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On the Navigation of Uncertainties: Chaos, Entropy, and Technological Singularity

Poetry has caught up. Moreover, we now have a machine
With its poetry as well as a new way of life,
Business, worldly, intellectual, sentimental,
With which the machine age has endowed our souls.
Alvaro de Campos, *Maritime Ode*

1. As stated in this article's title, it is about the possibilities of mastering what belongs to the coming future. The negative Cartesian concept of uncertainty cannot encompass the actuality of events, but emerging from the very logic of reality is what characterises reality in cognitive-theoretical insight, namely certainty as a certainty that being is what it is in the modality of its possibility as an actual necessity. Certainty, then, is *certitudo* and refers to human judgement about Being as such, speaking in Heideggerian terms. This judgement generally cannot be wrong because truth should be understood scholastically as the correspondence of opinion with things. It is certain, for example, that contemporary global capitalism represents the result of the technoscientific construction of reality as a network of events that appear cybernetically in the fourfold of information-feedback-control-communication. Nothing from this new trans-classical logic can be «efficient», «useful», or «pragmatic». Moreover, this certainty cannot be what exists by itself; it is a pure construction of events based on probability in science theory.

Chaos theory enters many areas of mathematics and focuses on the so-called deterministic laws of dynamic systems. The concept at the centre of this theory is not necessity but chance in the sense of disruption of order as a deviation from the usual course of cause and effect. Chaotic complexity sys-

tems are based on interdependencies and the cybernetic notion of feedback loops, repetition, self-similarity, fractality, and self-organisation. Deterministic non-linear systems produce significant differences in the initial states of matter and energy. An accurate metaphor for that is when a butterfly flaps its wings in Brazil; suddenly, a tornado blows up in Texas. In contemporary philosophy, this is best creatively performed in Gilles Deleuze and Felix Guattari's book *What Is Philosophy?* in which the last chapter is entitled «From Chaos to Brain», and the first sentence of that conclusion is unforgettable:

We require just a little order to protect ourselves from chaos¹.

Why is this chaos theory deterministic if its primary term denotes the opposite of necessity, i.e. chance, which means an event that escapes regularity and order in the sense of lawfulness? Because random cases necessarily happen in an evolutionary sense, the author of the theory, Edward Lorenz, claims that non-linear systems cannot be predicted. In other words, there is a rule of absolute contingency. This, in turn, does not mean any craziness regarding the non-determinism of all parameters that modern science takes into account. Instead, an understanding of chaos is at work in the sense that the present condition determines the future, but the proximate present does not approximately determine the future. The chaotic behaviour of parameters in non-linear systems should be characterised by the fluid flow of events and quantities' irreducibility, as in Poincaré's equations. We can find all this in philosophical terms not only in Deleuze but also in Gilbert Simondon, in Niklas Luhmann's cybernetic theories of systems in sociology and law, and in autopoietic models of events in which autonomous objects, initiated by artificial intelligence, function within the precisely realised plan of immanence. After all, my technosphere concept stems from the chaos, contingency, and emergence theory. If one wants to find a literary articulation of these ideas, the addressees are Thomas Pynchon's and Don DeLillo's novels. In addition to all that has been said, there is another term from physics: the second law of thermodynamics, which we call *entropy*².

Entropy in modern science theory includes two conceptions: Ludwig Boltzmann's and Claude Shannon's, which refer to statistical and informational entropy. According to the second law of thermodynamics, systems

¹ G. Deleuze, F. Guattari, *What Is Philosophy?*, Columbia University Press, New York 1994, p. 172.

² K.D. Bailey, *Social Entropy Theory*, SUNY Press, New York 1990.

tend to have maximum entropy as a balance in the probability of the system's sustainability disintegration. A sustainable system is in a state of order when all parts of the system relate to it as an autonomous unit to a higher order of energy and information regulation. *Entropy is, therefore, related to the concept of complex systems and is applied equally in physics, cybernetics, and social sciences. Boltzmann's understanding refers to the degree of probability by which order is brought to maximum entropy (chaos) by equalising the unavailability of energy and information within one system.* The measure used to achieve the exactness of the prediction of the maximum entropy of the system refers to the variables of the probability and improbability of events (physical and chemical) in the order of complexity of a state that goes from order to disorder. At the same time, statistical probability represents a measure that attempts to mathematically demonstrate the possibility of maximum entropy of the system within the framework of the physical data of a particular state. Information entropy represents an attempt to show the uncertainty of a system based on the production and distribution of information, which is necessary for the system to be effective. The Shannon-Weaver mathematical theory of communication, which enabled the computer age of information, presupposes precise information entropy in its foundations. *It is already clear from this that the concept of entropy does not refer to some «apocalyptic state» of the collapse of biological, physical, and social systems of complexity.*

On the contrary, with entropy, one tries to find a mental map for understanding the crossing of borders between two states of equilibrium-disequilibrium of the system where mass, energy, and information form the «essence» of the modern way of organising the technosphere. Mass society requires an order of high energy deliverability for survival. At the same time, information entropy represents its fundamental mode of communication, which is always on the verge of transitioning from one state to another. Therefore, the relationship between statistical and informational entropy is determined by the virtuality of actualising a chaotic order in which information itself assumes the properties of «mass» and «energy» in transforming social relations as technical relations between things. Global capitalism becomes a perfect model of total entropy in its state of maximum information-communication chaotic order.

