Post-Anthropocene Architecture: Exploring More-Than-Human Scenarios to Articulating Architectural Design Principles

Research plan

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Abstract

With the current climate crisis, this research will form a manifest as a guide for designers, that are responsible for taking action to implement more-than-human agencies in their designs. This will be the starting point for a symbiosis between humans and non-humans in the built environment. The change of environment has an impact on the lifestyle of humans. The focus will be on renovating a post-war building that is a current shelter for humans. At first, a vision of the post-Anthropocene is going to be outlined, This will be tested with the current human and non-human needs in the city and nature. Both result in possible human and non-human needs in a post-Anthropocene environment. This translated into design principles on how to integrate more-than-human agencies in an existing human-centred building. This will be a catalogue of design principles that will be translated into a catalogue of designs of forms and shapes. These forms and shapes represent the design principles that will integrate more-than-human agencies in a post-Anthropocene environment. This research represents how to make a vision more operational by research and design.

Keywords: Design, More-than-human agencies, Post-Anthropocene, Humans, Non-humans

Introduction

A disconnect from nature

The Earth has reached a point where there is more human-made mass than living mass (Elhacham et al., 2020). The biodiversity has decreased by 69 per cent since 1970 (WWF, 2022). And, the CO2 levels in the atmosphere have never been this high in 800,000 years (Ice Cores and Climate Change - British Antarctic Survey, 2022). Sumed up, these measurements have taken place since the Industrial Revolution and the existential growth of the human population (Kahn & Federal Reserve Bank Philadelphia, 2008). Before the Industrial Revolution, there were no such significant measurements. Meaning, a balanced ecosystem existed with humans as part of it.

The problem is that the amount of CO2 levels in the atmosphere correlates with the rising temperature of the earth. This gives us another climate than we are used to (Buis & NASA's Global Climate Change, 2020) (Ice Cores and Climate Change - British Antarctic Survey, 2022).

These environmental changes will have consequences for human and non-human lifestyles. If we keep trying to grow with the current economy – supported by our modern lifestyle - the earth will become uninhabitable not only for humans but also for the biodiversity that humans depend on (Raworth, 2017) (Watts & The Guardian, 2019).

Meanwhile, the current industry is continuing to use fossil materials for the built environment, modern technologies and energy use (Feng et al., 2009). The biggest CO2 emitter is the built environment with 42 per cent (*Why the Built Environment?*, n.d.). Furthermore, the United Nations (2018) says, 68 per cent of humans are going to live in urban areas by 2050. This means more people will use nature as a product than as their environment and have less responsibility to take action (Van Mensvoort, 2019) (Frantz & Mayer, 2009).

The current technology used daily disconnects us from our reality. The problem does not lie in technology, but in what kind of technology we use and what it is made from. Humans are inseparable from technology, since the technology of making tools out of stone. Besides that, humans need technology to get a better understanding of nature and to be able to

adapt faster. Without technology, humans wouldn't have existed (Van Mensvoort, 2019). On top of that Colomina and Wigley (2016) say that not only the human creates technology, but also the technology creates the human. Furthermore, the built environment is a form of technology, that serves us with the purpose of shelter (Van Mensvoort, 2019).

So if the built environment is technology and technology is human. This means that human is the source of the problem and not the CO2. To change the human, the built environment has to be changed to create a different lifestyle. A lifestyle that understands nature and brings a responsibility for a balanced ecosystem.

Design for more-than-human

As humans, it is a question of survival and an ethical question of letting non-humans extinct with or without us. So, to get a new balanced ecosystem, humans will have to go extinct with the rest of the current biodiversity or humans will have to adapt and create a new balanced ecosystem, by giving space to the emergent ecologies in the current Anthropocene environment (Kirksey, 2015).

Nowadays, our environment is not in the hands of nature, but in the hands of designers (Press & Cooper, 2003). So, designers play an important role in creating an optimistic future for humans and non-humans (GANIYU & ADETUNJI, n.d.) (Gump, 1971).

