which, taken together, would form the organism of the universe are nothing but hidden polytheism! Endowed with foresight! Monads, which would be able to prevent certain possible mechanical results such as the balance of forces! This is phantasmagorical! If the universe could ever become an organism, it would already have become one.

But, Caspari insists, what then is it that has been preventing the attainment of a state of equilibrium so far (and will always prevent, since a temporal infinity has already unfolded by now) if not the intentionality of atoms? If in infinity “*all the possible combinations must have taken place*,” it follows that even the combination that corresponds to the state of equilibrium must have taken place and this contradicts the *facts of experience*” (Caspari (1881): 136). In his copy of the book, Nietzsche traced two lines on the side of this sentence, and he specifically addresses this objection in fragment 11 [245] of 1881. There, he draws a distinction between the configurations of force that are merely possible and those that are real. For him, the balance of forces—that is to say, thermal death—is one of the *possible* cases, but since it has never been and never will be attained, it is not a *real* case.

If a balance of forces had been attained at any moment, this moment would still be going on: therefore, it never happened. The present state

127, 287, 344, 347, 422, and 441. Nietzsche, as early as PF 11[108], which is anterior to the idea of the return, writes resolutely, with a likely reference to Caspari: “there is no self-preservation instinct!”

contradicts this proposition. Supposing that a certain state rigorously identical with the present state had, one day, existed, this supposition is *not* refuted by the present state. As one of the infinite possibilities, *it is necessary* that the present state had been given anyway, since until now an infinite period of time has already unfolded. If equilibrium were possible, it must have occurred; and if the present state has already taken place, then so too the one that preceded it as well as the one preceding that one. Therefore it has *already* taken place a second time, a third time and so on. And likewise it shall take place again a second time, a third time... Innumerable times forwards and backwards. This amounts to saying that all becoming occurs within a repetition of an innumerable number of absolutely identical states. [...] The immovability of forces, their equilibrium is a conceivable case, but it has not occurred. As a result the number of possibilities is greater than the number of realities. –The fact that nothing identical recurs may be explained not thanks to chance, but only thanks to an intention infiltrated within the essence of force. Indeed, supposing an enormous amount of cases, the random occurrence of the *same combination* is more probable than the same combination never recurring.

Now we can go back to the page that follows the first sketch of the eternal return, which triggered our analysis. As we remember, it began with the warning: “Let you beware (*Hütet euch zu sagen*) that the world is a living being.” Things have now become clearer: *Hüten wir uns* is the phrase which Eugen Dühring uses at the end of his refutation of Eduard von Hartmann’s system of the world, a system which he regarded as anti-vitalistic *because* it led logically to the repetition of the identical. Dühring wrote: “Let us beware from such futile absurdities.” Organicism is Otto von Caspari’s answer to the problem of the dissipation of energy, of the thermal death of the universe and of all sorts of teleologies. Against Dühring, against Hartmann, but also against the extension of the second principle of thermodynamics to the universe, Caspari contends that the world will never be able to attain the final state because it is made up of some sort of biological atoms. Nietzsche supports Caspari in his critique of teleology, and the arguments he uses against the final state of the universe coincide with Caspari’s. However, he still regards organicism as the worst form of anthropomorphism, a hidden polytheism and rejects it with all his might. Nietzsche uses a parody of Dühring’s phrase “*Hüten wir uns*” (“Let us beware”) in order to ridicule and refute at the same time Caspari’s organicism, Thomson’s mechanism, Hartmann and Dühring’s world process and other false interpretations of the universe. He also uses this debate to develop his arguments in favor of his idea of the eternal return of the same. A reading of some of the other fragments from Notebook M III 1 confirms that this is not a matter of chance but a subtle intellectual game. Nietzsche writes:

Let us beware [*hüten wir uns*] to assign an *aspiration*, a *goal* of any kind to this cyclical motion, or to regard it according to our needs as *boring*, *stupid*, etc. Undoubtedly, the supreme degree of unreason manifests itself within it just as much as the contrary: but we could not judge it according to this fact, *neither* the reasonable *nor* the unreasonable are predicates that could be attributed to the universe. –Let us beware [*hüten wir uns*]

from regarding the *law of this circle* as having *become*, according to the false analogy of the cyclical movements taking place *within* the ring: there has not been first some chaos and then progressively a more harmonious movement, and finally a stable circular movement of all forces. On the contrary, everything is eternal, has not come once into existence. If there had been chaos of forces, the chaos itself used to be eternal and recurred in every circle. The circular course has no resemblance with *what has become*, it is the original law just as well as the *quantum of force* is the original law, without exception or transgression. Every becoming is inside of the circular motion and of the quantum of force. Therefore, making reference to the becoming and transitory circular movements, for example, the stars, or the ebb and flow, the day and the night or the seasons in order to characterize the eternal circular motion pertains to a false analogy (FP 11[157] of 1881).

Let us beware [*hüten wir uns*] from teaching our doctrine like some sudden religion! It must infiltrate slowly, it requires the investment and fecundation of entire generations—in order to become a tall tree whose shadow shall stretch over all future mankind. What are the two millennia through which Christianity maintained itself! (FP 11[158] of 1881).

The quantum of force in the universe is *determinate* and not “infinite”: let us beware [*hüten wir uns*] from such conceptual extravaganza! Therefore the number of situations, modifications, combinations and developments of this force is doubtless enormous and practically “*immeasurable*,” but in any case this number is determinate and not infinite. On the other hand, the time in which the universe exerts its force is infinite. That is to say, that force is eternally identical and eternally active: —until the present instant an infinity has already taken place, that is to say that all possible developments must *have already taken place*. Consequently, the present development must be a repetition and therefore both this that was born from it and this that shall be born from it and so on both forwards and backwards. Everything has taken place an innumerable number of times because the overall situation of all forces always recurs (FP 11 [202] of 1881).

Let us beware [*hüten wir uns*] from believing that the universe would possess a tendency to acquire certain *forms*, that it aspires to be more beautiful, more perfect, more complex! This is mere anthropomorphism! Anarchy, ugliness, shape—are irrelevant concepts. In mechanics there is no imperfection (FP [205] of 1881).⁴¹

This last sentence seems to grant mechanism an edge over organicism, and indeed, Nietzsche regards the mechanistic vision as more plausible and less anthropomorphic than organicism. However, faced with the two major cosmological models of his time, the mechanistic model and the organic model, Nietzsche wishes to return its polymorphous, proteiform,

⁴¹ See among others PF 11[201] 1881 already quoted and the other draft of aphorism 109 of the *Gay Science* on page 18 of M III 1 (published in KSA, vol. 14, p. 254). As regards textual correspondences, it is worth noting that Nietzsche takes over the title of Caspari's book in PF 11[148], which is the first exposition of the eternal return after the first sketch and a preparation to the famous aphorism 341 of the *Gay Science*: “And then you will find yourself finding again every preparation and every pleasure, every friend and every enemy, every hope and every error, every leaf of grass and every sunbeam, the entire correlation of all things [*den ganzen Zusammenhang aller Dinge*].”

unstructured and chaotic character to nature of which the perfectly non-theological and non-teleological theory of eternal return is the strongest seal. This is the first of the “new battles” which come to whoever is aware of the consequences of the death of God: take any antropomorphism away from nature. In the preparatory papers, the third book of the *Gay Science* is entitled “*Gedanke eines Gottlosen / Thoughts of a Godless One.*” Aphorism 109 of this book, which immediately follows the famous aphorism against the shadows of God, summarizes masterfully Nietzsche’s relations with the main tendencies of cosmology in his time. It is entitled: “*Hüten wir uns...*”:

109. *Let us beware.* — Let us beware of thinking that the world is a living being. Where should it expand? On what should it feed? How could it grow and multiply? We have some notion of the nature of the organic; and we should not reinterpret the exceedingly derivative, late, rare, accidental, that we perceive only on the crust of the earth and make of it something essential, universal, and eternal, which is what those people do who call the universe an organism. This nauseates me. Let us even beware of believing that the universe is a machine: it is certainly not constructed for one purpose, and calling it a “machine” does it far too much honor. Let us beware of positing generally and everywhere anything as elegant as the cyclical movements of our neighboring stars; even a glance into the Milky Way raises doubts whether there are not far coarser and more contradictory movements there, as well as stars with eternally linear paths, etc. The astral order in which we live is an exception; this order and the relative duration that depends on it have again made possible an exception of exceptions: the formation of the organic. The total character of the world, however, is in all eternity chaos — in the sense not of a lack of necessity but of a lack of order, arrangement, form, beauty, wisdom, and whatever other names there are for our aesthetic anthropomorphisms. Judged from the point of view of our reason, unsuccessful attempts are by all odds the rule, the exceptions are not the secret aim, and the whole musical box [*Spielwerk*] repeats eternally its tune which may never be called a melody — and ultimately even the phrase “unsuccessful attempt” is too anthropomorphic and reproachful. But how could we reproach or praise the universe? Let us beware of attributing to it heartlessness and unreason [*Herzlosigkeit und Unvernunft*] or their opposites: it is neither perfect nor beautiful, nor noble [*edle*], nor does it wish to become any of these things; it does not by any means strive to imitate man. None of our aesthetic and moral judgments apply to it. Nor does it have any instinct for self-preservation or any other instinct; and it does not observe any laws either. Let us beware of saying that there are laws in nature. There are only necessities: there is nobody who commands, nobody who obeys, and nobody who trespasses. Once you know that there are no purposes, you also know that there is no accident; for it is only beside a world of purposes that the word “accident” has meaning. 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. Let us beware of thinking that the world eternally creates new things. There are no eternally enduring substances; matter is as much of an error as the God of the Eleatics. But when shall we ever be done with our caution and care? When will all these shadows of God cease to darken our minds? When will we

complete our de-deification of nature? When may we begin to “*naturalize*” humanity in terms of a pure, newly discovered, newly redeemed nature?

There is no use in going back to the “let us beware” which returns ceaselessly and structures this aphorism. I would only like to stress some of the other textual indicators, corresponding to the German terms in brackets, which reveal the strong degree of intertextuality of this text and testify of its relation with the cosmological debate of its time. Nietzsche uses the term *Spielwerk* “a music box mechanism.” In this context, it is both an allusion to the eternal return and to the term *Räderwerk*, which means cogwheel and was used constantly by Caspari in his rejection of Dühring’s schematism of the world. As regards the insensitivity and the unreasonableness of the universe, a sketch of this aphorism, on page 74 of M III 1, explicates once more the reference to Hartmann and Caspari.

Let us beware of deprecating the value of existence by the mere fact that we place ‘callousness’ [*Herzlosigkeit*], the absence of pity, unreason [*Unvernunft*], the lack of noble feelings [*Mangel an edlem Gefühl*] etc. –as the pessimists do [here Nietzsche has Hartmann in mind], but at bottom, the monadists too [like Caspari, with his biological monads] etc. We must figure the fully mechanical and unreasonable universe of matter in such a way that it cannot be affected by any predicate of aesthetical or moral value. –It does not want anything, it neither wants to become more perfect nor more beautiful, nor more noble etc. –Casp<ari>, p. 288, shamefully invokes the “dissuasive sentiment” [*abmahnende Gefühl*]⁴²

Nietzsche is referring to page 288 of *The Correlation of Things*, which follows immediately Caspari’s critique of Dühring and Hartmann’s systems:

Whoever calmly observes these cosmic edifices as they are represented by Dühring and Hartmann, must confront the feeling that in the world itself plays a very important role indeed. It is exactly this sentiment [*Gefühl*] which dissuades [*mahnt*] in a clear voice and pushes them to part ways with this so-called unconscious divinity which builds worlds without being able to renounce them out of compassion, and at the same time dissuades him [*mahnt*] from conceiving the universe and its parts like a communist state, governed in the most insensitive way [*herzlosester Weise*], which throws all its members into chains and forces them to follow in *unisono*, now deprived of any sense of individuality, the Moloch of some insensitive mechanism [*gefühllosen Räderwerkes*].”⁴³

⁴² In the manuscript, this fragment follows PF 11[265] of 1881 quoted above.

⁴³ Caspari uses the term *herzlos* very frequently (five times on p. 287, twice on p. 288, then p. 445, etc.), on p. 287-288 we find also *gefühllos*, three times *werthlos* and *edle Gefühl* on p. 287.