Chaos and entropy are critical concepts for understanding our modernity. Instead of the necessity and pre-stabilised harmony of the cosmos and the world, on which classical and modern metaphysics still rest, everything «collapses», becomes «curved», and evaporates in «black holes», and from

everything, only *event horizons remain from an astrophysical point of view*. How is it possible that on these principles of complete fractalisation, the modern world of the rule of neurocognitive capitalism in the superintelligence of artificially created *homo kybernetes* sees its bright future without an essential human share in the form of capital as such? According to the great Italian thinker Emanuele Severino, and as I say in my five-volume work *Technosphere*, philosophers are inclined to return to Parmenides³. However, I do not consider a «great return to the beginning» a valid thinking alternative for the coming time. Severino claims that capitalism should be characterised by an outdated system of social relations concerning the boom of superintelligent technologies⁴. Of course, although it perfectly adapts to any new situation, including the rule of the principles of contingency, chaos, and entropy, what makes it obsolete in an idea is the essence of chaos theory. It is not about anything else but the possibility of collapse or the emergence of disorder, which begins what goes beyond the fundamental driving force of capitalism in general. It is about a dynamic procedure of desire as a thinking machine beyond any physical need. Like the current form of artificial intelligence, cognitive capitalism designates what absolute autopoiesis is not. Therefore, the will to Power must be included as a technopoietic desire to rule over Others outside the logic of primary, secondary, tertiary, and quaternary needs. When the system no longer needs anything from its environment, it is self-sufficient, like the Aristotelian God. It is no longer an immobile driver but a becoming or dynamic process of infinite techno-genesis of ideas as a polycentric information system. *Philosophically speaking, the synthesis of theoria, praxis, and poiesis is at work from the logic of what now makes them possible in the first place, and that can only be téchne.*

Why is ancient metaphysics, despite its realisation in the *technosphere*, still present as a regulative mechanism of thought in Kantian terms in circumstances where everything becomes chaotic and entropically placed in the nonlinearity of the world? Because *we require just a little order to protect us from chaos*. What else does it mean but a longing for human-too-human, animal-too-animal, plant-too-plant, or simply a longing for some form of rootedness and nativeness, for which Earth-earth is necessary, not heaven as an interplanetary space of wandering? We are, admittedly, beings of a wandering destiny, nomads and eccentrics, and this has been the fate of philosophy and art from mythic beginnings. But precisely because we are not

³ Ž. Paić, *Technosphere*, vols. I-V, Sandorf and Mizentrop, Zagreb 2018-2019.

⁴ E. Severino, *Capitalismo senza futuro*, BUR Rizzoli, Milano 2013.

angels or avatars, we need distance from the force and break of the ‘infinite speed’ with which everything goes into the abyss. We are losing what we need day by day, in the face of sceptical faith that there is still a possibility of overcoming metaphysics as a severe disease, that the antidote to this technologisation of thought exists in the mythopoetic vertigo of language, as in Fernando Pessoa’s poetry.

The Cartesian Being-God-World-Human model of thought included the axiomatic of certainty (*certitudo*). The new era begins as a scientific picture of the world based on the proof that what we call reality means the pure certainty of thought in coincidence with the reality of external objects. The dispositive of such an opinion is the *cogito* as the pure subjectivity of the subject. Starting from thinking as a thing that unites the mind and the materiality of nature, *res cogitans* and *res extensa*, René Descartes was able to arrive at a proposition that represents the condition for the possibility of the emergence, in tendency-latency, of absolute subjectivity, which would receive the name «absolute» with Hegel. It is, therefore, absolutely nothing divine but the result of the synthesis of substance or Being and subject or thought. But this synthesis comes from a pure mind, that is, from the essence of thinking as unconditional subjectivity. Being becomes thinking only from the axiomatic that reads *cogito ergo sum*. That is why Martin Heidegger, in his lectures and discussions from the end of the thirties of the 20th century, such as *Besinnung*, *Vom Ereignis*, and especially «Die Zeit des Weltbildes», advocated the position that the genesis of modern science denotes the emergence of modern technology that comes from the essence of metaphysics as nihilism⁵. This only means that the certainty of the opinion about Being-God-World-Human represents the result of the neutralisation and suspension of the Greek-scholastic image of the world, which, in its staticity and apology for the eternity of the universe, was based on the idea that being as such is *physis* and that the world and Human found in correlation with gods and God. *Metaphysical thinking from the beginning changes radically in the new age so that the cogito, the subject, and the absolute become a condition for the possibility of thinking «about» Being-God-World-Human*. What, then, should be a certainty other than the mental construction of the creation of a «new» world from a pure mind, but in such a way that between humans

⁵ M. Heidegger, *Besinnung*, GA, Bd. 66, V. Klostermann, Frankfurt am Main 1997; M. Heidegger, *Beiträge zur Philosophie (Vom Ereignis)*, BD 65, V. Klostermann, Frankfurt am Main 1989; M. Heidegger, *Die Zeit des Weltbildes*, in *Holzwege*, V. Klostermann, Frankfurt am Main 2003, pp. 75-113.

and nature in its objectivity, there is a necessary difference of «worlds», that of thinking, *res cogitans*, and that of bodily extension, *res extensa*?