Therefore, a revolution is needed in how designers act to design for a more-than-human built environment. Otherwise, our ecosystem will be uninhabitable for humans and non-humans.

In philosophy, these questions are discussed by several philosophers, artists, and writers. What would the posthuman world look like if human and non-human agencies were balanced?

What does the ecosystem need to be more in balance with its growing human population? A new synergy is going to be shaped in a post-anthropogenic world.

This research creates a guide with a call to action to designers on how to change the current environment and make space for emergent ecologies. The main question that arises is: how design could play a role in facilitating more-than-human agencies in pathways towards a post-Anthropocene environment?

First by questioning the current Anthropocene and the coming posthumanism paradigm. With the questions: What are the current needs of humans and non-humans in the city and nature? What are the thoughts of posthumanism and what vision does humanity need to keep their species alive? Secondly, what design principles are key for the survival of humans and non-humans in the post-Anthropocene environment? Third, how could design play a role in making this vision more operational in the post-Anthropocene world?

Research framework

The research framework is designed to guide the exploration of a more-than-human architecture to a manifestation for designers. The research aims to create:

1. **Vision making**

An outline of the speculative vision of a future of the post-Anthropocene.

In architectural practice, it is relevant to start with a vision. A vision shows the direction of the design project, like a guiding theme throughout the project. For an architectural practice, a vision is important, but also for the beginning of a revolution. For example, the revolution of the Age of Enlightenment in the 18th century. This trend is seen as the pillar of the current Western society with the start of a philosophical manifestation (Kuksa et al., 2023). The revolution forms an example for this research. How to make a vision operational with a guide for more-than-human agencies in the post-Anthropocene environment. This guide is creating the first steps for the revolution to a symbiosis between human and non-human life.

After this, it will be the start of thinking about how to carry out this vision into a design project. This vision will include why the role of the (landscape) architect is important to make this vision more realistic. The role of the (landscape) architect is important because the human lifestyle is influenced by their environment, the environment created by the architect, and the architect giving space to non-human agencies. The goal is to change the environment of the human and create a more-than-human city as nature, where humans and non-humans could live in a more mutualist way.

This vision will be based on the views of several philosophers who discuss the posthuman paradigm including Rosi Braidotti, Francesca Ferrando, Koen van Mensvoort, Deleuze, James Bridle, and Donna Haraway.
Furthermore, some visions, like Solarpunk and rainforest realism, are going to be addressed and compared to this paradigm. Several questions will be answered: What discussions are taking place in the posthuman paradigm? What do I, as a researcher and architect, think about these viewpoints? What visions support this posthuman paradigm?

2. **Exploratory scenarios and scenario thinking**

The first step to making a vision operational is to research current scenarios for future scenarios. To compare scenarios, a framework is set as seen in Figure 1. The framework is chosen carefully with the sense of what information is needed to make a vision for a project for designers. The base of the framework is human and non-human needs. Human and non-human needs are the main drivers of designers. The needs will be tested on three different scales that fit the scope of the design project. The scales chosen are tools, shelter and neighbourhood. Designers create environments for certain lifestyles and certain lifestyles demand certain environments.

First, the exploratory scenarios examine a range of plausible needs of humans and non-humans. The present human and non-human needs are the trajectories of drivers in the city and nature. The pyramid of Maslow will be set as background to differentiate primal to secondary needs.

Together with the framework and the exploratory scenarios, scenario thinking will explore multiple scenarios of the ‘city as nature’ associated with a vision of the posthuman paradigm. The ‘city as nature’ represents the post-Anthropocene environment. By envisioning different

future scenarios, the researcher can reflect on the implications and desirability of each scenario.

The exploratory scenarios will support a present knowledge of current the needs of humans and non-humans on the scales of the framework. The vision will support a generic idea about the future. Scenario thinking for the ‘city as nature’ within the framework of needs, will be supported by the outcomes of the vision and exploratory scenarios

3. Design principles

The design principles formalize design knowledge so that practices can solve future design problems (Fu et al., 2016). A catalogue of design principles, based on the needs of humans and non-humans, will be made to serve designers.

