

The Non-human City Driven by AI and Ecological Environment

Exploring the implementation of artificial and nature intelligence in the design morphology of post-Anthropocene

Author: Shengyu Meng

Supervisor: Prof. Claudia Pasquero

Keywords: Non-human City, Post-Anthropocene, Biological Intelligence, Artificial Intelligence

ABSTRACT: In the scope of conventional architectural and urban design, we proceed the design workflow by human intelligence, knowledge and regulation. So, what about design a non-human city? Non-human city is dystopian hypothesis scenery which is not aiming for human habitation. By researching the design workflow under this assumption, we could explore the morphology driven by the intelligence other than human, such as biological and artificial intelligence, to extend present design boundary, and answer some fundamental questions, such as the essence of consciousness and conception.

Non-human city is a dystopian hypothesis, where is not oriented for human habitation, but mainly driven by AI (Artificial intelligence) and ecological environment. This hypothesis could accidentally

exist in the history of human and nature interaction, and it may become more frequently in present post-Anthropocene age, as well as in the unknown future we are rushing into.

One hypothesis of non-human city is the earth become uninhabited in the long-term future. However, David Wallace-Wells believes that may come true much sooner than we think, because our present economy and industry system are accelerating the climate change constantly (Wallace-Wells, 2019). In addition, there are maybe various non-human cities because of other reasons. For example, the new discovering areas previously considered as uninhabited, such as mars and moon, and the future world has been taken over the control by super AI (Bostrom, 2014).

In one aspect, discover a novel design workflow driven by AI and ecological environment in this extremely hypothesis could extend the boundary of design and propose new morphology. In addition, we could try to answer the fundamental questions: if AI really has consciousness in present? Could we better understand nature intelligence with AI as a bridge?

Base on previous description, my research could be divided into four steps. The first step is the explanation of non-human city, to clarify its definition and categories, in other to provide the post-Anthropocene environment context as the specific site we could develop design later. The second step is the research of AI as design tool, to understand how AI could perceive the environment and apply in design. In the third step, we would introduce different creatures, for example, slime mold, to build up as the biological protocol to help the interaction between AI and nature. In the last step, by integrating the elements above, we could synthesize the plausible urban design projects of non-human City.

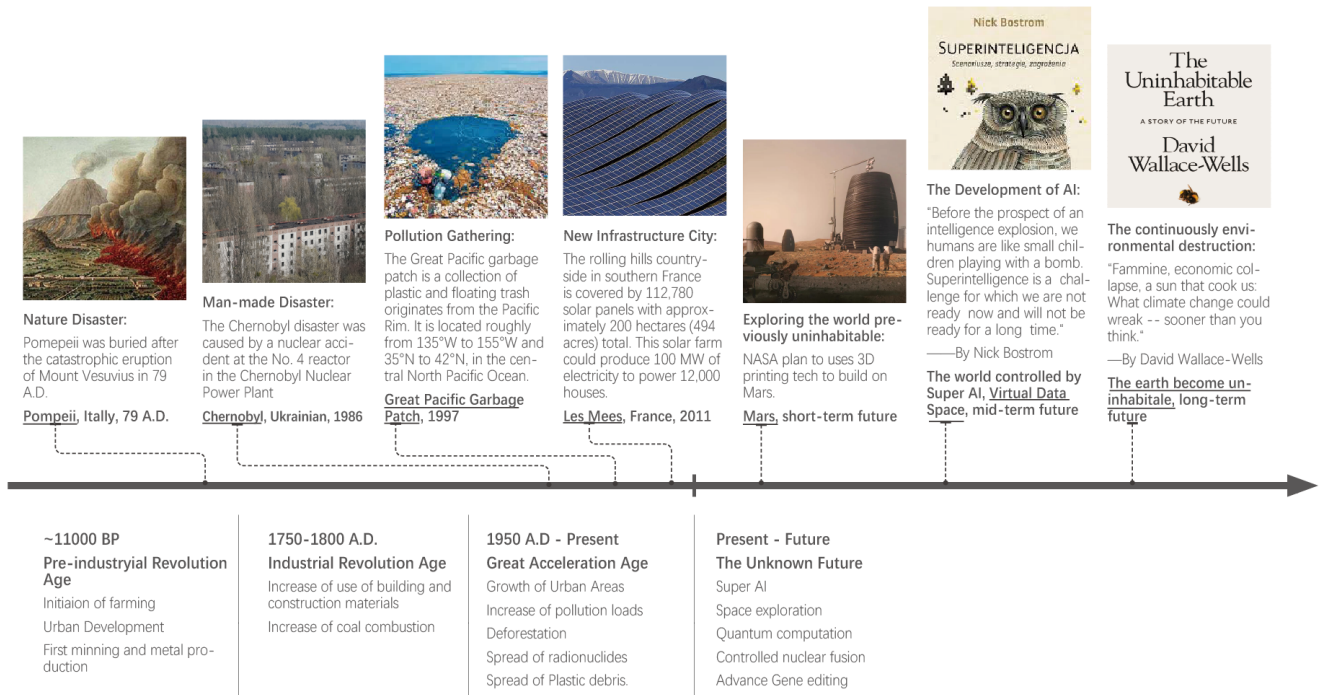
In summary, by building up the non-human city hypothesis upon the specific site context in post-Anthropocene, we could broadly research on the potential utilization of artificial and biological intelligence as design tool. The details urban design projects of various types of non-human cities will be produced under this novel design workflow and morphology.

