Over the past three centuries, Planet Earth first turned into a factory, and later on into a laboratory. The Laboratory Planet documents this transformation.

The Anthropocene debate aims to date the moment when human species, or part of it, started to become a significant driving force of major and irreversible terrestrial environment transformation.

Hardly able to figure out an earthly human project unity leads to extend reflexion on this transformation real agents. This investigation states the probability that this major transformation may be the fruit of a xeno power, alien capitalism, denying present and past Earth humankinds ontologies.

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F

development that the biosphere or that humans accord

Ancients of the lithosphere, of the heliosphere and its...
I had you guess, what do you think aliens would be like? Sci-fi novels and films have given us plenty of recurrent themes about alien civilizations, many of which have become ingrained; for instance, that aliens would have armadillo spaceships, that some would be aggressive and warlike, that they would be ever-hungry for resources—generally, that they would reflect 20th-century anxieties about racism, class, and imperialism. But these are mere fictional images, and—given that there’s never been any hint of extraterrestrial intelligence—have no basis in reality. So it would be absurd for the search for extraterrestrials to be informed by these themes, right?

Unfortunately, no. An increasing number of scientists see the need to rethink what we assume about supposed aliens could—even would—be like. These deterministic projections have slipped into the realm of politics and public policy.

One recent egregious example arose in early 2015, when a group of prominent scientists and technologists, including physicist Stephen Hawking and Tesla founder Elon Musk, signed a warning against “Active SETI”—that is, the act of sending out radio signals towards other stars in hopes of contacting intelligent life. (SETI is a general acronym for “Search for Extraterrestrial Intelligence.”) Co-signer David Brin, a scientist (and bestselling) science fiction author, analogizes the dangers of Active SETI with colonialism: “We have many examples where a technologically advanced civilization contacted a technologically less advanced civilization,” he says. “And in every one of those cases, there was pain. Even when both sides had the best of intentions.” (1)

Whether you believe this might depend on whether you believe there is anything universal (pun intended) about the word “technology.” Brin uses it twice in that short passage. But would an alien civilization necessarily conceive of an abstract concept like “technology” in the same way that our capitalist civilization does? Even in the dictionary (Merriam-Webster) definition—“the application of scientific knowledge for practical purposes, especially in the political, economic and military dominance of Europe and its offshoots [was]... not inevitable.” Marks adds, “the classical British political economists—Adam Smith, Thomas Malthus, and David Ricardo—developed another strand to be woven into the story of the rise of the West: the ideas of capitalist development as ‘progress,’” the West as “technologically advanced civilization,” he says, “inherent to Western civilization, which was itself born out of a very particular set of historical accidents that were in no way inevitable, not on Earth and not on any other planet.”

Both Edward Said and Robert Marks have noted the ethnocentrism inherent to positioning Western culture as the pinnacle of human civilization. “The rise of the West is a story—to be sure, a story at the core of Eurocentrism,” writes Marks, “and the political, economic and military dominance of Europe and its offshoots was... not inevitable.” Marks adds, “the classical British political economists—Adam Smith, Thomas Malthus, and David Ricardo—developed another strand to be woven into the story of the rise of the West: the ideas of capitalist development as ‘progress,’ the West as ‘technologically advanced civilization.’” (2)

Hence by positioning Western Culture as inherently progressive, the definition of technology—a peculiar, subjective term with subjective meaning within the context of Western culture—is poisoned, too; linked intrinsically to the same set of Western values, the same continuum of “capitalist development” coded as “progress.”

To make assumptions about alien “technology” is to deprive the alien civilizations of their own history and culture and impose our own—specifically, the culture of the West. Beyond that, it reflects tech-capitalist hegemony and the tendency for us to impose its cultural tendencies on supposed aliens—as if capitalism and Western values were universal in the literal sense (that is, extending across the universe). This tendency to project Western capitalism into the stars is epitomized by the recent surge of excitement over a very peculiar, distant star with the turgid name “KIC 8462852.” At least one journalist hailed it as “the most mysterious star in our galaxy” over speculation as to whether its peculiar flux hinted that it could house what the media called an “alien megastructure.” (3)

Some background is required in order to understand how KIC 8462852 was popularly reported as a potential candidate solar system for alien life. The most common observational means of finding extrasolar planets is to observe the light emitting from a star and observe if the light dips at regular intervals, which is often indication that the star is partially eclipsed, from our perspective, by one of its orbiting planets. Hundreds of planets have been observed via this method. When the Kepler satellite, the most prolific planet-finding space observatory (4), observed a star with an unusual light dip pattern—one which fit no known scientific models, and was too irregular to constitute a planet—some commentators and scientists began asking whether the dip in the star’s flux could have been caused by an orbiting alien-made object. This theorized object was soon termed the “alien megastructure” by sensationalist aficionados and bloggers.