This will serve as a base for the renovation of postwar buildings. This building typology is in high need of renovation and is a common typology in the city. The city is where nature is most limited and most people will live in 2050 (United Nations, 2018). These buildings had a very human-centred idea, and the goal was to make them into a more-than-human building.

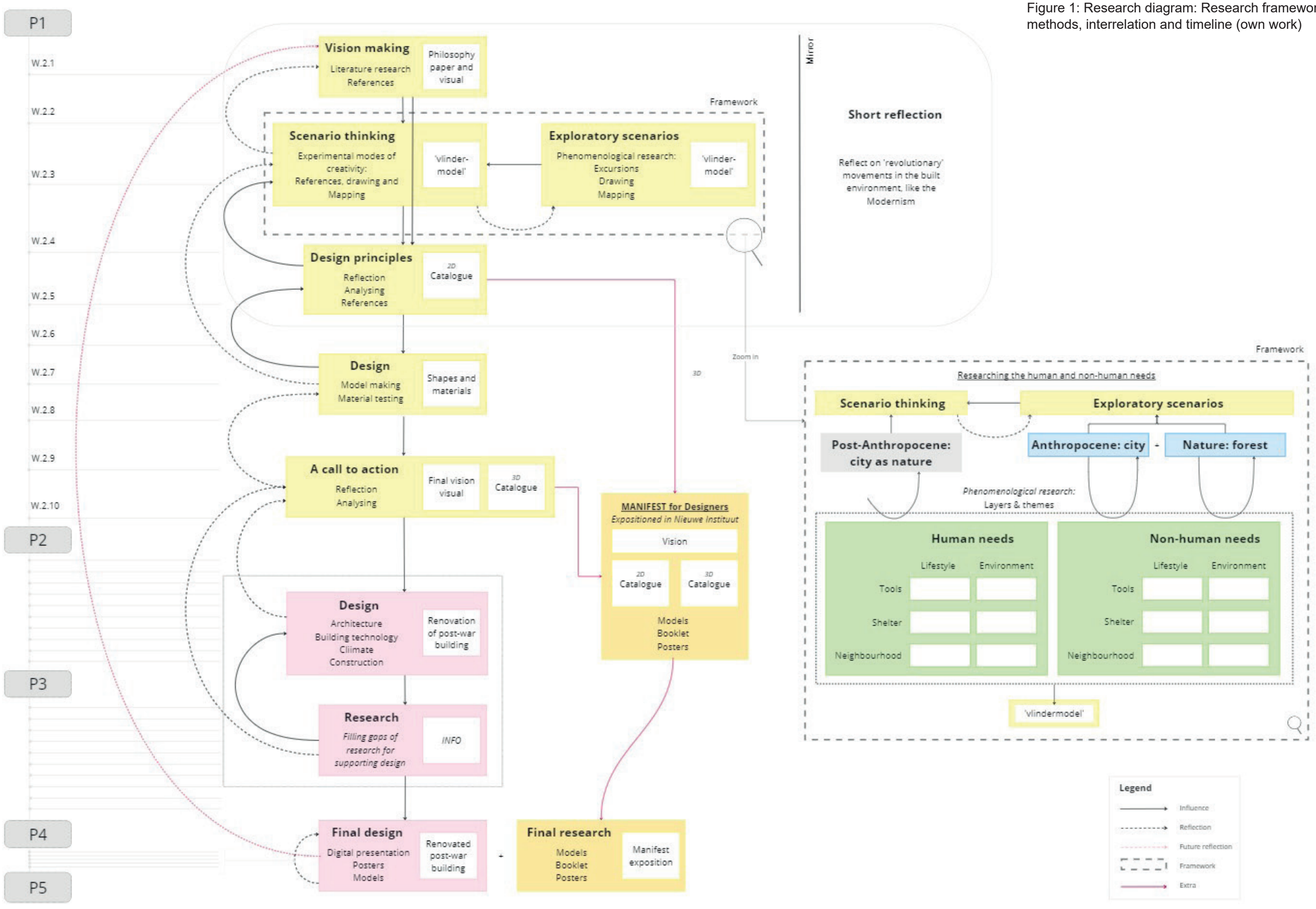
4. Design

The design will test the design principles in forms and shapes. These forms and shapes represent design principles that are possible to put into an existing post-war building regarding the role of aesthetics and pragmatic solutions. This hypothetical project with its catalogue of architectural strategies will act as an example to show the solutions realized or illustrate the hypothetical ideas in practice. To get closer to an environment that can change our human lifestyle.

5. Call to action

Lastly, this research will act as a manifesto for designers, a call to action, that elaborates on the vision and strategies described above and hopefully raise awareness of better human and non-human symbioses.

Figure 1: Research diagram: Research framework, methods, interrelation and timeline (own work)



Methodological reflection

The research has a mixed-method approach. These methods are outlined in the structure of the research framework. This creates a clear overview, as seen in Figure 1.

1. Vision making

To create a vision of posthumanism, I, as a designer-researcher, will dive into the world of philosophy by reading and finding other mediums that discuss this way of thinking. At first, a literature study outlines and discusses the thoughts of philosophers. The information is gathered by reading and attending possible masterclasses or lectures about this posthuman topic. The reason for choosing a literature study is because there is already a lot of written information about the ideas of a posthumanism future. Followed by the attendance of lectures and masterclasses will actively deepen my understanding of this topic.

In addition, visiting exhibitions of artists with a posthuman approach will bring a new layer to this vision. Some ideas about the future, cannot always be put into words only. This will be taken into account in discussing and creating the vision of a new manifestation of posthumanism. As a result, the vision will be a written text and a visual of this written text.

2. Exploratory scenarios and scenario thinking

In this step, phenomenological research will gather information about the current human and non-human needs in the city and nature. At first, by participating in experiencing living in nature for primitive survival and living in the city, put into drawings, sketches, diagrams, photography and writing. The different methods showcase the needs from different perspectives.

