

PROGRESS

When you invent the ship, you also invent the shipwreck.

Eleni Boutsika-Palles

*There is a painting by Klee called Angelus Novus. An angel is depicted there who looks as though he were about to distance himself from something which he is staring at. His eyes are opened wide, his mouth stands open and his wings are outstretched. The Angel of History must look just so. His face is turned towards the past. Where we see the appearance of a chain of events, he sees one single catastrophe, which unceasingly piles rubble on top of rubble and hurls it before his feet. He would like to pause for a moment so fair [verweilen: a reference to Goethe's Faust], to awaken the dead and to piece together what has been smashed. But a storm is blowing from Paradise, it has caught itself up in his wings and is so strong that the Angel can no longer close them. The storm drives him irresistibly into the future, to which his back is turned, while the rubble-heap before him grows sky-high. That which we call progress, is this storm.*¹

How does one define the future, how to care for it? How much do we participate in the making of our future or to which extend do we just let things happen? Letting things happen is, according to Benjamin, the definition of catastrophe². However a 'catastrophe' does not necessarily mean the end, as Louis Marin writes, 'catastrophe is the sublime way to open a neutral space, one that is absolutely different.'³

If we accept the perception of history as cyclical, as a sequence of aeons⁴, whose notion itself contains repetitive rises and falls, ascendances and decadences, upturns and downturns, where do we stand now?

We are indisputably living in an era where Benjamin's progress has arrived, utopic visions of the past in many fields have become reality, *'the future is already here, it is just not evenly distributed'*⁵ and who is included in this progress and who is excluded is basically the difference between utopia and dystopia. Conquering space, imitating nature, control of unconceivable amount of data and tools for creation on the one side, debris, destruction of ecosystems, tools for power and manipulation on the other.

Projects that promise ultimate solutions and better futures. But for every ideal project another ideal project has to be destroyed⁶, so then further projects are required to cover up for the consequences of this destruction. These subsequently prohibit the visions

and potential of the first ones, that do not seem that ideal anymore... and so it goes on. All connected to each other producing a vicious circle. While investing resources on a possible better future in outer space, side-effects lessen the quality of life in the one future given to humans by default, this of life on planet Earth. Programmes to establish more and more man-made objects in outer space and parallel programmes to clean up their side-effects. Ongoing wars, profitable for the few, that create tons of morbid debris, which is then upcycled by covering it up with genetically engineered flora. And how does one keep an optimistic approach when the buzzwords that come with every proposal are 'smart', 'resilient', 'sustainable'? All this makes the future sound like something that we have to withstand rather than something we can create.⁷ It all resembles Schopenhauer's conception of walking as arrested falling down.

If we assume that mankind is already on a path leading to decline, if we imagine that all the eschatological scenarios as presented in both science and in dystopian science fiction occur, what will the earth look like and what could trigger a new beginning? Will it be as neutral as Marin suggests?

When one wants to deal with the future, one starts with the past. What did the future look like some decades ago? Analysing futuristic dreams of the past can be incredibly expanding in order to see certain aspects in a bigger context and draw essential conclusions for the present. Architecture and cities as the vehicle for building a better society hand in hand with the advances of technology produced radical imagery of the future during the post-war and Space Age era. Utopian landscapes, futuristic megastructures, blueprints for plug-in cities and lunar colonies. Great expos demonstrating the advances of technology and cybernetics and their impact on everyday life. So what is now the intellectual and physical legacy of this period? What happens to obsolete spacecraft, machinery and architectural debris? Could these solid non-decaying materials serve as substructures and foundations that will carry the future?

Interestingly, David Gissen in his book *Subnature: Architecture's other environments* gives an interpretation for the term *debris* that differentiates it from *rubble*. Whereas rubble suggests something potentially

salvageable and local, debris describes the dispersed remains of structures leveled by cataclysmic events typically by war or natural disasters. Debris refers more to a collection of unrecognisable matter; debris is about taking in the total spatial transformation brought by violence and disaster; and debris speaks of the ways former structures transform the nature of their surroundings. Because it is often unrecognisable in its original form and because it often refers to social disasters, debris signifies not only the return of society to nature, but it exists as a type of latent hybrid nature in its own right.⁸

