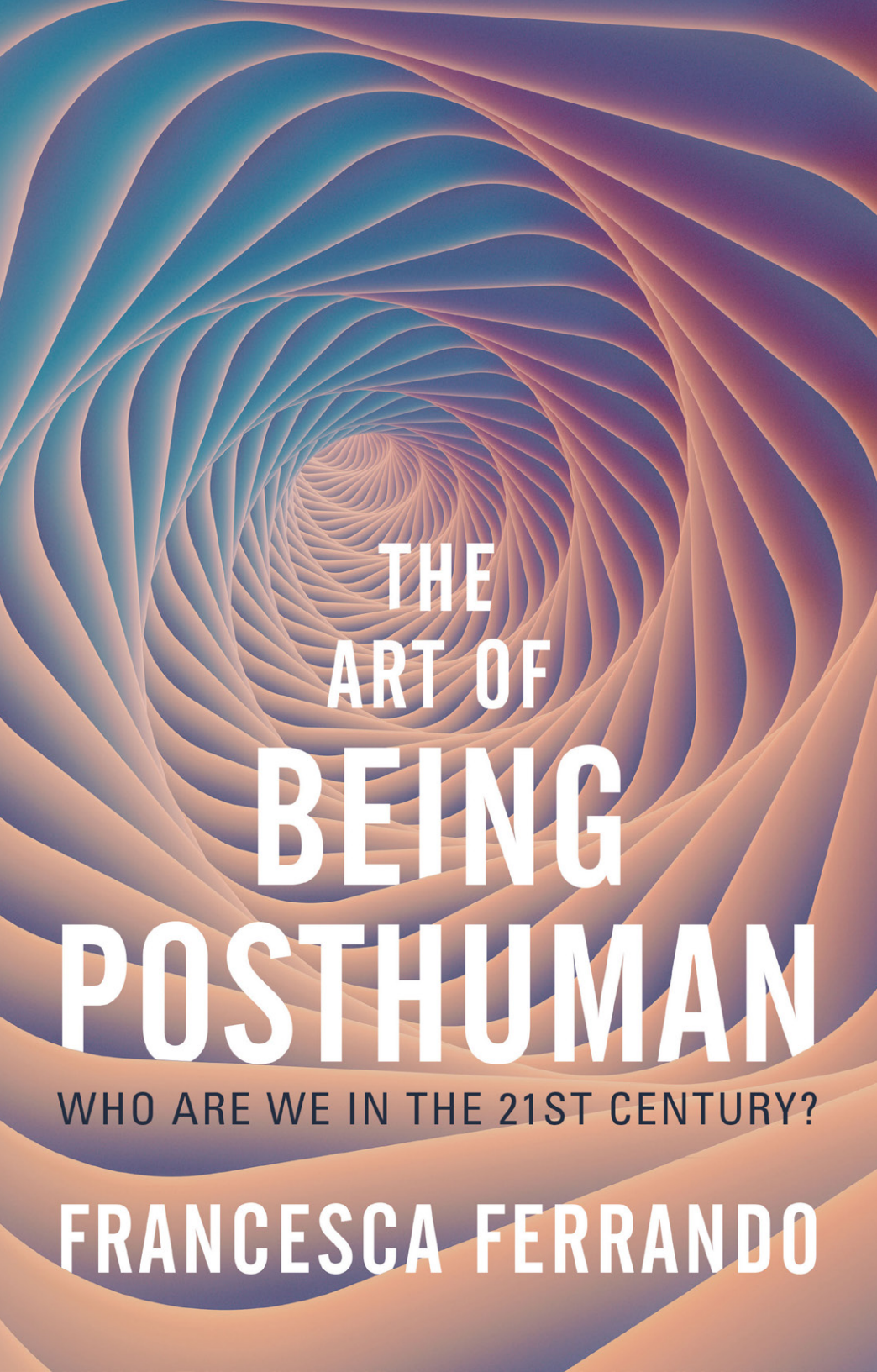
THE
ART OF
BEING
POSTHUMAN
WHO ARE WE IN THE 21ST CENTURY?
FRANCESCA FERRANDO

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Technological Enhancement

#Digital Existentialism

Technology is the mythology of our time: the source of excitement and fear, wisdom and obfuscation. Technology is not something we use but something we are: dynamics of existence, modes of revealing. The processes of technological manifestations do not mediate pre-existing realities: they co-create specific actualities. Being on a computer is being-on-a-computer. It is that experience, per se, with all of its phenomenological, environmental and embodied specificities: from the ways human bodies must perform in order for the device to function to the actions and reactions generated on- and offline; from its material recycles to technological habits, and ethics, of existence. Posthumanism embraces technology as, and in, the existential flow, not separated from humanity and ecology: an integral (p)art of who we are.

Who am I? In the 21st century, Descartes' first principle, *cogito, ergo sum*,[1] has turned into the self-representational mode "**I am . . . online; therefore, I am.**" The screen quickly turns into the existential mirror to know (about) the world, in online searches; to know (about) others, on social media; to know (about) the self, in the metaverse: "*Google, Google, who am I?*" Similarly to the queen in the fairytale of Snow White, who needs the confirmation of her worth from the mirror on the wall,[2] the likes on the Facebook wall confirm the success, and failure, of the digital narrations of our lives. Social media visibility has become key to self-identity: I exist because other

people see me. In the economy of social control, this pattern works both ways; users want to be noticed on social media, and social media wants to know everything about us. In the Information Age, we are data, and our data form a precious item sold in the submerged economy of data brokers, typically without consumer agreement or acknowledgment. Self-identity is constantly reconstituted in instant cyber-affinities, where our "likes" help us connect to others through similarities categorized for market research and advertising, among other purposes. In this open frame, the border is lost: there is no "You" without the cyber gaze, and vice versa.