Secondly, for the scenario thinking, about the post-Anthropocene, experimental modes of creativity will be used. The experimental modes of creativity will be drawing, mapping, collages, writing and visualization. Furthermore, references to projects that include more-than-human design will be implemented. This supports formulating the scenario's thinking with a broader perspective on the distinct needs and interactions of humans and non-humans in different contexts.

To give an overview of these needs after using the framework in Figure 1. A new model based on the 'vlindermodel' of Vereniging Deltametropool (2013) will be created that showcases the needs of humans and non-humans in the city, nature and 'city as nature'. With the model, the exploratory and future scenarios with the determined vision, the researcher can critically analyze the strengths and weaknesses of different posthuman visions.

As a side note: the first excursion about primitive survival in nature, has already taken place in October at the three-day course of Bosbeweging at the Veluwe, the Netherlands. Further field research will take place when more information has to be gathered for the phenomenological research.

3. Design principles

The creation of the design principles is done by analyzing and reflecting on the first two steps through the lens of a designer. How do these outcomes translate into design principles?

The design principles form the start of a beginning revolution. Formulating the design principles comparative reflection of 'revolutionary' movements in the built environment, like Modernism, will help sharpen the design principles in this research.

The design principles form a written catalogue, that creates a “2D” catalogue. The purpose of a “2D” catalogue is a structured and clear overview for designers to know what principles will be the main guidelines for the design.

4. Design

By creating examples for the “2D” catalogue, model making and material testing will take part in the process. This research serves as an example for designers of what the possibilities are to make the vision more operational for a more-than-human post-Anthropocene environment. In addition, materials like biobased materials, living materials and innovative technologies will be experimented with, at the base of an existing post-war building.

The experiments of models and materials will be done through the lens of a researcher, an architect and a landscape architect. These three specialists will create a multi-disciplinary approach to post-Anthropocene architecture.
The final forms and shapes include all design principles and give answers in design to the future needs of humans and non-humans, like a “3D” catalogue.

