

# Designing the Future Through Touch

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#### Abstract

In the presented article, I consider what the process of designing the future can be. In detail, I am interested in what role touch plays in this process, combined with the practice of speculative imagination. In order to better understand this phenomenon, I use the transdisciplinary model of knowledge production, whose specific feature is the crossing and blurring of boundaries between fields of knowledge. The goal of this activity is to produce new forms of knowledge by combining methods and cognitive tools derived from science, art, humanities, and crafts. In such a context, I am interested in how discursive practices and body practices are complementary. As a research perspective, I adopt the currents of posthumanism and new materialism oriented toward the analysis of human and nonhuman expressions of agency and processes of self-organization of matter. The starting point for the considerations presented here is a critical analysis of the vision of the future in the form of the absence of any future inscribed in the concept of the Anthropocene. Referring to the considerations of feminist thinkers such as Rosi Braidotti, Donna Haraway, and Karen Barad, I analyze what the future, understood as the commonality of the human and nonhuman, in the perspective of planetary changes, can be.

**Keywords**: posthumanism, new materialism, Rosi Braidotti, Donna Haraway, Karen Barad, future, touch, imagination, speculation, divination

#### 1. Introduction

The best way to anticipate the future is to design it

[Buckminster Fuller<sup>1</sup>]

In the movie "Tomorrowland" (Bird, 2015), in one of the final scenes, a group of heroes ends up in the titular Tomorrowland. This is a place located in an alternate dimension, where the most outstanding individuals, recruited from around the globe, create a kind of technological utopia. The most advanced device in Tomorrowland is the Monitor, an object resembling a large, levitating sphere or an eye, a powerful machine that allows one to look into the future.

When the main character Casey Newton, with the help of the Monitor, becomes acquainted with what the future holds for humanity, she experiences a mixture of horror and despondency. It turns out that the inevitable destiny of the human race is its annihilation and, with it, the entire planet Earth. However, the girl discovers the Monitor's secret: the machine does not predict the inevitable, predetermined future, like a techno-fortuneteller, but reveals humanity's desired variant of the future. In other words, as the movie's characters note, the Monitor "broadcasts" into people's minds a vision of the future that they project, causing a "self-fulfilling prophecy" effect. When Casey tries to convince David Nix (played by Hugh Lauri), the despot in charge of Tomorrowland, that humanity can be induced to undertake the creation of a different vision of the future, Nix, in response to Casey's words, delivers a very interesting monologue in which he explains why humanity is doomed to an unavoidable, terrible end. Nix's words read as follows:

Let's imagine. If you glimpsed the future and were frightened by what you saw, what would you do with that information? You would go to... Who? Politicians? Captains of industry? And how would you convince them? With data? Facts? Good luck. The only facts they won't challenge are the ones that keep the wheels greased and the dollars rolling in. But what if... What if there was a way of skipping the middleman and putting the critical news directly into everyone's head? The probability of widespread annihilation kept going up. The only way to stop it was to show it. To scare people straight. Because what reasonable human being wouldn't be galvanized by the potential destruction of everything they have ever known or loved? To save civilization, I would show its collapse. But how do you think this vision was received? How do you think people responded to the prospect of imminent doom? They gobbled it up, like a chocolate éclair. They didn't fear their demise, they repackaged it. It can be enjoyed as video games, as TV shows, books, movies. The entire world wholeheartedly embraced the apocalypse and sprinted towards it with gleeful abandon. Meanwhile, your Earth was crumbling all around you. You've got simultaneous epidemics of obesity and starvation.

<sup>&</sup>lt;sup>1</sup> Quotes from (Kuang & Fabricant, 2022, p. 243).

Explain that one. Bees and butterflies start to disappear. The glaciers melt. Algae blooms all around you. The coal mine canaries are dropping dead, and you won't take the hint! In every moment, there is the possibility of a better future. But you people won't believe it. And because you won't believe it, you won't do what is necessary to make it a reality. So you dwell on this terrible future, and you resign yourselves to it. For one reason, because that future doesn't ask anything of you today [bolding in the text—BM]. So, yes, we saw the iceberg, we warned the "Titanic". But you all just steered for it anyway, full steam ahead. Why? Because you want to sink. You gave up. That's not The Monitor's fault. That's yours (Bird, 2015)<sup>2</sup>.

The monologue delivered by Nix contains several important assertions that are extremely relevant to the consideration of the future that I want to present here. First of all, the figure of the ruler of Tomorrowland reveals the deepest assumptions of many debates related to the concept of the Anthropocene, concerning the inevitable annihilation of humanity, as well as the burden of its responsibility for the ongoing planetary catastrophe in the form of the climate crisis and the subsequent mass extinction of species. Nix exposes what is behind the modern fascination with the vision of a future with no future: "That future doesn't ask anything of you today." However, what interests me more in Nix's statement, and what will be the focus of this article's consideration, is the theme of designing the future and how to materialize it; to paraphrase the words of the ruler of Tomorrowland: "In every moment, there is the possibility of a better future. You need to believe in it and do what is necessary to make it a reality."

Situating my considerations within the currents of posthumanism and new materialism $^3$ , I would like to rethink how we can understand the process of designing the future from this perspective $^4$ . I begin my discussion by critically

<sup>&</sup>lt;sup>2</sup> See a scene from the movie showing Nix's monologue,

https://www.youtube.com/watch?v=5sZnphH7L80&t=51s [accessed 15.05.2024]).

<sup>&</sup>lt;sup>3</sup> Even though some scholars believe that the two currents are contained within each other, I tend to believe that they rather intermingle at different points, and should be treated as independent but inseparably intertwined currents. I believe that posthumanist considerations center around the relationship between the human and nonhuman, showing the consequences of these connections. In contrast, the inquiries carried out within new materialism are more concerned with ontological descriptions and explanations of how we can understand the agency of materiality, and more generally referred to as the processes of self-organization of matter. Similarly, I read the considerations of philosopher Monika Rogowska-Stangret, who, in her book *Być* ze *światem*, also points out the diversity of discourses developed within the two currents, and the need to distinguish between them. See (Rogowska-Stangret, 2021, pp. 11, 151).