The axiomatic power of the metaphysics of subjectivity is developed based on the scientific-technological structure of consciousness, and it begins with the concept of certainty, which needs to be mathematically and physically proven to be something that harbours no doubts regarding its ontological status. The proof can no longer be in God's hands but in human self-consciousness, articulating itself as the language of transcendental forms of thought and as a set of empirical facts. *What is certain comes from the self-certainty of thinking as a scientific-technological establishment of the world as a case. The language of modern metaphysics has already been mathematised by Descartes, Blaise Pascal, Baruch Spinoza, and Gottfried Wilhelm Leibniz, reaching its peak with Leibniz's idea of the infinity of the monad and the logic of sufficient reason in rationalism, with which the possibility of creating a thinking machine begins.* The reason for this lies in the calculating character of thinking as an analytical projection and construction of reality. The most significant saying of this constructive rationalism is Leibniz's *Cum Deus calculat etc cogitationem exercet, fit mundus!* What else should be a certainty than the management of the world as an a priori imposed set of Being, beings, and essence of humans that can be «programmed» at any moment only if he is also given what belongs to God as his determination? It is an intuitive knowledge that directly, suddenly, and instantaneously captures the essence of things without the mediation of evidence through mathematics and logic. Certainty, therefore, is already understood by Leibniz as a reestablished harmony of mind and body action with the help of rational and intuitive cognition. The first model determines philosophy as logic, mathematics, and physics, and the second belongs to art because it rests on the aesthetic power of imagination, without which rational cognition cannot be the unconditional power of absolute subjectivity. It is self-evident that the rationalism of the 18th century, when, after all, aesthetics as a philosophical doctrine of the beautiful and the sublime was born, is the most significant extension of the modern obsession with science and technology, what Michel Foucault called *mathesis universalis*⁶.

I single out all this synthetically to show how, as Hans Blumenberg would say, *the myth of modernity* was created from the idea of the progress of science as a rational knowledge of Being. So, logically, it is equally certain that only reason, as the mind's fundamental structure of the world, determines what is

⁶ M. Foucault, *The Order of Things: An Archeology of the Human*, Vintage, New York 1994.

certain and what is not. It is clear, therefore, that non-certainty as a negation of that *certitudo should be found only in the field of Cartesian res extensa* and not *res cogitans*⁷. Everything uncertain becomes chaotic and unordered, from Thomas Hobbes' horror of the «state of nature» to the revolutionary events in the realm of freedom and pure will as the essence of politics. Doubt that only thinking as logic and mathematics or the system of rationality of the modern world could have hidden within it something uncanny and rational and hence produce the structural uncertainty of the new world of fascinating reaches of contemporary technology such as automobiles, locomotives, hydropower plants, nuclear energy, etc. would only open entirely different perspectives of the so-called criticism of the Anthropocene after the Second World War. There is no doubt that Heidegger's thinking, which sees the unconditional progress of rationalism and technology in the 20th century as the greatest *danger* to the process of the destruction of Being, denotes a way for overcoming metaphysics as nihilism. *From the horizon of that constellation, uncertainty becomes a setup (Gestell) that is the essence of technology. It should only be understood as the origin of the abyss in the openness of modern metaphysics*⁸. Hence, this thinking with Cartesianism and Leibniz reaches the peak of *technodicy* and becomes the fundamental problem of the emergence of every possible risk, contingency, and chaos in the world as an apocalyptic event. Suppose the destiny and mission of the West genuinely emerge from metaphysics as a fundamental structure of thought that we inherited and continue to develop even in the age of the technosphere. In that case, even the end of technology in the idea of artificial intelligence means nothing «new» or unexpected but only corresponds to the path of technology.

The end of technology is predetermined and decisive from its very beginning because it corresponds to the decision about the supremacy of being over the primacy of Being. The end of technology does not simply mean no more further, but the opposite, because the end has already been decided for a long time and is always irrevocably and so on in its preliminary success⁹.

In the «ontological» sense, the danger (*Gefahr*) that Heidegger says cannot be something external, as such, is necessarily located in the essence of

⁷ H. Blumenberg, *The Legitimacy of the Modern Age*, MIT Press, Cambridge, MA-London 1985.

⁸ M Heidegger, *Die Frage nach der Technik*, in *Vorträge und Aufsätze*, Klett-Cotta, Stuttgart 1954, pp. 9-40.

⁹ M. Heidegger, *Leitgedanken zur Entstehung der Metaphysik, der neuzeitlichen Wissenschaft und der modernen Technik*, GA, Bd. 76, V. Klostermann, Frankfurt am Main 2009, p. 312.

nature as *physis* but is shown in the establishment of goals and plans for the transformation of nature into a modern system of information and energy delivery, such as the system networks of nuclear power plants or a communication system based on carbonised production and consumption that destroys a country's environment. *The danger denotes an apocalyptic event of risk, contingency, and chaos in the very essence of the rationalism of modern technology that drives progress in the core of science, not the other way around. If this is so, then the concepts of so-called cybernetic ontology after the 1960s and the introduction of the technosphere into everyday life as a triad of risk, contingency, and chaos so that the paradox is complete are no longer in the service of traditionally metaphysically understood uncertainty but a new order based on hybrid concepts such as Gilles Deleuze and Félix Guattari's chaosmos and Simondon's metastable equilibrium.* Heidegger's thinking about the event of openness as the «second beginning» of authentic history in the coming future can no longer be compared with a different logic of things that belong to the essence of the technosphere. Let us see what we have instead of «danger» and the openness of events [*Ereignis*]. We have a meta-theory of the uncertainty of events, which is based on the logic of cybernetics with the technosphere as an autopoietic way of unfolding reality in intervals of risk, contingency, and chaos¹⁰.

