Planet Earth as *Terra Nullius*: An Arendtian Interpretation of the *Tragedy of Commons* at the End of 2010's

The article approaches the tragedy of commons in the age close to environmental crisis. Basing on the philosophy of Hannah Arendt, we can outline the possibilities of commons in a situation where our experience of the reality is thoroughly mediated by technology. Instead of the general readings of Arendt solely as a political theorist, the article sees her foremost as a phenomenologist and materialist stressing her analysis of the impact of modern technological development on the human condition. This interpretation can be brought fruitfully into dialogue with the current posthumanist approaches that emphasize reciprocity between human and non-human actors including both technological artefacts and natural organisms. Against this theoretical background, we can understand, firstly, how technology and natural sciences shape our experiences and ideas of the common environment, and secondly, to sketch a conceptualization of the planet earth as commons that would include non-human organisms as a fundamental part, without forgetting the question of politics as basis of democracy.

Introduction: Desert as a commons

In some places on the planet earth, we may still find a *commons* as it was once known. Six years ago, when I was doing an internship as a journalist in Indian Rajasthan, I got a chance to visit in Bishnoi community in Thar Desert near the city of Jodhpur. The guide told about their independent way of living that involved following of strict religious rules, the most important of which were for conservation. For example, killing animals and cutting trees were forbidden, also cultivation and herding had to be done by respecting environment. Bishnois seemed to understand more about living from nature than the society outside their rudimentary huts.

In his well-known and controversial essay, *The Tragedy of Commons* (1968/2009), biologist Garrett Hardin describes his economic theory through the hypothetical situation where farmers' aspiration to increase number of their livestock leads eventually to the overuse of resources. According to Hardin, this malignant progress is a result of rational and individual-centered thought that the benefits of adding animals adhere to the farmer alone, while the costs are shared among all farmers of the area. The tragedy arises when no herder will be able to pasture the field due to overconsumption.

For the Bishnois, the desert surrounding their residences is a commons in a quite original sense. Although the religion may be reformed throughout the centuries, in the villages the 29 (bish-

noi) rules, developed by Guru Jambheswar in the 15th century, serve as a guideline to prevent the overuse of scarce resources – the birth of tragedy. Bishnois still cherish the protein rich Khjeri trees of the desert as sacred, since, as the experience has taught, they offer nourishment to the stock and wild animals even when the 50-Celsius degrees heat waves dry out the pastures. History tells that the king of Jodhpur, Maharaja Abhay Singh, did not care about the trees when he ordered them to be cut down for the construction of a new palace. As a conservation act, the inhabitants of the Khejarl village decided by hugging trees to protect them from the troops of the king. Over 360 villagers were killed in the conflict that is remembered as a massacre of Khejarl, and hence Bishnois became known one of the firsts environmentalists in India. (Jain 2011, 51-77)

Applying the aforementioned summary of Hardin's conception in a more general manner, the threat of the overuse of resources has not come primarily from the other herders and villagers but above all outside of the community: from those whom the rules did not bound, despotic kings and imperialist conquerors, later from the society struggling with inequality, corruption and contaminations. Today the biggest threat to Bishnois' lifestyle is most likely the broaden desert where the heat in the last years has become more severe (see e.g. Mashal 2019). The scale of tragedy expands, and this time hugging does not save the flora.

The history of the commons cannot be separated from the history of industrialization, capitalism, nationalism and colonialism, and, thus, it is full of struggles for spaces and their management. It is the story of those developments that led to the dispossession of resources and enclosing common lands. (Linebaugh 2014.) While the steam engine promised less work and easier life, fossil capitalism accelerated the use of nature as a resource. The need for the globally governed resources born along with industrialization when more expansive undertakings became technically possible (Disco & Kranakis 2013, 23-24). Due to enclosing of the common lands since the 16th century, humans have irrevocably wandered from the ancient way of using nature responsibly. Along with the historical development, the idea of the humans as communal beings shifted towards recognizing them as egoistic and self-seeking individuals. (see. e.g. Quilligan 2012.) To summarize, the modern attitude to nature leaded to see commons purely as a capitalized resource managed by humans.

While Bishnois may show that an alternative way of living and thinking still is possible, in the last instance, they offer just one of those exceptions that proves the rule: On the ruins of modern era, there is no way back to original commons. During the last couple of centuries, humanity has shaped the material basis of their environment with the help of tools, machines,

technologies and industries so fundamentally that the glorification of original communities, even if they deserve all the respect, tend to sound gratuitous nostalgia. Instead, in the moment of the crisis, it would be necessary to rethink humans' relationship with nature and technology in novel ways.