<sup>&</sup>lt;sup>4</sup> The initial inspiration for writing this article came from a meeting with Kasia Chrobak, the co-creator of the podcast series titled "Nikt nas nie pytał, ale i tak się wypowiemy!". Our meeting was recorded in the form of a discussion titled "Philosophy as a Practice of Designing the Future" and it was about how we can understand the future through notions of designing a community that entangles together the human and nonhuman in a process of self-organizing

reflecting on the notion of the Anthropocene and the related vision of the future as a non-future. I look for an alternative to the nihilistic vision in the inquiries of such scholars as Rosi Braidotti, Donna Haraway, and Karen Barad, among others. Taking the considerations of the aforementioned feminist thinkers as a starting point, I try to present the design of the future as a process of the production of a different "ways of living and dying together on one planet."<sup>5</sup>

I understand design, in the context of this paper, as a set of practices-processes aimed at creating something, as well as the object that results from them, and its specific properties and ways of interacting with its environment (agency)6. The mentioned practice-processes are, for example, speech, writing, thought, calculation, measurement, modeling, shaping, etc. Usually, in this kind of practice-processes, a human being is considered to be the one who creates and develops a given work using the materials of his/her choice. Something that undergoes processing is serving as a material. However, is this really the case? Is materiality reduced to the role of a material, something that serves as a building material, a passive tool for the realization of human visions? What exactly is materiality?

Matter and materiality in the posthumanist and new materialist view is not a kind of fixed, unchanging essence, a set of locked properties of things, reduced to their existence<sup>7</sup>. Rather, we are dealing with the processes of self-formation of things, the ways in which they become or self-organize in certain arrangements of relations. In such a view, let's say a cup is not a thing with fixed and non-modifiable properties, but an arrangement of the processes that constitute it, and thus its ongoing materialization. As Karen Barad writes:

Matter is neither fixed and given nor the mere end result of different processes. Matter is produced and productive, generated and generative. Matter is agentive, not a fixed essence or property of things. Mattering is differentiating, and which differences come to matter, matter in the iterative production of different differences. Changing patterns of difference are neither pure cause nor pure effect; indeed, they are that which effects, or rather enacts, a causal structure, differentiating cause and effect. Difference patterns do

matter. I am very grateful for all the comments and insights on the issue of the future raised by Kasia. Listen to the podcast: https://niktnasniepytal.podigee.io/59-nowy-odcinek [accessed 15.05.2024]. The podcast is only available in Polish.

<sup>&</sup>lt;sup>5</sup> The quoted words belong to Haraway; Braidotti adds that "we were never just human, but something much more than that." The statements of both scholars emphasize the importance of the covenant of human and nonhuman modes of existence and the impossibility of separating them from each other. For this reason, contemporary ethical projects should be situated in these very connections. See (Braidotti, 2013, p. 1; Haraway, 2016, pp. 58, 67–68).

<sup>&</sup>lt;sup>6</sup> https://www.britannica.com/dictionary/design [accessed 15.05.2024].

<sup>&</sup>lt;sup>7</sup> An example of this kind of metaphysical thinking is Catherin Malabou's notion of plasticity, showing things not through their unchanging essence, but their forming form. There are no unchanging properties, only perpetual changeability. See. (Malabou, 2012).

not merely change in time and space; spacetime is an enactment of differentness, a way of making/ marking here and now (Barad, 2007, p. 137).

Jane Bennett, a new materialist thinker, introduces the concept of *vibrant matter* to highlight matter's particular capacity for self-organization (Bennett, 2010). For example, Bennett describes the complex relationships and interdependencies that occur between human metallurgy and nonhuman metals (Bennett, 2010, pp. 52–61). The properties of various alloys are altered by interaction with a human subject who heats them or uses physical force to shape them. The metal reacts to human actions and thus affects what kind of object will be formed from it, which we can consider a manifestation of its self-organization. Pointing to Bennett and the context of design, Arjun Appadurai encourages us:

to rethink the problem of materials and materiality by suggesting that design is not a mere operation upon preexisting materials of an ideal (or idealized) series of creative operations. Rather, whether in the matter of clothing, architecture, or digital design, materiality can be viewed as a design context, and design can be treated as a form of vibration (in the sense of Jane Bennett's idea of "vibrant matter") that disturbs and creatively animates the material world and adds new forms of movement to already moving and dynamic materials (Appadurai, 2014, pp. 9–10)8.

Barad's considerations show us exactly what the practices-processes that connect the humans and the nonhumans in the design process are. Inspired by Foucault's reflections on discursive practices (speech, writing, thought, calculation, measurement, etc.), the feminist researcher shows that the French philosopher's mistake was to consider them in isolation from materiality or to think of them precisely as something external to matter. Thus, we should rather write about material-discursive practices, thus showing the self-organizing capacity of matter, which results in the constitution of interrelated concepts and bodies that constitute dynamically changing open wholes whose common boundaries are constantly negotiated. As Barad writes:

What is needed is a robust account of the materialization of all bodies—"human" and "nonhuman"—and the material-discursive practices by which their differential constitutions are marked. This will require an understanding of the nature of the relationship between discursive practices and material phenomena, an accounting of "nonhuman" as well as "human" forms of agency, and an understanding of the precise causal nature of productive practices that takes account of the fullness of matter's implication in its ongoing historicity (Barad, 2003, p. 810).

<sup>&</sup>lt;sup>8</sup> It is worth mentioning that Appadurai's words are an excerpt from her introduction to a collective monograph on contemporary design entitled *Designing as Futer-Making*, a title that resonates perfectly with the thought I am trying to present in this article.

Barad associates the turn to matter with the phrase "Matter Comes to Matter." In the context of design, the scientist's postulate described above can be interpreted in such a way that every action, oriented to the process of design, involves the agency of both human subjects and nonhuman beings. They themselves take part in the process of shaping materials, as do the people who accompany and assist them in the process. Human and nonhuman agency remain inseparably intertwined. The clay, steel, through its influence, triggered by the impact of human interference (the chemical processes initiated by the metallurgist, the applied physical pressure) is transformed into a thing with specific and intended properties, for example, a cup or cutlery. Referring once again to Appadurai's words, it can be said that "design thus emerges as a mediator of the relationship between human and nonhuman materialization." (Appadurai, 2014, p. 9).

