
DOI: 10.18276/aie.2020.50-05

ALEKSANDRA DERRA*

Holobionts, Symbiosis and New Narratives for the Troubled Times of Donna Haraway’s Chthulucene. Review of Donna Haraway’s (2016), *Staying with the Trouble: Making Kin in the Chthulucene*, Durham–London: Duke University Press Books, pp. 312**

Keywords: Chthulucene, Anthropocene, Donna Haraway, symbionts, holobionts, response-ability

Słowa kluczowe: Chthulucen, Antropocen, Donna Haraway, symbiont, holobiont, odpowiedzialność

An overview of Donna Haraway’s Legacy

I have grown used to a specific type of experience when reading Donna Haraway’s texts. Firstly, I have always been moved, fascinated, irritated, or disturbed by the unconventional language of her books. They have taken me by surprise by a unique combination of the literary and competence, biology and philosophy, especially

* Aleksandra Derra – Professor of Nicolaus Copernicus University, Chair of Practical Philosophy at the Institute of Philosophy, her research focuses on science and technology studies and contemporary critical philosophy of science, she is involved in providing science policies which aim at diversity and inclusivity.

Address for correspondence: Nicolaus Copernicus University, Institute of Philosophy, Fosa Staromiejska 1a, 87-100 Toruń, Poland. E-mail: aldewicz@umk.pl.

** The previous Polish version of this review has been published under the title: “*Twórzmy relacje, a nie dzieci*”. *Wspólne życie na zniszczonej planecie w chthulucenie Donny Haraway* in AVANT journal (2017, AVANT, 8 [3], 215–228). Here it has been appropriately adapted and changed.

because I am/have been filtered by a socialisation in (moderate) Scientism and attachment to the programme, or at least proclaimed non-metaphoricalness of the philosophical discourse. Secondly, her philosophical ideas, rich argumentation, examples from the history of science and modern techno-science have not only changed my way of thinking, but sometimes painfully forced me to verify the admissibility of methods or the legitimacy of research priorities in humanities, social sciences, and also biological sciences. Last but not least, her unprecedented sensitivity to the presence of prejudices in science (due to gender, race, age, ethnicity, geographical location, etc.) and awareness of the involvement of science in the system of economic and military connections made me ponder many times over about how I should think about the areas that interest me scientifically and how I should pursue my own.

If we were to enumerate the research areas in which her scientific ideas not only proved to be extremely influential for ongoing discussions, but were also ground-breaking for the development of a specific sub-discipline, one must mention anthropology that made use of the concept of the cyborg, ecofeminism, postfeminism, posthumanism, feminist studies on science and technology or animal research. The most notable and ground-breaking of her texts include *A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century* (1985, Polish edition 2003), *Simians, Cyborgs and Women: the Reinvention of Nature* *Modest_Witness@Second_Millennium.FemaleMan©_Meets_OncoMouseTM. Feminism and Technoscience* (1997), *The Companion Species Manifesto. Dogs, People, and Significant Otherness* (2003), *When the Species Meet* (2008). As far as the shaping of my own research interests is concerned, I would like to mention two of her lesser-known books. A book version of her doctoral dissertation *Crystal, Fabrics and Fields. Metaphors of Organicism in Twentieth Century Developmental Biology* published in 1976 and *Primate Visions. Gender, Race and Nature in the World of Modern Science* from 1989. In both of them the language which is used to formulate scientific theories is placed at the centre; the impact that certain metaphors have on the coining of the concepts adopted in them, on the shaping of research in a given field, on the modelling of research priorities.

Using the example of the history of developmental biology and primatology, Haraway shows the complex process of constructing a specialized language of these sciences, which does not take place outside the context of the place and worldview of the time in which it is created. It is carried out under the pressure of the binding requirements of scientific and methodological rigour, technological possibilities of a given historical moment, but also under the influence of social expectations or beliefs, which at a given moment become an important element of the described process. Even in these books Haraway will present a view, which is characteristic of her style, that theories formulated in science are not objective, if objectivity is to be