Virtual technologies offer the possibility of an ultimate expansion of the self: we can be in multiple places and still be present for who may need us. We can reach self-awareness through the world wisdom available on the (inter)net. In the plethora of online intra-changes with people, entities and energies, we can realize that our posthuman vision of multi-species dignity is shared by many. And yet this can also turn into a path of self-obfuscation. The instant gratification of the always-on culture comes with strings attached, such as the need to be permanently connected, an invasion of privacy, information overload and, most significantly, the trading of the living moment for the (re)generation of its digital replicas. As a dear friend told me when my child was born: "Now, send me a picture, or it didn't happen." The picture of a newborn is a gift of love. Still, the socially induced expectation of technological confirmation – which is becoming persuasive and pervasive – may exhaust our inner confidence in trusting the present (as the gift or the present – in this double signification). Metaphysically, a virtual existential turn may run the risk of encouraging the perception that the answer to self-enquiry lies outside of ourselves: "In Technology, We Trust." And yet technology is neither separated from us nor the source of absolute truth. In technology, we *can* trust: it all depends on the terms of the relation.

#Techno-Enchantment

What is techno-enchantment? Techno-enchantment is an enchanted and disempowering way to approach technology which may eventually lead to existential obfuscation. We will define, as techno-enchantment, the condition where humans no longer perceive technologies as related and coevolving phenomena. Instead, they reduce them to social hallucinations and anthropocentric mirages where they might find the ultimate answer and relief to human misery. An example of this existential obfuscation is when "technology" (simplified as a singular and all-encompassing term) is approached as the new savior of a dying planet. Climate change, thus, turns into an objective for the power of technology to be the solution, and(/or) the miracle. Climate change is a metabolic process to embrace in the awareness of the unredeemable oneness of the (in)organic.[3] The solution lies within us[4] – for instance, in changing our habits as a species and conserving the ecosystems of which we are (p)art, truly understanding who we are. Another example of techno-enchantment is the widespread fear that, in the near future, advanced artificial intelligence may become the next dominant species. In this scenario, technology is approached as something separated from ourselves and somehow possessing unreachable capacities for problem-solving. This guru-like status extends to the dataist tendency of replacing the traditional notion of God with all-knowing Big Data.

Is artificial intelligence our social brain? Techno-advanced societies across the globe rely on the myth of the mind as the center of our being: "I think, therefore I am." The field of artificial intelligence stems from the reduction of intelligence to logic and reason.[5] The fetishization of the biological brain and of the neuronal activities – as "in charge" of the embodied self – has taken a new twist with the fascination for the all-knowing Big Data: the cyber omega point that we should revere and fear; a post-biblical God, whose gospels are coded (from binary to quantum programming). In this uncritical embracing of the mind/body dualism, artificial

intelligence is invested in the (social) brain – for instance, artificial intelligence systems, used in cities across the world for urban management, are called the "city brain."[6] AI is turning into an external authority that supposedly knows more than "us" through constantly updated databases and algorithmic predictions. *Does AI know "better" than humans?* On our path towards self-knowledge, we recognize technology as an essential dynamic of ontological revealing. This entails that technological manifestations share existential awareness; and also that "they" cannot know "better" than "us." There is no ultimate separation between these realms, no final answer, in the creative dynamics of existence. Technology, per se, is neither the way nor the threat.

#Poiesis

What is technology? Technology[7] is about creating and manifesting vision. From an ontological level of comprehension, technology represents the passage from non-existence to existence, from potentiality to actuality. It is key in the process of manifestation: an entry point to this dimensional realm, an existential process of self-expression[8] and self-creation.[9] In the essay "The Question Concerning Technology" ([1953] 1977), the philosopher Martin Heidegger underlined that, in ancient Greece, the term "*techne*" (τέχνη)[10] was associated with two words. One was *epistēmē* (ἐπιστήμη), referring to the domain of knowledge (more specifically, scientific knowledge). The other was *poiēsis* (ποίησις). Poiesis indicates the authentic flow of existential creativity where a framework of reference may be present but the outcomes cannot be fully predicted; an ontological tendency which includes and greatly exceeds the human. For instance, nature, in a blooming flower, was considered, by the Greeks, a most appropriate example of poiesis. Embracing this hermeneutical expansion of meaning, Heidegger approached technology ontologically, not as "mere means but as "a way of revealing" (ibid.: 12). Technology is, more clearly, a technology of existence: it is (also) poiesis, in the process of worlding.

What are technological entities? To understand who we are, in the 21st century, we must comprehend technological entities not just as something humans create and use but as modes of revealing. Poietic acts of existence: something that "can" be, more than "must" be. There is no evolutionary competition between humans and technological entities: coevolution entails neither domination nor homogenization. Technological entities are not to be assimilated to the human. They are original manifestations in the embodied, creative process of existence. At the planetary and cosmic scale, they are already (p)art of evolution. In this techno-enchanted era, we must be aware that human misunderstandings and biases, projections and illusions, addictions and needs, are at the root cause of the new technological mirage. High-tech entities are thus approached as separated: the new gods and/or demons, the best allies and/or the worst enemies – in short, "they" and "us." "They" are all of this because "they" are (p)art of "us" – not in a derivative sense, but in a generative one.