Entangled with each other, human and nonhuman materializations are the processes of the constituting future, which is precisely defined relations and dependencies, rather than an imaginary place, distant in time, or, as Appadurai continues her argument, the future is "less as an abstract topology and more as an embedded property of the life of things." (Appadurai, 2014, p. 9). Relationships and dependencies understood processually, materialize the interconnected corporealities that constitute the communal. The future, therefore, is what begins (in) the now, in the connections and relations of the human and nonhuman, in their mutual transformations and affects (agency), constituting themselves into diverse forms of community. Ordinarily, the term community is used to refer to a group of persons, human subjectivities; however, in posthumanist and newmaterialist considerations, community includes both human and nonhuman beings and even phenomena. An example is the neo-animism approach, which posits that the world is full of other-than-human persons, where animals, plants, and even rivers can have the status of a person<sup>9</sup>. This includes any debates about giving rights to nonhuman animals, or research on the self-awareness of nonhuman animals. We can consider the totality of these patterned interactions between the human and nonhuman, which constitute the various forms of community, as the entangled processes of self-organizing matter that Barad and Haraway write about.

<sup>&</sup>lt;sup>9</sup> One of the more important contemporary examples of neo-animism in Poland may be the widespread action regarding the pollution of the river Odra. As a manifesto and opposition to further devastation of the river, action was taken to give legal personality to the river (Osoba Odra). The gesture is not only symbolic and legal, but aims to initiate a social debate on how human and nonhuman existence are inextricably linked, prompting us to think about mutual coexistence through the prism of community. See https://osobaodra.pl/en/home/ [accessed 20.02.2024]. In such a perspective, Stacy Alaimo's thinking on "trans-corporeality, in which the human is always intermeshed with the more-than-human world, underlines the extent to which the substance of the human is ultimately inseparable from 'the environment.'" becomes a very useful tool. See. (Alaimo, 2010, p. 2).

As Nix notes, "In every moment, there is the possibility of a better future", or, more precisely, every moment—now—there is the materialization of multiple futures. One of the many expressions of this process is thinking and movement, constituting themselves into concepts and bodies. Hence Nix's words about the future: "You need to believe in it and do what is necessary to make it a reality." To believe means to imagine it together with others, and thus to design the desired future as the first expression of its materialization, to then take all the other actions that make up the future itself. In this article, I will focus on the entanglement of imagining and bodily practices related to touch and its connections with the other senses.

# 2. Anthropocene: What is the Vision of the Future as the Absence of any Future?

In the part of the movie preceding Casey's arrival in Tomorrowland, we see the protagonist when she is in class at school. In various classes, teachers present students with all sorts of global crises of the present day, related to economics, social issues, energy sources, and climate change, etc. All these crises are supposed to add up to one thing—the inevitable end of mankind in the form of an unspecified annihilation linked to the eradication of life on planet Earth. Looking at these scenes, I get the impression that the teachers derive a kind of sadistic satisfaction from scaring the students with terrifying visions and creating in them a sense of fear and helplessness. As the tirade continues, Casey utters a question, sending the teachers into a stupor and consternation: "We can fix this. I know it's bad, but what are we doing to change it?" When, in the final scenes, Casey ends up in Tomorrowland with a group of heroes, the question she uttered in the classroom is expanded, rephrased, and put before her in the following form: "Are you able to fix the World?".

However, there is something wrong with the above question—the world does not and has never needed fixing. With the described earlier Nix's monologue on humanity in mind, the question that I think should be asked is, rather, "Are you able to create a different vision of the future?" or, more precisely, "What visions of the future are you able to propose?". In this context, I follow Donna Haraway and, thinking with her concept of *storytelling*, pose the following questions: "With whom will you tell your stories of the future? Who will you allow to speak and who will you not? With whom will you develop the story? Who will be missing in it? Who will be deliberately removed from it, subjected to oblivion?" (Haraway, 2016, pp. 30–57). As Haraway points out, visions of the future, or, more broadly, the process of designing them, requires us to forge alliances, to produce and become aware of the connections that exist and are produced, the exclusions that sometimes arise, and the paradoxes that come with them.

Let's return to the vision of total annihilation, consisting of a tangle of all forms of global, or planetary, crises, spun and injected like poison into students by teachers at the school Casey attends. It fits into a broad debate within the humanities about the Anthropocene and its resulting planetary consequences. The concept of the Anthropocene was proposed by the biologist Eugene F. Stoermer and atmospheric scientist Paul J. Crutzen as the name for a new geological epoch in which the human race plays a key role in transforming the Earth (Crutzen & Stoermer, 2000). The term inaugurated by scientists was quickly adopted in the humanities. Unfortunately, the popularity of the Anthropocene is as pronounced as the sense of gloom and despair the term carries. The overemphasis on analyses of the role that the human race plays in the devastation of almost all types of natural environments functioning on Earth seems overwhelming and takes away the motivation to take action. Philosopher Ewa Bińczyk refers to this state as "lethargy" (from Greek lēthargía), defined as apathy—a state of the organism that impedes its ability for cognition and action (Bińczyk, 2018, 2019). Of course, I don't think that the overdeveloped human activity on Earth doesn't have a bad or even fatal effect on the ongoing life on Earth. However, I believe that the issue of the scale of human agency at the planetary level has more than one face, and it is worth looking at precisely from the perspective of the co-creation of various projects of the future. Thus, the concept of the Anthropocene can either be a story of total annihilation, a sense of despondency and powerlessness, or a starting point for the search for new visions of planetary communities, understood as materializing futures precisely.