In the past years, the consequences of the ongoing environmental crisis have increased the willingness of the scientists interested in the environment to define commons on a global scale to support more sustainable and equal use of the common resources through global treaties, moral economy, emission trading and commons trusts (see e.g. Bollier & Helfrich 2012; Disko & Kranakis 2013; Ostrom 2015). Although practical suggestions to manage dwindling natural resources as commons are necessary for political decision-making, the most of the examinations are still based on the modern concept of commons in which nature is seen primarily as an object of management and utilization.

Interestingly, in Roman law can be found two alternative latin concept to understand human's realtion to surrounding nature: *res nullius* and *res communis*. The difference between these two was significant: Under *res nullius*, common goods cannot be owned by anyone, and under *res communis* the ownership by everyone is based on the self-interest of each member of the community, which means that ownership of common property may be licensed to a private individual or group. James Bernard Quilliqan, the chairman for Global Commons Affairs of the International Renewable Energy Organization, has suggested that to protect the commons, the human society must transform the state centered legal system of absolute sovereignty and ownership and revisit *res nullius* in its pure form. (Quilliqan 2010.) By the pure form Quilliqan does not mean that ownerless areas are free acquired by the means of occupation but an ethical and political sensibility that the natural reserves of the earth should stay without owner.

Nowadays, when the humans have almost successfully grown plants on the dark side of the moon (Wolf 2019), plan to start mining in the deepest abysses (Packham 2019) and are able to engineer their own genomes (Regalado 2019), it is difficult to find milieus that the human has not acquired in one way or another. Every time when the humans extend their activities into these unknown surroundings and no one's lands, we should reflect the conceptual relationship between human, nature and technology.

Hardin's article has been cited extensively especially amongst the social scientists interested in environment. The scientists have often considered Hardin, usually with good reason, as an eco-authoritarian thinker who reduces the society to the interaction of competitive and calculating individuals (see e.g. Hess & Ostrom, 11). However, it seems that Hardin's idea of the human

was not absolute. He seems to call for a change, for example, when he writes: "(W)e are locked into a system of 'fouling our own nest,' so long as we behave only as independent, rational, free-enterprisers (Hardin 2009, 247)". Although we would disagree with Hardin's suggestions to solve the tragedy with birth control, he importantly brings the ecological and material basis to the debate on human and society emphasizing the fact that solving the tragedy of commons is primarily a moral and political issue and cannot be solved only by the means of science-based technologies. (Hardin 2009.)

Instead of creating regulatory frameworks to manage resources, this article approaches the tragedy of the global commons from the theoretical perspective. To be precise, the focus is on the thinking of Hannah Arendt combining her ideas with the current posthumanist theoretization. First, I propose that through Arendt's interrelated concepts *worldliness, common sense* and *condition*, as she defines these concepts in her book *The Human Condition* (1958/1998, HC) and *The Life of the Mind* (1971/1978, LM), it becomes possible to understand the ontological relationship between material reality and human action. Second, I will show that the widespread development of the enclosing commons during the 16th century is connected to Arendt's analysis of the alienation from the material earth and human world. Through Arendt we can see that enclosing is not just a matter of privatizing natural resources but also enclosing of the common world and limiting the conditions to act as human beings. Thirdly, I suggest that this reading of Arendt resonates fruitfully, though not without dissonances, with the current posthumanist and new materialist theorizations that emphasize interactivity between human and non-human actors. I will perceive these *assemblages* constituted of humans, technology and nature more closely through the conception of *non-conscious cognition* (Hayles 2017). Finally, against this theoretical background, the paper formulates the definition of commons that takes as its starting point the idea of *terra nullius*, nobody's land, instead of the notion of sharing or owning land.

Hannah Arendt's contribution to rethink commons

With reference to technological innovations of her own time, such as launching of the first Sputnik satellite, splitting an atom and rise of automation, Arendt asked, in the preface of her well-known philosophical study *The Human Condition*, a simple but important question: What are we doing? Obviously, Arendt's point was not to query how the mentioned innovations were technically realized, but her wish was rather to challenge us to consider their ethical implications and political consequences. As Margaret Canovan writes in the introduction of second edition of HC, Arendt "also makes clear that what she has in mind is not just a general

analysis of human activity, but "a reconsideration of the human condition from the vantage point of our newest experiences and our most recent fears" (HC, X).