The speculative idea that a “megastructure” might be orbiting KIC 8462852 emerged only from the evidence of an irregular flux change in KIC 8462852’s light curve, which obeyed no known scientific model. And yet, a fantastic leap in logic was made here, refined in the public eye through articles and buzz online,fixated on the idea that there may have been a massive solar collector array, also known as a Dyson Sphere, orbiting the star. (5)

The idea of the Dyson Sphere originated in a 1960 paper (6) by physicist Freeman Dyson speculating whether an “advanced civilization” might build millions of orbiting solar panels, enough to eclipse the light from their entire star, so that 100% of its solar energy might be harnessed for the sake of the civilization. Hence, the idea that the periodic dip in this star’s light curve could have been caused by an orbiting solar panel “megastructure,” akin to a Dyson sphere, was based on Dyson’s ideas. This speculation seems a non-intuitive projection of Western culture onto the observational data from KIC 8462852. Indeed, what kind of civilization might project that it would one day need so much energy as to encompass 100% of one’s star? It would have to be an unsustainable civilization that consumed energy resources at an exponential rate, and incorporated this lust for energy into its social doctrine; a civilization whose consumption was rapacious; a civilization that valued production more than anything else, with no concern for the environment or conservation; and finally, a civilization willing to strip-mine and destroy entire planets in its quest for energy.

Indeed, Stuart Armstrong, a physicist at Oxford University, proposed that the latter scenario might be a “simple” way for humanity to build a Dyson Sphere—that is, to wrap our sun with orbital solar panels to collect massive amounts of energy. In a recorded lecture (7), Armstrong explained that creating a Dyson Sphere around the Sun would be relatively “easy,” though would require the complete destruction and dismantling of the planet Mercury. Armstrong structures his lecture as a series of seemingly logical assumptions that flow from each other: one, that humans would want to “colonize the galaxy,” two, there would be political will to destroy the planet Mercury in order to build solar collectors to harness energy, and three, that we would have the robotics technology to automate much of the process. Armstrong emphasizes the simplicity of it in his lecture: “We could do it now, we could get to Mercury, put some solar panels, get some mining stuff, and get the whole procedure done. The question is, if we could automate it and have the factories built.”

The notion that energy-harnessing of this magnitude would be commonplace among alien civilizations has become a hegemonic tenet of many scientists and SETI thinkers, so much so that there is a “classification system to describe hypothetical aliens” based on measuring their ability to harness energy, a system known as the Kardashev scale. In an article about the Kardashev scale, journalist Georgy Dvorsky writes: “Kardashev’s scale has been expanded and re-interpreted to include more than just the capacity for communications technology. Astroblogists and cosmologists now use the scale to simply describe the amount of energy available to an ETI [Extra Terrestrial Intelligence] for any kind of purpose. As a result, the scale is often used to speculate about the kinds of technologies and existential modalities that characterize advanced civilizations.” The Kardashev scale divides planetary civilizations into three types, I, II, and III. Type I civilizations are at a “technological level close to the level presently attained on the Earth, with energy consumption ~4 x 10^16 erg/sec.” (8) In Dvorsky’s words, Type I is typically associated with a hypothetical civilization that has harnessed all the power available to it on its home planet. As physicist Michio Kaku has said, it’s a planetary scale civilization that can “control earthquakes, the weather — and even volcanoes.” It will have taken advantage of every inch of space, and build “cities on the oceans.”

For a civilization to attain Type I status, therefore, it needs to capture all of the solar energy that reaches the planet, and all the other forms of energy it produces as well, like thermal, hydro, wind, ocean, and so on. More radically, Type I status would only truly
be achieved once the entire planet is physically reconfigured to maximize its energy producing potential. For example, the entire mass of a planet could be reconfigured to take the form of a massive solar array to energize a civilization’s power-hungry machinery.(9)

Correspondingly, a Type II civilization has harnessed all the energy from its local star—using Dyson Spheres, of course—whereas a Type III civilization has harnessed all the energy from its local galaxy.