### 3. Ontological Imagination: Speculation and Imagination

Haraway is one of those researchers who direct our attention to this search for new visions of planetary togetherness and the need to rethink it under the conditions of dynamic ecosystems and geopolitical changes. In her reflections, the feminist biologist takes into account the perspective of the Anthropocene—human activity in its broadest sense and its links to climate change and the sixth mass extinction of species, and thus declining biodiversity, crucial to the continuation of life on Earth (Haraway, 2016). For Haraway, however, this is only a starting point for far-reaching visions of the future, situated in the material now. In such a context, the feminist thinker writes about "ways of living and dying together on planet Earth" or "the arts for living on a damaged planet" (Haraway, 2016, pp. 58, 67–68). Like Haraway, I believe that the "seeds" of the future in its various variants are to be found in the concrete bodily communities being produced now. The broad backdrop for such explorations are dynamic, and often violent, planetary changes 10. Propositions of the future, often

<sup>&</sup>lt;sup>10</sup> Their effect could be the end, or the diametric transformation of what we call humanity today into a completely different form of community, and thus a specific variant of the process

happening simultaneously in their neighborhood<sup>11</sup>, develop precisely in concrete surroundings<sup>12</sup>.

The ambiguity of the ways of creating differentiated stories (*storytelling*) in the form of new variants of the future, Haraway includes in the term SF, having several expansions (speculative fabulation, string figures, speculative feminism, science fact, and science fiction) (Haraway, 2016, pp. 2–3). In particular, I am interested here in the issue of feminist speculativity and its importance in the process of designing the future, understood as different variants of material communities of the human and nonhuman, or in other words in creating experimental forms of the future possible at the level of speculation, that is, working with imagination<sup>13</sup>.

Referring again to the notion of Anthropocene; it can lead us to a vision of the future as any absence of any future (for mankind). This vision still, however, paradoxically involves thinking of the future—recalling Appadurai's words once again—as an "abstract topology," that is, certain unspecified spacetime imaginings, such as Hollywood productions portraying a post-apocalyptic world. However, for Haraway, the Anthropocene becomes a starting point for feminist speculation, that is "our capacity for imagining and caring for other worlds, both those that exist precariously now (including those called wilderness, for all the contaminated history of that term in racist settler colonialism) and those we need to bring into being in alliance with other critters, for still possible recuperating pasts, presents, and futures." (Haraway, 2016, p. 50). Speculativity in this perspective is the ability to imagine worlds (worlding) as the first of the manifestations of their materialization, arising from—referring again to Appadurai's words on what the future actually is—"the embedded property of the

of materialization of the future. However, in contrast to the considerations carried out within the concept of the Anthropocene, humanity does not play an overarching role here, and the only one that remains is one of many equivalent elements, manifestations of the agency of self-organizing matter.

<sup>&</sup>lt;sup>11</sup> There is never just one future happening, but there are always many, and their materializations are interrelated. For more on this topic, see the subsection on different ideas of time, "Divination and co-creation of the future: predicting the future, or designing it?".

 $<sup>^{12}</sup>$  On situated knowledges see. (Haraway, 1988).

<sup>&</sup>lt;sup>13</sup> My consideration of speculativity, and imagination in the context of designing different variants of the future is also inspired by the investigations of the French philosopher Quentin Meillassoux. He is one of the thinkers who develop speculative realism, which is also a part of the field of posthumanism, as well as new materialism, but not associated with feminism. Meillassoux mainly analyzes the issues of speculation, imagination, ontology, and the possibility of the emergence of scientific understanding, as a specific method, closely related to inductive thinking, the emergence of the scientific method, or science in general. Since the investigations of this philosopher do not directly fit into the considerations of speculativity and the related design of different variants of the future, I do not include them in the actual text of the article. At the same time, I recognize the need to point out the philosophical achievements of Meillassoux as an important source of inspiration for the argument presented, concerning the design of the future. See (Meillassoux, 2009, 2015, pp. 3–6).

life of things" or, referring to Bennett's consideration—of the vitality of matter itself. As Haraway writes "It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties. It matters what stories make worlds, what worlds make stories." (Haraway, 2016, p. 12).

Speculativity is a method of imagining, and thus the first stage of designing the future, the constitutive bonds and dependencies between human and nonhuman in their inseparability. The futures materializing in this way are not spatio-temporal places (abstract topologies), but relationships and connections, emerging commonalities (embedded property of the life of things).

The starting point for the speculations that constitute the various variants of designing the future is imagination understood as "the first form of existence" (Rogowska-Stangret 2021, 9). The process of imagining something in the context of posthumanist and new materialism considerations is a manifestation of the self-organization of matter, that is, its materialization. Philosopher Monika Rogowska-Stangret has created a concept that enables a good understanding of this process. The thinker proposes to us "being *from* the world" (*bycie* ze *świata*) as a way of existence that is an alternative to Heidegger's "being-in-the-world," aimed at distinguishing human subjectivity from other forms of existence. The concept introduced by the German thinker can cause us to experience a sense of isolation and separation from the world. The philosopher describes her philosophical alternative to Heidegger's notion in the following words:

We are from the world, not *in*-the-world. To be from the world means that there is no qualitative difference between us and the world, which we must bury in order to be able to define our own theory as anthropo-de-centralizing. To be from the world also means that the subject experiences an implosion: the world emerges from within the subject, and the subject emerges from within the world, and the world emerges from the subject, and the subject emerges from the world... Finally, to be from the world also means that we emerge from the world, that we become-with-it, that all aspirations—whether they be aspirations to fuse, fade into, connect, or to separate, isolate, be a narcissist—are immanent to the world, characterize the world [translation—BM] (Rogowska-Stangret, 2021, p. 26).

Let's return to the movie "Tomorrowland". Casey experiences being *from* the world when she begins to interact with the Monitor. As I have said before, in the course of interacting with the Monitor, the heroine discovers its secret, namely that the machine does not predict a set in stone, determined future, like a techno-fortuneteller, but reveals humanity's desired variant of the future. In other words, as the film's characters note, the Monitor "broadcasts" into people's minds a vision of the future that they themselves project, causing a "self-fulfilling prophecy" effect. This may be the vision of total annihilation inherent in the concept of the Anthropocene, but it is only one of many possibilities.

The vision of the future appearing before Casey's eyes as an inevitable catastrophe in the form of planetary annihilation is not a kind of cinematic projection. We are not dealing here with something ultimately determined, a kind of "glimpse" of events that will inevitably happen. What Casey sees is a manifest projection of the future here and now in the form of intertwined forms of related human and nonhuman agency. The future understood in this way is precisely a dynamic process undergoing constant changes and transformations; the future is a continuous materialization of the now, containing within it the ongoing transformations we call the past<sup>14</sup>.