5. A call to action

The manifesto will be shown as a final vision with the “2D” and “3D” catalogues. The final vision and the catalogues will be analyzed and reflected on the previous steps of the research. This critical analysis allows deeper reflection on the process of the research and how the research step reflects on the result. How did the final vision take shape throughout the process by making the beginning vision operational? What are designers capable of influencing the human lifestyle by redesigning the environment? What do the designers need to make a vision more operational for the post-Anthropocene environment?

The call to action will be an exposition of the final vision, “2D” and “3D” catalogue as a manifesto guide for designers. After the P2, the Nieuwe Instituut will be contacted to discuss exposition possibilities. This will create the capacity to put the vision not only operational but also into practice.

Conclusion

The expected conclusion of the research is humans and non-humans can live in symbiosis. Humans have to adjust to non-human agencies and interact actively with nature in their living environment. Granting that we have to create space for more-than-human agencies. One way is by inviting wild nature into the city and the other way keeping parts of controlled nature, for example, agriculture.

The task of the designer is to implement both ways into the built environment. In that way, humans learn to adapt to more-than-human agencies, which will give us a bigger chance of survival and supporting emergent ecologies. Also, actively living with these agencies will give us the awareness to treat nature as a part of us and not as a product. Furthermore, the designer can give form to the design principles that will trigger the humans in their daily comfort zone to change their lifestyle to a more positive footprint for the ecosystem.

Secondly, as technology has disconnected us from nature, this doesn't have to be the case in the future. We just have to work with the ecosystem instead of against it. Technology as an extension of humans helps humans to learn more about nature and to implement nature in innovative ways into design.

So not only, is the task of the designer implementing more-than-human agencies step by step in the post-Anthropocene environment, but also showing that we could live in a symbiosis way with nature even with the presence of technology. This can be achieved by designing a shelter that serves symbiosis between humans and non-humans, while having met our comforts and needs in our day-to-day lifestyle.

[Addition after P1]

A small sketch of a possible post-Anthropocene future is shown below in Figure 2.

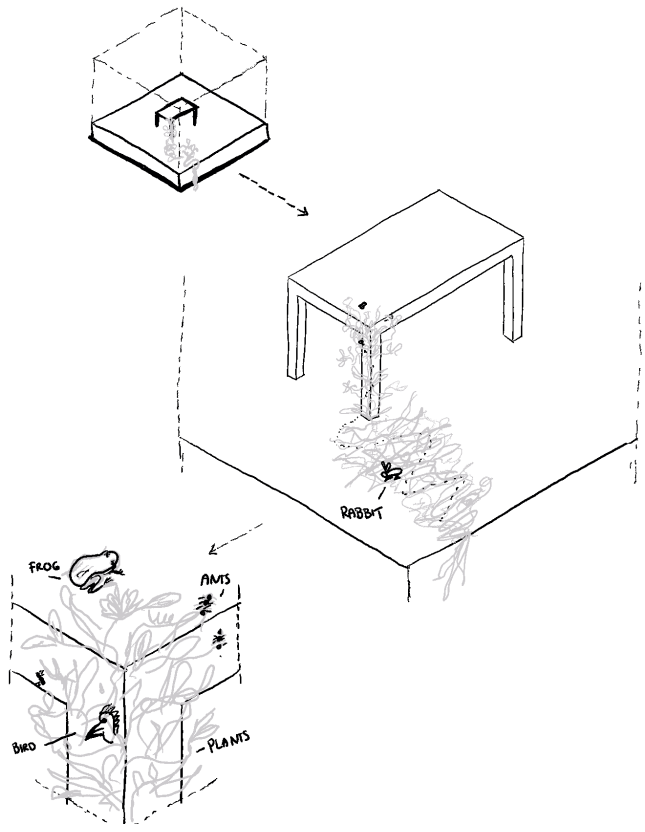


Figure 2: Post-Anthropocene sketch of a table corner (own work)

Discussion P1

During the presentation of P1, the critics of the research plan were focused on specifying what more-than-humans and non-humans are in this research. This could be defining it first before starting research or defining by doing research: which more-than-humans and non-humans will be there in the future, and which are emergent?