The use of the term “advanced civilizations” here is highly subjective and biased. It assumes that civilizations would, in the future, follow the same energy-hungry model that our own has for far too brief a time period. And yet, the deterministic path that led scientists and futurists to conclude that the Kardashev scale is a good way to typify alien civilizations, or that a Dyson sphere is a likely, logical policy and industrial outcome of an “intelligent civilization” is so accepted that it drives policy. In a phone conversation with Dr. Anthony Aguirre, a University of California Santa Cruz cosmologist and director of the Foundational Questions Institute, Aguirre said that his foundation funds research into “seeing if there are distant stars that have been manipulated by an alien intelligence.” Aguirre, too, was convinced that aliens could have imperialist aims. “If we tapped into some kind of interstellar communication stream between aliens, I would suggest that we don’t interfere or make ourselves known,” he said. It’s hard to imagine a democratic, pluralistic society, lacking a rigid authoritarian command structure, would undertake such industrially and ecologically intensive projects as mining the entire energy resources of the planet, or destroying Mercury to build solar collectors around the sun. However, these might seem like logical scenarios if we were to project our capitalist imperialist civilization far into the future, assuming our civilization’s industrial and cultural practices as something “innate” and “natural” to all intelligent life—rather than a specific, short-lived historical moment.

LIFE IN THE TERATOPOE

by ŠPELA PETRIČ biologist and artist

Xeno—presumes I know what home—is. If I am unsure, I can only ever encounter terra. (prefixes from Greek homós: one and the same; xénos: stranger, guest (noun); alien, foreign, strange (prefix); téros: monster)

The Lost Simplicity of Zoë and Bios

Aristotle interpreted human life as an actualization of a person in society, acting as a political body (bios, the good life), along with being invested the natural life of the human species in political relations to nature and to ourselves. This biocentric and philosophy had opened up the nonhuman dimension of life itself at a cellular, genetic, molecular, and autopoietic level, is had unhinged the categorical divide between the individual life of human beings and the collective life of all living matter, between the despotic politics of bios and the vital politics of zoë (van den Hengel, 2012). The zoë had returned as a vital force of material generation, as Braidotti states: “Contemporary scientific practices have forced us to touch the bottom of some inhumanity that connects to the human precisely in the immanence of its bodily materialism. With the genetic revolution we can have the unintended consequence of triggering change radically our way of life, underlying this demand is its opposite, a deep distrust of change, of development, of progress every radical change can have the unintended consequence of triggering a catastrophe.” (Zižek, 2007).

The conclusion of this reasoning is that since nature is changing constantly and the conditions on Earth will make the survival of humanity impossible in a couple of centuries, the collective goal of humanity should not be to adapt itself to nature, but to intervene into the Earth ecology even more forcefully with the aim to freeze the Earth’s change. This way Earth’s ecology will remain unchanged, thus enabling humanity’s survival. The anthropocentric proposal points to a technological bias involved in the contemporary assessment of climate change and reveals a strong belief in human knowledge and capacities. However, if natural adaptation is not fast enough and intervention is necessary to pre-

See explant tissues bred in a sterile gelified medium, the vital material onto which she sprinkles her endocrinological essence. They are...
vent human extinction, two more plausible scenarios come to mind: to survive, humans may (i) alter the immediate environment they live in (creating "environ-mental bubbles" such as space stations), (ii) bio-technologically alter their biological constitution to adapt to the new environment. The first would imply a drastic reduction in population and redistribution of wealth among the survivors, whereas the latter approach implies a biotechnological modification of humans.

The modification, molding of our biological selves alongside the environment should not be perceived as intrusive and novel. Human culture has greatly amplified the capacity for niche construction and the ability to modify selection pressures. In compar-ison to other mammals, hominids (including humans) have evolved more in response to self-constructed selection pressures (that is the culturalized environ-ment) and less in response to selection pressures that stem from independent factors in their environment, leading hominid populations to become increasingly divorced from local ecological pressures (Laland et al., 2001). For example, human-induced pollution may provoke new technology to remove environ-mental contaminants, thus counteracting the change in the genetic selective environments for species across relevant ecosystems (Kendal et al., 2011). Similarly, drug treatments to prevent diseases may relax genetic selection for disease resistance or sus-cceptibility. In short, humans have reached the stage of evolution where their culture (including technolo-gy) is by far outstripping biology and is the predom-inant form of adaptation.

**Coming to terms with terra-**

Terrabiology is an artistic discourse, which frames an ontological perspective on life on Earth, contem-plates the position of the human within the terrafor-mative system and understands the human culture as an epiphenomenon of the self-aware species. It is an attempt to form a theoretical vantage point extraneous from Earth as a biosphere. The prefix terra can be read as terra, pertaining to the Earth, or as terra, derived from teras, the Ancient Greek word for monster. The Latin word terra refers to the fact the discourse is centered around the ontology of life on Earth. Terra implies the fear of humanity (sym-bolized by monsters), a challenge to be overcome when undergoing the transition from a hegemonic essentialist approach to species to the concept of fluidity and multiplicity contained within categories, which become heuristic ascriptions rather than being descriptions of reality. Terrabiology thus questions the human disposition in relation to fundamental-dly different forms of organization, which can yield successful systems exhibiting life-like properties. The category of the discriminated Other changes ac-cording to context (not male, not heterosexual, not abled, not human, not living, and so on), but it is ex-emplary for a human, who defines himself/herself by what he/she is not (Heidegger, 1962). An intention-al shift of perspective from the exclusionary to an inclusive one facilitates a change in the motivation and rationale of the human's scientific endeavors.