Despite of her interest in technological developments, Arendt is rarely included into the domain of science and technology studies or into that of philosophy of technology for that matter. One significant reason to this neglect may be that last decades Arendt has been mainly conceived as a political theorist. Academic discussions in the 1990's on Arendt's thoughts tended to focus on her tripartite distinction of *vita activa*, that is, the analytical distinction she made between dimensions of human activity, labor, work and action. According to the "standard" interpretation of *The Human Condition* Arendt wanted to protect the realm of free public action against necessity of labor and instrumentality of work (see e.g. Markell 2011, 24). Such an understanding can be justified, but the problem is it ignores the importance of fabrication in Arendt's analysis, thereby leading easily to mistake her as a dualist thinker.

In contrast, my take on Arendt is to see her primarily as a theorist who stresses the collapse of old categories of *vita activa* that followed from the development of modern technologies and the industrial revolution. This historical description shows how advancements in science and technology render problematic human agency in modern times by initiating a process of alienation from both the natural *earth* and the human-fabricated *world*. Hence, the interpretation I present here resonates with some of the more recent readings of Arendt, such as Marieke Borren's (2013) recognition of Arendt as a hermeneutical phenomenologist, Philip Walsh' (2011) reading of social ontology in *The Human Condition* and Laura Ephraim's spotting of Arendt's "worldly" turn (2018). These interpretations do not negate the value of earlier approaches but they emphasize the internal co-dependence and reciprocity of Arendt's conceptualizations and pay particular attention to her interest in science and technology. (Also Tijmes 2008; Yaqoop 2014; Canovan 1998; Undurraga 2019).

It should be noted that the aspiration of this article is not to develop a new reading of Arendt's HC per se. Rather, my aim is to think *with* Arendt the prospects of the global commons at the end of 2010s, using as my point of departure the importance of material reality as the basis of *vita activa*. Proceeding from this starting point, HC is not so much a book about human action but concerns the ontological conditions and the historically changing dynamics of this action. Such a take on HC helps us to understand more sensitively how political subjects are conditioned by technology in the modern world, and offers an interesting theoretical background to re-examine the conception of commons in a new situation where the modern definitions of the human, nature and the relations of these two categories are challenged.

The earth and the world in Arendt's analysis

Historically, the commons has referred to diverse resources, reserves and ownerships that makes it partly a confusing concept. In addition to the meaning of commons as a land belonging to a local community, it has meant, on the one hand, both the common people and the bourgeoisie as well as latter's' representatives in parliament, and on the other, to common dining in abbeys or a shared meal in general (e.g. Ostrom 2015). Today, commons is a popular term in, for example, highlighting the accessibility of the Internet or other digital resources (see e.g. Andrejevic 2007; Kidd 2001). Thus, the commons does not necessarily concern the natural but also immaterial and social resources. Either way, even a superficial etymological mapping reveals something about the duality of the concept: One of its aspect refers to something held in common by a group, while another aspect refers to user community bound by the rights and responsibilities. Therefore, the implementation of the commons always requires publicity in which decision-making is based on equality of the members of the group. Hence, the privatization of common resources does not solve the tragedy of commons, but rather writes it off from the public agenda.

Examining the planet earth as a commons, and the ongoing environmental crisis as the tragedy of it, the aim should be to appreciate ontologically this dynamic between the material reality and the specificity of human actions. A fruitful way to grasp on this interaction is Hannah Arendt's analysis of active human life (*vita activa*) and its conditions. It helps us to see that, contrary to what the dualistic culture supposes, in reality the ecological and the social are not separated and, thus, it would be a mistake to create a contrast between them.

Referring to Aristotle in HC, Arendt distinguishes three interrelated – and in practice inseparable – categories of *vita activa:* labor, work and action. Concisely, by labor she means reproduction of biological life and the process of metabolism; work refers to fabrication of artefacts; and action to speech and action in the public realm. To understand the interrelations and historical dynamics between these existentially fundamental dimensions we must look into Arendt's other important distinction, namely that between the *earth* and the *world*.

For Arendt, the worldly nature of being a human means inhabiting both the earth and the world. In this dual view, the earth refers to the natural realm, which provides the necessary material conditions for the process of life, such as nutrition, oxygen, water and favorable temperature (HC). At the same time as humans live on planet earth, they also, so to speak, "world" it by fabricating durable things and acting among other people. This capacity to build a lasting world, which exceeds the life span of individuals, distinguishes humans from other animals. (HC, 2) In

Arendt's tripartite distinction between labor, work and action, *Homo Faber* points to the dimension of vita activa that enables humans to work its earthly environment by making tools, buildings, institutions and art. These fabricated things are, metaphorically speaking, like a table: artefacts, which simultaneously bring people together but also separate them from each other. (HC, 52-53.)