understood as impartiality, neutrality, independence of tools and technology, complete distancing from values and worldview, perspective of the divine. Knowledge is, according to her, always situated (Haraway, 1988), formulated from a specific place, at a given time, in the name of certain values and interests. Its creations and the effects of their activities outside the laboratory can be both positive and negative. It seems that today it is impossible not to notice the latter, especially when we look at the disastrous connection of civilization changes and scientific progress with hyper-individualism, consumerism and the logic of the free market. The reviewed book *Staying with the Trouble: Making Kin in the Chthulucene* to a large extent deals with what is evil, with our troubled times of anthropocene which are full of difficulties, economic and political tensions, the real perspective of ecological disaster. The authoress reflects on new ways of thinking about the natural world, and thus on transforming the language and methodology of biology, but above all she writes about the extremely urgent need for responsibility and communality, the necessity to create new forms of kinship in order to save oneself and the world.

The main goals, assumptions and ideas of the book

The book is not too extensive – there are 170 pages of the main text. It consists of an introduction, eight chapters, a bibliography and an index. The history of the editions or first prints of the chapters that make up the book may disappoint the reader who expected a completely new, coherent whole. Only chapter eight, the last of the book, was written specifically for its purpose and contains previously unpublished material, whereas other chapters had been published earlier over the period 2012–2015 in various magazines or collective works. They constitute separate, loosely related stories, in which similar themes told each time from a slightly different perspective, keep reappearing. Inevitably, parts of the book written for different purposes are of different length and have a different structure: in some the authoress focuses more on conceptual decisions, whereas others are more of case studies in which the whole complexity and multidimensionality of the anthropocene subject is at its clearest. The last chapter entitled “The Camille Stories” addresses not only the extremely interesting problem of demographic and ecological threats resulting in economic and social crises, but has also been constructed in a literary, surprising and captivating way. Well, one thing at a time.

What is Haraway’s purpose in the book? Let us take a closer look at the title. The most important thing, as she explains in the introduction, is to face the troubled times in which we happen to live (Haraway, 2016, p. 1). They are troubled not only because they are teeming with various problems, but also because they are incomprehensible, ambiguous, confusing, and difficult to grasp with a thought.

Hence the word “trouble”, derived from the French verb “troubler”, which means “to mix”, “to disturb”, “to cloud”. The point is that one should not only speculate about what will happen in the future, but also not postpone things for later, not deny that things have happened (denialism) or abandon the uncritical and post-Enlightenment hopes that techno-science will fix everything in the future (fixation on technology) (Haraway, 2016, p. 3). This is symbolically represented by another word used in the title – “Chthulucene”, which is derived from the Greek words “khthôn” and “kainos”. “Kainos” is a term used for what is new, refreshing, for what is to begin, whereas “khthôn” means “land”. Haraway explains that in combination they mean “[...] the kind of time and place where we are to learn how to deal with life and dying in a responsible way on a damaged planet” (Haraway, 2016, p. 2). Haraway represents the notion of responsibility, which appears repeatedly on the pages of the book, with a neologism that is peculiarly her own. She spells the English word “responsibility” as “response-ability”, which can be interpreted as “the ability to give answers”, “responding”, “ability to respond”. Yet another goal is to undermine the rhetoric related to the concepts of Anthropocene (which again puts the human being on a pedestal as the most important and distinguished form of existence on Earth) and Capitalocene (which in turn naturalises economic processes, describing them as all-encompassing, systemic, advanced and therefore impossible to be stopped). Haraway urges people to think about making connections with non-human beings (“making kin”) and to act for the purpose of a heterogeneous community. As she writes, we need each other for cooperation that we cannot yet imagine. We will either become someone other than we are today in combination with other beings on Earth, or we will not become anything at all (Haraway, 2016, p. 4). Taking into consideration the great sixth extinction of species, real overpopulation of the world (it is expected that by 2100 the population of Earth will reach 11 billion), gigantic disparities in the consequences that these processes have for the poor and for the rich, as well as deadly pollution and littering of the environment, we will simply die.

