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The Advent of Technology

The comprehensive work *Tehnosfera* (*The Technosphere*) by the Croatian philosopher Žarko Paić that is scheduled to be released this year in its full five-volume format—from which the first two were already published in 2018—represents the height of a philosophical endeavor in the broadest field of our contemporary everyday life undertaken by Paić intensively and extensively throughout the last decade or so. It boils down to—as the title suggests—the complex notion of the technosphere, which we would like to discuss here in the context of the first two volumes of the oeuvre which deal with anthropology and cybernetics respectively. This is not, however, the first time that Paić deals

with the technosphere. As mentioned, in the course of the last ten or so years he consistently works on testing the possible applications of this concept to the field of political philosophy, contemporary art, visual studies, and digital aesthetics, just to name a few. With many international projects up ahead, the co-edited volume with Krešimir Purgar *Theorizing images* under the Cambridge Scholars Publishing exemplifies this with the article "Technosphere—A New Digital Aesthetics?" while there are also numerous entries in scientific journals by Paić, which testify to the rigidity of his task of thinking.¹

In Tehnosfera I. Žrtvovanje i dosada. Životinja - čovjek - stroj (The Technosphere I: Sacrifice and Boredom. Animal—Man—Machine) Paić dispenses with the straightforward introductory study of his main concept. There are two reasons for taking a deliberate in medias res approach. Namely, the concept of the technosphere itself is not a new invention, but a stage in the progressive autonomization of technology in our contemporaneity. As summed up earlier, it is also not a new concept in the thought of Žarko Paić, but rather a concept that should be taken intuitively as the radical summation of all our knowledge of technology and science to keep in mind while beginning to study through the first volume of the book. The technosphere is to be considered as the intensity of contemporary technology. By taking technology as a progression, we are not far from the truth in saying that every contemporary phenomenon can be considered as technology in its own sense (Paić 2018, I, 379). Most notably, paraphrasing Heidegger in the closure of the first volume, Paić states that "the essence of science is nothing scientific. It lies in the technical character of the way by which sciences relate to the world in emergence. To describe this 'way' means to walk in the articulation of the language of the technosphere." (Paić 2018, I, 421). And as this volume deals with the human, its relations through repetition and difference, or through the subtitled triad of animal man-machine, as well as through the notions of sacrifice and boredom, we are invited into a philosophical discussion of anthropology taken as the theme of contemporary culture as well as new techno-science, cybernetics, and

¹ Cf. Žarko Paić: "Technosphere—A New Digital Aesthetics? The Body as Event, Interactivity and Visualization of Ideas." In *Theorizing Images*, ed. by Žarko Paić and Krešimir Purgar, 121–143. Newcastle upon Tyne: Cambridge Scholars Publishing, 2016.

communication theory. Namely, the radical question Paić that poses with this book could be to discuss in which way can we preserve the notion of humanity when metaphysics, upon which it is grounded, becomes inept to conceive of a world made on the image of autonomous and hybrid technology of selfproduction of artificial life and artificial horizon of experience in general. The technosphere here means not only the intensity of technology, but the overall possibility of overwriting the notion of life, being, time, essence, etc., to its own informative agenda. This radical notion of the "immanent transcendence" of life in Paić stems from Heidegger and Deleuze respectively and indicates in its own right not just a radical impossibility of life as nature, nurture, artifice, or artificiality. Immanent transcendence is a synthetic principle of the technosphere. As the reader carefully strolls through the introduction and the first set of essays in *Tehnosfera I*, this is more than evident. It is a constructive planning and calculating of life itself (Paić 2018, I, 30). In the chapter on Hans Jonas and the conditions of possibility for ethics as applied humanity in the age of technology's reign Paić recapitulates and provokes the Heideggerian Gestell: "Technology as the gage no longer exposes nature as essence (or being). It enframes nature in the state of being-at-disposal (or to be essentially relative) to drive the accumulation of knowledge, information, and energy for the global profit economy." (Paić 2018, I, 277)