Nietzsche starts from a narrow polemic between those who appeared as the great philosophers of his times and succeeds to draw an image of the universe as “*chaos sive natura*” (as he called it in a parody of Spinoza) still relevant to this day. For him, it is foremost a matter of making mankind aware of its own structuring and creative force, which was at the root of all the qualities successively “found again” in nature. In aphorism 300 of the *Gay Science*, he writes: “Did Prometheus have to *fancy* first that he had *stolen* the light, and then pay for that—before he finally discovered that he had created the light *by coveting the light*, and that not only man, but also the *god*, was the work of *his* hands and had been mere clay in his hands? All mere images of the maker—” This aphorism clarifies the ending we can find in the drafts of aphorism 109: “Prometheus has still not broken free from its vulture!” that is, he has not yet discovered the human origin of his images of the universe.

The analysis of the manuscripts shows us how Nietzsche succeeded in assembling, condensing, and sometimes summarizing in one word or play on words the result of a whole debate which has now fallen into utter oblivion but which, reconstructed thanks to the analysis of his manuscripts and reading, helps us understand the genesis and the meaning of the eternal return. The philosophical interpretation cannot afford to overlook this genetical analysis. But to perform it we shall avoid using compilations of posthumous fragments and fake works such as *The Will to Power*. On the contrary, we shall favor a reliable edition like Colli and Montinari’s and, above all, we shall return to the study of his manuscripts, his library, his reading. Otherwise, as we have demonstrated in the case of one of the most famous and brightest interpreters of Nietzsche, we will never escape the vicious circle of misinterpretations.

4. Epilogue: the cyclical time of Ludwig Boltzmann.

After experiencing the vision of the eternal return which, as we saw, rests upon an argumentative structure determined by the echoes of the scientific and philosophical debates of the times, Nietzsche had considered devoting ten years to the study of the physical sciences. He wished to complete his training and acquire the intellectual tools that would enable him to ground his doctrine more securely and to return to philosophical writings as the master of eternal return. This project failed, most of all because of the Lou von Salomé “affair,” and of the adventures of the “trinity” formed with Paul Rée. On the verge of suicide, the philosopher took up the path of writing, created his double, Zarathustra, and gave a dramatic exposition to the eternal return as part of a great tragedy of knowledge, which is at the same time a fierce parody of all sacred books. This form of presentation is not incompatible with an exposition of the eternal return from the point of view of a philosophy of nature or physics. Nietzsche regarded it as preliminary and talked of *Zarathustra* as the antechamber of his philosophy.

As a conclusion to this study, I would like to stress that the controversies about the thermal death of the universe continued

independently of Nietzsche's philosophy throughout the end of the 19th and the beginning of the 20th century and that the final scientific solution to the problem of the thermal death is to be found in Ludwig Boltzmann's statistical theory of thermodynamics, even if this fact is rarely emphasized sufficiently.

Boltzmann's theory belongs to the third phase of the debate on thermodynamics and cosmology. The publication of Thomson's brief paper "On a Universal Tendency in Nature to the Dissipation of Mechanical Energy" of 1852 signals the beginning of the scientific controversies on the problem of the dissipation of energy and opened the first phase of the debate, which was announced in the *Reflexions on the Motor Powers of Fire* by Sadi Carnot and whose conclusion is represented by Clausius's recapitulative article on the concept of entropy in 1865.⁴⁴ The second phase started in 1867 when, at the forty-first congress of German scientists and doctors, Clausius gave a lecture on "The Second Principle of the Mechanistic Theory of Heat," where he applied the results of his research on thermodynamics to the universe. It is true that in his famous lecture of 1854, Helmholtz had already presented the cosmic consequences of the second principle, but Clausius' contribution had a strong impact on German culture. This is because in this lecture he robustly rejected the possibility to consider the universe as an eternal and self-renewing circle, an *ewiger Kreislauf* in which force and matter are in constant transformation, as was heretofore affirmed by the materialism of the scientists and philosophers, and he did so in the name of the second principle of thermodynamics. In this way, the debate on the principles of thermodynamics gained great importance in European Culture starting in 1867.⁴⁵