Risk comes from the Italian *risco*, *rischio* and the French *risque*, which means a kind of danger that can be predicted to a certain extent by determining its intensity. In addition, risk is the ultimate loss or damage caused by war, natural disasters, and poorly assessed investments in the capitalist economy. This understanding is mainly reduced to the «profane» functioning of modern society, for which the decision of a free individual on the market represents a model of action. The negative Cartesian concept of uncertainty cannot encompass the actuality of events, but the very logic of reality characterises reality in cognitive-theoretical insight. Certainty, therefore, is *certitudo* and refers to human judgement about Being as such, speaking in Heideggerian terms. This judgement generally cannot be wrong because truth is understood scholastically as the correspondence of opinion with things. It is certain, for example, that contemporary global capitalism becomes the result of the technoscientific construction of reality as a network of events that appear cybernetically in the fourfold of information-feedback-

¹⁰ Deleuze, Guattari, *op. cit.*; G. Simondon, *L'individuation à la lumière des notions de forme et d'information*, Jérôme Millon, Paris 2017; Ž. Paić, *Art and the Technosphere: The Platforms of Strings*, Cambridge Scholars Publishing, Newcastle upon Tyne 2022.

control-communication. *Nothing outside of this new trans-classical logic can be «efficient», «useful», or «pragmatic». Moreover, this certainty cannot exist by itself but represents a pure construction of events that rests on what we call probability in the theory of science.* The probability that something will happen just so assumes that the certainty of the occurrence of an event is not in the authority of God, nature, or man but in the authority of programming the course of events as a model of projection of reality in a specific shorter or longer period. The assessment of the risk of action corresponds to contemporary philosophical theories of probabilism, which have become scientifically binding and indelible in the media. Probability denotes the basic word for expecting the coming future as a risky event in the meteorological discourse of storm and hurricane forecasters; only after does so-called nice weather occur. The acclaimed sociological theory of Ulrich Beck's so-called risk society denotes, however, only one of several theories of negative probabilism, and it cannot «ontologically» deal with Deleuze's theory of the societies of control¹¹. Why? Control denotes the third key concept of cybernetics as a *causa efficiens*. It signifies the possibility of a dynamic-active way of ruling over society as an object¹². At the same time, the risk is only a consequence of what the cybernetic control system constantly produces. *Namely, non-human control produces risky consequences in society because it replaces human existential uncertainty with the rational order of risk, contingency, and chaos.* We used to be able to complain about lousy fate and curse God for such a fate. Nature took the place of the divine, and today, we have everything to blame for the system of new rules of this global planetary game of information capitalism; Deleuze says that anything should be rational except capitalism itself.

Contingency [contingentia] means the randomness of an event, then its uncertainty, the possibility of something being different than it is. In contemporary philosophy, especially in speculative materialism and post-modern pragmatism, Quentin Meillassoux and Richard Rorty, especially in logic, indicate the status of statements that are neither necessarily true nor necessarily false but depend on the context in which the statement about something appears. It seems evident that contingency cannot be a mere negation of necessity in the randomness of the event. A linguistic statement becomes true only from a specific situation, not a priori. For this reason, the term was used in the philosophy of pragmatism from William James to

¹¹ U. Beck, *Risk Society: Towards a New Modernity*, SAGE, London 1992.

¹² G. Deleuze, *Postscripts on the Societies of Control*, in «October» 59 (1992), pp. 3-7.

Hilary Putnam. However, it originates from late Wittgenstein and his theory of «language games» [*Sprachspiele*] as «forms of life». Language is not necessarily a universal signifier of thought but rather a contingent possibility of the occurrence of an event when it unexpectedly enters the horizon of thought as telling and perceiving and thus changes the order of the conceptual-categorical series. It is no coincidence that since the emergence of cybernetics, this term has also been expanded in the technosphere, politics, science, culture, and art. Everything suddenly became contingent precisely because the old metaphysical order with its ontological hierarchies of Being, beings and the essence of Human no longer works. Contingent means, therefore, the irreducible otherness of the event that one tries to think probabilistically, but in such a way that it is not appropriated and reduced to *object X*. Chance can no longer be the negation of necessity in the sense of Being-God-World-Human but rather the necessary contingency of the possibility that a third exists and that his logic is trans-classical like the technosphere. *Everything that can still be philosophically coherently said about contingency comes down to what is entirely different, unforeseeable and undetermined, uncertain and impossible from traditional, modern metaphysics from Descartes to Hegel. Let us be even more precise. Contingency means the opposite, not the negation, of necessity within Immanuel Kant's categories of modality so that neither possibility nor reality arises as a hierarchy of potentiality of thought but as that which gives a different meaning to the very possibility of the emergence of a new event starting from the absolute necessity of the Other in its autonomy and positivity.* What is the «function» of contingency in understanding cybernetic thinking? Nothing other than being the «essence» of an event that is not but happens in its contingency. Hence, a new event becomes contingent, not necessarily risky and chaotic¹³.