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The notion of the technosphere bears great importance in our contemporary technology-laden society as it reworks and substantially reconceptualizes the notion of technology itself. This is also why Paić makes it a task of his own thinking to find possible ways of giving life to the notion of the technosphere through numerous contemporary philosophies, rediscovering technology as the true aesthetical overcoming of all contemporary issues, problems, and contradictions that lie in the notion of human, human life, being, and its metaphysical groundings. Life, intelligence, and biology give way to artificiality, virtual horizons, and neural networks capable not only of designing new life according to its own image, but more radically (re)designing the "lived" life to a world-image of pure hyperreal experiences. This is the technosphere, "the 'immanent transcendence' of life that is no longer anything natural or artificial but is techno-genetically created as an autopoietic system." (Paić 2018, I, 11) The first chapter of the book, "Creation without a Plan? From Creature to Thing,"

opens up the space for the thinking of autonomous technological objects and phenomena as the new stage in our conceptualization of technology that requires a completely new way of thinking, that is to say, we are in a historic situation where our standardized notions of human, technology, science, nature, society, etc., are becoming radically inept to deal with the world built on the foundations of information science and technology of exchange-governance over data.

There is certainly no space for us to discuss the totality of the two volumes published in 2018 as they contain about twenty dense discussions spanning over more that thousand pages. What we can do, is debate the main precursors of these discussions as the conditions of possibility to even comprehend the importance of the volumes that are still ahead waiting to be published. The two presented books contain discussions and dialogues with authors, whom Paić has held in high regard throughout his philosophical life. Namely, Martin Heidegger as the pivotal point from where technology departs into contemporary warfare of information and techno-genetic science and gives consequential meaning of important distinction in Paić through triad of technics-technology-the technosphere (Paić 2018, I, 257). On the other hand there is also Franz Kafka as the prodigal writer of the age of the world picture which transfers—through the well-known text by Deleuze and Guattari on "the minor literature"—to the discourse on the technosphere or the world overrun by autonomous machinery in which human experience is one of paradoxical rationality of abundant everyday chaos, but Fernando Pessoa also, whose radical wish "I want to be a machine" remains a big motive in discussions undertaken by Paić. The mentioned technological triad presents a non-dialectic progression, but a synthetic state of cybernetic control in which we are presented with a world no longer bound by the metaphysical grounding of nominal differentiation of nature, culture, man, technology (Paić 2018, I, 8), but a world of technological states, in which man acts as an agent in the metastabile state of being—human—animal—machine (Paić 2018, I, 72). What Paić undertakes here, is the overcoming of the problem Heidegger posed at the end of philosophy and the advent of cybernetics as the new metaphysics. Namely, to answer the question of what is thinking in the age of speed, synthetic and hybrid beings is to say that we are overrun with communication, or even more

ominous, we are overwritten by it in "the total acceleration of 'the world' and the transformation of thinking to the framework of computing, planning, and construction." (Paić 2018, I, 9)

It is also important to note that the studies presented in the book interpolate specific vocabulary that is usually found in the information-communication sciences as well as in techno-scientific discourse of contemporary science. From artificiality, complexity, entropy, to metastability and feedback control, there surely are more than a few terms that deserve their own discussion or an engaged critical reader willing to combat his or her ordinary understanding of the capacity of certain notions. There are nine studies arranged into three chapters, each bearing its own conclusions that come together with preferred multiple rereading of the introductory remarks by Paić. This will be even more important in the second volume. Paić sets up to reconstruct the contemporary philosophical discussion with a hybrid language of post-modern philosophy and what we could have called—up to the most recent time—the minor philosophies of authors like Gilbert Simondon, Gotthard Gunther, and in our tradition often overlooked Albert Whitehead. The point is not just to try and preserve the notion of humanity fallen in between metaphysics and cybernetics of contemporary worldview, but to consider new outcomes of traditional philosophical problems in a contemporary setting.