Architectural debris

Ever since the massive destruction and flattening of cities as aftermath of the WWII, a lot of postwar architectural thinkers perceived debris as a type of authentic nature on which a new architecture would be grounded, one that would reflect the past and come to dialogue with it. A good example of this are the Smithsons⁹, whose commitment to debris as late-modern nature, produced many controversial projects. One of their most famous projects is the Robin Hood Gardens housing complex in London, for which the remnants of the demolished houses that previously occupied the site were formed into the terra-firma of a new type of collective landscape. Rather than removing the image of debris from the city and its physical manifestation, they give it a significant role in urbanisation.¹⁰

Reconstructing nature on debris

Highly debatable projects are launched all over the world to rework the grey urban or industrial sites into green non-polluted areas. Projects like the trash island Nanjido in Seoul (South Korea 1978-1993) and Fresh Kills Landfill¹¹ on Staten Island (New York 2005-) aim to transform urban trash heaps into monumental topographic shapes covered with plantings¹². What does the ability to reconstruct nature resembling pre-industrial forms entail? Modifying the insanitary soil to host the plantings or modify the plantings to adjust and survive in the nonsanitary soil?

Space debris

The acquaintance with Dr. Alice Gorman in Vienna where she was visiting as guest speaker at the round table *Propulsion: On Changing Futures*¹³ led me to look closer into that problematic by-product of 'progress'. She is an archaeologist specialising on space debris (she humorously calls herself Dr. Spacejunk) and it was the rather naïve questions I posed while having a cigarette with her outside, that led me to go further

on researching the programs launched to deal with this problem. The junk lingering in space is constantly multiplying and constitutes a threat to space missions, so there are numerous proposals of how these masses could either be sent further away in space or collected with nets or magnetic tethers in order to be de-orbited and return back to Earth to sink into the Pacific pole of inaccessibility, widely known as point Nemo¹⁴. Would it be possible for these non-functional but durable materials as their overall volume increases to form solid entities within or outside the Earth's atmosphere?

Throughout my research, I was very soon caught in the trap of trying to find answers, but in the process, it became obvious that it was about posing better and more to-the-point questions. Depiction of the future is usually an exaggeration of contemporary conditions, which can be the sharpest of criticisms on current situations, so this seemed to be the right tool. Focusing mainly on the fields related to the production of physical space, I collected as much information, facts and literature as possible about the future (any future), to see if it would then be possible to compose them together into a hypothetical, both visual and verbal, narrative that would provoke the right questions.

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- 1) W. Benjamin, *Gesammelten Schriften* I:2. Suhrkamp Verlag, Frankfurt am Main, 1974.
 - 2) According to Benjamin, the concept of progress is to be grounded in the idea of catastrophe. That things just go on is the catastrophe. Walter Benjamin 'Central Park', *New German Critique*, Issue no. 34, Winter 1985, p. 50.
 - 3) Louis Marin 'The Frontiers of Utopia', from the book *Utopias and the Millenium*, edited by Krishan Kumar and Stephen Bann, Reaktion Books, 1993, p.10-11.
 - 4) The word 'aeon' originally meant 'life', 'vital force' or 'being', 'generation' or 'a period of time', though it tended to be translated as 'age' in the sense of 'ages', 'forever', 'timeless' or 'for eternity'. It is a Latin transliteration from the Greek word *αἰών*. In Homer it typically refers to life or lifespan. Its latest meaning is more or less similar to the Sanskrit word *kalpa* and Hebrew word *olam*. A cognate Latin word *aevum* or *aevum* for 'age' is present in words such as 'longevity' and 'mediaeval'.
 - 5) William Gibson as quoted from an interview on *Fresh Air*, NPR, 31 August 1993.
 - 6) WAI Architecture Think Tank, 'The Palace of Failed Optimism', *What About It? Magazine*, Issue 3, Beijing, September 2014, p.10.
 - 7) Quoting Rachel Cooper from the public lecture at LSE 'The Future City: cruel or consoling utopia?', hosted by Richard Sennett, February 2016. Rachel Cooper is professor of Design Management and Policy at Lancaster University and director of ImaginationLancaster.
 - 8) David Gissen, *Subnature: Architecture's other environments*, Princeton Architectural Press, 2009, p.132.
 - 9) James Taylor-Foster, 'What can be learned from the Smithsons' New Brutalism in 2014?', *ArchDaily*, June 2014, <http://www.archdaily.com/51902/what-can-be-learned-from-the-smithsons-new-brutalism-in-2014>.
 - 10) Ironically, the complex will be demolished and replaced with new 'sustainable' housing over the next decade and there is no intention of reusing or keeping any part of the lot's past.
 - 11) The 'land-fill method' of disposing of unburnable waste was developed in 1939 and is structured like a layer cake, with a layer of garbage covered by a layer of ash – the remains of burnable trash from the city's incinerators – another layer of garbage, and then a layer of dirt to contain the smell. At the end of the landfill's usable life, new real estate would be created.
 - 12) The landfill in Staten Island opened in 1947 and closed in 2001. After the September 11, 2001 attacks, Fresh Kills was temporarily re-opened to be used as a sorting ground for roughly one third of the rubble from Ground Zero. Thousands of detectives and forensic evidence specialists worked for over 1.7 million hours at Fresh Kills Landfill to try to recover remnants of the people killed in the attacks. In 2008, reclamation of the site began on a multi-phase, 30-year site development for reuse as Fresh Kills Park. The Fresh Kills site is to be transformed into reclaimed wetlands, recreational facilities and landscaped public parkland and of course a memorial to honor those who were not able to be identified from the debris. Source: <https://www.nycgovparks.org/park-features/freshkills-park>.
 - 13) Site-specific Art, Vienna, 20-22.10.2016.
 - 14) The oceanic pole of inaccessibility is the place in the ocean that is farthest from land. It lies in the South Pacific Ocean and is also referred to as *Point Nemo*, Latin for 'no one'. Source: https://en.wikipedia.org/wiki/Pole_of_inaccessibility.