Put differently, the metaphor of table that Arendt uses refers at the same time to the materiality of in-between or mediating things, but the metaphor also extends to cover more than human-made artefacts: the world comprises also things that are publicly shared with other human beings through communication. In other words, the world is not only created by *Homo Faber* through its artefacts but also equally through the public action of *Zoon Politicon*, a political animal, in its relations to other people. Thus, action takes place always between different kinds of people, "in-between" of human plurality. According to Arendt, this experience of sharing common human world with others who look it from different perspective makes possible a shared sense of reality.

Consequently, the world actualizes and takes its shape simultaneously as fabricated artefacts and as a network of human communicative plurality. As said, the humans' capacity to build a lasting world, separates them from other species. From an Arendtian perspective, we enact our humanity by creating an artificial world that was built to seek immortality by acting in ways that are publicly memorable.

Now it could be easy to insist that Arendt's distinction between the *earth* and the *world* reflects a dualistic view of the relation between humans and nature by placing the dimensions of *vita activa* into separate ontological categories. This is not the case however, since Arendt particularly emphasizes human dependence on earth's materiality, for example, when she writes: "The human artifice of the world separates human existence from all mere animal environment, but life itself is outside this artificial world, and through life man remains related to all other living organisms" (HC, 2).

After all, humans are not dependent on the earth only because it enables our biological survival, but we also relate to our environment as spectators and sensing beings when we create and secure the conditions of the common world.

Common sense

The earth is not only made to be consumed as a material resource but also to be appreciated for its other qualities. This dimension of the material environment can be called aesthetic and it ties

the earth and the world to each other. Arendt addresses this ability of humans to receive reality through senses with the notion of *common sense*. Thus, Arendtian definition of common sense differs from its typical meaning as conventional thinking. In other words, common sense gives us a kind of confirmation that things we receive through senses are evidences of reality, and it ensures us that others can sense the same objects as we do. (Ephraim 2018; Borren 2013; LM.)

According to mundane reading, Arendt's common sense is often connected primarly to the common *world* which is constituted of human made artefacts and where we appear to each other publicly. It is true that in the *Human Condition* Arendt talks about common sense mostly in the context of *world* and about *plurality* as the condition of human action because "we are all the same, that is, human, in such a way that nobody is ever the same as anyone else who ever lived, lives, or will live" (HC, 8). Thus, people not only appear to each other but also actively bring forth, reveal and articulate their otherness by answering to the question "who am I in relation to others". This view is correct in itself, but it remains inadequate if we want to look at the whole earth as commons.

Arendt does not analyze the importance of the common sense for our experience of earth in HC, yet she mentions for example that "everything that is, must appear, and nothing can appear without a shape of its own" (HC, 173). In *The Life of the Mind,* Arendt continues the discussion of the coincidence between being and appearance more systemically. She points out that while things appear they, in turn, requires spectators. Hence, the beings to whom things appear and who, thus as the recipients guarantee their reality, are themselves also appearances. Hence, they are never mere subjects and cannot be considered as such. (LM, 19-20.)

When the reality is understood as a place of such appearance, the common sense can be interpreted as a "sixth sense" that fits us into our environment. For example, if the eyes can eyes can see colours and fingers feel textures, the common sense perceives reality, but like other senses it cannot be placed in any specific organ. Instead, it is connected to our sensing of the location and surroundings. Our spectatorship ensures the coincidence of appearing and existence constituting shared scenes of through common sense. From the perspective of appearance, the earth is not determined only as field of survival but also as a tangible texture for the human world, a stage of appearances and hence an inspiration for political stage. (LM, 50; Ephraim 2018, 41-43.) As such the earth calls humans to reveal their uniqueness to each other through *work* and *action.* In other worlds, when humans "world" the earth they realize the law of the plurality of the earth by speech and action contributing to the constitution of a space of appearances. As said in the earlier chapter, the specificity of humans is in the ability to create

an immortal *world* through speech and action, or through fabrication of the earth's material into lasting objects.

This appearing of something or someone to others stresses the intersubjective nature of our being in the world (Borren 2013). Without a sense of common reality, people are left alone, abandoned to a sense of worldlessness, which consists only of their own needs, dreams and thoughts. As Arendt writes, "the end of the common world has come when it is seen only under one aspect and is permitted to present itself in only one perspective" (HC, 57).