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In the second chapter of the book Paić deals exactly with the above discussed "technical" creation of man, or what we could call the emergence of "technical humanity" in the common sense of the word "technical" or "technicality." It takes the largest portion of the book so we should consider giving it more space for discussion here. Paić begins with another Heideggerian question that pushes the discussion of the technosphere into the political-ethical debate on the grounding of freedom, which in this respect again takes on the notion of thought and its relationship to the essence of that which is human and animal "in the identity and difference over the essence of life itself" (Paić 2018, I, 182). If thinking is embedded in the human as a condition of possibility of metaphysical questions in general, then the epochal coming-of-age of metaphysics in cybernetics as its realization means that thinking radically transforms into computing (Paić 2018, I, 185). Why is that? "Cybernetics itself is neither philosophy nor science in the sense of theory on that which is real

and what is essence. Its role is to create the possibility of relationship between the system and environment from techno-genetic logic of formation of that which neither 'is' nor it is 'nothing." (Paić 2018, I, 185) Dense discussion of Heidegger's notion of the world-environment differentiation as well as the mananimal distinction (Paić 2018, I, 202-3), cannot find its resolution without the question of what kind of space are we pushed into with the emergence of what Heidegger calls the "global" world state or a state of "planetary technology." And that is why common anthropology cannot give an answer to the essence of the human being as this answer lies in the vast space of fringe-humanity, the techno-science, and new artificial beings that exercise radically different and yet very familiar freedoms, lives, and even cultures. This brings about the crucial importance of two essays by Heidegger which we should keep in mind throughout Tehnosfera I, "The Age of the World Picture" and "The Question Concerning Technology." Discussing Sloterdijk's essay on The Rules for the Human Park, an important question remains in the title: "How to Think an Animal?" (Paić 2018, I, 215) which will bring us to the problem can technoscience with its synthetic and hybrid life formation and autonomization think the difference between human and animal? If metaphysics is embedded in the human, then humanism certainly remains metaphysical, and it is only from there that we can pose the question on the being of an animal. "We can no longer think the animal any more differently but cybernetically." (Paić 2018, I, 242) This chapter, as well as the following, are sound in their logic of deliberating on what sense our conceptions of life, human, world (as the totality of nature and history, as the dwelling of being) have when contested with the questions that spring out of new technology as well as with new relations it proposes and spaces it constructs. Nothing is comparable and everything is connected, nothing is genuine and everything replaceable in the planetary, global state of world technology. What makes the essence of technology is—as Heidegger noted—nothing technical, but it is a framework, the *enframing* (*Gestell*), which exercises power over human, nature, animal, being, and freedom by supplying them with states and depriving them of their difference in support of the total-life-project of contemporary technosphere (Paić 2018, I, 220-4). Once "framed" with technology, the most important questions become questions of the ontological difference from the framework of the decentered human,

namely, the human decentered by technology. This is also the way in which Paić recuperates Heidegger from contemporary critics and debates that label him an "anthropological dogmatic" (Paić 2018, I, 224-33). Heidegger's thought is analogic, and by postulating the question of the animal, we are in essence questioning the human, nevertheless, in the broad sense of the relationship of modes of "being as life" and its relation to "being as such" (Paić 2018, I, 224): "[...] when philosophy itself at its end transforms into cybernetics [...] we encounter the question of a different mode of thought from which by necessity must emerge a different understanding of the human as well as the animal. All this leads through the lack of homeland in 'life' itself." (Paić 2018, I, 235) It is in this way that the question of how to and from where to think the difference between the human, animal, natural, original, and artificial constantly reemerges as one of the main motifs for analysis in Tehnosfera I (Paić 2018, I, 140; 307; 373). The discussion of Heidegger continues throughout, and most notably in the second volume's central chapter on cybernetics and nihilism (Paić 2018, II, 221–275).

The triad of computing, planning, and construction that comprises the transformation of thought in the age of the technosphere leads us to the question of creation, creative acting upon the world that is replaced with technical creation of life itself. If anything is to rise out of profound boredom, a work of art or speculative thought, with the mentioned advent of new technology we see our world immersed in a much broader and widespread, but shallow boredom which can only bring about the by now evident radicalization of culture and politics, but also, and maybe, even new means of "doing" life. The main premises of Heidegger and also Paić today have the uncanny character of obvious facts, analogies that are taken in the discussion throughout the book. Namely, the character of "planetary technology" is what is brought about with gadgetry of contemporary communication and information science. When Heidegger says that modern man is a slave of the oblivion of being and when Paić talks about the installation of the world as the construction of the world-picture we are certainly talking about a world, in which technology is as hidden as being (Paić 2018, I, 237-9), but with the uncanny character of their empty presence through screens, applications, services, and interactive communication. Contemporary