We can consider the Monitor, or rather the way it works, as an intriguing moment of grasping and understanding what is the process of self-organization of matter, or its becoming. What is being transformed is matter, carrying out a self-organizing process of materialization, manifesting itself in interrelated human and nonhuman forms of agency. The process of imagining, which is an important element of speculation, expresses the self-organization of matter, that is, "the emergence of the world from within the subject and the subject from within the world," since "there is no qualitative difference between us and the world" (Rogowska-Stangret, 2021, p. 26).

The ontological immanence described by Rogowska-Stangret is identical to Spinozian materialist monism, in which everything is contained within itself infinitely as a multiplicity of manifestations of the same thing, or to put it another way, everything that exists is "packed" within each other (de Spinoza, 2003). Casey, the Monitor, the indifferent humanity, the devastated planet, and Nix, are making mutual transformations to each other, comprising the process of self-organization of matter, which is an infinite multiplicity in itself. This process is precisely the designing of different futures, that is, the phenomenon of collective transfiguration of the entangled forms of human and nonhuman agency<sup>15</sup>.

The materiality of the process of designing the future has both ontological and ethical dimensions, or each projection of the future is a proposal of a different ontology of "stories about the world" and a different ethic of "ways of putting stories into practice." Thus, different futures are constituted by imagining, speculating, "thinking differently," and "thus telling stories about the world differently," closely linked to "changes in our everyday practices and habits" (Rogowska-Stangret, 2021, p. 17). In the process of designing the future, transformations are onto-ethical. This means that "stories about the world" and

 $<sup>^{14}</sup>$  Later in the text, I will also discuss various ideas of spacetime and the ideas resulting from them on how we can understand the process of designing the future.

<sup>&</sup>lt;sup>15</sup> This process continues constantly within ourselves as "the emergence of the world from within the subject and the subject from within the world," where the human and nonhuman continually reconfigure each other. This is accurately put by Rosi Braidotti and Astrida Neimanis, who writes that "we might say that we have never been (only) human" (Braidotti, 2013, p. 1; Neimanis, 2017, p. 2).

"ways of putting them into practice" express two aspects of the materialization of change as equal. Ethics are understood here in Spinozian terms; each ethos is a different way of existence, a mode of existence (*conatus*) whose goal is to "remain in existence" (de Spinoza, 2003). We are talking about interacting bodies, interacting with each other through different kinds of affects, and thus mutual stimulation.

I understand the process of imagining as a practice of speculation, that is, forming, or structuring, as a manifestation of the self-organization of matter. Inspired by Rogowska-Stangret's reflections on the matter, we can say that imagining something is materialization, that is, a process of transformation of what exists<sup>16</sup>. The notion of Anthropocene conceals the kind of contradiction I mentioned; it is an experience of a sense of powerlessness and "lethargy", materializing in the form of a vision of the future in the form of the inevitable destruction of humanity, and with it the annihilation of life on Earth. I will refer to such a state, in the context of the above discussion, as a crisis of imagination or lack of ontological imagination, i.e. lack of ability to produce long-term visions of possible futures, or, more radically, the ability of the Anthropocene to produce a single vision of the future in the form of the absence of any future <sup>17</sup>, associated with the destruction of humanity. In the movie "Tomorrowland", the school teachers and their depressing narratives directed at the students convey the mood of frowning at the Anthropocene and the vision of ultimate annihilation behind this notion. But have we lost the ability to spin visions of far-reaching futures? Do we no longer know how to tell common stories with others? Or is this a short-lived effect in the perspective of planetary time, related to a state of feeling "lethargy"? The numbness and the resulting "lethargy" are expressed in a withering of ontological imagination. The effect of this state of affairs is to focus only on catastrophes as something unavoidable. This shows, however (to return to Nix's words), that we are comfortable in our sense of powerlessness: we no longer have to answer for anything, we just wait for the inevitable end.

<sup>&</sup>lt;sup>16</sup> This process, when it takes the form of the practice of designing the future, to use the words of Magdalena Środa from the introduction to the book *Bycie* ze *świata*, requires from us "infinite reserves of imagination and openness." See (Rogowska-Stangret, 2021, p. 9).

<sup>&</sup>lt;sup>17</sup> In the words of Karen Barad, we can say that the Anthropocene is a specific way of thinking about time: "Time is synchronized to a future of No Future. This is time fixated on its own dissolution. Setting time on edge, it offers both a grim view of our prospects and a false sense of globalism assuming a homogeneity of times and spaces, eliding the uneven distribution of nuclear and climate crises' resources and precarity. Furthermore, it has the anesthetizing effect of diverting questions of responsibility and of focusing the apocalyptic phantasm of total war, thereby distracting attention from the realities of war in its ongoingness." See (Barad, 2018, p. 208).

# 4. Divination and Co-creation of the Future: Predicting the Future, or Designing it?

Speculation on the question of the future is closely related to the need to rethink the concepts of time and space, which, following Barad, I consider as two, mutually containing, manifestations of the process of becoming matter (Barad, 2007, pp. 179–182). In this section, I would like to consider the design of the future by attempting a specific speculative development of the practice of divination. Divination (Latin *Divinatio*)—or, in more folkloric terms, fortune-telling—is a field of knowledge concerned with ways of predicting the future through the use of specific methods, practices, and ways using objects specifically designed for this purpose, such as cards. What will be of most interest to us in the practice of divination is the associated understanding of the concept of the future and its implicit metaphysical assumptions about the concept of time. We will examine three concepts of time and the resulting accounts of the future; I conventionally call them the linear, circular, and quantum concepts.

I would like to emphasize that by referring to a particular subject of quantum physics, I do not aim to undertake its scientific analysis or to criticize them. Inspired by Barad's considerations, I—like her—want to make speculative use of the implicit metaphysical assumptions inherent in the theories of this field of knowledge. In other words, I try to think about and imagine time through selected ontological assumptions from the field of quantum physics. For Barad, this kind of practice became the starting point for the physico-philosophical stance she postulated, which she calls agential realism. See (Barad, 2003, p. 814).