The idea is to become more specific about the non-humans and more-than-humans during the research. The ones that need attention will become clear in the process. This will create a wide view in the beginning but create space for the unknown.

The second criticism is the importance of keeping this research doable and not having blurred lines between what is research and what are design studies. The structure of the research could be more parallel with design and research.

At last, specifying what is the smallest scale to design to achieve this revolution. In this research, the smallest scale could be a table or corner of a wall or toilet.

All in all, the research has to be more specific to create grip and direction.

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APA 7 style

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Definitions

For clarification, some terms have to be defined that revolve around the research.

Nature

According to Cambridge (2023):

1. all the animals, plants, rocks, etc. in the world and all the features, forces, and processes that happen or exist independently of people, such as the weather, the sea, mountains, the production of young animals or plants, and growth;
2. the type or main characteristic (of something);
3. the character of a person, or the characteristics a person is born with.

To add, to this research, the first definition is going to be used as a base. But this definition will be discussed in the research on why nature is seen as separate from humans. And it is going to be questioned if humans are part of nature with the “human-made” technology. Could we see humans and technology as nature in a posthuman world?

Wilderness

According to Cambridge (2023):

1. an area of land that has not been used to grow crops or had towns and roads built on it, especially because it is difficult to live in as a result of its extremely cold or hot weather or bad earth
2. an outside area in which plants are left to grow naturally or untidily

To add, to this research, the definition of wilderness is going to be the second one, but specifically defined as the following: an area in which nature is left to grow naturally or untidily and is not controlled by humans.

Climate change

According to Cambridge (2023):

1. changes in the world's weather, in particular, the fact that it is believed to be getting warmer as a result of human activity increasing the level of carbon dioxide in the atmosphere

Anthropocene

According to Cambridge (2023):

1. relating or referring to the most recent period in the earth's history, when human activities have a very important effect on the earth's environment and climate (= weather conditions)

To add, to this research, the definition of Anthropocene is mostly going to focus on the built environment, the use of technology and the human lifestyle of this period. Also, the period when the lack of biodiversity has become emergent.

Post-Anthropocene

The period after the Anthropocene, where humans no longer are dominant in shaping the biosphere. (Groß, 2020)

Biosphere

According to Cambridge (2023):

1. a part of a planet's environment where life exists

Posthumanism

The critical perspective that the age of *humanism has come to an end. It is premised on the idea that humanism's twin assumptions that humans are both knowable and reasonable is false. It rejects the idea that humans can be known, largely on the grounds that the dividing line between human and non-human or animal is difficult to delineate in the first place and highly permeable too. (Oxford Reference, 2010)

Human

(Cambridge Dictionary, 2023)

1. being, relating to, or belonging to a person or to people as opposed to animals

To add, to this research, the definition of human is going to be discussed in this research. The philosophies about being human is going to be outlined. What makes us humans? Are we biologically human or do we act like a human? (Colomina & Wigley, 2016)

Non-human

The not human or not produced by humans (Collins English Dictionary, 2023)

More-than-human

A term used critically to remind human geographers that the non-human world not only exists but has causal powers and capacities of its own (Oxford Reference, 2010)

Technology

(Cambridge Dictionary, 2023)

1. (the study and knowledge of) the practical, especially industrial, use of scientific discoveries

To add, to this research, the definition of technology is going to be more connected to the human. The human is inventing technology and the technology invents the human. Both terms are inseparable. Technology extents the human knowledge. (Van Mensvoort, 2019) (Colomina & Wigley, 2016) This will be further discussed later in the research.

Symbiosis

(Cambridge Dictionary, 2023)

1. a relationship between two types of animal or plant in which each provides for the other the conditions necessary for its continued existence