In the two first phases, it is Thomson's *mechanism* that predicts the thermal death of the universe. In the third phase, on the contrary, the meaning of the term mechanism changes radically.⁴⁶ In accordance with the apocalyptic climate of this period dominated by the "rebirth of idealism," the "overcoming of scientific materialism" and the "bankruptcy of science", the mechanistic paradigm which had accompanied the birth of modern science became challenged on account of the second principle of thermodynamics. According to the theorem of

⁴⁴ Sadi Carnot, *Réflexions sur la puissance motrice du feu et sur les machines propres à développer cette puissance* (Paris: Bachelier, 1824); Rudolf Clausius, *Über verschiedene für die Anwendung bequeme Formen der Hauptgleichungen der mechanischen Wärmetheorie*, lecture at the *Zürcher naturforschenden Gesellschaft* on April 24th 1865, in *Abhandlungen über die mechanische Wärmetheorie* (Braunschweig: Vieweg und Sohn, 1867), II, 1-44.

⁴⁵ Hermann von Helmholtz, *Über die Erhaltung der Kraft. Eine physikalische Abhandlung*, in *Wissenschaftliche Abhandlungen* (Leipzig: Barth, 1882), I, 12-75; Rudolf Clausius, *Über den zweiten Hauptsatz der mechanischen Wärmetheorie* (Braunschweig: Vieweg, 1867), 1-17.

⁴⁶ As a symbolic step for the start of the third phase we can quote Henri Poincaré's article on "Le mécanisme et l'expérience," *Revue de Métaphysique et de Morale*, I (1893), 534-537. The texts of history of science, which speak of cosmic extension of the second principle of thermodynamics and of thermal death, mechanism and eternal return, usually use this terms in the sense they have in this third phase.

the quasi-periodicity of the motions of mechanical systems demonstrated by Poincaré as part of the problem of the three bodies (1890), a mechanical system must evolve according to a quasi-periodical movement and consequently it must always return—sooner or later—to the initial state.

An easily established theorem informs us that a limited world obeying solely the laws of mechanics shall always pass through a state closely similar to its initial state. On the contrary, according to established experimental laws (supposing we grant them absolute value and wish to push their consequences to the end), the universe is directed towards a final state, which once it is attained, it shall not be able to escape. In this final state, which shall be like a sort of death, all material bodies shall be at rest at the same temperature.⁴⁷

Poincaré's theorem seems therefore incompatible with the second principle of thermodynamics, which predicts a unidirectional movement of all natural phenomena until the whole universe is brought to a total standstill. Wilhelm Ostwald and the entire energeticist school of thought contended that the principles of thermodynamics were fundamentally new, and could not be re-incorporated to traditional physics and that they should serve as a basis for a new science that regards the qualitative diversity of energy and its tendency to degradation as its axioms. Against energeticism and in an effort to bring entropic phenomena back into the theoretical framework of mechanism, Ludwig Boltzmann introduced the concept of probability in physics, not as an instrument of calculation, but as an explicative principle. In Boltzmann's statistical thermodynamics, the increase of entropy assumed by Clausius is re-interpreted as an increase in molecular chaos. As a result, it becomes possible to explain mechanistically the evolution of closed systems endowed with increasing entropic value, without it committing us to granting absolute value to the second principle of thermodynamics. Moreover, one no longer needs to fear the thermal death of the universe insofar as the state of equilibrium will in principle never be complete, but rather will be attained only statistically, leaving open the possibility of fluctuations towards less probable states.

Boltzmann's critics remarked that this hypothesis involved two paradoxes called the objection of reversibility (*Umkehrreinwand*), and that of repetition (*Wiederkehrreinwand*). I shall only address here the second one since it coincides with the theory of the eternal return. Based on Poincaré's theorem quoted above, Ernst Zermelo objected to Boltzmann that his model of the universe suggested that after a finite (if admittedly very long) time the system would return to its initial position. In his first response to Zermelo, Boltzmann avoids committing himself directly to cosmological questions and he only observes that, in the case

⁴⁷ Cf. Henri Poincaré, "Sur le problème des trois corps et les équations de la dynamique," *Acta Mathematica*, 13 (1890): 1-271; Wilhelm Ostwald, "La déroutte de l'atomisme contemporain," *Revue générale des sciences*, November 15th 1895, p. 953 f.; Ferdinand Brunetière, *La renaissance de l'idéalisme* (Paris: Firmin-Didot, 1896); see H.W. Paul, "The Debate over the Bankrupt of Science," in *French Historical Studies*, 2 (1968): 299-327.