With the regard to considering the idea of commons today based on Arendt, the natural environment must be taken into account, not only as a life-sustaining resource but also as a pre-condition of all human activity. Through the common sense, we not only understand that we share the world with other human beings, but we can also realize that the planet is not alone for the humans. Thus, when the planet earth is thought from the Arendtian perspective as a material condition for human activity, it is determined as *res nullius* – nobody's land. Interestingly, Arendt underlines, in the notes from the lecture held at the University of California in 1955, that "to whom belongs the earth? Nobody".

Considering the tragedy of the global commons, the definition of the earth as *res nullius* could mean that our task is not only to protect the continuity of processes that sustain biological life but also to recognize the uniqueness of other appearing beings that is ultimately a guarantee of the human uniqueness. Taking care of planet earth as commons should mean taking care of the human condition, and that should include the ethical consideration of the aims and consequences of the human made technologies.

Condition

The image of humans not only as specific but also as exceptional and as exceptionally inventive beings contains deep paradoxes. This is because exceptional human capacities contain the possibility of frightening and unpredictable consequences. In Arendt's analysis of modern society, this uncertainty does not concern only our relations to other people, it is also fundamentally about our lives as earthly beings and about the limits of our understanding concerning it. Concerning the latter, Arendt points out that "it could be that we, who are earth-bound creatures and have begun to act as though we were dwellers of the universe, will forever

be unable to understand, that is, to think and speak about the things which nevertheless we are able to do" (HC, 3).

The human condition comprehends more than the conditions under which life has been given to man. While humans are capable to extend their spectatorship in time by fabricating durable things, which remain around even after individuals, humans are also capable of shaping their material living circumstances in multiple and unpredictable ways. They have the capacity to rework the conditions of their own life and action. Humans are conditioned beings because everything they come in contact with turns immediately into a condition of their existence. As Arendt formulates:

"Whatever touches or enters into a sustained relationship with human life immediately assumes the character of a condition of human existence. This is why men, no matter what they do, are always conditioned beings. Whatever enters the human world of its own accord or is drawn into it by human effort becomes part of the human condition." (HC, 9.)

Although Arendt describes *Homo Faber* as a manufacturer of artificial world, with 'artificial' she does not mean anything unnatural. Technology, along with speech, transmits humans' experience of their environment, and permits the passage from biological to human-constructed world. Arendt's view concerning the relation between material basis and artificial fabrication can be fleshed out with the help of anthropology. According to the French paleanthropologist André Leroi-Gourhan (1993, orig. 1964), tools and technologies define the relationships between human and nature. At the same time, the tools reflect the material interaction between human and the environment, making visible and palpable the human effort to shape their surroundings.

With the help of craniometrics and anthropological discoveries, Leroi-Gourhan describes in detail the co-evolution of humans and human-made technologies. The adaption of vertical position freed the hands and enabled the preparing of food and building tools for hunting, copping and cooking. Similarly,

The palatable food in turn freed the facial bones and muscles evolving them to suit for producing more complicated sounds. Usage of tools and language, for their part, developed those parts of the human brain that coordinate motor functions of hands and facial muscles. A significant part of the modern human's motor cortex is harnessed just to these two functions. (Leroi-Gourhan 1993.)

Leroi-Gourhan's explanation shows that cognitive faculties cannot be fruitfully explained by starting from the brain but by putting the primary emphasis on an evolutionary process in which the brain was one of the consequences. Unlike people tend to assume, and as Charles Lenay summarizes, the tool is not so much the product of the intelligence but rather the intelligence is the product of the tool (Lenay 2018). According to Leroi-Gourhan's study, each tool reminds us of the gestures of our body, like hitting or beating, and same repeated gestures are recognizable in different cultures and different materials. He speaks about this trait of tools as social memory that is externalized from the biological human body. (Leroi-Gourhan 1993, 257) The most intriguing insight Leroi-Gourhan's anthropological analysis provides us with is that the fulcrum of human liberation, from the beginning of the hominization process to the freeing of social memory, was the tool which permits the passage from the biological world to the human world (Lenay 2018). Hence, Arendt's idea that the human shape conditions of its own life through technology means in its most fundamental level that technology is involved in human evolution.

Based on Leroi-Gourhan we can think Arendtian *work* as a social memory that possess agency affecting our thinking, environment and even the evolution. The technological and scientific developments are not just about the new management of the resources through technology but are the change in ways to see the human relationship to the environment.