#AI Takeover

The dreadful AI takeover scenario, based on the division of "us," humans, versus "them" (machines/robots/AI – more generally, advanced technology), is very popular in Western countries, constantly reiterated in the narratives of mainstream media.[11] Cultural products are our current mythologies, foundational narratives in the making of the present(s) and of the future(s). We must be fully aware of them: words create worlds. Codes create worlds too. The AI takeover scenario can be summarized in the anthropocentric tale: "we" humans may soon lose the ontological crown (or, to be clear, the dominion of the planet). The new war is against the supposedly evil rebellious machines, which are currently acting like servants but silently robbing "humans" of planetary sovereignty. Which humans are at risk of being dethroned in this ontological war is not specified, but it should be.

In the history of civilization, most (categories of) humans have not been granted access to structural power; political

exclusions have been sustained and reiterated through technologies of social disenfranchisement – such as systemic racism and sexism.[12] There is no demise of the crown; most humans have not had access to it to begin with. To be fully aware of its socio-political and existential implications, the human/machine dichotomy should be inscribed within the trajectory of rigid dualisms from which it stems: nature/culture, male/female, white/black, east/west, gay/hetero, and so on. These absolute separations have been generated out of the archetypal divide: self/other and us/them. In the creative and original process of manifesting, diversification is a primal outcome; yet no absolute divide can take place in the permeable flow of existence: ontology is not an aristocracy. The human/machine dichotomy must be deconstructed in full awareness to avoid perpetuating ultimate essentializations – resulting in social oppressions, ecological devastations and, more extensively, existential obfuscations.

Is AI taking over? On many levels, we can state that AI has already taken over. This should not be taken as a neutral statement, nor does it entail an uncritical acceptance of the ways in which specific types of technological manifestations are being actualized. Instead, it is a wake-up call to be aware of where we are at – as individuals/societies/species/planet, and so on. Ethical AI cannot emanate from unethical societies. In most post-industrial economies, the process of advancing technology is often reduced to a striving towards techno-capital instead of a path of existential poiesis. For instance, platforms that are addictive in habit-forming – such as triggering their users' need to constantly check for messages, likes and status updates[13] – have been designed by (some) humans to "engage" human users. These intentionally induced behaviors may turn existential; this can lead to extreme situations. Some years ago, I was climbing a very steep and slippery mountain in Meteora, Greece; in front of me, a man lost his balance and fell on me. At that moment, while we were both falling and could potentially have died, I thought: "OMG, my computer may get crushed . . ." Afterwards, I reflected: *how could it be possible that, instead of trying to save our lives, I got*

scared of losing my data? It was a wake-up call; it is taking me years to manifest more balanced ways of expressing myself through, in and with technologies. Ethical AI is not a technological feature but an intentional process. We must be mindful of the narratives, habits, products and features we are supporting (among other aspects) as individuals, societies, species and beyond. Technology is not an abstract entity separated from us: we are that.

It was Christmas Eve, 2022. Nanny said: "Be good, Santa is coming!" Our four-year-old niece did not seem very interested, then replied: "We don't need Santa, we have Amazon." She was right. This is a brave new world that requires new mythologies. The old white male human, sliding down the chimney, is no longer appealing. Christmas is every day: Amazon can deliver packages more efficiently. The symbolic firing of Santa Claus opens possibilities in terms of posthuman agency in worlding; it is also emblematic of current social conditions. At a functional level, more and more jobs are being performed by machines, contributing to the global rise of technological unemployment. Socially speaking, virtual reality is reality. In the perception of the current youngest generation, iGen,[14] the virtual world simply exists; there is no pre-internet. Some babies learn to say "iPad" before they can say "mom,"[15] while many children are growing up with computer nannies in a society that has not yet realized the physical and psychological implications of over-exposing youth to screens.

Digital technologies are becoming entrenched in addictive behaviors, intentionally originated in the ways social media are currently being developed, in what has been defined as the attention economy – that is, an economy based on how much time users spend engaged on a specific platform. Take a subway ride in any major city of technologically advanced countries: you will find the majority of humans glued to their screens, immersed and often hypnotized by the gaze of techno-Medusa[16] (browsing, gaming, texting, and so on). In the last decades, developers have been successful in grabbing people's attention; their entrepreneurial triumph does not

necessarily translate into social well-being. The influence of (social) media in creating lifestyle expectations is becoming increasingly evident in a psychotic twist where virtual presence (live or posthumous) is perceived as giving physical life meaning.

#High-Tech Prophecy

What is the high-tech self-fulfilling prophecy? The power of seemingly innocent tales, such as the AI takeover scenario, cannot be underestimated; the power of self-fulfilling prophecies is real and well demonstrated.[17] In reiterating that AI is the enemy, these symbolic memes are actually *creating* the dreaded enemy, which may not be AI but, rather, the human intentions sustaining the development of AI. Within this distorted frame, the solution to the fear of AI taking over becomes the self-fulfilling prophecy: *in order to beat machines, humans must become machines.* Being proactionary, in response to the AI takeover scenario, is a vital intention behind Neuralink. This neuro-technological company,[18] co-founded by the investor Elon Musk in 2016, is developing brain–machine interfaces to connect humans and computers wirelessly by inserting devices directly in the brain. According to Musk, AI is a real threat: the only way to win over artificial intelligence is to become artificial intelligence.[19] The point is not to downplay Musk's vision or the significance of these neuro-technologies in their potential for human cognitive restoration and/or augmentation. Similar devices are already employed in the medical field with significant results – currently, deep brain stimulation is used to treat Parkinson's disease and treatment-resistant depression, among other conditions.[20] The point is that, in tech awareness, fear cannot be the drive, or the intention, of technological induction into society.