technology is the realization of Western metaphysics in the sense of this oblivion. In the form of cybernetics, it is the pure realized governance over all environments and systems, the "control of life processes" or the coming of technical life, the artificial life, and its intelligence. "They all became the actualization of the virtual from the logic of the technosphere." (Paić 2018, I, 242) It remains equally evident that new synthetic and hybrid life forms will have an important impact on the contemporary understanding of ethics and human action in the world. The less we know, the better—can be the modus operandi for a sustainable life in the technosphere, and this is, namely, because it requires, if we are to understand new technology, its processes, and to act upon it, a loop of constant immersion into the control process of technology itself. This is the threat of the technological frame (Paić 2018, I, 285), because artificial life and its phenomena are a radically new step in the contemporary techno-science for they defeat the dominant Western notion of causal, effective, and purposeful use of technology (Paić 2018, I, 253). It is not just that artificial things are made, but that they defeat our relationship with technology through its increasing autonomization. While technology used to be dependent on the human—regardless of whether the human was used, or was it the user in the process—, the contemporary techno-science proves itself independent and regulatory for the processes in science, technology, and culture. Moreover, technology can be said to have its own culture, through its internal and external design, its intelligence, speed, automatization that is no longer observable to the conventional user.

The book with its critical depth is an impressive collected set of distinctive studies regarding technology through the critical dialogue with all relevant contemporary philosophical sources, on the count of which *Tehnosfera* will become and remain a fundamental sourcebook for radical reconceptualization of our history embedded in the philosophical task of thinking from Heidegger onwards. By this, we mean that Paić utilizes Heidegger in a profoundly new manner exactly to bring about a renewed understanding of technology outside of the clutches of metaphysics and teleology, in such way that the remarks Heidegger made could even become, so to speak, the grounding for a post-metaphysical operation of the world as technical image of being. Privileging philosophical criticism over speculative confrontation, *Tehnosfera I* and *II*

remain highly instructive in-depth analyses of how we are to understand the extensive techno-scientific operation of our everyday life where understanding of the contemporary world depends on our ability to operate with hybrid terms and theory in what we could—anticipating the coming volumes of *Tehnosfera* call techno-poiesis and techno-aesthetics. The concluding chapter of the first volume deals with Deleuze. Much as its theme is important, the conceptual progression from Heidegger to Deleuze is also a point to keep in mind as it comes as a particular novelty in the discussions of contemporary philosophy. The theme, however, concerns, especially in the concluding chapter of the book "From Chaos to Brain," the "philosophical hybridization" proposed by Deleuze and Guattari in What is philosophy? Other than being just a mere reconceptualization of the notions of chaos and brain per se, the text brings us closer to a philosophical understanding of speed, entropy, complexity, and intuition. For Deleuze, chaos is closely connected to speed and transformation which are embedded in his notion of virtuality against actuality. Equally important is that Paić rightfully recognizes Baudrillard in this discussion as the source of the utmost important description of the hyperrational chaos within his own terminology, simulacrum, and simulation. With just a list of dealt-with concepts we can see that the conclusion of this volume opens up a space for something even more uncanny: the emergence of artificial intuition. The network (namely, the paradigm of the Internet) encapsulates speed, chaos of accelerated virtuality that is the substance of the "livelihood" of the artificial phenomena. It synthesizes, or naturalizes, the concept of space-time, something outside of our own cognitive capacities, and that is why Paić will conclude that—outside of the ordinary language and rationality—artificial phenomena represent the "irreducibility of the thought of the technosphere" (Paić 2018, I, 424). Such is the thought freed from "the chains" of "nature" and "life," and the one which affirms the hybrid connection of mind and intuition in their artificial form of blackboxing and speculative design. On the other side, the threat of artificiality is not just "real," but conceptual also, because there are very subtle ways of differentiating the simulation and the "real," e.g., thought, intuition, intelligence. The artificial intuition hypothesis as "the constructive life of simulation" is the step beyond mere cybernetic aesthesis. It is the operation of multiple mediated realities that—as mentioned above—

overwrites and codes the human (and animal) in the technical sense of life and culture as autopoietic system, mediated environment of what we could call the ecology of the technosphere. Or: it could also be said that in Paić's conclusion of the first volume artificial intuition poses the final remark on the possibility of "thinking, action, and creation" from the "spirit" of the technosphere.