As a philosopher, Haraway uses rhetorical figures, the most important of which and, as she admits, the all-encompassing is the “SF figure”, which she represents with a few expressions beginning with the letters s and f. They include “science fiction”, “speculative fabulation” (creating speculative stories), “string figures”¹ (figures made of string), “speculative feminism”, “science fact”. This figure, which

¹ According to a Wikipedia entry: “A string figure is a design formed by manipulating string on, around, and using one’s fingers or sometimes between the fingers of multiple people. They may consist of single or multiple images or be created and altered as a game, known as a string game, or as part of a story involving various figures made in sequence. A popular string game is cat’s cradle, but many string figures are known in many places under different names.” See: https://en.wikipedia.org/wiki/String_figure.

is quite mysterious, though perhaps interesting only from philosophical and linguistic perspective, has a significance only to the rhetoric of the text – it is invoked from time to time to show that science needs a story, and these in turn need feminism. Haraway describes it poetically using a play on words: “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 description describe descriptions, what ties tie ties” (Haraway, 2016, p. 12). The SF figure does not have a structuring role, nor does it serve as a scaffolding on which the considerations in individual chapters are based. Its purpose is to strengthen the message, the same as in the case of over thirty illustrations that ornament the book and its beautiful cover.

As I pointed out earlier, the chapters in the book are not closely linked to one another. With regard to that, I will look at each of them in turn with varying enthusiasm and perspicacity, depending on the power of the message they carried and how much impact they had on me.

Complex relationships of post-human creatures

With the title of the first chapter “Playing String Figures with Companion Species” Haraway refers to her earlier works, in which she used the category of “playing cat’s cradle” (Haraway, 1994) and the concept of companion species (Haraway, 2003), in order to capture contemporary subjectivity. She introduces the term “Terrapolis” (Haraway, 2016, p. 11), referring it to the peculiarity of the modern world which is populated by companion species not in the form of post-human subjects, but in the form of compost, a mixture of various beings that enter into complex relationships. Haraway refuses to recognize human uniqueness, but she does not want to take strictly posthumanist stance (Haraway, 2016, pp. 13, 50, 55, 97). It seems that there are several reasons behind her move. Firstly, she identifies posthumanism with “grand narratives” in Jean Francois Lyotard’s sense, as narratives which account for everything in a totalizing manner, hence being deterministic and teleological. Following James Clifford’s idea of “big-enough stories” and her own concept of situated knowledge, she rejects the prospect of providing one big synthetic theory of everything (Clifford, 2013). Secondly, she believes that using the notion of posthuman will result in focusing primarily on humans (even if in a negative way) as a vital point of our conceptions. Therefore she claims “We are compost, not posthuman; we inhabit the humusities, not the humanities” (Haraway, 2016, p. 97, 101, I will explain the concept of humus in what follows). Finally, although she attributes responsibility (as an ability to response – I will write more about it later on) to every possible earthly critter, she simultaneously points out that in particular

cases some critters are more responsible than others. Her position works in accordance with many contemporary views which seriously take into account posthuman predicament, but refuse to accept eurocentrism, nationalism, xenophobia, sexism and racism, which are described as tightly connected with Western European humanism (Braidotti, 2017).

Haraway like Isabelle Stengers believes that dealing with hardships of the modern world must be done with the help of cosmopolitan tools, with the participation of all those who will bear the consequences of the actions taken in it; it must be a multi-species response (Stengers, 2010). The metaphor of playing cat's cradle is meant to emphasise that it is impossible to separate thinking from acting; the game is both a practice of thinking and acting (Haraway, 2016, p. 14). In this chapter the considerations are guided by pigeons, the history of their settlement in cities, how they are treated, the roles they have, the relationships they enter with people and other inhabitants of the world. The authoress emphasises that a whole range of positive effects for people is brought about with the help and participation of pigeons or other creatures, which usually remain unseen. What's more, on account of the mutual cooperation of pigeons and people, the abilities of both people and pigeons are enhanced, which enables completely new activities. She demonstrates that on the example of the Pigeon-Blog project which engages working pigeons, artists, engineers, breeders and pigeon enthusiasts involved in monitoring air pollution in southern California (Haraway, 2016, p. 21). Properly equipped with appropriate machinery, the birds cooperate with their human friends collecting real time pollution data from inaccessible places, which are later transferred to appropriate communication systems on the Internet. This project is not scientific and for this reason, PETA (People for the Ethical Treatment of Animals) has contested the use of animals as unacceptable, as it does not serve scientific purposes (Haraway, 2016, p. 23). This initiative made use of the knowledge and experience of pigeon enthusiasts and ordinary people who entered into relations with street pigeons, to broaden the understanding of the community, to go from thinking about pigeons as "rats with wings" to treating them as animals entering into social relations (Haraway, 2016, p. 24). The empowered pigeons had shelters built for them, which were designed for them by the artists, where they could live in harmony with their ecological needs and without damaging the city's resources (e.g. Capsule in Lille, a loft in Batman Park in Melbourne). Haraway emphasises that giving details in the presented stories is of great importance. We are all responsible for the conditions in which different species live, but we are not responsible in the same way – everything depends on ecological and economic differences related to a particular species and the way of life – we need to provide details in order to take this into account, (Haraway, 2016, p. 29).

