

A Radical Rethinking of the Industrial Landscape through New Materialism:
The case of Almaty

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Abstract:

Industrial landscapes are the areas within a territory that are oriented towards the concept of production in order to satisfy human needs. Industrial buildings and the landscapes they create are always part of the global warming discussion, as their existence has a negative impact on our planet. In the case of Almaty, industry plays a protagonist role in the country's economy. The strategic role within the New Silk Road Economic Belt increases the importance of the industrial character of the city and the need for a new reading of these landscapes. This need is based not only on the issues arising from the relationship between technology and ecology, but also on the notion of automation expressed in these industrial landscapes. This research is based on a non-anthropocentric theory that shifts its focus from the subject to the object. The name of this cultural theory is New Materialism, which emerged at the end of the 20th century and has become known during the 21st century. The aim of this research is to expand the understanding of the factory through the lenses of New Materialism and to explore how architecture can address these new understandings.

Problem Statement:

Global warming and climate change are two terms that humans use in order to describe the effects of their actions to the Earth. This change is something ongoing, something that accelerates and often surprises humanity that appears to be helpless in front of this phenomenon. This event makes us realise how fragile is the world we live in and how non-human powers can take control and alter our living environment. In order to comprehend how these non – human systems work, it is crucial to shift our focus from anthropocentric theories to non-human theories such as New Materialism. New Materialism is a cultural theory that arises at the end of the 20th century after post-modernism and had become known during the 21st century. It cuts across many disciplines and has already influenced contemporary artists, philosophers, cultural theorists and scientists. The leading scholars who wrote about this theoretical framework are Rosi Braidotti, Manuel DeLanda, Karen Barad and Quentin Meillassoux. New Materialism arises from the idea of monism. Monism argues that there is no difference between mind and matter, meaning and matter or culture and nature and this theory can be applied in a lot of different branches of thinking.¹ Karen Barad defines matter as a set of interactive entanglements with a morphogenetic character and object as a technological apparatus or a set of measurements.² Manuel DeLanda defines object as a composition of historical, geological, social and biological events.³ Further to this, Gilbert Simondon argues that matter comes into life after a certain form has been given to it and its development, anatomy and way it behaves depends on the relationship between its form and its substance that it is made out of.⁴

(Global warming and climate change are two terms humans use to describe the effects of their actions on the earth. This change is something ongoing, something that accelerates and often surprises humanity, which seems helpless in the face of this phenomenon. This event makes us aware of how fragile the world we live in is and how non-human forces can take control and change our living environment. In order to understand how these non-human systems work, it is crucial to shift our focus from anthropocentric theories to non-human theories such as New Materialism. New Materialism is a cultural theory that emerged in the late 20th century, after postmodernism, and has become known during the 21st century. It cuts across many disciplines and has already influenced contemporary artists, philosophers, cultural theorists, and scientists. The leading scholars who have written about this theoretical framework are Rosi Braidotti, Manuel DeLanda, Karen Barad and Quentin Meillassoux. New Materialism arises from the idea of monism. Monism argues that there is no difference between mind and matter, meaning and matter, or culture and nature, and this theory

¹ Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews and Cartographies* (Open Humanity Press, 2012), pg. 93.

² Karen Barad, *Meeting Utrecht Halfway* (7th European Feminist Research Conference, 2009).

³ Manuel DeLanda in *New Materialism: Interviews and Cartographies* (Open Humanity Press, 2012), pg. 39.

⁴ Gilbert Simondon, *The Position of the Problem of Ontogenesis* (Perrhesia 7, 2009), pp. 4-16.

can be applied in many different branches of thinking. Karen Barad defines matter as a set of interactive entanglements with a morphogenetic character and object as a technological apparatus or set of measurements. Manuel DeLanda defines object as a composition of historical, geological, social and biological events. Moreover, Gilbert Simondon argues that matter comes into existence after being given a particular form, and its evolution, anatomy, and the way it behaves depend on the relationship between its form and the substance of which it is made.)

New Materialism and this specific understanding of the objects that surround us raise questions not only about the nature of the cities and landscapes in which we live, but also about the relationship between technology and ecology. Since nature is within humans, what humans create can also be seen as nature, or the natural evolution of our planet, and thus the built environment can be described as mutations of nature. These mutations change the ecology and geography of a place and leave their mark on the landscape. New Materialism gives new definitions to the object and matter and thus to the built environment. Industrial landscapes, which are part of the built environment and one of the main factors contributing to global warming, serve as tools to explore possible new relationships between a technological development and ecological thinking.

Research Questions:

If according to New Materialism the shift is from the human to the object, in what ways can these industrial landscapes be described? How can we expand the understanding of the factories and what are the implications of these understandings in architecture? These research questions are investigated within the context of Almaty in Kazakhstan.

Methodology:

The theoretical framework of this research is inspired by the book *New Materialism: Interview & Cartographies* by Iris van der Tuin and Rick Dolphijn. The research uses this book as a starting point and more specifically the definitions given to subject, object, matter and topology. By looking at the properties of matter, as defined by Karen Barad, the research focuses on its morphogenetic capacities and zooms into landscapes where matter produce matter. Industrial landscapes is an example where this phenomenon occurs and hence becomes the object of research. Certain industrial landscapes are examined and mapped within the context of Almaty, Kazakhstan in order to reveal different relationships and characteristics. The North - South arrangement of these industries across the railway lines creates a connection between the individual research topic and the group research which is the understanding of the territory of Almaty as a North – South system based on the water flow, hardware and soil conditions. The research continues to map these industrial landscapes by creating an inventory of six industrial landscapes within Almaty. The choice of these six industries is defined by the remote character of the research and hence the amount of information that can be accessed online. The inventory becomes a catalogue of industrial objects that generates different understandings for these landscapes. The understandings are the following:

- Chemical Understanding: Molecular exchange between physical objects
- Understanding based on the industrial equipment of the factory
- Time – Displacement understanding: Mapping different types of movement
- Ecological Understanding: flora, fauna and industrial waste
- Soil Conditions understanding
- Understanding of the factory as an assemblage of materials

The Modi Operandi workshop is a very important part of the research process as it stimulates the last two understandings for the industrial landscapes. Finally, a combination of modelling and mapping of spatial conditions will form a set of conclusions that identifies the typical characteristics of these different investigations. These conclusions in combination with an architectural reading of the models, form a strategy and the starting point of a design proposal that will be developed in the second semester.

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