This is an important note to be made already when confronted with the title of the second volume of the work on the technosphere Tehnosfera II. "Crna kutija" metafizike: Kibernetika i apsolutno vrijeme stroja (The Technosphere II. The "Black Box" of Metaphysics: Cybernetics and the Absolute Time of the Machine). The notion of the black-box design and research indicates a stimulus-response relation and understanding of objects and processes in nature, science, and culture that comes about with the advent of binary inputoutput technology and communication theory. What remains hidden is often recreated using the primary method of science of the new age as Heidegger would suggest-experiment-, but more importantly here, by the usage of calculation, planning, and constructions in developing something we can only call by the dubious name of "original artificiality." This is also why the analyses undertaken in the second volume of *Tehnosfera* act as the necessary explanation of premises posited in the first volume regarding our own relationship with technology, and the way technology "operates" and "frames" the world to its own image. "What are we talking about when we talk of the essence of technology? Namely, about that there exists something in its being which comes into-the-world and makes it at the same time new and constructed, artificial and non-living [...] Technology is the total mobilization of enframing as computation, planning, and construction in the planetary age of the world. Strictly speaking, enframing of the world can only be the construction or the creation of the world as an image [...]." (Paić 2018, I, 236–7)

In the second volume, Paić begins with the philosophical discussion of the theory of relativity and its implication for metaphysics questioning the immanence of motion for the possibility of time and space in general (Paić 2018, II, 9 ff.). Radical premises begin with the consequences of understanding the role of information in physics and science of the 20th century. Namely, the acceleration of communication in the present age poses the question of the utility of information for the human mind with its

perceptive limitations: "people don't communicate, but living machines do, thanks to the increase of cognitive capacity made possible by the growing expansion of 'working memory.' Speed and memory correspond to what was ontologically and traditionally named as being and time. Speed is the characteristic of cybernetical understanding of 'being' as information, and of memory as surpassing the unconscious mode of recollection of substance that transits into the state of steady duration (*durée*)." (Paić 2018, II) This is a direct continuation of the discussion at the end of first volume with the reference to Deleuze's *chaos* hypothesis mapped over the ontology of digital computing which has data, speed/acceleration, (*random access*) memory as its substantial momentum.

An important thing to note with regard to the second volume is that it beings exactly where we left off at the end of the first volume's "road to artificial intuition." The encountered notions as black-box, theory of relativity, and information theory pave the way not only to introduce a vast list of contemporary philosophies of technology from Max Bense to Gilbert Simondon and Bernard Stiegler, but to open the space for a discussion of technology, science, and aesthetics that should be brought into play at any point where we concern ourselves with space and time, space-time as conditions of possibility of perceptions, experiences, and creation at all. The mentioned philosophers did not just pave the way for new concepts of understanding the world of contemporary digital technologies, but they also reach the height of discussion in the notion of aesthetics of information/ data, digital aesthetics, and techno-aesthetics respectively. The chapter on Wittgenstein is instructive in that regard. The grounding for such a line of contemporary continental thought lies in the science of cybernetics which is the main theme of Tehnosfera II, from its beginnings in Norbert Wiener, information-communication theory, and developments of its socio-cultural and philosophical relevance through Gilbert Simondon's technogenesis and technological individuation. Construction—in the book as well as in personal correspondence with the author—remains the main concept which synthesizes being and event as transformation of states. Not only are we for the first time in our philosophical socio-geography concerned with cybernetics and critical reevaluation of philosophical relationship with the

understanding of technology and its history, but we are also progressively moving towards aesthetics, art, and design as the black box of contemporary culture in general. No wonder that the infamous aphorism by Lev Manovich will prove to be an important side note towards the final volumes of the work on the technosphere, equal to the poetic importance Kafka and Pessoa possess in the first two volumes: to say that the designer is the prototype of our time should surely become more and more evident through our increasing interactions with autonomous, creative, speculative machines.