According to Arendt's analysis, modern technology, natural sciences and industrial revolution shaped the character of human work as it was known in the western tradition. It was no longer a question of securing a permanent world by fabricating durable things but through scientific revolution work has increasingly become "acting into nature". This, in turn, accelerated the process of alienation from the earth and from the world.

Arendt's description of the alienation from both earth's nature and the shared human world offers a fruitful way to capture the change in the notion of commons, which presently, due to the historical process of enclosure, mainly refers to the private technologically managed resources. In order to understand this we have to understand Arendt's argument that the roots of alienation are in modern natural science (Berkowitz 2018, 348). According to Arendt, to understand the modern age the earth alienation is actually more significant than world alienation. As she writes, "if world alienation determines the course and the development of modern society, earth alienation became and has remained the hallmark of modern science" (HC, 264). Both of these alienations are connected to the loss of the commons and hence Arendt's description of the alienation from both earth's nature and the shared human world offers a fruitful way to capture the change in the notion of commons, which presently, due to

the historical process of enclosure, mainly has reduced to refer privately and technologically managed resources.

Alienation from the earth and the world

In HC, Arendt writes that telescope had an important role in the process of alienation. This human-made artefact enabled a new (artificially) mediated – and thereby expanded – sense of the real and opened the path to heliocentric worldview and secularization. But it also caused humans to doubt their own senses. Arendt writes that Descartes's phrase "I think therefore I am" is an articulation of human's experience of its existence as confirmed in a situation where human beings could not trust their immediate perceptions anymore (HC, 275-280).

Searching for knowledge and truth, modern man began to look at nature and its processes from an abstract Archimedean point of view relying more on their thinking abilities than on their senses. This, according to Arendt, led humans to start treating nature as if they themselves were not earthly beings anymore. While the achievements of modern science showed that human beings are just atoms in the universe, paradoxically it allowed us to forget our subjective point of view, the fact that every scientific criticism will return to ourselves. (Arendt 2018.) Because of this, rational consciousness was dualistically separated from the material, biological foundation and the physical world. Neither space nor the planet are a closed system and therefore can never be fully grasped. Arendt reminds us that modern natural science forgets all this in replacing sense-based common sense with calculability and precision. (HC, 280-284.) As a result of the scientific revolution the human lost his idea of himself as an earthly being that led to the concept of nature only as a resource utilized and managed by humans.

The earth alienation is thus connected with the world alienation and enclosing development of common lands. Scientific revolution laid the foundation for industrial revolution and economic growth, for an ideology that justified the endless depleting of resources. Collecting private property became a rational activity: Once you own the material, the logic of reasoning goes, you have the right to collect wealth (see e.g. Quilliqan 2010). Because capitalist market economy creates value by enclosing common area, the communities no longer manage their social and material resources according to their own demands, as the control is ceded to central authorities in private markets. The masses excluded from governmental decision making have lost their connection with commons.

Arendt traces the development of the enclosing to the expropriations of ecclesiastical and peasant property carried out in the course of the Reformation leading to a development where a stable property was converted into fluid wealth. Arendt compare this capacity to produce wealth

to the natural process of life where the very worldliness of human is sacrificed. (HC, 254-257.) Instead of inhabiting a stable world of objects made to last, human beings found themselves sucked into an accelerating process of production and consumption. The human as worldly being – that is *Homo Faber* and *Zoon Politicon* – was reduced to a laborer of the surplus value.

Particularly macabre in the present situation is that the humanity does not only threaten their own worldliness by their actions but also the organic diversity of life. Presently, the cumulative impacts of human action *into* the nature can be seen on the planet earth's geology and ecosystem, thus leading to some geologists to propose that the current human epoch should be named the Anthropocene (see e.g. Moore 2016; Davies 2016). One of its most alarming feature is the rapid shrinking of biodiversity and the rate of extinction of species. As recent studies show, humans have driven at least 571 plant species to extinction since 1750s, which means that on average more than two plant species per year has been wiped off of our planet during the last 250 years. (Humphreys & co. 2018) The mass extinction concerns all levels of the food chain, including birds, lizards, amphibians, insects and mammals, which in turn will eventually drive humans to extinction, too. (Living Planet Report 2018)

Paradoxically, the same development, which brought with it quality of life and cultivated technological innovations has led to Anthropocene and its ratchets. In other words, the modern progress, relied on the ability of natural sciences to solve problems, now paradoxically shows that this problem solving has created its own utterly damaging problems. Despite of the scientific facts about the ongoing mass extinctions and climate change, humanity is lagging behind on required measures to stop these catastrophes. One reason to the disregard might be that it is not easy to step outside of the modern idea of constant progress of humanity and its celebration of human rationality emphasizing the dualistic worldview, in which human, through their cognitive capacity and advanced technologies, can dominate and known nature and its processes from the universal, Archimedean point of view. As Arendt writes: "(T)he danger is that humans start to look at themselves and all human actions from the vantage point in universe" (HC, 323).