Chaos in Greek means emptiness, boundlessness, a state without order and predictability, formlessness, indeterminacy, lawlessness, and disharmony. Greek mythology is about the deity by whom light and day, Earth and the underworld, and love were created. However, the modern understanding of chaos is entirely different. Chaos theory enters many areas of mathematics and focuses on the so-called deterministic laws of dynamic systems. *The concept at the centre of this theory is not necessity but chance in the sense of the disruption of order as a deviation from the usual course of cause and effect. Chaotic complexity systems are based on interdependencies and the*

¹³ See J. Williams, *Gilles Deleuze's Philosophy of Time: A Critical Introduction and Guide*, Edinburgh University Press, Edinburgh 2011.

cybernetic notion of feedback loops, repetition, self-similarity, fractality, and self-organisation. Deterministic non-linear systems produce significant differences in the initial states of matter and energy, so it is an accurate metaphor when we say that when a butterfly flaps its wings in Brazil, suddenly, a tornado blows in Texas.

2. *Sed quid igitur fidem? Res cogitans. But still, what am I? A thing that thinks*¹⁴. Thing? Thinking? To think means to be present in thoughts as I. However, if artificial intelligence soon reaches this Cartesian position, we can freely say that apart from humans as a thing that thinks, there is also a thing that feels like what – human? If this is so by analogy with human thinking, then AI can have its subjectivity as a thing that thinks, or in other words, its I. *Self was a fundamental issue of modern philosophy. That Cartesian basis of thinking expresses itself in the language of thought and imagines the objects of its thinking in an image to the ultimate limit of thinkability, which we call absolute subjectivity.* At the same time, it is the key to understanding rationalism since Descartes was the thinker and mathematician, i.e. a scientist, who brought Aristotle's definition of human as *animal rationale* to the postulate of all Western metaphysics. This does not exclude that thinking takes place in the environment of the *cogito* that inhabits the human body and is endowed with animal desires, i.e. passions, and that between mind and body, there is what belongs exclusively to humans as a sphere of ethical mediation in society and community, which is always an expression of this hierarchically organised relationship between thinking, feeling and bodily automatism, that which belongs to the area of *res extensa*. This thing extends into infinity because it is about materiality, not spirituality. Finally, it follows from the Cartesian way of thinking that beings naturally absorbed by their instincts, i.e. animals, are necessarily automatons without a soul because their physicality within the given environment is the fundamental substance that determines the «meaning» of their existence and life. All the radical criticisms of modern Cartesianism as a contemporary metaphysics of subjectivity, paradigmatic among which are Heidegger's as well as Deleuze's, who therefore takes Spinoza and Leibniz and the thinking of immanence and «vitalistic materialism» as his true predecessors, still do not dispute something as a fundamental assumption for contemporary thinking.

¹⁴ R. Descartes, *Meditationes de prima philosophia*, Demetra, Zagreb 1993, p. 94; translated from Latin by Tomislav Ladan.

Humans are *res cogitans* as things that think, and thinking necessarily presupposes individuation. However, this does not mean that some form of trans-individuation, as Simondon would say, cannot be the «cause» of necessary unification and human contingency. The only question is whether thinking as such should be universal and non-personal, though not in the sense of the Freudian One or *Es*, nor in the sense of Heidegger's conception as the openness of events (*Besinnung – Ereignis*), nor in the mind of the poetic expression of Arthur Rimbaud: is it wrong to say I think because I am someone else, truly just a «collective matrix» or, ontologically speaking, the totality of this already coincidental individuation or something even more original than the summing up of what is collected in thinking as telling? Before the individuation of the *cogito*, was there some pre-reflexive environment of thought that did not act in the way of absolute subjectivity but was organised in a completely different way against this I or Self? If AI thinks analogously to human thought, then «it» can call itself I and name itself in the language of human communication, like Stanley Kubrick's HAL 9000. But that is just an extension of human subjectivity to – what? Artificial intelligence, symbolically speaking, becomes the artificial brain in different bodies as devices and technical devices. Human subjectivity is embodied in one body, which, if we remove Descartes' definition of an automaton, has its passions, experiences, and imaginations, which suffers and enjoys, is born and dies as a *res extensa*. Does the same apply to AI, or is artificial intelligence a trans-individuation that can be «implanted» in English as an embedment into many devices and technically exist in them as a robot-cyborg-android in a posthuman condition? My notion of the technosphere goes beyond Cartesian dualism. Still, I do not dispute that the question of the individuation of thought is the ontological-epistemological dividing line that separates the human way of thinking from the non-human in the sense of the post-biological existence of superintelligent computers that, in addition to mind, also have a soul, i.e. tend to possess an artificial intuition. Therefore, thinking cannot be reducible only to *animal rationale*. Instead, thinking presupposes It and I as bodily individuation in the existential performance of a one-time life, not in the immortal substance of living, as Heidegger would say in *Being and Time* with the German word *Jemeinigkeit*¹⁵. However, the difference between «me» and «my power» as human existence versus «it» and «it», the technically created individuation of thinking as

¹⁵ M. Heidegger, *Sein und Zeit*, GA, Bd.. 2, V. Klostermann, Frankfurt am Main 1977, pp. 153-173.

the calculation-planning-construction of a robot-cyborg-android, is that the «power» lies in the vulnerability and cunning of itself. Bodies appear on the horizon of thought, not through the projections of the world. What should be unique to human thinking cannot be a program but a vision¹⁶.