The study of the Other is more evidently a study of the same. The subjectivity in research can no longer be considered an adverse effect, as the observer is not only WITHIN the system he/she observes, but IS the [same type of] system.

The teratope is the figurative transformation of our biosphere marked by a rupture in the accidental culture-nature essentialism, which has been failing to maintain its elementary order amongst the bas-estry of forms and functions coaxed into existence by developments in both mimetic and synthetic bio/-technology. In the teratope we continuously tread untested grounds: the possible, the desired, the untested, the non- knowns, not knowns. Anxiety as the dominating social affect is internalized, feeding off of the per-ceived individual guilt and responsibility while caus-ing debilitating arrest reminiscent of powerlessness and alienation. The proliferative quality of the loss of bearing is underappreciated, deterrioralization is perceived as threatening rather than liberating. Pursuing humanistic values and holding on to old classifications is inept, because it does not acknowl-edge those were coined in a different era with different societal tasks to fulfill.

The teratope lacks a temporal dimension, because its span of geological time is insignificant in compar-ison to the trauma of unveiling humanness as one of the many, but not more than, natural phenomena. It speaks of our perception of its monstrosity, but in deep time the current state is just another a trial (and perhaps error) on a global scale, one actu-allyizing of the infinite adjacent possibles. Due to this, the teratope does not have the anthropophagic ecologiacal significance as the Anthropocene does. In the teratope there is no room for human hubris, but significant potential for reforming.

To achieve emancipation from the sentiment of 21st century biopolitics we should immunize against the xeno. We have to claim the alien of the contempo-orary experience as our own. To learn to love our monsters, they are monstrous only in the eye of the beholder.

**References**


novel information-storing biopolymer is “invisible” to natural biological systems and raises an opportunity to implement a genetic firewall that impedes exchange of genetic information with the natural world, making it a biosafety tool. Schmidt writes: “Just as the Earth lost its place as the center of the universe, or men lost its unique status in the animal world, our natural world could lose its unique status as being synonymous with ‘life’”. And Creation of ‘alien’ or ‘virtual’ life in the laboratory, in other words, advances in xenobiology research, will not only contribute to a better understanding of the origin of life, but will definitely expand our capabilities to provide safer biotechnology-production tools for human and environmental needs. Future life forms that are orthogonal to natural life forms, such as those based on XNAs, could represent the ultimate biosafety tool” (2).

The greedy algorithm of natural selection

A greedy algorithm is an algorithm that follows the problem solving heuristic of making the locally optimal choice at each stage with the hope of finding a global optimum. In many problems, a greedy strategy does not in general produce an optimal solution, but nonetheless a greedy heuristic may yield locally optimal solutions that approximate a global optimal solution in a reasonable time.

For xenobiologist Philippe Marlière, “natural selection is a poor algorithm of optimisation, akin to greedy algorithms” (1). He considers the limitations of the greedy algorithm that presided to the elaboration of natural species. According to him “All molecular structures, all the Noah’s Ark, show us that we are in a local minimum”. Following this logic “All natural species and their molecular devices are imperfect and improve locally within a narrow combinatorial horizon. Evolutionary breakthroughs and radical metabolic innovations will have to be designed and enforced”. Then come the questions: “What is the minimum genetic cost for bifurcating away from the terrestrial biodiversity? How to access other possibilities living worlds while preserving human health and mature habitats” (3) in their first international conference in Genoa, xenobiologists depict themselves as Christopher Columbus discovering the Americas. What does that kind of simplistic metaphor mean? Simplistic “absurdatant” question could be then asked to these “heuristic conquistadores unhindered by their lack of navigation instruments:” If one third of the emerged lands were not “discovered” by Europeans at the time of Columbus, do they mean that they are going to populate the planet with no more than one third of new alien forms of life? What will be easiest to find if it lives in riches too insolib- table for even the hardest of microbes. The upper atmosphere, bombarded in ultraviolet light, and boiling hot sea volcanic vents are two possibilities. If shadow life among us, scientists will need to look for organisms that break the rules of known biochemistry. For instance, all known terrestrial life builds its proteins out of amino acids with left-handed chirality orientation (chirality). Organisms that use right-handed amino acids could very well be alien.

Since all life stores its genes in RNA or DNA, built from five kinds of chemical letters [RNA replaces thymine with uracil], shadow life might write their genomes using another code, or another kind of chemical. Along these same lines, shadow life could build itself out of chemical elements never used by other life. Putting aside previous speculations on the idea that silicon could replace carbon in any life form, shadow life supporters rather think that arsenic might make a good substitute for phosphorous, which links together individual DNA letters and stores cellular energy.