Towards the brave new world?

To understand the extent of the threat of "acting into nature" Arendt so poignantly described six decades ago, it is useful to look at the current movement of transhumanism that can be seen as a new articulation of the ideology of eternal progress. Many of the developments that Arendt highlights as central to the modern time – automatization, cloning, enhancement of the human organism, and immortality – are ones that the current transhumanists celebrate. As she writes:

“It is the same desire to escape to imprisonment to the earth that is manifest in the attempt to create life in the test tube, in the desire to mix "frozen germ plasm from people of demonstrated ability under the microscope to produce superior human beings" and "to alter [their] size, shape and function"; and the wish to escape the human condition, I suspect, also underlies the hope to extend man's life-span far beyond the hundred-year limit”. (HC, 2.)

The current transhumanist aspirations seems to offer technological solutions to the tragedy of the global commons. In a situation in which the human conditions are under threat, transhumanists seek to create new artificial conditions. The strong belief in technology as a solution to the environmental crisis is reflected, for example, in the desires to initiate food production on the dark side of the moon, start regular space travels or resort to the climate engineering, appears more like a rationalistic wet dream than a viable strategy for living a socially and ecologically sustainable life on this planet.

This desire to escape the limits of the planet is only one example of the earth alienation. In other words, Arendt also worried that the humans begin to look at themselves as scientists look at rats (Berkowitz 2018, 352). “From there technology in fact no longer appears as the result of a conscious human effort to extend man’s material powers but rather as a large-scale biological process of biological mutation, in which human bodies gradually begin to be covered by shells of steel.” (HC, 322–323).

In a similar vein, contemporary research programs are constantly looking for technical solutions to extend biological age, enhance concentration, intelligence and other human cognitive capacities, and expand the limits of our planet through NBIC (neo-bio-info-congo) technologies, artificial intelligence, neuropharmacology and space technology respectively. Hence, the technological shaping does not only concern our daily routines or influence our environment, but through technology, humans are now even able to intervene in their own genomes without knowing where this intervention will lead. It is this daunting human ability (and recklessness) to ‘act into’ that makes Arendt’s question ‘do we know, what we are doing’ so much more burning today than it was at the end of 1950s. In affording novel ways to manipulate human genes, the new bio- and nano-technologies reconfigure in profound ways the boundaries of old dualistic distinctions – which is still the basis of modern worldview – between human and nature, subject and object.

Because of the strong belief that the human condition can be improved by science and technology, many theorists have seen transhumanism as an extension of the Enlightenment project. As Branden Allenby and Daniel Sarewich (2011), for example, have shown, transhumanistic ideology is based on the same rationalist individualism, which conceives technology as a manifestation of objective rationality and the progress of freedom, without recognizing that technological innovations are a part of complex and increasingly intertwined systems. Hence, transhumanist self-understanding is deeply conservative. It does not take into account humans as conditioned and conditioning beings. The ideological belief in the ability of technology to surpass the *human conditions* is dangerous when it ignores the social dimension of technological innovations. According to Allenby and Sarewich, we would need a new scientific paradigm, which would understand new technological systems as complicated techno-social systems.

Historian Hava Tirosh-Samuelson (2009) describes new technological revolution in a somewhat similar manners and calls for new ways to approach the specificity of current technologies. According to her, instead of the enlightenment paradigm, it should be compared to the fragmentation of postmodern time, place and culture rather than modern dualism. When genetics and nanotechnology enable even the improvement of our biological organism, dualistic separation between human and material, subject and object lose their relevance. The human condition is increasingly determined by technology, and hence, the firm dualistic oppositions between reason and body, culture and nature, as well as constructivism and essentialism become problematic.