#### - Linear time -

A linear understanding of time is based on the assumption that consecutive moments are arranged in a sequence, comprising the experience of the past, present, and future. They are bound together by the concept of causality, or—in this case—the specific sense that individual events follow from each other. The concept of linear time, where future events follow closely from past events, is rooted in Newton's classical physics, where time and space exist in an absolute way (Barad, 2007, pp. 233, 437). The future, in such a perspective, is something that can be guessed, and discovered, because it follows closely from the antecedent events and their connections to what is to happen; the concept of determinism, considered in two ways, plays a key role in this process.

The first of the cases in reference to the linear concept of time is based on the assumption of full determinism: the occurring events passing in a cycle of the past, the present, and the future, are defined sequences that gradually become apparent to us, but our actions do not affect it—a change of events is not possible. The future is a "point" located on the "line" of time, a point that is in front

of us, and we are inevitably approaching it, because there is a "lapse" of time. Moreover, the line is already completely determined, and events "appear" to us like a film projection. Here we have total determinism: everything that will happen has already been predetermined (by whom or what?) and it's impossible to change. This is the first scene of Casey's "meeting" with the Monitor. When the girl comes into bodily contact with the machine, it reveals a sequence of consecutive events. Any human intervention does not affect the future, which is ultimately always accomplished in the form of the destruction of life on Earth. Divination, in this view, means the ability to look at the events that will take place, and therefore to see them. The flaw that seems to reveal itself here is that the fact of recognizing events in the future means only getting acquainted with them, but none of our actions, including the mere sighting of them, affect their course. The future can be seen, but it cannot be shaped.

The second case with regard to the linear concept of time involves the assumption of partial determinism. The events that are to come in the form of the future are subject to constant negotiation, in which human causality plays an important role, but not the only one. Divination in this perspective means seeing possible variants of events and selecting from among them those that have the highest probability of happening. This resembles the process of meteorological weather forecasting: by taking a few key factors and their current trajectory of change, we can predict what is most likely to happen, but not with complete obviousness. Taking certain actions can enable us to produce or cocreate a particular variant of the future<sup>18</sup>. Moreover, the future in such a view represents a kind of imagining, a vision of what we want to avoid or realize. Predicting or "looking into the future" will perhaps enable us to prevent or change certain events.

Interestingly, the past in the linear concept of time is something that has already happened and cannot be changed, which is not so obvious in every possible concept of time, about which I will write more when discussing the quantum concept.

Both concepts of linear time raise the question of the finiteness or infiniteness of time: do the events taking place have an end? Is there a beginning and an end? In addition, there is the question of the number of possible variants of events (also finite and infinite, which is of considerable importance in the case of probability). There may also be the question of the first cause; is there some overarching force that has a key or sole role in how events occur over time? Or

is a finite number of possibilities. See (Meillassoux, 2009).

14

<sup>&</sup>lt;sup>18</sup> It would be appropriate to add that this type of thinking is part of probabilism, which is linked to probability calculus. As Meillassoux rightly points out, this kind of prediction, based on induction, i.e., the presumed recurrence of events based on their repeated occurrence in similar ways, conceals the assumption of a finite number of possible events. However, this is a speculative assumption that is not necessarily true, since we cannot say whether the world

do individual actors influence them? If there is an influence here—causation, agency—then who can affect it and to what extent? Is the force external (transcendence) or internal (immanence), or perhaps both?

# - Circular (cyclic) time -

We can also think of time as a kind of repeating cycle, resembling a closed circle. This is a concept that was developed by ancient thinkers, including Heraclitus of Ephesus, the Stoic school, and Plato<sup>19</sup>. Events, in this view, occur in a cyclic, repeating rhythm, and this cycle can last forever. The continuator of the ancient understanding of time was Friedrich Nietzsche, who presented it as the concept of *eternal return* (See aphorism number 341. Nietzsche, 2001, p. 194). The circular conception of time presupposed that the events that take place repeat themselves cyclically. The past, present, and future are what, in a sense, happen simultaneously as an infinite number of repetitions. If we focus on the issue of the future in the sense of cyclical time, it is determined<sup>20</sup>.

Divination in such a perspective means seeing an inevitable destiny, which can involve great suffering. An example of this is the prophecy of the Delphic oracle given to Oedipus, who is said to have put his own parents to death. Terrified by this discovery, the young man made every effort to prevent the prophecy from coming true. Oedipus' actions did not change his tragic fate, and in fact caused him increasing suffering, leading him into an incestuous relationship with his biological mother, whose identity Oedipus did not know. In cyclical terms, time is what has already happened, both in the form of past, present, and future. Thus, past, present, and future, in a sense, happen simultaneously, as what has already happened, but is continually repeating.

### - Quantum time -

What the linear and circular concepts have in common is the understanding of time through the passing of sequential moments. Even though in the circular conception events are what occur infinitely and repetitively, what we have here is a certain sequence of related events; there is a rather standard understanding of causality, which is a closed cycle or continuity of events that may

<sup>&</sup>lt;sup>19</sup> See Plato's *Timaeus dialogue*: http://classics.mit.edu/Plato/timaeus.html [accessed 15.05. 2024].

<sup>&</sup>lt;sup>20</sup> Here, however, some doubts may arise. The concept of "repetition" is not the same as "identity" in the sense of Aristotle, i.e. the situation when two objects have the same set of characteristics and properties. In the case of "repetition," there is a "difference"; in practice, this would mean that eternal cycles of time would have to differ from one another, since each repetition of them is not "identical," but only similar. The subject of how each repetition produces a difference in itself is considered by the French philosopher Gilles Deleuze in his book *Difference and Repetition*. See (Deleuze, 1995).

or may not have a beginning and an end. However, in the case of concepts of time understood through the prism of quantum physics, presented by Barad, causality understood in this way loses its obviousness (Barad, 2018; Rogowska-Stangret, 2021, p. 60). An example developed by the feminist researcher is the recognition of the phenomenon of diffraction in time, where "a given entity can be in [a state of] superposition of different times. This means that a given particle can be in a state of coexisting at multiple times—for example, yesterday, today, and tomorrow" (Barad, 2018, p. 218). The state of superposition of waves is crucial for us here, that is, the situation when waves propagating from two sources overlap or collide with each other, which in practice means that they can extinguish or sum up (amplify) each other at the same time. In this context, Barad writes about diffraction: "In fact, it is possible to do a diffraction experiment in both space and time at once, whereupon a single particle will coexist in a superposition of multiple places and times. In this case of spacetime diffraction, a diffraction pattern can be accounted for by taking account of all possible histories (configurations of spacetime), understanding that each such possibility coexists with all others. In particular, then, in its four-dimensional (relativistic spacetime) QFT elaboration, the probability that a particle that starts here-now will wind up there-then entails taking account of all possible histories, or rather, spacetimemattering configurings" (Barad, 2018, p. 220).