A broad multidimensional understanding of the chemistries of life and the planetary processes that shape their evolution and development is now ascendant, driven by the xenobiology research to explore and extend the boundaries of what we call living. When these environmental niches and planetary processes become more diverse and extreme, how might these chemistries differ from what we currently know? Researchers are in pursuit of the answers through a top-down, systems-biological survey of extreme environments and identification of their associated biochemical signatures; a bottom-up, systems-chemical investigation of emergent lifelike behavior from inanimate yet dynamic chemical networks; and work at the “Golden Spike”, the interface of inanimate and living matter, to explore the landscape of alternative biochemistries and their potential origins here and elsewhere in the universe.

There is a whole “shadow biosphere” to be discovered—or to be created by the xenobiologists of the biotech industries.

Paul Davies is a physicist, astrobiologist and early activist of the Search for Extraterrestrial Intelligence (SETI) program. In his book The Eerie Silence: Renewing Our Search for Alien Intelligence (Mariner Books, 2011) he has suggested that if life has evolved on Earth more than once, microorganisms may exist on Earth which have no evolutionary connection with any other known form of life. He states that if scientists discover an alternate form of microbial life on Earth, the odds are good that life is common elsewhere. “Shadow life”, as Davies calls it will be easiest to find if it lives in riches too insoluble for even the hardest of microbes. The upper atmosphere, bombarded in ultraviolet light, and boiling hot deep sea volcanic vents are two possibilities. If shadow life among us, scientists will need to look for organisms that break the rules of known biochemistry. For instance, all known terrestrial life builds its proteins out of amino acids with left-handed chirality orientation (chirality). Organisms that use right-handed amino acids could very well be alien.

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1. http://xb1genoa.com
The capability of some marine animals to take advantage of photosynthesis by hosting symbiotic algae has been known indeed since the late 19th century. This capacity, referred to as photosymbiosis, is based on structural and functional complexes that involve two distinctly unrelated organisms. These stable photosymbiotic associations between metazoans and photosynthetic protists play fundamental roles in marine ecology as exemplified by reef communities and their vulnerability to global changes threats (3). An association between a host (multi- or unicellular) and an “algall” photosymbiont represents, in principle, a “domestication” of photosynthesis that can result in a trophic independence as long as the partners are located in the euphotic zone in view of the infinite source of solar energy (4).

Here we introduce the photosymbiotic tidal flat clam, *Sphaeroma roscoffensis*, and its obligatory green algal photosymbiont, *Tetraselmis convolutae* aerolatae (5). The enigmatic green photosynthetic corpuscles (“zoochlorellae”) were unambiguously ascribed to the algae in the detailed studies of Keebles and Gamble (1905, 1907) (6). These authors documented their substantial set of original experiments and observations on the biology, ecology and behavior of *S. roscoffensis* and the associated symbiosis in a book entitled *Plant animals, a study in symbiosis*, 1910 (7).

**From Symbiogenesis to Endosymbiosis**

Beside being director of the marine biological station at Roscoff (Britanny, France – giving it its name to the worm) by its director Yves Delage centered on the origin and the role of the enigmatic “green cells” inhabiting the body of *S. roscoffensis* (thought to be chloroplasts because of starch accumulation and oxygen production) (Delage, 1886) (8). The enigmatic green photosynthetic corpuscles (“zoochlorellae”) were unambiguously ascribed to the algae in the detailed studies of Keebles and Gamble (1905, 1907) (6). These authors documented their substantial set of original experiments and observations on the biology, ecology and behavior of *S. roscoffensis* and the associated symbiosis in a book entitled *Plant animals, a study in symbiosis*, 1910 (7).

The Laboratory Planet

**Two Plasmas as the Basis of Symbiogenesis**, a “New Study or the Origins of Organisms”, arguing that plants’ predecessors co-opted chloroplasts - which were once free-living bacteria - an evolutionary story that happened billions of years ago.