location:48° 52' 36" S , 123° 23' 36" W, total area:10,613 km² , highest elevation: 3,928 m

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a fictional narrative in the year 3108

The accumulation of relics of the past had been manipulated to create a new type of land(scape), a hypertopos, there, where for centuries had been nothing but mystery and inspiration for storytellers.

[...] The visionary brains behind the engineering of this much debated project was proud to present his lifetime achievement. He was finally hosting the conference, announced over a decade ago, to present the outcome of his once utopian proposal. At his keynote speech, he didn't miss the chance to quote yet again this German artist, whose words had caught his attention years ago on some recycling advertisement:

'Ruins for me are the beginning. With the debris, you can construct new ideas. They are symbols of a beginning.' (Anselm Kiefer)

The island was now ready to become test ground for new experiments. Scientists, architects, developers, investors, politicians and artists had arrived from every corner of the man-occupied space to decide on a future wise appropriation of the landfill, trying to avoid erroneous endeavours of the past, that had by now rendered two thirds of planet Earth inhabitable. [...]

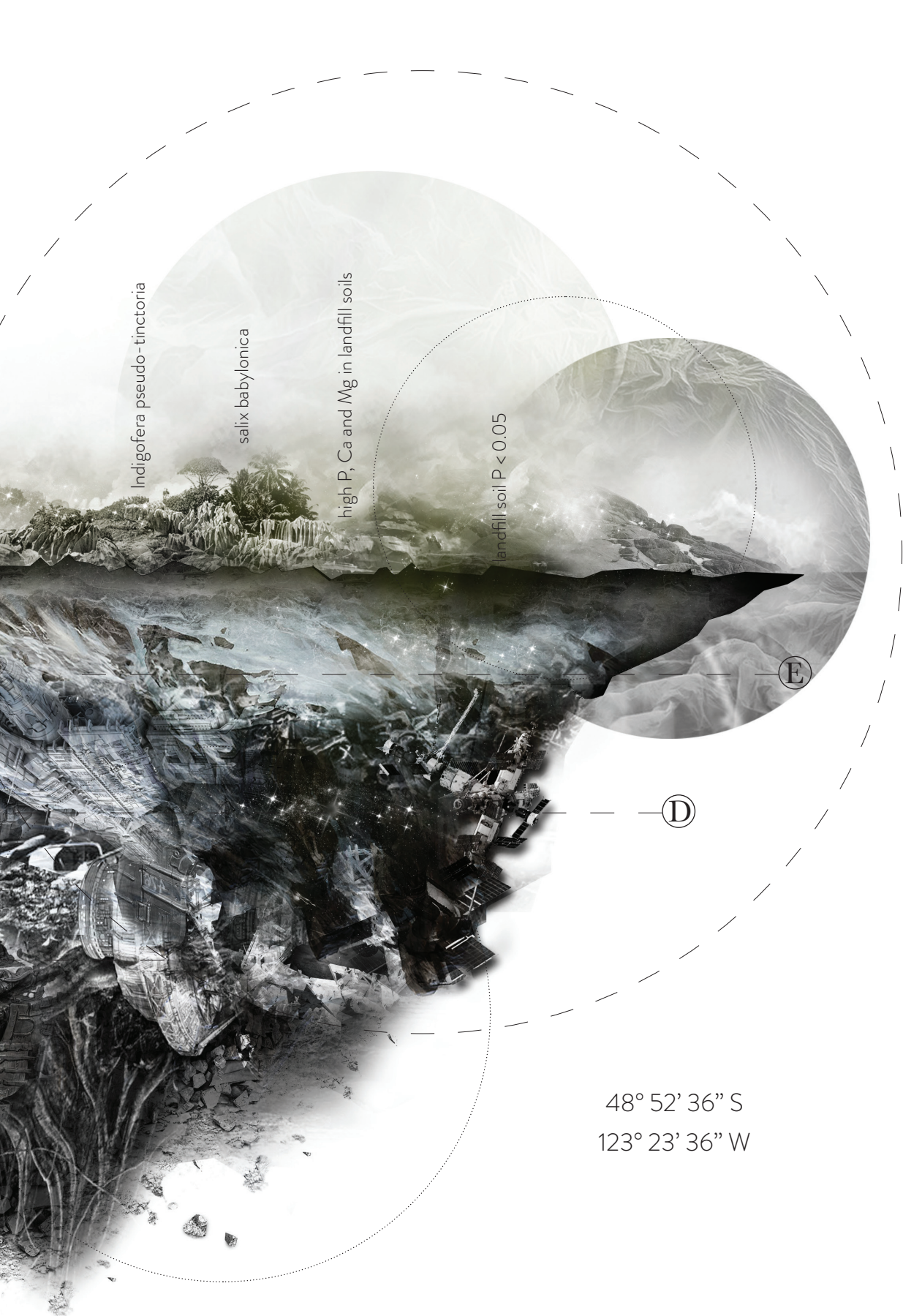
They received a set of knowledge plug-ins with information about the project, scientific details, biohistory and a long list of thought-provoking ideas to keep their mind active in critical thinking. The fleet of vessels carrying the visitors was hovering above the area and every three quarters of an hour one would land on solid ground encouraging the physical exploration of how once polluting and disturbing trash had been transformed into a potential valuable treasure.

Ruins of their own collective making covered up with flowers were offering the possibility to revive something long gone in favour of missions for the making of new and better worlds. But now a new promising future based on literally and physically recreating the past could make everything alright again. What an irony wanting so bad to achieve a better future and when everything goes wrong retrieving to the safe predictability of the past.