With that in mind, what do we «see»? That there is no collective human mind, no Jungian collective unconscious, no quasi-mystical monolith from the pre-Stonehenge or Altamira era, which visionarily programmed us without, of course, being aware of it, so that we would be thought beings in our bodily-enactive subjectivity, as they would say in the language of neurophilosophy today. *No, instead of the trace of the divine Great Primordial, we have the mystery of individuation, which, in its pre- and post-state, presupposes the natural-and-technical as a synthesis of the creation of a thing that thinks, but that thing is not a thing in the sense of the creation of some stone or hardened lava, but a thing as the essence of thinking, which, in turn, is nowhere outside of thinking, but only happens when a person is a conscious being who thinks by being aware of himself, of his authentic Jemeinigkeit in one way or another at every moment – and let's be absolutely clear, that authenticity does not come from anything else, from any borderline situation of war or peace in society and politics, but only from the opinion of what is, what was, and what will be, the Self as the Self and the Self as the One that even in the posthuman condition of transindividuation is nothing but an issue about the meaning of the existential event that a thinking being with the will and desire to live leads from the beginning to the end or in the tendency to the infinity of what we call time.*

To conclude, individuation cannot be just the process of creating a fundamental and indivisible Self as an absolute subjectivity of thought. This is how one can think factually and contingently in «one's» body, be it living or artificial, Christlike or technological, imbued with the mysticism of suffering on the cross or the joy of life as an all-powerful Nietzschean affirmation of the will to power as an eternal recurrence of equality. Trans-individualised lies in the collective mind of something uncanny and inhuman. The problem lies in thinking as telling and visualising. Philosophy and art are mythopoetic sources of human thinking, while sciences are not; they are the technology of pure construction of the world as a realm of objects that think technogenetically. Philosophers and artists can be, and most often are, crazy and eccentric, outside the community and the mind of «common sense», solitary

¹⁶ Ž. Paić, *Brain as a Vision and Program*, May 3, 2023, <https://zarkopaic.net/blog-post/brain-as-a-vision-and-program/>.

like Friedrich Nietzsche's «rare plant» or the nomad in Friedrich Hölderlin's parables about the poets in *Bread and Wine* who, like eternal wanderers, follow their stars «in the holy night». Scientists are never like that because they are driven by the so-called objective truths of their research «frenzy». Thinking becomes an event of individualised confrontation and struggle with chaos. And Deleuze is right when he claimed that

The philosopher, the scientist, and the artist seem to return from the land of the dead. What the philosopher brings back from the chaos are variations that are still infinite but that have become inseparable on the absolute surfaces or in the absolute volumes that lay out a secant [sécant] plane of immanence: these are not associations of distinct ideas, but reconnections through a zone of indistinction in a concept. The scientist brings back from the chaos variables that have become independent by slowing down, that is to say, by the elimination of whatever other variabilities are liable to interfere so that the variables that are retained enter into determinable relations in a function: they are no longer links of properties in things, but finite coordinates on a secant plane of reference that go from local probabilities to a global cosmology. The artist brings back from the chaos varieties that no longer constitute a reproduction of the sensory in the organ but set up a being of the sensory, a being of sensation, on an anorganic plane of composition that is able to restore the infinite. The struggle with chaos that Cézanne and Klee have shown in action in painting, at the heart of painting, is found in another way in science and philosophy: it is always a matter of defeating chaos by a secant plane that crosses it¹⁷.

Humans, as the governor of chaos on Earth, go to the sky as a figure of the historically created mystery of the creation of the One who is not a thing that thinks but a thing that makes new from itself and through the process of *autopoiesis* as techno-symbiogenesis, which means that both insects and wasps, ticks and flies think, but entirely *differently* than humans. Wittgenstein made the most enigmatic statement about this in modern philosophy in general:

If a lion could speak, we could not understand him¹⁸.

¹⁷ Deleuze, Guattari, *op. cit.*, p. 173.

¹⁸ L. Wittgenstein, *Philosophical Investigations*, 2nd ed., Basil Blackwell, London 1958, p. 223.

3. By analogy with Aristotle's concept of cause-purpose, cybernetics always acts in such a way that its «essence» exists in digital constructivism, which means that information creates a feedback loop. This effectiveness of system control reversibly produces interactive visual communication in the surrounding world of autopoietic states and not beings. *The cybernetic «fourfold» becomes a techno-poietic one, and the metaphysical one set by Aristotle is necessarily organological, which means that creation is always linked to the model of human-as-artisan.* This model determines the concept of art throughout the entire history of metaphysics, and it is interesting that both Heidegger and Deleuze took it over and transformed it in their own way. Hence, the primordial fourfold of Being-God-World-Man establishes the rule of thought as mimesis and representation of what already exists in the idea of the divine cause of all action – Aristotle's immovable mover. Cybernetics denotes the construction of what does not exist but is the techno-poietic creation of artificial reality. Artificial intelligence represents only a continuation of the cybernetic foursome for its model of autopoietic thinking-action; it can no longer be an artist-as-craftsman in all its transformations up to Deleuze's model of meta-film as a montage of living and non-living assemblies. The model for cybernetic creativity becomes inhuman, the black monolith from Kubrick's *2001: A Space Odyssey*, pure techno-genetic thinking that neutralises and suspends both the first and second metaphysical fourth, and the Being-God-World-Human and the formal, material, practical, and final cause. The fourfold of information-feedback-control-communication no longer has anything to do with metaphysics, although the technosphere is realised by analogy. But the problem is that the technosphere, and here is my essential difference with Deleuze, cannot be any form of «immanent transcendence» other than in the order of chaos and contingency that transcends the boundaries of ontology and cybernetics in general because it synthesises mind and intuition in a thought that is no longer divine or human, only thinking as an event of absolute creativity of *homo kybernetes* as a necessary stop on the way to the singularity of everything thinkable and possible as such. *Singularity no longer needs any fourfold because the essence of metaphysics, cybernetics, and transhumanism has been realised*¹⁹.