After the World War One, Russian botanist Boris Kozzo-Polynovsky was the first to explain the theory in terms of Darwinian evolution. In his 1924 book *Symbiogenesis. A New Principle of Evolution* (12) he wrote, “The theory of symbiogenesis is a theory of selection relying on the phenomenon of symbiosis”. These theories were first dismissed or ignored, but the idea of symbiogenesis was reflected half a century later in the modern endosymbiotic theory developed and popularized by the zoologist and geneticist Lynn Margulis after her theoretical paper entitled “On the Origin of Mitosing Cells”. While recognizing Darwin’s contributions, Margulis totally rejected the modern evolutionary synthesis (13), strongly arguing against Neo-Darwinism. She explained that certain interpretations of Neo-Dar- winism that she felt were excessively focused on an inter-organismic competition, as she believed that history will ultimately judge them as comprising “a minor twentieth-century religious sect within the sprawling religious persuasion of Anglo-Saxon Biology” (14). She also believed that proponents of the standard theory “wallow in their zoological, capitalistic, competitive, cost-benefit interpretation of Darwin – having mistaken him. Neo-Darwinism, which insists on [the slow] accrual of mutations by gene-level natural selection, is in a complete funk” (15). She opposed competition-oriented views of evolution, stressing the importance of symbiotic or cooperative relationships between species.

**Animal-plants today**

Many studies in marine biology have been done since that era on unique photosymbiotic units, but new aspect has been highlighted last year at the Woods Hole Marine Biology Laboratory (16) in Massachusetts in studying the emerald green sea slug *Elysia chlorotica*, one of the “solar-powered sea slugs”, utilizing solar energy via chloroplasts from its algal food. It lives in a subcellular endosymbiotic relationship with chloroplasts of the marine hetero- algal *Vaucheria litterae*. The researchers used an advanced imaging technique to confirm that a gene from the alga *Vaucheria litterae* is present on the *Elysia chlorotica*’s chromosme. This gene makes an enzyme that is critical to the function of the chlo- roplasts, which are typically found in plants and algae.

It has been known since the 1970s that *Elysia chlo- ritica* “steals” chloroplasts from *Vaucheria litterae* (called “kleptoplasty”) and embeds them into its own digestive cells. Once inside the slug cells, the chloroplasts continue to photosynthesize for up to nine months—much longer than they would perform in the alga. The photosynthesis process produces carbohydrates and lipids, which nourish the slug. How the slug manages to maintain these photosyn- thetizing organelles for so long has been the topic of intensive study and a good deal of controversy.

The Woods Hole scientists confirmed that one of several algal genes needed to repair damage to chloroplasts, and keep them functioning, is present on the slug chromosome. The gene is incorporated into the slug chromosome and transmitted to the next generation of slugs. While the next genera- tion must take up chloroplasts anew from algae, the gene to maintain the chloroplasts are already present in the slug genome.

There is no way on earth that genes from an alga should work inside an animal cell. And yet, they do. They allow the animal to rely on sunshine for its nutrition. So if something happens to their food source, they have a way of not starving to death until they find more algae to eat. This biological adaptation is also a mechanism of rapid evolution. When a successful transfer of genes between species occurs, evolution can basi- cally happen from one generation to the next, rather than over an evolutionary time scale of thou- sands of years.

Microbiologists at the Marine Biologie Station in Roscoff have also been studying the possible occurrence of lateral gene transfer from the symbiont to the host. Although the exchange of genetic material between metazoans and symbionts is thought to be very rare, the obligate symbiosis of *S. roscoffen- sis* might involve such gene transfer (Bailly et al., 2014).

**The algae-person**

Ocean animals are not the only animals that have stolen solar secrets from the plant kingdom. There’s the pea aphid, which charges up a solar-powered
backpack using light-harvesting pigments called chromatophores. And the original hornet might use a similar trick, utilizing a pigment called xanthopterin to convert light energy to electricity. But neither of these creatures are truly photosynthetic—both lack the critical ability to turn carbon dioxide into sugar.

A single vertebrate, the spatted salamander, has been proved to use algae to solar-power its eggs as they develop inside the eggs. Normally, an immune system would destroy any foreign algae that tried to enter our bodies. The salamander gets away with it for two possible reasons. Firstly, the algae invade before its immune system has fully developed. Secondly, salamanders have strangely inefficient immune systems. This might account for their incredible ability to regenerate lost body parts, but it could also mean that they recognize their algae cells in a very different way to other animals. Perhaps this lax self-recognition opened the door for invading algae (17).

Synthetic biologist designers such as Christina Agapakis, had spent a lot of time thinking about how to engineer new symbioses, including animal cells that can do photosynthesis. In a recent popular experiment, Christina Agapakis et al. explored potentialities of animal cells by shortening the life cycle by the injection of photosynthetic bacteria in zebrafish embryos. The fish do not die, and neither the bacteria. If coli - even dead ones – would be injected the embryos would die within an hour. But when injecting photosynthetic bacteria, the fish would still grow (18).

It is a fascinating demonstration of biological versatility. But’s it’s a far cry from creating, de nova, an organism that lives off the sun. The trouble is it takes a heck of a lot of surface area to capture enough sunlight to make a meal. With leaves, plants are able to harness an enormous amount of solar energy that we would never be able to extract. This photosynthetic capacity, so basic and virile, would necessarily be green, and us, little green men/women. Eventually other pigments could be engineered. The plant-person (or algae-person (21)) would also need a lot more water than a normal human.