The troubles with Anthropocene, Capitalocene and Chthulucene

The subtitle of the second chapter, “Tentacular thinking”, lists the categories of Anthropocene, Capitalocene and Chthulucene. It starts with a question, which is extremely important for the entire book, about what happens when it is impossible to think or act any more without being guided, in both theory and practice, by human uniqueness and individuality (Haraway, 2016, p. 30). According to Haraway, given the incredible devastation of the natural world that man has made, and the uncertainty and unpredictability of the consequences of this devastation, the transitional period in which we now are on Earth must not be called Anthropocene.² Hence the proposal to use the term “Chthulucene” with reference to the figure of the “Pimoa Cthulhu” spider, referring to the Goshute language of the inhabitants of Utah (Haraway, 2016, p. 31), and the ocean-dwelling deity or octopus with many tentacles (a kind of spider of the seas). In order to try to use the potential of new modes of thinking about contemporary subjectivity, Haraway introduces the concept of humus and sympoiesis. Humus – the earth’s organic matter – defines a heterogeneous family of creatures that inhabit the Earth from fungi through bacteria, plants and animals. The authoress borrows the term sympoiesis (as opposed to autopoiesis) from M. Beth Dempster and her MA thesis from 1998 in the field of environmental studies. She calls the systems created collectively, in which the flow of information and control are dispersed in its various elements, and their boundaries are not strictly determined, because the system is evolving in a variable way (Haraway, 2016, p. 33). Both contemporary philosophy and biological sciences seem no longer to use concepts built on units that are strictly set apart, individualized entities like genes, organisms or environments (Haraway, 2016, pp. 30, 33). Not only is it impossible for science to be practised like before, but it is impossible to live in the same way as before on the damaged planet on the ruins of capitalism. In this chapter, Haraway calls upon the meditations on the evil by Hannah Arendt, the art of life by Anna Tsing, ethics of Thom van Dooren, the story-telling skill of Ursula Le Guin, the postulate of telling “the story of Gaia” by Bruno Latour. Repeating the postulate by Stengers that it is not about facing Gaia, Haraway calls for the treatment of Gaia/Earth as a systemic phenomenon which builds our planet (Haraway, 2016, p. 43). This call is not just another theoretical appeal and an attempt to build an original system of concepts. One must not stay inactive – the way of thinking must be changed to act at once. At the conference in San Francisco in 2012, Bred Werner argued that from the scientific point of view, the only sensible thing to do in the current situation is

² The debate over the Anthropocene as a concept, phenomenon and set of assumptions, narratives and theses is deftly summarized by Ewa Bińczyk (Bińczyk, 2019).

a revolt, revolution, and collective action. According to him, global capitalism has led to such a rapid extermination of resources that we are not able to predict how human-earth systems will behave (Haraway, 2016, p. 47).

In this chapter Haraway summarizes what exactly she does not like in Anthropocene viewed as a concept, tool, epoch or story. Its story is about death and hopelessness – a situation in which she cannot be driven to act. The human species itself does not make history, which might be suggested by Anthropocene. It is not made by people with the aid of tools and other creatures either – stories about the modern world cannot be stories only about this. Anthropocene is to a large extent supported by utilitarian individualism and the evolution of modern synthesis. We are finally dealing here with an economic aspect – the notions of Anthropocene may be used by high-class intellectuals from affluent countries (Haraway, 2016, p. 49). It hides demons of modernity, determinism, modernisation, division into nature and society, progress and teleology. According to Haraway, we need a story in which another world is not only urgently needed, but also possible. Chthulucene is a suggestion of an alternative story in which people are not the most important protagonists; it is created by the practices of the existence of many creatures, without distinguishing the main character, in troubled times in which the world is not yet finished, and the sky has not yet fallen on everyone's head (Haraway, 2016, p. 55). It is not a global, great and all-encompassing story, but a story without the tinge of apocalyptic panic and the complacency of a sated king.