REFEENCES:

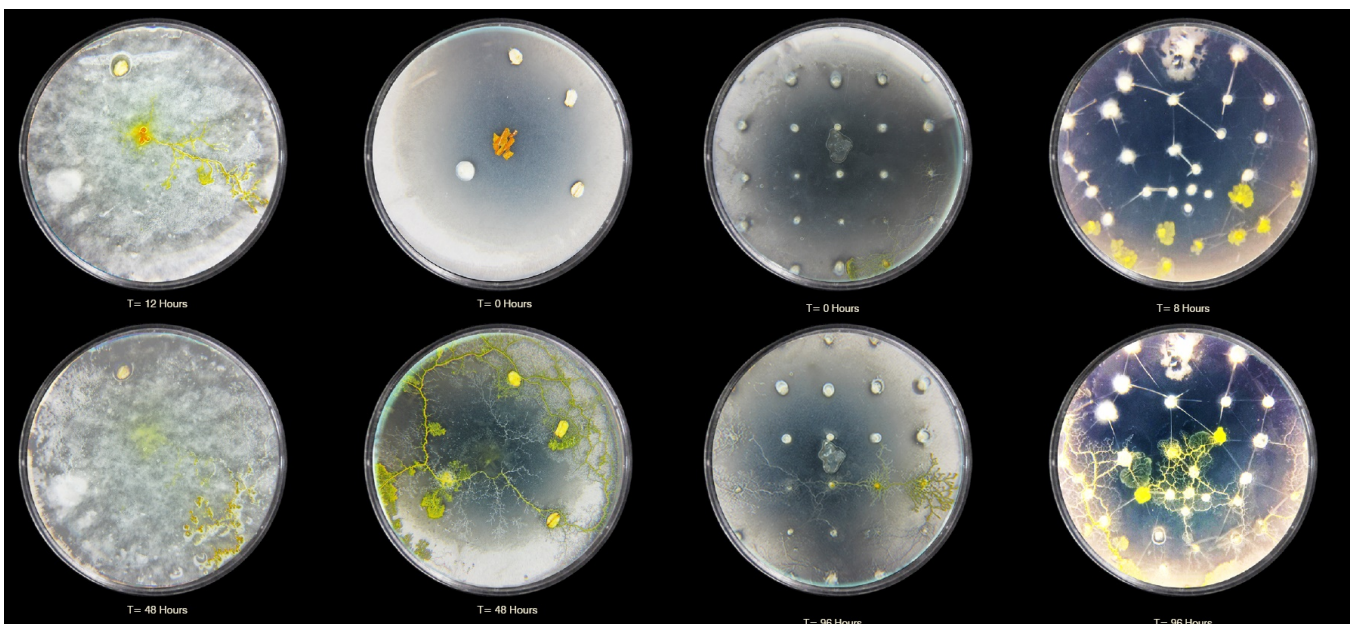
Bostrom, N. (2014). *SUPERINTELLIGENCE: Paths, Dangers, Strategies*. Oxford, United Kingdom: Oxford University Press.

Wallace-Wells, D. (2019). *The Uninhabitable Earth: Life After Warming*. New York: Tim Duggan Books.

Appendix A: Diagrams and Experiment Records of Design of Non-human City Design Workflow



Bio 3D printing process of feeding the Liwa site condition into physarum bio protocol.



The biological characteristics catalogue shown by growing of physarum polycephalum (slime mold).

Appendix B: Inexistence Creature created by Artificial Intelligence (CLIP Guide diffusion)



Sci-fi photosynthetic dog



Cyberpunk photosynthetic fish



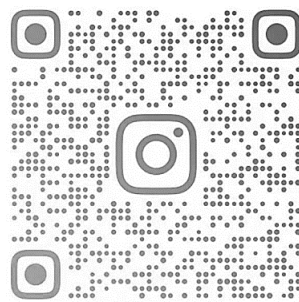
Cyborg jellyfish survive in nuclear war



Cyborg oyster survive in nuclear radiation



 @meng_shengyu



Ins: @shengyu_meng