In the tradition of metaphysics, the word-concept «Other» refers to the existence of the world beyond the limits of empirical knowledge. The second world is the one that refers in Christian theology to the kingdom of God

¹⁹ See Ž. Paić, *War, Technosphere, and the Question of Evil*, in «Teoria» 43 (2023) n. 2, pp. 27-48.

beyond this world of materiality and the obsession of real Being and eternity and bliss belong to it. Therefore, God defines himself legitimately as the «Big Other» because he rules over this world, starting with the irreducibility of transcendence. To be over and beyond means to be concerning transcendence and metaphysics. Therefore, nothing in this world, from Plato through scholasticism to modern philosophies of spirit, happens autonomously because human existence represents the most significant reach of the freedom of this being whose essence is determined by his spirituality with its origin in that which resembles the divine, but not as a simulacrum of God. Instead, we can realise the five transcendentals as conditions for the possibility of all reality in general: *Unum*, *Bonum*, *Verum*, *Ens*, and *Pulchrum*. Both Platonism and Aristotelianism, as *Idea* and *Energeia*, are fundamental words for the meaning of Being, and they assume that the world was created by an act of divine will or the act of creation. Still, only the Thomism of scholasticism will equate God with the thought-concept-act of creative activity, which, in principle, corresponds to what humans have through the experience of all five senses. More transcendental are the ideas and forms in which the possibility of creating the human world in its perfection appears. *The five transcendentals encompass the five spiritual senses by which what arises from God's substance is realised here. The «Big Other» must necessarily be outside and beyond this world, and that other and different cannot be related to the characteristics of beings but rather Being as preceded by God.* In scholastic logic, as is known, which continues with Aristotelian logic, the term *tertium non datur* or «the third does not exist» indicates that it is not possible for a being to exist both here and there at the same time and that the truth of Being appears only in judgement in the sense of matching opinions and things themselves such that only one statement can be confirmed, the other being untrue or false. *The fundamental logic of metaphysics is either/or logic.*

But from Plato to Georg W.F. Hegel, Karl Marx, Sigmund Freud, Jacques Lacan, and cybernetics, we encounter something self-evidently uncanny: *Unheimlich*. Plato established the triad or trinity of theory, practice, and production. The latter is established as *poiesis* and signifies the production of beings from Being. Based on this assumption, Christian theology determines God as one who creates from nothing (*creatio ex nihilo*). *Poiesis* denotes a creation, work, and production by which man shapes his world as a work of necessity and freedom because production in the active and non-active sense, for example, poetry and sculpture, is something «innate» to him that determines his essence. Of course, production ranks third after theory and practice. Hegel's absolute is third in the highest rank and has the

characteristics of totality in historical-dialectical progress and development.

Thus, philosophy denotes a condition for the possibility of creating absolute science and is above art and religion. The «Big Third» appears for Hegel as the essence of absolute metaphysics and as the end of history in the sense of termination-overcoming [*Aufhebung*] the previous two stages of historical development: nature and society, subjective and objective spirit. Only at the third stage does the meaning of philosophy as metaphysics become severe, and history has the character of a theodicy of the world spirit that knows itself as the truth of the entire process of events from beginning to end. Marx, on the other hand, gets the «Big Third» through the so-called triple pattern of the rule of capitalism from the first stage of goods through money to capital or the pure idea of the actual process of the development of world history, which even prevails in what Vanja Sutlić calls the practice of work as scientific history, and that is nothing more than communism as the highest form of the meaningfulness of history in general²⁰. Man, both in Hegel and in Marx, is a free individual who exists only in synthesising the «Big Third» and history as the conception of the idea's movement through the necessary characteristics of its appearance. *Communism denotes the «immanent transcendence» of the historical absolute in which man exists. Still, communism is not the goal of history but its end in the metaphysical sense of the word.* Freud talks about the subject's consciousness stage through the stages of *Id*, *Ego*, and *Superego*. Of course, the fundamental problem of psychoanalysis is the «Big Third», which commands and oppresses, liberates and oppresses, becomes an insurmountable obstacle for the free development of a person, or has the value of faith and hope in a future society of happiness, well-being, and all-round personal development. Lacan «deconstructs» this same scheme, so we have the imaginary, the symbolic, and the real, which is traumatic because it is a split between the first and the second and exists only as a desire to reach a sublime object. The «Big Third» within metaphysics is, therefore, the initiator of history, its goal in the sense of the synthesis of substance and subject, a moment that is found in the actuality of the «here» and «now» and not in the mythical past or the indefinite future.