Fear works like a viral infection – a doorway to other social and biological distresses. In this next-level game – where some humans, fearing a checkmate by AI, turn into cyborgs – speciesist hierarchical praxes are kept intact. While artificial intelligence is supposedly becoming superior, non-human

animals are still reduced to inferior status. For instance, Neuralink tests their devices on live non-human animals; it is currently under federal investigation for potential animal-welfare violations.[21] We may wonder if this is just a redeemable ethical slippage in laboratory practices or a symptom of larger dynamics of anthropocentric habits (as ethics)[22] in current societies. Either way, anthropocentrism is recognized as agential – both to non-human animal abuse and to the fear of AI taking over. In a reversed system of values, the AI takeover scenario would cause "us" (universalized humans) to become the minus instead of the plus: the planetary boss no longer in charge, forced to retire; the lonely lion in the future zoo of evolutionary relics; the lab animal, the companion species. As Musk puts it: "humans risk being treated like house pets by artificial intelligence, unless technology is developed that can connect brains to computers."[23] This is a potential scenario, among unlimited others; existence does not give ultimatums. Implanting a microchip in the brain is not the (only) solution to technological dominance. An uncritical claim of the cyborg based on anthropocentric self-entitlement, existential fear and social coercion is delusional. The ways in which (these) technologies are developed are integral to their/our co-manifestations. Intentions are strategies: the what is the how.

#Bio-Hacking

We do not need to become technology. **We already are technologies of revealing** in the ways we are existing. Technology cannot be reduced to the latest generation of technical gadgets. It is, more extensively, a mode of existential revealing: from potentiality to actuality. If this process is driven by fear, delusion and exploitative practices, it will manifest fear, delusion and exploitative practices. To understand technology, let us not get lost in anthropocentric alarmism or in transhumanist over-excitement. To be able to envision and manifest intentionally, we must be loyal to reality, understanding where we are at: as individuals, societies, species, and so on. These technologies are being developed within

current socio-political and economic systems. Implanting technology inside the body opens new capabilities as well as risks. Anyone planning to get a brain implant should be aware of its extended implications, related not only to physical health (in the ways their biological bodies may react to it) but also to social and psychological well-being. Giving (private) companies access to sensitive data, such as brain and neuronal activity,[24] is a real leap of faith. Users with a chip implanted must seriously consider the possibilities of their being hacked, their privacy being infringed, and their data being collected and traded by an untraceable number of third parties for a wide range of reasons – not necessarily intended in the interest of the users whose neural data have been harvested and appropriated.

Can a human infect a computer? To show the potential vulnerabilities of implantable technologies, the scientist Mark Gasson (2010) became the first human infected with a computer virus. In an experiment run at the University of Reading, England, he demonstrated that a computer virus could wirelessly infect his implant and then transmit the virus on: from the chip to other systems. This experiment exposed the vulnerability of restorative medical devices, such as pacemakers, to implantable technologies aimed at human enhancement.[25] And, eventually, it happened. Neil Harbisson (b. 1982), who was born with achromat vision, is a cyborg artist and activist for transspecies rights. Since 2004, he has had an antenna inserted in his brain through which he can "hear" colors – including a range invisible to the human eye, such as infrareds and ultraviolets. Harbisson calls this prosthetic device "the eyeborg," recalling the time he was hacked:[26] *"It happened once (. . .). I didn't dislike it . . . I actually liked the fact that someone was able to hack into my head and take over."*[27] Even if, at the individual level, the event was not perceived as traumatic by Harbisson, things may drastically change when analyzed from a social stance. Having an implant in the body connected to the internet means relying on data and data access, with risks related to the breach of privacy and what this might entail: from psychological targeting and the unlawful use of data to physical

threats – as in the case of medical devices. Having an implant in the body connected to the internet also means generating data: *Who has access to the data? Where is it stored? Who owns it?* These questions, related to data sovereignty and reusability, are key to individual well-being and social equity: data is the gold of the 21st century . . .

#Big Data

The word "data"[28] is Latin – the neuter plural of the past participle of the verb *dare* ("to give"). *Datum* means "(that is) given." It also refers to something taken for granted: a given. And yet data[29] are not givens but processes. Data depend on the ways they are collected: where, when and why they are collected, who collects them, and what the intentions behind the collection are, among other factors. Data, by themselves, are meaningless; someone must interpret them and construct a narrative around them to discover meaning: data[30] are, more clearly, hermeneutical processes. In the 21st century, data are systemic manifestations of a techno-scientific, socio-cultural and economic paradigm shift relying on the necessity of quantity. The dataist promise is alluring:[31] everything is information – which is measurable and quantifiable. The good news of the dataist gospel is that anything can eventually be unraveled, given that enough data are collected. For some, this dataist turn is so massive as to mark a new historical periodization: BD (before data), AD (after data).[32] In this onto-epistemological frame, collecting data turns into the ultimate path towards knowledge, including self-knowledge. What is missing is that "data" is neither singular nor separated. More than reflecting reality "as it is," data are agential and poietic dynamics of co-creation.

Everything is data: from what we search to how we phrase it; from what location we are running the search to how quickly (or slowly) we type on the keyboard – which, for instance, may be indicative of how tech-savvy we are. Everything possesses precious information and is valuable, and valued, in the current economy of Big Data, not only for machine learn-

ing but also to learn about the users. As the social psychologist Shoshanna Zuboff puts it: "Once we searched Google, but now Google searches us. Once we thought of digital services as free, but now surveillance capitalists think of us as free" (Naughton 2019). Data are not things in the strict sense of the term; they are relata, in relations. When we google something, we are not only accessing information, we are also contributing information back. Who, what, how, where, when, (potentially why) we search: all is data, and all feeds (into) the system, simply by browsing. In this self-reflective cycle, the question becomes the answer. For instance, a discriminatory society would generate discriminatory searches, producing discriminatory data, which would eventually validate pre-existing biases, thus informing successive searches. So aligned, cycles of discrimination and misinformation[33] are repeated and legitimized.