Symbiogenesis, sympoiesis, and kinship, or how to make kin, not babies

In the following chapters, Haraway presents details related to the category of sympoiesis and the creation of new forms of community and kinship in Chthulucene. Chapters four (5 pages), six (9 pages) and seven (8 pages) are short and do not contain extensive argumentation; they loosely refer to philosophical works, scientific studies, science fiction texts and everyday practices, and contain a metaphor that is typical of the author.

In chapter four, the authoress presents once again how she understands Chthulucene, the extent of changes it brings and ways to respond to them in science and in political and social practices. When considering which catchy slogan could illustrate it, she chooses “Make Kin, Not Babies” (Haraway, 2016, p. 102). Her interesting view on the problem of overpopulation of our planet is worth recalling here. She reminds us that it was feminist thought and activity that constantly demanded that women should have a choice as regards children; that the sense of their existence should not only be boiled down to presence; so that they could choose not to have

children (Haraway, 2016, p. 6). In need of a family, kinship, and bonds, we have to focus on expanding our way of thinking about who our loved ones could be. A relative, according to the initial, primary meaning of the word, meant “logical connections”, and came to mean a member of the family only in the 17th century (Haraway, 2016, p. 103). Our relatives are all those earthly creatures with whom we are connected in a given place and time, all those creatures that we need to look after, also for our own good.

In chapter six, Haraway explores the meaning of the title slogan of the book, “Stay with the Trouble”, which could be understood as a call to face difficulties, to handle them and in a way accept what we have to face in the world today and try to deal with it. For now, Haraway suggests a change in the way of thinking which involves noticing the role of plants, bacteria, fungi with which we communicate and need one another (Haraway, 2016, p. 122). The categories of symbiogenesis and sympoiesis appear here (I will come back to this concept later on) as necessary to describe modern nature. The word “symbiogenesis” may be broken down to components which in Greek respectively mean: “sún”, i.e. “together”, “biosis” – “life”, and “genesis” – “origin”. It is emphasised here that species came to be through integration and symbiosis, which for Haraway means a departure from the fantasy of independent, self-creating and self-sufficient autopoietic systems for the sake of systems that co-create their identity with others, becoming co-responsible for one another. This does not only mean that which is good or idyllic, but also communication, origin from the same matter, care and mutual “mothering”. It is not the first time that Haraway expresses this metaphor in the form of a sequence of words: “mutter, matter, mother” (Haraway, 2016, p. 125) – it also appeared in her text entitled “Situated knowledges”.

In chapter seven, Haraway presents a very interesting way in which Vinciane Despret attempts to describe the nature of field biology research by observing scientists. She appeals to the virtue of politeness to reflect on the specificity of visits made by scientists who observe animals (Haraway, 2016, p. 127). She claims that what scientists do affects the way that animals react to their actions. She gives an example of Amotz Zahavi’s research on Arabian babblers (birds of the *Leiothrichidae* family), who deliberately conducted experiments with birds he observed, not on them (Haraway, 2016, p. 128). It can be said that they carried out the experiments together, effectively communicating with one another. By showing the vital role of communicating with other creatures, Haraway emphasises that for animals to nourish us, we must “nourish” them in daily practices, which involve co-operation, conversation and mutual attention (Haraway, 2016, p. 129). There is no place for them in the modern world of commercial breeding, depersonalised production of

laboratory animals or exploitation of the natural environment regardless of the fate of its multi-species inhabitants.