To be third means to be that which transcends human existence in terms of form, but it is found in it in terms of content and determines the limits of its activity. Since humans do not have their own eternal and permanent «essence», the «Big Third» is always metaphysically thought of as Kantian regulative action in the sense of human historical perfection, self-conscious-

²⁰ V. Sutlić, *The Practice of Work as Scientific History*, Kulturni radnik, Zagreb 1974.

ness, self-organisation, and self-rule until the transition to a state where the character of the human-too-human no longer exists is complete. *God, history, the absolute, work, and what goes beyond the limits of metaphysics and appears in the trans-classical logic of the technosphere, i.e. the virtual actualisation of becoming, are simultaneously the transcendence and immanence of life itself, which, for Aristotle, was already synonymous with Being. However, the difference is that the technosphere, as the third order of cybernetics, signifies the rule of autopoiesis, which thinks and no longer goes through the stages or historical platforms of what belonged to the past. Still, its development indicates the irreversible hyperplasticity of artificial life in the eternal present (nunc stans).* From now on, we can only conditionally talk about the first, second, and third terms within the speculative and reflective triad because the idea of history as eschatology and soteriology, as theodicy and messianism in all imaginable versions from Karl Marx and Walter Benjamin to Emmanuel Lévinas and Jacques Derrida is no longer valid for the technosphere. We no longer value the «third» from dialectical logic as the highest in the rank of things. No, all that lies behind us belongs to the musealised past of thought.

The paradigm has three correlative meanings for understanding the technosphere. All three are at the same level of conceptual-categorical redundancy and are almost tautological. The reason for this is that the technosphere no longer has the metaphysical meaning of Aristotle's logic as an *episteme téchne*, but in the middle is an autopoietic construction of an artificial reality that does not exist in the so-called first or actual reality. When Simondon, the most crucial philosopher of cybernetics, explained that the concept of information cannot be by analogy the same as Aristotle's form in the sense of *eidos* and *morphé*, it was a reversal in the essence of metaphysics. The reason was that with the emergence of the thinking machine or computer, the model or matrix of the entirety of Western philosophy as an ontology changed. «Paradigm» should, therefore, be freed from its metaphysical meaning in Greek, even though the term is historically Greek, like almost all others that we still use in philosophy and science today, albeit with changed meanings after the Latin language dominated Western civilisation in the era of Rome and Christian scholasticism. Hence, these three meanings of the paradigm belong to an area that is no longer bounded by the relationship between philosophy, science, and art in the thinking of Being, traditionally speaking, but is open-closed in the «black box» of cybernetics, which, in Hegelian terms, presupposes the thinking of a thought. The paradigm, therefore, must be understood as (1) the transversal thinking of

the technosphere as a contingent event of the creation of a new artificial life; (2) a matrix or a cognitive-theoretical-pragmatic-production framework in which thinking is articulated throughout history as linguistic, the visual and numerical code thus becoming a universal tool for creating and retrieving reality in thoughts; and (3) a conceptual-categorical system of thinking is shown as a fundamental structure, such as idea in Plato, energy in Aristotle, the spirit in Hegel, work in Marx, event in Heidegger and Deleuze, theory of relativity in Einstein, theory of black holes in Hawking, and technological singularity in posthumanist Kurzweil²¹.

The thinking of the technosphere is neither a thought «about» something nor an opinion «on» something but paradigmatic thinking in the form of a cybernetic circle of circles by which artificial intelligence constructs an artificial life from a trans-classical logic that combines the fourfold information-feedback-control-communication into a «transversal order» of meaning. «Transversal» in Latin denotes a transverse direction intersecting two other directions. In a figurative sense, we can talk about a crossroads that shortens the way from one place to another. Wavy motion in cosmology takes the transversal as a paradigmatic form in which thought appears through the above three meanings. That is why «paradigm» represents a term used in philosophy or the theory of science and refers to a reversal from the previous paradigm in understanding the universe's origin and essence concerning the relationship of matter, energy, and information. For example, the difference between Ptolemy and Copernicus is that they designated the best example of the emergence and operation of a paradigm in thinking as a universal communication system between actors in the human world. The same applies to the difference between Isaac Newton and Albert Einstein. However, the technosphere cannot be only about unconditional progress in understanding the scientific picture of the world; rather, it is also – and primarily – about an open-closed order of thought figures that are not a mirror of reality but conceptual holograms that are interconnected with other such tools of thought. Paradigm denotes a fundamental structure by which we think of matrices in a historical-epochal sense, such as Platonism and Aristotelianism in the Renaissance or Nietzscheanism and Heideggerianism in postmodern or 21st-century philosophy. It is the power of designing disorder and cuts in the historical development of thought rather than order, so the paradox is complete. Why? *Because the paradigm of the technosphere should*

²¹ Ž. Paić, *Superfluity of the Human: Reflection on the Posthuman Condition*, Schwabe Verlag, Basel 2023.

be labelled as thinking in a transversal journey through emergent events in chaos and contingency. This journey becomes a post-metaphysical wandering without a first cause or a final purpose. What else does wandering mean besides an event of an entirely different matrix or paradigm of thought in the contemporary world?

Abstract

Chaos and entropy are critical concepts for understanding our contemporaneity. Instead of the necessity and pre-stabilised harmony of the cosmos and the world, on which classical and modern metaphysics still rest, everything «collapses», becomes «curved», and evaporates in «black holes»; only event horizons remain from an astrophysical point of view.

The assessment of the risk of action corresponds to contemporary philosophical theories of probabilism, which have become scientifically binding and indelible in the media. Probability became the basic word for the expectation of the coming future as a risky event in the meteorological discourse of storm and hurricane forecasters, only after which does so-called nice weather follow.

In this article, the author tries to articulate the fundamental assumption that the technosphere as autopoiesis becomes, at the same time, a matrix of new action in the system and environment of human-non-human communication and a model for the possible management of chaos, contingency, and technological singularity as the main concepts of contemporaneity.

Keywords: uncertainty; risk; chaos; contingency; technosphere; technological singularity.

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