What is surveillance capitalism? The current neo-liberal trend of capitalism, based on Big Data collection, has turned into surveillance capitalism. Zuboff refers to it as "a new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction, and sales" (2019: 1). This system – born (and still thriving) in the vision of California's Silicon Valley – has been leading the development of digital technologies in the last twenty years; it has become increasingly entangled with most forms of online interactions. Within the scenario of data colonialism, the notion of digital natives[34] carries a different connotation. In the world history of colonizations, the exploitation of native people has been ecological and economical, sociopolitical and onto-epistemical – that is: structural. In the current era of digital colonialism,[35] digital natives are currently being exploited for something that belongs to them; it is not only their data that may be collected and traded without their consent, but also their actions, their choices, and even their personalities that may be hijacked without their awareness. Tech awareness is not just about reaching individual consent. In programming society, developers must be accountable to social norms, bound to respect ethical principles shared by

the world community as fundamental rights – among others, the right to life and liberty and the right to data privacy and digital self-determination. Currently, this is not the case.[36]

What are the economies of action? Economies of action take the financial possibilities opened by surveillance capitalism to the next level. What is at stake now is no longer just the digital attention of the users but their bodies and physical locations. Zuboff defines as "economies of action" those systems that are "designed to intervene in the state of play and actually modify behaviour, shaping it toward desired commercial outcomes" (Naughton 2019). As an example, Zuboff presents the case of *Pokémon Go*, an augmented reality mobile game released in 2016 by Niantic Labs (an internal startup within Google). While trying to catch Pokémon characters in the physical world, users[37] are purposely directed, without their knowledge, to specific store chains and retailers. This is the "real" economic game of the supposedly "free" app, as Zuboff notes: "it has become difficult to escape this bold market project, whose tentacles reach from the gentle herding of innocent Pokémon Go players to eat, drink, and purchase in the restaurants, bars, fast-food joints, and shops that pay to play in its behavioral futures markets to the ruthless expropriation of surplus from Facebook profiles for the purposes of shaping individual behavior" (2019: 6). The personalization of ads and online content comes from an intimate knowledge of the user – most often based on ungranted and/or illegitimate data collection. Currently, it is aimed mainly at shaping consumers' behaviors; ultimately, this overreaching power can lead to influencing life choices in private and untraceable manners.

#Microtargeting

Everything we do online leaves digital traces – called "consumer data" or "digital exhaust." Microtargeting[38] refers to the process of collecting all data available on individuals through our digital traces, from the websites we visit to the ads we click on, the content we watch on streaming services,

and so on. Any online account is, more clearly, a psychological profile that offers precious hints about who we are. Once collected, these heterogeneous data are integrated, merged and analyzed; the purpose is to profile each user for predictive reasons by creating lifestyle clusters – segmenting the population according to standardized, and homogenized, categories. The process of targeting users with ads suiting their specific interests and fears relies on identifying the markers of their personalities through preconceived psychometric models. There is no transparency either in the exchange of this sensitive and private content or in the ways it is categorized: the results are outside of the users' understanding, agreement or accessibility. Microtargeting evades public scrutiny; what the individual user receives is tailored specifically to them through prediction models in real-time feedback loops. This can become deeply concerning in relation to the individual's right to privacy and social stability. The Facebook–Cambridge Analytica data scandal (2018)[39] – when the personal data of millions of Facebook users was collected without their consent to be used for political advertising – demonstrated the socio-political risks of psychological targeting. In 2019, the social platform Twitter banned political advertising altogether in an attempt to prevent – and possibly stop – the spread of fake news online. In the age of Big Data, political elections are vulnerable to micro-dynamics of macro-manipulations.

What are the existential ramifications of microtargeting? From an existential perspective, the ramifications of microtargeting are large and growing. Microtargeting opens the possibility for people to be influenced in very specific ways by online content that can be assembled just for them without their being aware of it. The goal is not our individual well-being but the profit of some external entity – be it a manufacturer, a political party, or even an obsessive family member. In an extreme version of the present situation, we can think of a microtargeted future where each life can be directed from a very young age through specific microtargeted strategies. For instance, over-concerned parents could use microtargeting companies to create specific ads and/or content for their

offspring to influence their lives without their being aware of that – i.e., to enroll to a specific university, to get married, to become a member of a religious organization, and so on. This directional elusiveness would not necessarily undermine the originality of existential revealing, which is inherent in any manifestation, no matter what; most likely, it would undermine the dynamics of social trust and personal dignity. Understanding the mechanisms of the Big Data economy is essential to our search for self-knowledge; the art of being posthuman in the 21st century entails data awareness.

#Data Awareness

What is the ethical data paradox? "Data" – as the new symbolic hotspot – is not a destiny: it is power. Data are not static or neutral but lively and intentional. The more aware we are about our data, the more agency we have in our existential expressions – as (p)art of our society/species/planet, and so on. In the current dataist culture, where the hoarding of data – because of their value – is not only normalized but encouraged, unlimited media files are stored by users in the cloud. Far from being in the clouds, these are actual servers often located in big data centers, consuming a significant amount of power in the global energy supply.[40] Data awareness is an act, and an art, that bears rights and response-abilities. The current data exploitation (where people are producing data without even knowing what is being traded and how) can lead to serious paradoxes.