Monument, museum, new habitat, theme park, retreat resort for the elite or ongoing in-situ experiment? If extended and multiplied, could it form new continents and allow man to inhabit the Earth again? Could the future resemble the long lost past once again?

...to be continued





48° 52' 36" S
123° 23' 36" W

Stories told in the layers:

Ⓐ

electrodynamic space tethers

Long conducting wires¹ were missioned around the second half of the 21st century to collect and remove spent or dysfunctional spacecraft from Low Earth Orbit. When retrieved back to the atmosphere, they were disposed, as so many objects before them, into the oceanic pole of inaccessibility. Their infallible construction allowed them to remain unburnt during re-entry and their size and durability in time was the element that triggered the idea of using them as a solid core for new habitable formations.

Ⓑ

archaic space debris from the protospace period (1971-2030)

From the beginning of man's endeavours in space, numerous objects had been retrieved post-mission, set into orbital decay and finally disposed into the area. Spaces stations, early stages, rockets' secondary payloads, spy satellites, fuel tanks, cargo ships, mostly parts of unrecognised scrap metal, that accumulated excessively over the years². As planet Earth became more and more uninhabitable anyway, this proved to be the best solution for the disposal of expired spacecrafts, since storage orbits³ were a setback for intergalactic traffic.

Ⓒ

tiangong fragments

In 2011, Wang Wenbao, the director of the China Manned Space Engineering Office, asked the public to submit suggestions for names and symbols to adorn the space station and its cargo ship. He stated that 'the crewed space program should have a more vivid symbol and that the future space station should carry a resounding and encouraging name', insisting that 'the public should be involved in the names and symbols as this major project will enhance national prestige, and strengthen the national sense of cohesion and pride'.⁴ Tiangong, Chinese for 'heavenly palace', China's first space station module, launched after long anticipation in 2030 but was retrieved only five years later after the multi-docking berthing mechanism failed due to defect radial ports of the core module. A major setback at the time for the Chinese space station program that it hasn't managed to recover to this day.