Much more elaborate chapters three and five require a bit more reading attention. In the chapter three titled “Sympoiesis”, Haraway once again refers to the meaning of this Greek word: “sún” means “together”, whereas “poiēsis” means “creation”, the result of which is “creating something together”. Nothing is created on its own, nobody and nothing is self-sufficient. Haraway’s ontological proposition is to abandon the categories of separate individuals and beings (species, orders, etc.) and instead use the categories of holobionts and symbionts³(Haraway, 2016, p. 60). Once again, the ideas of M. Beth Dempster are recalled here with a tedious repetition of the same quotations that we may find earlier in the book. Again, we are talking about the role of modern synthesis in shaping concepts and research tradition in biology; about the departure of life sciences from focusing on separate organisms towards relationship and connections; about the need to study the interspecies, which allows to develop, communicate and maintain the integrity of multi-layered tissues, such as animals (Haraway, 2016, p. 65). Credit goes to the DNA technology and genomics, which allow to show a symbiotic diversity of the animated world (Haraway, 2016, pp. 66–67). Scott Gilbert, Jan Sapp and Alfred Tauber (Gilbert, Sapp, Tauber, 2012) wrote an article on sympoiesis entitled *A Symbiotic View of Life: We Have Never Been Individuals*, the second part of which paraphrases the title of Latour’s book *We have never been modern* (Latour, 1993). Carla Hustak and Natasha Meyers, on the other hand, quoted by the authoress, argued that “presenting nature as a zero-sum game between competing individuals is a caricature of the chemical, biological, material-semiotic world” (Hustak, Meyers, 2012). In this chapter, Haraway draws attention to the fact that changing the scientific dictionary, activism, are not enough to cope with the problems of the modern world, we also need social and artistic actions and stories. In other words, biology, art and politics need each other – projects like Crochet Coral Reef,⁴ Ako Project from Madagascar, “Never Alone” game or activities related to the saving of the Hopi and Navajo peoples’ heritage (Haraway, 2016, p. 71), which are presented and illustrated in this chapter.

³ Holobionts are assemblages of various species that form separate ecological units, symbionts are organisms that live in symbiosis with other species.

⁴ The discovery and recognition that raising sea temperatures contributes to the extinction of coral reef ecosystems led to the dissemination of the Anthropocene concept.

Response-ability instead of responsibility. Developing the ability to respond

The most moving story of this part of the book is the story of the people of Navajo (Haraway, 2016, pp. 89–97), which also illustrates Haraway's claim that the problem is not that changes occur on Earth, but it is their range and distribution in the world (Haraway, 2016, p. 73). The Hopi and Diné people who live in the Navajo region are now the poorest citizens of the United States. Their story is a tale of violence in the coal industry, whose lobbyists removed the indigenous peoples from places where it was possible to develop energy industry, by means of political tools (US Congress), displacing thousands of people and devastating the natural environment. These relocations did not take place only hundreds of years ago in the old, barbaric times, but in the 1970s and 1980s (Haraway, 2016, p. 75). In the 19th century genocide took place indirectly. In 1863, by the decision of the US Department of War, indigenous peoples were forced to move on foot from Dineath to the Bosque Redondo reserve in Fort Sumner, New Mexico, and for the next five years 9,500 of Navajos and 500 of Mescalero Apaches were imprisoned there. The Churro sheep, which were an important part of the Navajo identity, their culture and social order, were systematically and methodically exterminated. They allowed them to maintain and cultivate the traditions of weaving carpets, which was of a religious and symbolic character. The extermination was carried out with the help of the tools of the War Department, the Ministry of Agriculture and the related scientists, the ideology of the New Deal, modernisation and modern agriculture. In the 1930s, almost all the sheep and most of the goats, which ensured subsistence to these people, were killed (the total of about a million sheep and goats, without any compensation – in 1970 there were about 430 Churro sheep left scattered throughout the reserve). Today, through the activities of such organizations as the Black Mesa Water Coalition (BMWC), attempts are being made to restore energy justice, economic relations that empower the weaker, and fight for climate justice in the south west of the United States, especially the Black Mesa region.

