The Terraforming Project Presentations 2021

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theterraforming.strelka.com
The only humans to have died in outer space are the three Russian cosmonauts of the Soyuz 11 Mission, 1971. To die in outer space is to approach two shared unknowns: the limit of the human in terms of its mortality, and our planetary limits in the extension of outer space. This historical interplay between space as both the realm of idealism and the crucible of technological development offers an interpretative framework for approaching questions of human finitude. How far the human can be untethered from its original context and propagate the planet outwards entails the reassessment of our epistemological frameworks and their implications for design. Kosmos and Nekros, therefore, emerge as shared boundary conditions that raise questions of the knowing and unknowing of the limits of human knowledge and experience. In moving beyond the sacralised images of the Blue Marble and the human as Vitruvian, our historical and contemporary imaginaries of space open to a new retelling through a systems view of life and death in the kosmos.
Future Premium

Insurance as a design medium for climate mitigation and governance

Current technologies of abstraction allow for the past to inform present human actions in order to produce viable futures. However, the understanding of the future as uncertain and volatile doesn’t match the way these technologies are deployed or the way climate related risks are approached. Future Premium explores the ways humanity has conceptualised the future, the technologies that made these ideas possible, and the tools and policies it designed to manage chance and misfortune. Specifically, it focuses on the technologies of insurance and computer modelling and explores their historical, present-day and possible future convergences. The project enquires whether when coupled with climate modelling, insurance can become a medium of climate mitigation and governance. The idea is based on the consideration that the future is deeply uncertain and therefore needs to be continuously produced and reproduced. Thus, insurance is approached as a tool of design rather than prevention. Future Premium identifies three aspects of the current insurance system that need to be taken into account when pondering the transition to insurance of the future: capital protection, uninsurability and collectivisation of risk. The proposition reveals the system’s implications for the realms of finance, spatial zoning or governance.
Terra-Collar Work

A new kind of work that draws from recent climate change projections and reframes the future of labor

The Terra-Collar project provides a different view on the future of work, one that responds to the goal of staying below 2°C degrees by 2050. The project departs from the discussions about working hours reduction, nonwork advocacy and transition of the entire labor force to coding and data science. Instead, it argues that future work will be tethered to the very material processes of climate change mitigation and adaptation. This new type of work necessarily strides away from the white and blue-collar distinctions and emerges as a new category of its own: Terra-Collar. Scaling up to the amount of produced carbon emissions and limiting global warming will require an effort equivalent to the largest terraforming project in human history. It will demand mass labor mobilization as well as new knowledge, skills, and jobs to appear and disseminate across the globe. The end of time narratives that describe the climate crisis have demonstrated their inability to instigate effective actions against the problems that become more tangible every year. A new story is needed for the times we inhabit, one that motivates action with the tools at our disposal.

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Genomic technologies as potential tools for deliberate microbial terraforming

The project is a call to recalibrate our approach to design by recognizing the microbiome as an additional parameter and overlooked agent of terraforming. The technological mediation of the continuous, interchangeable and entangled relationships between microbiomes, environments and ourselves allows for higher resolutions of perception in the way we compose synthetic landscapes. When germ theory originally framed microbes as pathogens, design was driven by “sterilization” and aimed at the “extermination” of microbial life and the production of highly tempered and sealed environments, propelling a culture of cleanliness. With the potential advancement and accessibility of metagenomic sequencing, we may be at the cusp of refining our understanding of these microbial systems, and reframing our design practices from the reactory to the nuanced, adaptive, and proactive. Manifesting alternative, more precise compositions across various sites and scales of intervention, the project narrates how sequencing could become a potential design tool to inform deliberate terraforming.
Platform Poiesis

A historical account of technological platforms and the political relations they generate

Technological platforms interfere with politics by generating new political relations and shifts in power. This emergence of political relations via platforms - or platform poiesis - creates contingencies that states strive to account for by measuring and modelling the impact of platforms on society. In this project, we tell a historical account of how this capacity for platform modelling developed, focusing on the Eurasian context. We depart from the late 19th century with the consequences that the Trans-Siberian Railway brought for the Russian state, which was unprepared to model platform poiesis. We then focus on the emergence of computing in the Soviet Union, where futile efforts to resist platform poiesis culminated in a new sensibility toward it, and to the subsequent emergence of Chinese computing, which involved unique geopolitical conditions for platform poiesis. This history brings us to the modern-day People's Republic of China's Big Earth Data Platform, itself embedded within the larger BRI infrastructure construction project, through which China plans to strategically harness the capacity of platform poiesis. Reading history and the present moment together, we suggest how to understand statecraft that has the capacity for platform modelling at its disposal, and what such accountability requires.