Ⓓ

ISS-1

The Intergalactical Space Station in the Sun-Earth L3⁵, whose assembly started in 2073 and whose purpose was to serve as a main control station for the space colonies, exceeded by far its predicted life time before being de-orbited and replaced by ISS-2.0.

Ⓔ

ecologically engineered ecosystem

Vegetation and soil analyses of the insanitary landfill were conducted over many years to investigate the colonisation potential of plant communities, and to suggest new modified alternatives. The vegetation of the landfill was surveyed by using 10x10 m quadrats. The soils were analyzed for pH, electrical conductivity, organic matter content, Total-N, P, K, Ca, Mg, sand, silt, and clay⁶. Canonical correspondence analysis (CCA) was performed by using the extent of cover for all the recorded species, and the physical and chemical variables of soil. This study made it possible for the newly acquired piece of solid ground to host and support what could be described as succession to typical and natural earth forest, by now long extinct⁷.

Further reading, favourites and inspiration

Frederic Jameson, *Archaeologies of the Future, the desire called Utopia and other science fictions*, 2005, Verso Books, London
Felicity D. Scott, *Architecture or Techno-Utopia – politics after modernism*, 2007, MIT Press, USA
Jean-Pierre Dupuy, *Pour un catastrophisme éclairé: Quand l'impossible est certain*, 2009, Seuil
Luc Deleu , *The unadapted city*, 1997, NAI Publishers
Douglas Murphy, *Last Futures*, 2015, Verso Books, London
Marcel Proust, *In search of lost time*, 2003, Modern Library; Slp edition
Darran Anderson, *Imaginary Cities*, 2015, Influx Press, London
Stanislaw Lem, *Eden*, 1959
Isaac Asimov, *Soviet Science Fiction*, New York, 1962
Jorge Luis Borges, *Labyrinths*, 1962, New Directions Publishing
Jean Baudrillard, *The Transparency of Evil: Essays on Extreme Phenomena*, 1993, Verso Books, London
Andrei Tarkovsky, *Stalker*, 1979
Yakov Protazanov, *Aelita*, 1924, based on the novel by Leon Tolstoy
Alan B, *The last fortress*, 2016
Denisa Kollarova, *Under My Own Construction Of Ruins*, 2014
David Sherman, *Wasteland Utopias*, 2010
Daniel Barter and Daniel Marbaix and their photographic journey through *States of Decay*
Aristide Antonas and his storytelling through drawings and collages
WAI Architecture and their *Palace of failed Optimism*
Arthur Kay with his *Paranoia House, a vision of the London house in 2062*
Nemestudio's *Nine Islands* as presented at the 3rd Istanbul Design Biennial *Are We Human?*
Jeffrey Kipnis's radical proposals for *1983 Moonmark* project
Lebbeus Woods and his writings and drawings on *Political Machines*

* Illustrations by Eleni Boutsika-Palles.

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- 1) Carmen Pardini, Toshiya Hanada, Paula H. Krisko 'Benefits and risks of using electrodynamic tethers to de-orbit spacecraft', IAC-06-B6.2.10, 2006.
 - 2) Klinkrad, H. 'Space debris: models and risk analysis', Springer Praxis, Chichester, UK, 2006.
 - 3) J.-C. Liou, N.L. Johnson, N.M. Hill, 'Controlling the growth of future LEO debris populations with active debris removal', *Acta Astronautica magazine* Vol.66, Elsevier, March 2010.
 - 4) 'Countdown begins for space station program', Beijing: China Daily, 28 April 2011.
 - 5) George Bosworth Burch, 'The Counter-Earth', *Osiris magazine* Vol.11, The University of Chicago Press, 1954.
 - 6) Kim, K.D., Lee, E.J. & Cho, K.H, 'The Plant Community of Nanjido, a Representative Nonsanitary Landfill in South Korea: Implications for Restoration Alternatives', *Water, Air, & Soil Pollution magazine* Vol.154, Springer May 2004.
 - 7) Scott D Bergen, Susan M Bolton, James L. Fridley, 'Design principles for ecological engineering', *Ecological Engineering magazine* Vol.18, Elsevier December 2001.