Chapter five entitled – “Awash in Urine. DES and Premarin in Multispecies Response-ability” – heralds the issue of responsibility that runs throughout the book, or, using Haraway's language, developing the ability to respond. And, there we will find a story about the authoress' twelve-year-old bitch Cayenne, which started to take (or rather was administered) synthetically produced on the industrial scale DES oestrogen, to prevent problems with incontinence and protect its heart. This seemingly simple gesture of concern for the welfare of the animal and one's own, however, evokes an anxiety disorder in the author, evoking a whole lot of heterogeneous relationships that we have dealt and are dealing with here. First, the feminist

anxiety, because oestrogen deficiency causes various health deficiencies, closely related to the disappearance of the reproductive potential, applies not only to female dogs, but also to women. As if in the old age, the loss of the hormone resulted in the loss of femininity and required fixing! Second, an anxiety about causing harm. Exposing the human foetus to this drug between 1940 and 1970 resulted in a possible adenocarcinoma; it was speculated that it caused spasms, miscarriages and premature births. Since the 1990s in the United States, it can only be administered to animals and to humans only in rare cases. Another side of the same coin is the (invisible) dependence of people on animals when using drugs. The authoress describes her own experience of taking Premarin during the menopause, which contains natural oestrogens extracted from horse urine. Haraway sadly concludes that as a feminist researcher of science and technology and a long-time animal admirer she will not be able to notice the fate of mares and their “single use” foals when she takes on a menopause. She asks: “Have I forgotten, or never known this? Have I failed to inquire or maybe i simply never cared?” (Haraway, 2016, p. 111). As she emphasises, the relationships between people and animals, between us and non-human relatives, are not innocent, and our responsibility for them is much greater and to a large extent never ends (Haraway, 2016, p. 114). However, to notice this, we need to know the details, be able to see the incredible complexity of connections. Only then will we see where our response should take place. Today we know that “corporations, farms, clinics, laboratories, homes, science, technologies, multi-species existences are interrelated” in time, on a different scale, materially... (Haraway, 2016, p. 115).

New narrative: “The Camille Stories. Children of Compost”

I have already mentioned that it is only chapter eight, the last of the reviewed book, that is not a reprint and appears in this form for the first time. It is ornamented with nine different illustrations and it has been written with a literary language. Haraway admits that it was created as a linguistic product of imagination at the writing workshop in which the author took part in the summer of 2013 in Cerisy. The task for the participants from each separate group at the workshop was to bring a child to a literary existence and describe its life and those of their descendants for five human generations. In the Haraway group, the story in its original, workshop version was also co-created by a film-maker Fabrizio Terranova and a philosopher and psychologist, Vinciane Despret. The aim of this literary experiment was to create an imaginable fiction without paying attention to the traditional ontological divisions and the existing real ways of living on the damaged planet. According to Haraway, Camille was conceived as a child born for sympoiesis, whose identity was created with other, thanks to other, acting with other, various, diverse creatures inhabiting

the planet (Haraway, 2016, p. 137). These imagination exercises had their limitations imposed by current knowledge about the ruined world, hence in the creation of Camille worlds several rules were adopted (Haraway, 2016, pp. 138–143). None of the compost communities (next generations described in this history of beings) can start from scratch and move to some uninhabited area. They cannot leave the damaged land, but they must try to thrive on it, creating new communities and fixing what they can. Due to the overpopulation of the Earth, it is encouraged that creatures other than human beings are brought to life, freedom of reproduction is retained, but it is assumed that the appearance of each new life entails a change in the structure of the entire community, and it must therefore be part of this process. That is why human children come to the world as symbionts with creatures from some dying species. Learning to co-live with a symbiont and all beings associated with it for the next five human generations is part of the education process. A new creature may choose a gender or not choose it at all, it can freely transform the body, enrich it with micro-organisms from the animal world, expand its perception so as to experience the world as well as the animal creatures symbiotically associated with it. This interference only affects people, it does not involve animals or plants, but because of the changes that take place in the functioning of people, flora and fauna change with them.⁵

Haraway's story covers the life story of five Camilles, from the first born in 2025 to the fifth who dies in 2425. Each one of them starts with listing the following details: "Born in...", "The population is...", "Dies in...", "The population is..." When the first Camille is born, there are eight billion people on Earth, when she dies, there are already ten billion of them. When the fifth Camille dies, there are three billion people living on Earth, two billion of which are human-animal symbionts – more than half of the species living Earth in 2015 disappear. Millions of different creatures make symbionts with humans, while animal symbionts remain unchanged by human genes. Human symbionts take after their animal partners in many respects... During the life of five Camille generations amazing things happen on Earth – one should read about it and imagine it. Haraway describes them coherently and convincingly as a biologist, with the sensitivity of a methodologically-oriented philosopher who is conscious of the history of science, and with a literary grace of a writer. It was worth reading the entire book only for this 33-page long chapter.