So, although photosynthetic humans would need less food, it wouldn’t be substantially less. Still, researchers argue that, over a large population, it could slightly reduce the need for farmland; and that this process could be done to livestock too, and with a large number of livestock that could naturally reduce the area of land required to feed cattle or horses.

Of course it would work better for “green sacred cows”, but what would happen to hairy animals like cattle or horses. And with a large number of livestock that could no longer be kept with us, little human sustainableness within the skin. Replacement, but eventually the choroplasts will be sustainable within the skin. At first this graft may require regular in humans. At first this graft may require regular

If we humans wanted chloroplasts for ourselves, or our livestock or pets, we would need to genetically modify the host animal to express proteins required for chloroplast function. It has been estimated that about 70%-90% of the genes required for chloroplast function are provided by the plant’s genome (Martin et al., 1998) (19).

It would probably be most feasible for chloroplasts, along with the required genes, to be added to skin stem cells and applied as a skin graft, as there is a lot of research in this area for burns victims. This approach has been used to produce proteins in mice (Larcher et al, 2001) (20), and so should be feasible for producing sugars by photosynthesis in humans. At first this graft may require regular replacement, but eventually the choroplasts will be sustainable within the skin. In S.K. Rabinson sci-fi short story, the photosynthe- sising skin would necessarily be green, and us, little green men/women. Eventually other pigments could be engineered. The plant-person (or algae-person (21)) would also need a lot more water than a normal human.

A new human, the spotted salamander, has a critical ability to turn carbon dioxide into sugar.
The Laboratory Planet

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tations and slime mats were once forests, farms, of the tentacular, and the burning and extracting the world. Human people are in/of the holobiome feelers; they are studded with stingers; they taste cut and bind everything in our way. Tentacles are must learn to live and die well in the entangle- recuperation, partial connections, and resurgence poietic, not autopoietic. All of us who care about it is always sym-chthonic, not auto-chthonic, sym- home world, terra. The Chthulucene is never one; gerous, the Chthulucene is the temporality of our dangerous, but plentiful earth for always evolving goingness—of a wild, cultivated and uncultivated, resurgence', or 'feral biologies'—i.e., of the on- diverse and luxuriating world. The Chthulucene was,ing's kind) of vitalities that feed the hungers of a people, can strengthen the resurgence (Anna Ts-

The chthonic powers, both generative and destructiv, are kin to Bruno Latour’s and Isabelle Stengers’s Gaia, even though their Gaias are not at all identi-cal to each other. But for all three of us, Gaia and its kin are not mother; they are snaky gargoles like the untamed and mortal Medusa; they do not care about the thing that calls itself the Anthropos, the upward-looking one. That upward-looking one has no idea how to go visiting, how to be polite, how to practice curiosity without sadness (remember Visciane Despret and Hannah Arendt). In the An-thropocene (a naming I have come to need too), the chthonic entities can and do join in accelerating double-death provoked by the arrogance of the industrializers, super-transporters, and capitalists, in seas, lands, airs, and waters. In the Anthropocene the tentacular ones are nuclear and carbon; fire; they burn fossil-making man, who obsessively burns more and more fossils, making ever more fossils in a grim mockery of earth’s energies. In the Anthro-pocene, the chthonic ones are active too; all the ac-tion is not human, to say the least. And, written into the rocks and the chemistry of the seas, the surging powers are dreadful. Double death is in love with haunted voids.

The chthonic ones can and do infuse all of terra, including its human people, who become-with a vast motley of others. All of these beings live and die, and can live and die well, can flourish, not-without pain and mortality, but without practicing double death for a living. Terran ones, including human people, can strengthen the resurgence (Anna Ts-ing’s kind) of vitalities that feed the hungers of a diverse and luxuriating world. The Chthulucene was, is, and can still be full of what Anna calls ‘Holocene resurgence’, or ‘feral biologies’—i.e., of the on-goingness—of a wild, cultivated and uncultivated, dangerous, but plentiful earth for always evolving critters including human people. Mixed and dan- gerous, the Chthulucene is the temporality of our home world, terra. The Chthulucene is never one; it is always sym-chthonic, not auto-chthonic, sym-poietic, not autopoietic. All of us who care about recuperation, partial connections, and resurgence must learn to live and die well in the entangle-ments of the tentacular without always seeking to cut and bind everything in our way. Tentacles are feelers; they are studded with stingers; they taste the world. Human people are in/of the holobiome of the tentacular, and the burning and extracting times of the Anthropos are like monocultural plantations and slime mats where once forests, farms, and coral reefs flourished, which were allied to fun-gal materialities and temporalities in very different ways.