Let's try to imagine, or speculate about, a time in quantum terms through the image of wave propagation. We throw two stones at two points not too far apart on the surface of water, such as a lake. When the stones collide with the water, the surface is breaking, resulting in waves that propagate in the form of circles. Waves propagating from two different points come into contact with each other at some point. Now imagine that the waves do not propagate in a circle, but in a spherical manner, like an explosion, and the very points from which the waves propagate are large in numbers, perhaps infinitely large. Each moment is such a circular wave, a transformation in the form of the past, present, and future. The waves, propagating from different points, overlap each other, creating an intertwining of the past, present, and future. However, the most interesting situation is when the waves, that is, different variants of the past, present, and future, overlap, creating a situation of superposition of waves as a result of the phenomenon of interference: what for one of the "worlds" (points) is the past, can be the present for another. The light radiation of stars, which reaches us from distant galaxies, can be used as an example here. The light of a star that has ceased to exist, reaching us, expresses its end, which has happened before. However, we experience this event as the present. The light we perceive is only a kind of "haunting", an afterimage of past events—a past that we experience as the present moment. In a similar context, Barad considers the example of human and nonhuman victims of the atomic bomb explosions dropped on Hiroshima and Nagasaki (Barad 2018). "Hauntings" for this

researcher are "not immaterial, and they are not mere recollections or reverberations of what was. Hauntings are an integral part of *existing* material conditions" (Barad, 2018, p. 227).

Pasts and futures contain each other in the present, occurring in the form of transformations of the matter: every past is simultaneously a future, as well as every future is already some form of the past, depending on the current material situatedness, or a particular arrangement of corporeal relations, an entanglement of human and nonhuman forms of agency. In the quantum model, we have a multiplicity of entangled pasts, presents, and futures that occur simultaneously in a process of endless "spacetimemattering configurings" (Barad, 2018, p. 220). To be corporeal in such a view is to be situated (Haraway 2009), through repeated processes, like the aforementioned propagation of waves, constituting themselves as past, present, and future. As Rogowska-Stangret writes, "It is difficult [...] to keep the story of the body linear (time-wise) since it is inevitably a simultaneity of the past, present and future [translation—BM]" (Rogowska-Stangret, 2021, p. 71).

Together with the dancer Krystyna Lama Szydłowska, we tried not only to describe the process noted by Rogowska-Stangret, but also to generate or activate it in the readers of our performative text, which is an attempt to combine choreographic practices with philosophical reflection. We write there that "The future begins with the end of the world, with a fragment of it that wanders into a new environment, entering the process of becoming the past—the future. The process of passing and the emergence of new worlds is understood as the materialization of diverse variants of the future [translation—BM]" (Mroczkowski & Szydłowska Lama, 2023, p. 247). In an extremely colorful and insightful manner, philosopher Federico Campagna develops the theme of how the end of one world inevitably becomes the beginning of a new world, or how the remains of the old world become the seed of a new world. In this context, the thinker elaborates on the importance of the art of divination as a skill for designing the future (Campagna, 2021, pp. 21–30). Campagna also sees the production of the future as a process of constituting new forms of community, but from my perspective, he does not sufficiently show the importance that nonhuman others play in this process.

Casey's bodily contact with the Monitor, through touch, produces a change in the form of a new version of the future—the becoming now—in the form of a brief, almost elusive, flash of imagery that Nix tries to deny. The process of thinking, that is, imagining, which constitutes the "first form of existence" (Rogowska-Stangret 2021, 9), is a manifestation of the process of materializing the future now, as a specific trajectory of events, a certain potentiality situated at the edge of the now; any form of the future is possible, as a contingency, but not necessary, since, as Meillassoux paradoxically notes, "contingency is what is necessary" (Meillassoux, 2009, pp. 65–67).

# 5. Touching the Future or The Future of Touch

With my eyes, I can see the cinematic moment when Casey, together with the Monitor, begins to produce the future. The girl and the machine begin their relationship through touch, starting the process of designing the future. Perhaps the same scene is also seen by the feminist philosopher Luce Irigaray, who, at the same moment, says the words "Perhaps Cultivating Touch Can Still Save Us" (Irigaray, 2015). In her text titled with the same words, the thinker emphasizes the crucial importance of the sense of touch in the process of producing the community. Irigaray's reflections focus on the making of human relations and the thread of gender difference, which plays an important role here. What I find missing in the feminist thinker's investigations, however, is how the cultivation of intimacy, grounded in direct bodily contact, makes it possible to produce and sustain bonds with other nonhuman beings as well. The production of bodily community through the nurturing of relationships produced through touch, linked to the other senses, may be an important factor in dismissing the specter of planetary catastrophe portrayed in visions of the Anthropocene. I interpret the final words of Irigray's text as a starting point for the practice of designing the future, namely the question of "another way to cultivate touch and share it." with human and nonhuman others (Irigaray, 2015, p. 283).