⁵ Haraway refers here to "EcoEvoDevo", i.e. to the "ecological, evolutionary developmental biology", in which symbiosis and plasticity in development are treated as factors of evolutionary changes.

Staying with the Trouble is not finished off with a separate conclusion. As it is not the end, but the beginning. Absolutely non-optimistic, sorrowful and pessimistic. Each new beginning, however, brings a new hope.

Contemporary humans: lack of ready-made recipes, and the need to act

It cannot be denied that the book by Haraway raises extremely current problems not only of contemporary humanities, but also of biological sciences. It poses the question of what concepts and theories should be used to describe today's man; capture their hybridity, entanglement in technologies, economic relations, environmental changes, demographic processes, political and social crises. Is this a post-man living in an overcrowded dying world? Or a symbiont that tries to build relationships with others anew? Part of global humus? The author deals with conceptual problems of contemporary life sciences, their attempts to move away from the dictionary and theories founded on individualized categories and the idea of rivalry. However, what is meant here is not only a matter of words, but that they should give rise to actions aimed at saving the world. Having finished the book the reader will feel lost: there is a lack of consistency, ready-made recipes, arguments that could be used. This would have to do for now. For now, we have to think about how to make kin, not babies. How to extend the family without overpopulating the world. It is really hard for starters...

Bibliography

- Bińczyk, E. (2019). The Most Unique Discussion of the 21st Century? The Debate on the Anthropocene Pictured in Seven Points. *The Anthropocene Review*, 6 (1–2), 3–18. DOI: 10.1177/2053019619848215.
- Braidotti, R. (2017). *Four Theses on Posthuman Feminism*. In: R. Grusin (ed.), *Anthropocene Feminism* (pp. 21–48). Minneapolis: University of Minnesota Press.
- Clifford, J. (2013). *Returns: Becoming Indigenous in the Twenty-First Century*. Cambridge, MA: Harvard University Press.
- Gilbert, S.F., Sapp, J., Tauber, A. (2012). A Symbiotic View of Life: We Have Never Been Individuals. *The Quarterly Review of Biology*, 87 (4), 325–341.
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14 (3), 575–599.
- Haraway, D. (1994). A Game of Cat's Cradle: Science Studies, Feminist Theory, Cultural Studies. *Configurations*, 1, 59–71.

- Haraway, D. (2003). *The Companion Species Manifesto: Dogs, People, and Significant Otherness*. Chicago, IL: Prickly Paradigm Press.
- Haraway, D. (2016). *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, UK: Duke University Press.
- Hustak, C., Myers, N. (2012). Involuntary Momentum. *Differences*, 23 (3), 74–118.
- Latour, B. (1993). *We Have Never Been Modern. Study of Symmetric Anthropology*. Trans. C. Porter. Cambridge, MA: Harvard University Press.
- Stengers, I. (2010). *Cosmopolitics I*. Trans. R. Bononno. Minneapolis: University of Minnesota Press.

HOLOBIONTS, SYMBIOSIS AND NEW NARRATIVES
FOR THE TROUBLED TIMES OF DONNA HARAWAY'S CHTHULUCENE.
REVIEW OF DONNA HARAWAY'S (2016), *STAYING WITH THE TROUBLE:
MAKING KIN IN THE CHTHULUCENE*,
DURHAM–LONDON: DUKE UNIVERSITY PRESS BOOKS, PP. 312

Summary

The aim of the article is to discuss the basic assumptions, theses and solutions of Donna Haraway's book "Staying with the Trouble: Making Kin in the Chthulucene". The author places the considerations of an American philosopher and biologist against the background of her earlier books and conceptual proposals. She analyses her suggestion of using the category of Chthulucene instead of Anthropocene, the category of sympoietic system instead of an autopoietic one, she presents her appeal for creating new forms of kinship and extensive response-ability for each other.