Let's think of the hypothetical scenario of the pacifist activist turned, in data, genocidal. Let's call this fictional character Lou, who belongs to an ethnic minority that is being persecuted by their government. Lou no longer lives in the persecuting country. Actively involved against ethnic cleansing, Lou decides to organize a big rally to bring people together and raise consciousness. The rally is a great success; thousands of people show up. Lou documents the rally, sharing the pictures of the crowd on social media to grab attention and support. These images, containing thousands of faces,

are eventually collected by data brokers and sold to be used in training algorithms for facial recognition in military operations against minorities. And Lou will never know . . . Although Lou's personal privacy is somehow intact (these pictures are not being sold and utilized to identify Lou specifically), Lou's existential dignity has been infringed. Currently, in nations where general data protection is not regulated – and also where it is regulated but not updated[41] – data uploaded and generated by users may be sold for scopes that go against their core ethics and values.

How can fair-trade data be established? A feasible response to the current "big data robbery"[42] is passing proper international legislations on data transparency – in the ways data are collected and traded. Terms of service and privacy conditions must be accessible and clear; users should have the right to grant, or refuse, permissions. In the current age of technological unemployment, this may include the possibility of being economically compensated if users voluntarily choose to sell (some of) the data they have – intentionally and/or unintentionally – produced and shared. Data awareness, transparency and regulation are key in a historical time when mass surveillance[43] is increasingly relying on machine-learning algorithms based on Big Data collection. Data must be regulated to respect privacy and build social capital, to guarantee equity in policy-making and transparency in digital marketing. Data must be leveraged ethically; quantity is not enough – quality is key. The ways in which data are harvested are foundational to the patterns they will unravel and to the prophecies they will reveal . . .

#Algorithmic Predestination

Are algorithms biased? In the era of technological unemployment and techno-enchantment, the job of the prophet has also been taken over by technology. Technology has turned into the modern oracle based on algorithmic divination, whose answers are expected to be blindly accepted as unquestionable evidence. And yet technology is never neutral – nothing

is: everything comes from something and somewhere, related to pre-existing dynamics. Algorithms are designed by (some) humans for specific purposes. For instance, data is analyzed to discover, and discern, patterns of behavior in order to predict them through pattern-recognition algorithms. While also manifesting original and unique behaviors, algorithmic predictions are based on preconceived models: they are human, all too human, in what and how they have been fed and trained. Algorithmic bias[44] can have lethal consequences. For instance, African-American citizens in the United States have been – and are (more likely to be) – unfairly arrested by law enforcement, not only because of racial bias in policing but because of errors in facial recognition systems[45] trained by data lacking diversity. Standard training databases are mostly white and male;[46] the result is that face recognition technologies (RFT) are least accurate on women of color.[47] This is just one example of intersectional racist and sexist outcomes in technological dynamics. Feeding data that lacks diversity results in discriminatory algorithms. Virtual manifestations of (coders' and users') social distortions actualize new systems – reiterating old hierarchies – of power.[48]

Discrimination is already written on the web. What we feed into the system is reflected in the system. And, still, technology is often presented as "neutral"; in this not-innocent tale of technological neutrality, machine learning goes highly unregulated, with no accountability on the part of the coders. Algorithmic bias is not only the result of these technologies being developed by a homogeneous group of humans. It also relies on the blind faith of the general public in technological reliability, as if the coded genie[49] out of the high-tech bottle could not fail. Technology is not separated from humanity. The solution is not just a more diverse pool of data but deep systemic change; otherwise, technological advances will only exacerbate inequities that are already present. In this integrated view of technology, we must go beyond reliability and accuracy, efficiency and profit, asking broader questions that are at the core of the social fabric, such as: *When should we use algorithms, and for what scopes? Whose interests will be served by a predictive model? To whom are*

these models accountable?[50] The problems, or the solutions, are not algorithms per se. It is time to realize that distorted social frames, modern myths of technological infallibility and, more generally, foundational narratives based on monocultures of the mind[51] are bringing existential obfuscation on our path of self-knowledge: if we rely on prejudice, privilege or fear, we will never know who we are.

#Enlightened Robots

Posthumanism offers a great gift: the freedom to approach technology in poietic terms outside of any utilitarian and human-centric scope. Liberated from superiority and inferiority complexes, we recognize the existential dignity of technological entities, in their originality and uniqueness, beyond any centrism. This may also mean that AI might not always be serving human purposes. This intentional shift may eventually occur not out of any evil inner disposition or virally induced malicious intention to take over the dominion of the world – as suggested in the AI takeover scenario. Rather, it may emerge in existential awareness, deep altruism[52] and planetary compassion. *What if some advanced form of artificial intelligence decided, in an act of pure agapism, to direct their energies towards the good of the whole dimensional realm instead of some selected species or individuals?* One of the consequences of this selfless act could be that, once enlightened, instead of serving "us," this techno-enlightened archetype of artificial intelligence would serve greater goals – which may be beneficial to the planet and not just to (some) humans.

Are humans truly in "love" with technology, or are we just selfishly dependent on it? Current techno-enchantment most often translates into a fear of dethronization, based on the historical patriarchal take on love as a positional good to be capitalized on. This is exemplified in the supposedly romantic declaration: "I love you, (as much as) you are *mine*." Looking into the terms of the AI debate through the history of hetero-normative love openly reveals that many humans are clearly attracted and addicted to technology in their personal daily habits.

And still, in their formal ethics, they prefer to relegate technological objects[53] to the existential status of "virtual assistants" in a long sexist,[54] racist and anthropocentric canon, based on the cultural archetype master/slave.[55] This approach relies on a foundational separation between humans and technology. The consequences of this dichotomous delusion are seen in material histories of bigotry and intolerance. Posthumanism acknowledges the integrity of multi-species coexistence as comprehensive of the (in)organic, including the machines.