There are a few discussions in the book that require a specific address. Paić, namely, analyzes the notion of entropy and feedback in the context of information theory, and, more importantly, in the context of understanding information as the "essence of the technological age." It is impossible to think contemporary technology, science, culture, and even art without grasping the complex language of techno-scientific information and communication processes of construction and computation. The "technotopy of information" in the chapter "Technotopy: Information and Construction" presents us with the notion of being immersed into the fluidity of networks against being rooted in a home-land, an inter-space or mediated space of the Internet (not to mention the ideas and consequences behind the phenomena of an Internet-of-Things), and the uncanny space of interactivity. Entropy stands in the center of the emptiness provoked with the disillusion of metaphysics in cybernetics where time is an illusion at the edge of the ever-present chaos at the end of our universe. Entropy in the cybernetic invention of Norbert Wiener remains one of the darkest notions of human existence, and Paić uses this notion to construct the means for the understanding of "integral reality" (Paić 2018, I, 300) that we are immersed into, a reality, or the world which—in its openness harbors artificiality as the means of keeping the metastable chaos in place. Other than its reality being integral, this is the "intelligent world" we live in. The discussion of the "naked life" and the "naked gaze" (Paić 2018, I, 294–338) testify to this whilst introducing us with the notion of a problematic exchange between the animal and the human but keeping in mind also the exchange between the human and the machine, artificiality and the image.

Continuing on the Wittgenstein chapter, it is equally important for an understanding of the role of language as possible consolation for thought

both through Wittgenstein's own philosophical transformations and through culture, art, and life, in which essence becomes a fluid (word) play with nothing evident but everything quite performable. Paić concludes that the architecture of word-plays in Wittgenstein has the importance of architectonics of the pure reason in Kant. Even if that remark obviously brings us right to the end of the infamous *Tractatus*, the difference is subtle, because these architectonics belong to the grammar of language (or being, consequently of life forms in play of language-culture-art), and not to its logic and bear a great deal of importance in the linguistic turn as well as the pictorial turn in contemporary theory and art. The conclusion of the chapter brings about another turn, the "engineering" of art as (*techno-aesthetical*) life in a radical epitaph to be considered by the reader, but which we are not going to spoil in this review.

The second volume's overall agenda is to further develop, or to constitute a hybrid language for a possibility of the understanding of the technosphere. Namely, discussions regarding Gregory Bateson, Gilbert Simondon, and Bernard Stiegler are crucial pieces of investigation that will lead to another radical conclusion by Paić at the end of the book. The first of the four chapters of the second volume deals with the notions of cybernetics, information, entropy, and openness in the construction of the posthuman condition (Paić 2018, II, 88-91). Cybernetic constructivism against metaphysical foundationalism in one sense further develops this in the meaning of the "transubstantiation" of thought into information within all of the consequences brought up with the radically changed world of manipulation and computation of artificial negentropic natures. The radicality of this twist is, again, that of the furthering of the Heideggerian notion of representation as the esse of modern science: "In the milieu of the new cybernetic ('science') paradigm an epochal change occurs. Now the techno-sciences no longer reveal/represent anything because the notion of nature is constructed as 'artificial nature' of technically produced beings." (Paić 2018, II, 125) The human remains in-between—as the condition of planetary state of techno-science dwells between the world and the space—and requires a new determination outside of the 20th century human science. With the advent of planetary information networks, feedback control, and self-constructing machinery/intelligence, the information/communication code is determined by speed and memory that govern over the altering of states and programs of

machines via machines for which the human—as mentioned earlier—becomes inadequate. The sky over the "third order cybernetics" (i.e., the technosphere) is the color of the TV screen tuned to a dead channel, to paraphrase William Gibson's introduction to the *Neuromancer* novel. If we cannot grasp the information code, communication becomes "white noise." "Nothing is no longer understandable because chaos creeped into the space between the signal and the message." (Paić 2018, II, 137) Because of that, post-human environment will be—concerning the human as such—framed in the bio-genetic and bio-cybernetic enhancement and engineering of preservation, elongation, acceleration, and capacitive extension of human life (Paić 2018, II, 155 f.).