From Arendtian perspective, transhumanism is about the desire to escape the human conditions as they have been given to us from nowhere. Arendt did not so much criticize the discoveries of natural science as such, but saw the dualism developed by the scientific and technological revolutions as antagonist to the common sense, which she saw as a basis for the experience of common shared environment and hence as a precondition of politics but also of human consciousness. It should be noted that despite of sophisticated technologies, humans are dependent on the materiality and physics of the world, since no human can create any machine in vacuum. Similarly, though robots are more powerful calculators than humans are, even the most advanced androids cannot have a sense of shared reality and plurality of the earth nor world. This also means that the tragedy of the global commons cannot be solved from the basis of technological determinism and its dualistic point of view.

In a way, the challenge formulated by Arendt concerns finding a new understanding of the human's place in its relations to the environment and technologies. In terms of the tragedy of the commons, this should mean, at least, the understanding of human conditionality. In this case, the conceptualization of the global commons cannot be guided by the idea of the global village controlled outside of it.

Entwinement of human and non-human actors

In the recent posthumanist conceptualizations, established modern boundaries between human, nature and technology have blurred and the world is viewed as a constant interplay of technical devices and living organisms (See e.g. Pickering 2010). Lastly, I will open this approach as a way to talk about the processes beyond our understanding and as a way to recognize the existence of non-human actors as part of the shared planet earth.

One of the most interesting articulations of the posthumanist approaches comes from professor N. Katherine Hayles, who tackles the complex relationship between human and non-human in her latest book, *Unthought, The Power of the Cognitive Nonconscious* (2017). Her posthumanist materialism does not focus only on the entwinements of humans and nonhumans but it also opens up a perspective on technological organisms conceiving of them as cognitive entities.

Hayles examines the cognition of human, technological and natural organism respectively. She defines cognition as a process that interpret information within context that connect it with meaning. This interpretation can happen in conscious or unconscious context (Hayles 2017, 22). Though, the most of cognition, according to Hayles, occurs outside of human consciousness, a phenomenon, which she calls non-conscious cognition. Hence, all the modes of life have cognitive capacities, some of which exceeds human understanding. (Hayles 2017, 1-30.)

Hayles's conceptualization relies on the cognitive biology in which the knowledge is understood as something that is in constant interaction with the environment and is embodied in the structure of the organism. The cognition is not a representation of the given world but rather the realization of mind and world through diverse processes. Thus, it is an interpretation within

a context, which concerns not only biological creatures but also technological devices that communicate and interact with each other constituting cognitive assemblages. Cognitive processes interact not only with each other, but also with the material processes that do not include interpretation or selection, and therefore are not cognitive. (Before mentioned.) This cognitive agency does not need to be compared to the conscious human agency, but it should be noted that the different forms of agencies interact with each other in the constant processes. Hayles' argument can be understood complementing the idea of the planet earth as nobody's land or *terra nullius* emphasizing that all things that appear to us as spectators have cognitive capacity largely outside of the human understanding.

Conclusion

To summarize, according to Arendt, to fully actualize our humanity, we must humanize the material by establishing a reality that places us above mere matter. However, she is not talking about humanizing the world in any conventional modern sense but in the sense of constant negotiation with the fact that the earth is not alone for humans. By recognizing our dependence on the material environment, we notice that human responsibility towards the earth should exceed the process of our own survival. This also means that the planet earth should not only be threated only as a life-sustaining resource but also as a stage of appearance for all the beings. In their appearance, the living creatures are dependent on each other's spectatorship

Historically, enclosing common lands along with the development of capitalism and industrialism rooted people from the public decision making concerning their earthly foundation and reduced them to the laborers of mass society and of the constant reproduction of the capital. However, when looking at the concept of the global commons it is alarming that human ability to "act into nature" threatens, not only human world, but also the life on the earth.

To return to Bishnois, they provide us with an example of a community that does not separate dualistically the nature and the sacred from each other, and therefore the desire to preserve the conditions of the common life has remained strong. Although humans do not return to the huts, in current situation, where the dualisms of body vs. mind and nature vs. culture have structured western thinking in recent centuries, is questioned by the modern natural science itself, humans are demanded to reconceive their relation to the nature and the technologies.

Arendt's thinking, together with posthumanistic approaches enables us to define the planet earth as an environment for the common sense which affords and conditions not only our biological survival but also our life together. This "new" world should not be addressed in the terms of ownership and division, but by taking as a starting point that the earth is *terra nullius*, nobody's land. Thus, the question of the future of the earth cannot be reduced only to the question of resource and their management. Since humans are only the only sentient creatures with ability to act to enhance common sense. This human uniqueness oh humanity should bring with it the responsibility to "world" the earth sustainable ways, so that it does not threaten the existence of other species nor the human condition.

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