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Intelligence is only disclosed as it is expressed through a medium, or site of expression. Moving beyond the avatar model of intelligence, in which various figures — human, machine, or otherwise — are the subject of analysis, we articulate a figuration of a synthetic intelligence through the specification of the site. This specification unfolds across the various elements of site design — data mobilization, learning algorithms, interfaces, constraint spaces, co-relations. Here, the human figure is less a user than yet another element of the site, both a subject and an object of design. The resulting expression of intelligence is neither human nor machinic, but an emergent product — a synthesis — of these elements and their composition.

Sites of the Synthetic is a project of design, guided by two questions: How might a landscape of possible intelligences take form and how might we reorient ourselves accordingly?

There has never been a more pressing moment for this kind of project. As the technological capacities of artificial intelligence mature into their potential, as the human is de-centred from its position of privilege, and as the planet nears a number of bifurcation points, new modes of intelligibility — hence new modes, new models of intelligence — are no longer an aspiration, but a necessity, for a viable terraforming.

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synthetic.site
Peak Face

The Facial Age of the Terraforming

Terraforming is the process of intelligence transforming its surroundings at the scale of the planet. Peak Face proposes that the terraforming has a period that has been marked by an abundance of faces. The face started out as an evolutionary adaptation that collected sensory organs at the front-ends of animals. Its period of relevance began around the Cambrian Explosion (~541 mya) and has lasted until now. From this perspective, the face was a platform for changing the environment long before it became an indicator of human identity.

Since the facial age has a determinate starting date, we can anticipate that it’s also going to end at some point in the future. It may even be that we are at the threshold of a post-facial age of the terraforming, where facelessness and alternative media of social cognition (or intelligence) become increasingly important in the reshaping of the surface of the Earth.

This provocation covers the origins of the facial age of the terraforming; the ways in which the strange collection of sensory organs at the front-ends of most animal species has shaped the Earth; and why the face’s role may be about to change.

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Borders of ZATO

Learning from ZATOs to conceive of different modes of enclosure and bordering

In the middle of the 20th century at the beginning of the Cold War, the USSR started the development of new kinds of cities: closed, military governed research centers, known as ZATOs. Based on the case of their enclosure, this project reconsiders city borders and designs new bordering techniques.

Initially ZATOs were united by one goal - the creation of the atomic bomb. Despite a regime of secrecy, ZATOs formed industrial nuclear clusters and an interconnected scientific network. The growth of this network could be seen both as a planned strategic aim of the USSR, and as the formation of a giant multi-nuclear organism with a distributed cognition system. But how could closed cities be connected to anything? We expose this paradoxical complexity of ZATOs borders by bringing different notions of “enclosure / openness” from cybernetics and ecology. The further we explore ZATOs, the less information about them we have. Missing data about travel routes of scientists between ZATOs or construction of the wall reveals fundamental premises about the way we think about borders. We introduce the notion of bordering cascades and temporal vortices to describe not just the closed world of ZATOs, but various spectra of past and future planetary cities.

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Dusts

Dust has always been (t)here

Dirt or displaced matter? A third of the Earth's terrestrial area will be subject to drier conditions due to hotter temperatures and changing precipitation patterns. The largest areas with high dust intensities are in the Northern Hemisphere, a broad dust belt that extends from the west coast of North Africa, over the Middle East, Central and South Asia, to China. Terrestrially, dust and sandstorm-derived microbiota contain a spectacular diversity of bacteria, viruses, and fungi feeding on - and cohabiting with - each other. Industrial processes drive an increasing amount of circulating dust in the atmosphere, complicating greenhouse gas-driven anthropogenic global warming. The properties and functions of dust are entangled with human activities and effects on Earth, as co-producing and active agents of planetary ecosystems within larger interplanetary dynamics. From 2015 to 2018, Deinococcus radiodurans - a bacteria known for its extraordinary capacity to survive high levels of radiation - was exposed to extraterrestrial conditions outside of the International Space Station, and did not exhibit any lasting damage. It is inevitable that the level of microorganism transportation and delivery to extraterrestrial space will in perpetuity exceed those of intended human species. While the theory of panspermia is still debated, panspermian logic outlines how omnipresent dust is vital to planets and central to planetarity.

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