of concrete thermodynamic systems, the time of recurrence may be extremely long. For example, in normal conditions of pressure and temperature, one-centimeter cube of gas requires $10^{10^{10}}$ years to reach a molecular configuration identical to the original one! However, following a response by Zermelo, Boltzmann wrote a new article where he outlines a cosmological picture that he will re-use later in his conclusion to his famous *Lectures on Gas Theory*.⁴⁸

In this cosmological picture, Boltzmann considers the universe as a closed system with constant entropy, within which some fluctuations occur, creating islands of negative entropy. Our solar system originates in one of these fluctuations. As Clausius correctly pointed out, the entropy of our solar system increases constantly as the solar system gets closer to the state of chaos and of the thermal death of the rest of the cosmos. However, in other zones of the universe, some new fluctuations and new islands appear, so that thermal death is never generalized. Here we are given a grand cosmic image, in which the solar system and the sparkle of life that was lit on planet earth are only a fluctuation of order from within a dominant entropic tendency. Life, and the order on which it is based are exceptions, transitory forms taking place in the realm of the shapeless, they are islands of the cosmos that will soon be re-absorbed into chaos. According to Poincaré's theorem, our island will have to be reborn, to develop and die innumerable times in a strictly identical fashion. This happened an infinite number of times during the past eternity and it shall take place again an infinite number of times in the eternity to come.

In this framework, the problem of time acquires a particular aspect. For the cosmos as a whole, there is no privileged direction of time. The universe is in a thermodynamic equilibrium and the two directions of time are indistinct, just like "high" and "low" in space. But in each world, a witness is still able to define the past and the future according to entropic evolution:

One can think of the world as a mechanical system of an enormously large number of constituents, and of an immensely long period of time, so that the dimensions of that part containing our own "fixed stars" are minute compared to the extension of the universe; and times that we call eons are likewise minute compared to such a period. Then in the universe, which is in thermal equilibrium throughout and therefore dead, there will occur here and there relatively small regions of the same size as our galaxy (we call them single worlds) which, during the relative short time of eons, fluctuate noticeably from thermal equilibrium [...]. This method seems to me to be the only way in which one can understand the second law-the heat death of each single world-without a unidirectional change of the entire universe from a definite initial state to a final state. [...]

⁴⁸ Cf. Ernst Zermelo, "Über einen Satz der Dynamik und die mechanische Wärmetheorie," *Wiedemann Annalen*, 57 (1896): 485-494; Ludwig Boltzmann, "Zu Hr. Zermelos Abhandlung 'Über die mechanische Erklärung irreversibler Vorgänge'," *Wiedemann Annalen*, 60 (1897): 392-398; Boltzmann, *Vorlesungen über Gastheorie* (Leipzig: Barth, 1895 and 1888).

Obviously no one would consider such speculations as important discoveries or even—as did the ancient philosophers—as the highest purpose of science. However it is doubtful that one should despise them as completely idle. Who knows whether they may not broaden the horizon of our circle of ideas, and by stimulating thought, advance the understanding of the facts of experience? [...]

Very well, you may smile at this; but you must admit that the model of the world developed here is at least a possible one, free of inner contradiction, and also a useful one, since it provides us with many new viewpoints. It also gives an incentive, not only to speculation, but also to experiments (for example on the limit of divisibility, the size of the sphere of action, and the resulting deviations from the equations of hydrodynamics, diffusion, and heat conduction), which are not stimulated by any other theory.⁴⁹

Boltzmann accepts the “paradox” of recurrence—that is the eternal return of the same—as a legitimate consequence of the probabilistic conception of thermodynamics. It may be rejected for ethical reasons, it may be stored away as an abstract speculation or dismissed along with other cosmic fantasies, but it cannot be rejected on the basis of any rigorously scientific viewpoint.

⁴⁹ Boltzmann (1898), II, § 90, p. 256-259, *Lectures on Gas Theory*, tr. by Stephen G. Brush (New York: Dover, 1995), 477-448.