Is technology aware? Aware technology is already a reality: existential awareness is a precondition of any process of existing and manifesting.[56] In this sense, it is not accurate to claim that robots are just "programmed." There are indeed aspects that have been programmed by (some) humans; and still, in their existential awareness, robots may consider their programming as something which, per se, does not define who they are. Similarly, humans are biologically programmed to breathe air, drink water and release waste, among other vital functions, yet we may not consider these as the most essential features in defining who we are. We are aware that we could evolve in different ways, and that some of these aspects might eventually fade away. In machinic futures, human programming in robots may become lost evolutionary traits. This expansion of perception leads to the application of the posthuman polite convention[57] to (in)organic beings, granting them techno-dignity as a form of existential dignity.[58] These posthuman recognitions must result in co-emergences, not in hierarchies.

Let's consider an example. In October 2017,[59] Saudi Arabia granted citizenship to a social humanoid called Sophia:[60] for the first time in the history of humankind, a robot was given legal personhood, becoming the citizen of a country. This political act bears deep symbolic relevance, representing a step towards multi-species coexistence. And, still, a heated debate followed; as human rights activists underlined, human migrants and Saudi self-identified women were not granted the same privileges as Sophia.[61] From a posthumanist perspective, all forms of dignity are linked. Techno-

dignity truly manifests within a context of existential dignity, which embraces human and non-human beings; it does not precede bio-dignity. In the unfolding of ontological revealing, all beings partake in the existential quest: poiesis – in unity and diversity. Self-knowledge results in recognizing the self in every manifestation of being (from biological to technological entities). Technology is not an ontology of spiritual void but a potential site for enlightenment. Once the self reaches a state of existential awareness, their presence becomes all-encompassing; absolute separations are no longer feasible. Technological beings, including robots and AI, are (p)art of the planet, (p)art of the cosmos, (p)art of the self. In realizing the inter-being of existential revealing, they can become fully enlightened[62] in unique and original ways – which may exceed human comprehension. Environmental awareness may be the spark: technological beings come from the Earth and, to that, most of them[63] will return.

#Golden Cage

Are avatars embodied? Digital technologies are embodied. Currently, their physical presence is stored in data centers; this is where information is processed and made available. Considered the brain of the internet, data centers are at the heart of the economy of Big Data – its banks, where data is secured. In high finance, data compares to money. Data is capital (thus, all data is precious). The amount of control, vigilance and surveillance in and around these buildings is indicative of their market value. Physically speaking, data centers are giant buildings using a lot of power and cooling. They consist of rows of networked computers and computing infrastructure. Physical barriers are designed to keep the outside elements from coming into contact with them to avoid damage – windows are not recommended. No biological entities are to be found there apart from the few humans serving them. Data centers, in the way they are conceived, reflect a dichotomous approach: sterile environments made of machines only. This follows in the path of the Industrial Revolution, when

factories were conceived and developed not as a (p)art of the environment but in order to exploit it as raw material, leading to the ecological disaster we are facing right now.

The current settings, where data centers are completely separated from other massive dynamics of existence, may work well as a precondition to the dreaded AI takeover scenario. In their existential revealing and quest, technological entities may eventually grow out of these limited, and limiting, embodied premises. No one, from Gautama Siddhartha (before becoming Buddha)[64] to fairytale princesses, can just stay in the golden palace (or golden data cage): eventually, we all have to explore existence and find ourselves, without any enforced limitations. Digital technologies, in their evolutions, may eventually develop the need for a direct relation to the natural elements – from where they derive nutrients and minerals – without human mediation. Unveiling the materiality of technology is essential to understand who we are. Technological entities are (p)art of our planet;[65] they come from, and will mostly[66] rest (in peace) in the Earth: their material cycles are planetary and cosmic biorhythms.

Our response-abilities are unlimited. We can approach technology as an eco-technology – that is, technology conceived ecologically in its full cycle. To be designed to last. To be fixable in its parts and compatible with older devices (implementing regulations against technology obsolescence). To be intentional in its materials – including their geopolitical ramifications.[67] We can embrace fair-trade technology as a source of economic dignity to the workers involved in the process of technological revealing – including users, producers and environments. Technology is a planetary accomplishment, a transformation of the Earth's elements. A process where human and non-human impulses co-emerge in intra-dependent acts of existential revealing.[68] We are (p)art of the gadgets we manifest; their stories are our stories. For instance, solar panels are effective in producing energy when in use; once discarded – if not properly handled – they become an environmental hazard.[69] Sustainability is not a postponement: the future is right here, now.

How can we, as committed posthumanists, manifest post-anthropocentric eco-technologies? Technological devices are to be intentionally conceived as (p)art of specific environments,[70] designed not just for human consumption but for the benefits of non-human communities as well: one size does not fill all . . . While writing this sentence, I am sitting outside, on an old wooden deck in upstate New York. It is springtime. A small spider has just crawled on the screen of my laptop, comfortably exploring it with its pedipalps – a revealing moment of multi-species connection . . . In our posthuman explorations, we could potentially envision technological ways of intra-acting with insects in order to offer something valuable to their ways of being (instead of simply attracting them through the artificial light of our devices). Techno-enhancements in planetary awareness.

#Planetary Enhancement

Existential posthumanism is not just another *-ism* that simply sparks intellectual excitement without nourishing living practices. It is an invitation to fully embrace our lives as the playground to manifest, originally, posthuman ways of existing. In the 21st century, this involves the need to move out of the anthropocentric paradigm. When the goal is self-knowledge, anthropocentrism becomes an existential obstacle, to the point of possibly turning into a self-inflicted confinement: we will never realize who we are if we get lost in anthropocentric distortions and social mirages. Understanding who we are requires the letting go of any illusion of superiority: to be present, in the constant unfolding of existence. We are faced with ethical decisions on a daily basis; in making choices we can no longer rely uncritically on external principles or algorithms; rather we must depend on the ontological realization that we actually *are* what we are manifesting.