Haraway introduces the theme of interspecies relations here and formulates a follow-up question: "Whom and what do I touch when I touch my dog?" (Haraway, 2007, p. 35, See also 2003). The questions pile up—another one is: what is happening when I touch myself, and what is happening when we touch each other? How does a difference occur here? In touching, "world making" is performed, that is, the process of becoming matter (Haraway, 2007, p. 36). The precondition here is precisely intimacy, made possible by the establishment of bodily contacts, occurring in the form of different variations of becoming. Touching is a process of creating relations of intimacy, involving a special kind of care and responsibility, connected with the fact that one never knows what consequences will result. Barad refers to Haraway's reflections in the text *On* Touching—the Inhuman That Therefore I Am, elaborating on the issue of touch emerging in the relations between the human and the nonhuman (Barad, 2012). The researcher, situating her reflections in the field of quantum physics, tries to show the activity of matter through intimate relations in the broadest sense. This risk connected to touch is related to with whom and under what conditions we establish relations of intimacy. Barad emphasizes the need to consider the possibility of inclusion (inclusivity) as well as exclusion from the community (exclusivity), and thus from certain forms of the future (Barad, 2012, p. 216). What needs to be considered is whether we can create relations of intimacy based on touch with every human and nonhuman other, at least potentially. From the reflections of the three researchers, we can conclude that

touch enables the production of a committed community, grounded in the direct, bodily contact of the human and nonhuman. Another important question arises in the context of the practice of designing the future: how does touch connect with the other senses, creating the phenomenon of multisensuality, in the process of producing the community?

In the context of the above question, I am interested in the role of pleasure in the production of intimacy in touch related to the other senses. A field of exploration that allows us to grasp the moment of formation of such relations are body practices aimed at expanding bodily awareness and mindfulness. These are techniques used in various fields of art, such as dance, performance, contemporary choreography, martial arts, and different types of meditation in resting positions or in movement. What they all have in common is the ability to observe and experience the connections between emotional and mental states with physical sensations. In such a context, we explore both the relations with ourselves and others. As an example, we can consider the work of the Kama Lab Project, an organization founded by Chloe Macintosh with the aim of "transforming how we experience pleasure and its role in our wellbeing."<sup>21</sup> The community founded by Macintosh makes us aware of the fact that the creation of bodily relations with others becomes possible only when we begin to explore and experience our corporeality. The pleasure-oriented bodily practices proposed by Macintosh are a kind of answer to the question raised earlier about the difference between touching oneself and touching someone else. The condition for producing a creative relation of intimacy through touch with another being is a long-term exploration of one's corporeality through touch to experience it as fully as possible. The practice of touch connected with other senses and imagination, "the first form of existence," gives us an understanding of how to create boundaries, and thus apply the mechanism of inclusivity and exclusivity mentioned by Barad, which are so important in creating shared variants of the future.

The practice of touch with oneself and others requires a constant sensitization to pleasure because, as Michel Foucault writes, our corporeality is "infinitely more susceptible to pleasure" (Foucault, 1996, p. 310; Shusterman, 2012, pp. 32–33; For a more detailed discussion of Foucault's notion of pleasure, see the second volume of *The History of Sexuality*. See Foucault, 1990). As corporeal beings, we are capable of perhaps an infinite variety of ways and scales of experiencing pleasure with every part of ourselves and others. Continuing with references to Foucault's deliberations, we can consider the practices of creating intimacy in touch with the involvement of the other senses and the imagination as techniques of the self, enabling *subjectification* in bodily contact with self and others (Foucault, 1986, pp. 37–68). What is missing in the reflections of the author of *The History of Sexuality*, however, is attention to the production of

<sup>&</sup>lt;sup>21</sup> https://kama.co/about [accessed 15.05.2024].

relations of intimacy through touch with nonhuman others, relevant to the designing of the future on a planetary scale. In such a perspective, it is worth looking at Monika Bakke's considerations on the topic of zoosexuality, that is, the erotic relations occurring between human and nonhuman animals (Bakke, 2009). It is worth noting that the researcher does not have in mind here situations of using nonhuman animals as objects for satisfying human sexual desires. Rather, she is referring to the development of relations of interspecies intimacy, producing new kinds of communities understood by me precisely as specific, possible variants of the future. The commonality of human and nonhuman is produced on the grounds of practices of intimacy situated in the intertwined connections of touch with the other senses (multisensuality). We can consider the practices of producing intimacy through touch precisely as ways of "living and dying together on one planet."

# 6. The End/New Beginning

In the process of designing the future, the inseparability of imagination (thinking) with bodily sensations (movement) is shown to us. I call this link thinking (in) movement, where there is a mutual complementarity of discursive practices with bodily practices expressing the becoming of matter<sup>22</sup>. Thinking (in) movement as a practice of designing the future is, for me, directly related to the use of all possible senses in various combinations and configurations, with a particular focus on touch, to produce material connections that constitute "more-than-human" (Neimanis, 2017, p. 2) forms of commonality, and thus diverse variants of the future. The key here is to combine corporeality with speculative imagination. The practice of designing the future is transdisciplinary, where the production of knowledge becomes possible by crossing and blurring the boundaries between fields of knowledge (art, science, humanities, crafts) (Barad, 2007, p. 93). Designing the future under conditions of dynamic planetary change requires us to produce new connections between human and nonhuman, incorporating methods and tools derived from different fields of knowledge.

We can consider the future according to the logic of the Anthropocene as total annihilation, the ultimate end. I believe that the creation of intimacy through touch intertwined with the other senses and the speculative practice of imagination can liberate us from the lethargy of the Anthropocene, and thus from

20

<sup>&</sup>lt;sup>22</sup> In the article titled "Performatywność sztuk walki: jak agresja zaczyna mieć znaczenie" ["Performativity of martial arts: how aggression begins to matter"], I discuss in more detail the notion of thinking (in) movement, while the experimental article titled *Fizjo-filozofia: myślenie (w) ruchu jako maszyna do stawania się wydzielinami* [Physio-philosophy: thinking (in) movement as a machine for becoming secretions], created together with Krystyna Lama Szydłowska, is our proposal of how we can combine discursive and bodily practices. See (Mroczkowski, 2021; Mroczkowski & Lama Szydłowska, 2023).

the nihilistic fantasy of the future as no future. Together, we can project different kinds of futures, representing diverse forms of the commonality of human and nonhuman, unfolding on a planetary scale, as ways of "living and dying together on one planet."

The moment when Casey enters into an intimate relationship with the Monitor through touch is reminiscent of Michelangelo's painting *The Creation of Adam*. However, what is created in bodily intimacy here is not the Man—the looming doom of the planet prophesied in the notion of the Anthropocene—but something else. The corporeal union of human and nonhuman is the moment of the designing of many futures. What kind of image or images of the future are materializing in the touch of two beings, in a brief glimpse that raises doubts in Nix, a man tainted by the lethargy of the Anthropocene?

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