We will conclude with three interconnected motifs of the second half of Tehnosfera II: Gilbert Simondon, Bernard Stiegler, and the "thinking-thing." The two thinkers, as well as Whitehead, remained until now, "under the radar" of philosophical concerns in our region, while their novelty bears significant consequences in considering the state of contemporary technology, and that is why studies undertaken by Paić in this part mark him as one of the first thinkers at all to consider them as constitutional figures of a radically new approach to the task of thinking at the end-times of philosophy as such. The overall tone of these discussions is reflected by the opening statements regarding Simondon's "task of thinking." Namely, grounding his analysis in contrast to Heidegger's questioning of the essence of technology, Simondon constructs a new way of considering technology in its pr-e(s)sence, or "to question the creation of the new way in which the world appears in phases from physical, biological, psycho-social, and technological" (Paić 2018, II, 278). Not only does a consequent discussion prove to bear significance in the understanding of the major influence Simondon had on Deleuze, but Paić also presents us with most of the relevant interpreters and commentators of Simondon's philosophy in the present day as well as places him in dialogue with present day prominent philosophers of information, like Luciano Floridi and Bernard Stiegler. The analysis that emerges is one which confronts us with the operating within Simondon's universe of philosophical technology, with concepts, such as metastability, states, modulation, etc. Such an analysis could also provoke a new reading of Deleuze by now considered mainly from the standpoint of ungrounded and pejorative post-modern perspective. For

Simondon, the task is comprises a presentation of an overall theory of the overcoming of traditional bounds of metaphysics by the introduction, not just of new concepts and themes, but also new steps and orders of categories, and by the creation of concepts and phenomena. Therefore, we no longer are dealing with being as one, but as a multitude which emerges within the framework of technogenesis over ontogenesis, with modes of technoindividuation, transduction, and trans-individuation of being (Paić 2018, II, 297–299), as well as with the condition of metastability, or the naturalized fringe state of perpetual transformations of beings, just to name a notion that will most notably be adopted by Deleuze. Unlike the "first wave" cybernetics of Norbert Wiener, we can, with Paić's discussion of Simondon, see a turn in the understanding of its potential. While Wiener discussed the vast space of the application of cybernetics for the understanding, not just of technology and science, but of society as a whole, Simondon deliberates upon the need for a technological culture by means, not just of technological governance over human lives, but of an introduction of the notion of human into the planetary network of technology. The motive is no longer control, but a synthesis, no longer of something real and something artificial, but of nature and the new as such. Therein lies Simondon's optimism in his own understanding of the human's in-between status of a coordinator, conductor, and conceiver of machines that work by themselves, leaving out the possibility that they could be also working for themselves.

And, thus, the question of a technical construction of consciousness remains last in discussing one of the most relevant French philosophers in the field of technology, Bernard Stiegler, with his three-volume work on *Technics and Time*. Paić valorizes his work from the standpoint of inventive "tertiary retention," which is a culmination of the "transformation" of memory into a constitutive capacity of productive information: "against living remembrance [tertiary retention] brings about the traces of constructed reality of the digital age [...] time is no longer detachable from the technical dispositive" (Paić 2018, II, 335). The question is similar to the conclusion of the first volume. Namely, intuitive machines and things that think, autonomous objects and thought as thing, bear the same problems of understanding, at which point the speed, accelerated and extended capacity, brings the altered state of (digital)

technology to the fringes of "technological history" as the transference logic and constructive intelligence of new, artificial life forms. With a lot still left out in this review, we successfully emphasized the high points of discussions collected in the first two volumes of *Tehnosfera*, a critical investigation in anthropology, cybernetics, philosophy of techno-science, and digital technology in general.

The contribution rendered by Žarko Paić in *Tehnosfera I* and *II* can be—by way of a simplification—considered to be threefold: he introduces, 1), an original concept to, 2), bring together the unrealized descriptive and critical potential of numerous philosophers, philosophies, and concepts that until now remained out of the philosophical discussion, as well as, 3), he pushes for the radical steps in philosophical and speculative investigation of our everyday life inside the digital networking of life processes. While for Goya the sleep of reason produces monsters, with the conclusion of the first two volumes of *Tehnosfera* we can say that blackboxing of metaphysics produces thinkingthings as this is the high-point from which we await the coming three volumes of the book.

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Dario Vuger