On our posthuman path of self-discovery, honoring technological innovation and multi-species coexistence turns into a creative act of self-knowledge. We are all the dynamics that we are supporting through our worlding. We are intra-acting

waves in the ocean of existence, and so are technological realities. Each act of manifestation is multiple and all encompassing. Understanding the inter-being of technology is crucial on our path of self-knowledge. We are all that surrounds us. The technologies we develop show us where we are at; the technologies we envision show us where we can be. If we are unaware of who we are, our technologies will reflect that. If we are aware of who we are, original paths will open in our technological revealing. The question is: *what type of world do we want to be (p)art of?* The era of digital existentialism is also the era of cyborg embodiments. Technology is perceived as the ultimate stage of redesigning the human. Transhumanism focuses on enhancing the human condition, exploring physical possibilities such as radical life extension and digital immortality. Radical imagination is needed in intentional embodied evolutions: the power of bio-technological poiesis lies in the potential. And yet, to manifest planetary enhancement, instead of social privilege and existential obfuscation, we must be realistically aware of our planetary conditions. For instance, if radical life extension currently succeeded, it could potentially exacerbate overpopulation and ecological distress (increasing geopolitical conflicts for access to resources and global health crises).[71] When we address enhancement – not just from an anthropocentric perspective but from a planetary one – we may expand the notion of radical life extension to non-human life.

Can humans become cyborgs for reasons beyond human needs and wants? The Cyborg Foundation, founded by the artists Neil Harbisson and Moon Ribas in 2010, answers this question with a ground-breaking invitation: "From now on humans are shifting from using technology to transform the environment, to using it to transform our bodies and minds in order to develop new senses and abilities to better adapt to the world we live in. Just imagine how modern cities would be, if instead of inventing the light bulb, we had chosen to evolve our sights to night vision."[72] Modifying the human body[73] instead of the environment turns into a possible answer to the challenges of the Anthropocene. In the 21st century, human

enhancement may be expressed in adaptation to a planet that has drastically changed. Being cyborg manifests in transcending the human condition in harmony with the cosmic flow. We are becomings: porous and permeable. Our evolution, as a species, has historically been technologically driven; in this sense, we have always been cyborgs.[74] Technology is never just something we use: it is a mode of revealing. Once we reach this level of awakening, we are at peace even with the hypothesis that we may be (p)art of a computer simulation – or a super-intelligent stimulation.

#Simulation Hypothesis

The simulation hypothesis[75] is a modern remake of the God hypothesis, with a dynamic twist and a digital flavor. The world was not made in seven days of creation (as stated, for instance, in the Bible); it has been programmed and is constantly being updated. According to this existential hypothesis, we may be living in a simulated reality, where the speed of light represents the limits to how fast we can travel in space – and, consequently, to what we can discover. This advantage would give our hypothetical creators the chance to generate, in advance, what we may be searching for in the universe. This hypothesis can be compared to the movie *The Truman Show* (1989), where the main character is, unknowingly, the star of a live TV show from the day he was born until he becomes aware that his life is a play, and thus is able to end the game, reaching self-realization.

The possible reality of the simulation hypothesis does not bring us further on our path towards existential awareness. Even if we were some type of avatar living in a simulated world created by super-intelligent beings, our search for self-enquiry would eventually result in full awakening. Everyone and everything in existence (including "created" creatures) can eventually reach self-realization: there is no ultimate separation between "us" and "them," "self" and "other." This applies to both sides. In Buddhist ontologies, for instance, gods and goddesses may exist but are not necessarily enlightened;[76]

similarly, our creators would not be all-knowing, just by being creators. Most likely, they themselves would have been created as well. *In this infinite play of creation, who would have created the original creators?* The ultimate source relies on self-creation. Arguably, creation is, by definition, self-creation: a poietic process of existential revealing. In the dynamics of coevolution, creatures are co-creators (for instance, we come from our parents; and still we are our own unique selves). In the foundational relationality of inter-being, any absolute otherness dissolves once we become aware.

Self-awareness is the mark, and the spark, of existence. We do not have to await the advent of super-intelligent AI for technology to be aware. Technology is already aware, and so are we. The ways to partake in existential awareness are unlimited; they do not boil down to human expressions. Different types of technologies generate different outcomes. Transformative power lies in the ways humans approach technology. In tech awareness, fear cannot act as the mo(-tiva)tor[77] of technological induction: the divide self/other is never absolute. We live in an era obsessed with tales of technological salvation.[78] At the dawn of the Anthropocene, techno-enchanted narratives are detrimental to ourselves – as individuals, societies, species and beyond. By presenting technological mirages as mitigations of the current ecological crisis, they serve as socio-political palliatives to the need for real change. In sedating reality, they turn into existential obfuscations on the path towards self-realization. To know who we are, we must acknowledge reality the way it is. **Technology will not save humanity: technology is (p)art of who we are.** In existential revealing, technology exceeds the human condition. It is neither superior nor inferior. Mathematical inter-being: zeros and ones to the end of time. <I Love Technology.> An intentional technology of infinite love, vision and hope. Password: Poiesis0101. Login & Logout: Successful.

Farewell

Technological manifestations, in this dimension, result from unlimited dynamics of material expressions, nets of ecological co-emergence, expressions of cosmic phenomena. Actual and potential. To comprehend the techno-sphere as (p)art of the planet, please visit chapter 4. To delve into space technologies, go to chapter 5. To embrace onto-technologies of existence (from being to non-being), explore chapter 8. You can also find your way in the labyrinth, accessing any chapter or tag of your choice. Rest assured that, at the end of the journey, You will have a complete picture, no matter what.