The Anthropocene will be short. It is more a bound-a- rary event, like the K-Pg boundary (Cretaceous-Pa-leogene boundary), than an epoch. Another muta-tion of the thick Kainos is already coming. The only question is, will the brevity of the Anthropocene/ Capitalocene/Plantationocene “boundary event” be because double death reigns everywhere, even in the tombs of the Anthropos and his kin, or be- cause multi species entities, including human people, made potent alliances in time with the generative powers of the Chthulucene, to power resurgence and partial healing in the face of irreversible loss, so that rich worldings of old and new kinds took roof? Compost, not posthuman.

The Chthulucene is full of storytellers. Ursula LeGuin is one of the best, in everything she wrote. Ha-yao Miyazaki is another; remember Nasucaoi of the Valley of the Wind. And then go to the Inupiaq online game Never Alone. Watch the trailer! (2)

With these storytellers, my next manifesto must be Make Kin Not Babes!


(2) http://neveralonegame.com/
The subject of xenofeminism is neither woman nor human, if these terms are understood as suggesting discrete entities snipped from the wider fabric of technomaterial existence. Instead, xenofeminism is interested in the assemblages within which social agents are embedded. This is evident throughout our recent manifesto, “Xenofeminism: A Politics for Alienation” – a text that seeks to be very much alive to the entanglement and co-constitution of silicon-based and carbon-based actors. It makes frequent reference to current technoscientific conditions, from online solidarity networks, to the hyperstitional phenomenon of the stock market, to suggestive but embryonic advances in open source medicine. In so doing, the manifesto points to some of the many ways in which technological alteration might generate forms of radical alterity. ‘Nature’, meanwhile, emerges as a recurrent force in the text – not as a naturalizing or essentializing underpinning for gender and eco politics, but as an always already technologized space of contestation that fundamentally shapes lived experiences. ‘Nature’ (not least as it is manifested in gendered embodiment) is viewed as a space of experimentarity – not a fact to be accepted but a terrain of negotiation to be actively contested for. This is captured in the manifesto’s ultimate call to action ‘in the name of feminism, ‘Nature’ shall no longer be a refuge of injustice […] If nature is unjust, change nature!’ (Luboria Cuboniks, 2015: n.p.). I am starting with this outline both in order to emphasize the position from which I am articulating my ideas, and because a lot of what I want to discuss here takes this position as its implicit reference point.

Xenofeminism, as a political and theoretical project, is distinctly future-oriented, tracing emerging developments in technology and the post-human in order to imagine a world beyond current understandings of gender, race, and class. However, aside from our (relatively brief) reflections upon globalized technocultures, our work has yet to really engage with the Anthropocene. To put it another way, we have been theorising the future (not to mention various senses of ‘Nature’) without reflecting on the conditions for biological existence upon which any future-oriented project would obviously depend. With this paper, I want to start to rectify this framing our queer, technomaterialist transfeminism in terms of ecology and debates about human population. The points I’m making here are intended to be provocative rather than prescriptive, and they are as surely looser and more gestural than I would like. However, the ideas contained here mark an early gesture in a commitment to a longer-term project – one that I hope will be viewed as an invitation to discuss, engage, and construct a better xenofeminism.

The title of this piece is ‘(Re)producing Futures Without Reproductive Futurity’. It takes as its starting point the work of the queer theorist Lee Edelman, who, in his 2004 book No Future: Queer Theory and the Death Drive, famously takes issue with ‘the future’ as a heteronormative construct. I’m going to be using Edelman’s work to point to the limits of some of the discourses that most commonly circulate around climate activism – namely, that the focus of said activism should be preserving things for future generations, and that it should be framed primarily as an effort to protect ‘our’ children’s rightful inheritance. For Edelman, the contemporary world is characterised by a reproductive futurity in which the ‘Child remains the perennial horizon of every acknowledged politics, the fantastic beneficiary of every political intervention’ (2004: p. 3). As he puts it, we encounter ‘the disciplinary image of the Child […] on every side as the lives, the speech, and the freedoms of adults face constant threat of legal curtailment out of deference to imaginary Children whose futures, as if they were permitted to have them except as they consist in the prospect of passing them on to Children of their own’, are construed as endangered by the social disease as which queer sexualities register’ (2004: p. 19). The needs of adults – particularly non-reproductive adults are constantly subordinated to those of children, as bearers of the idea of the future. Edelman’s primary examples of this phenomenon are rampant cultural homophobia and so-called ‘pro-life’ activism.

When we think the future, which is largely the terrain of politics, he feels that we inevitably perpetuate a culture lataudatory of the child, and therefore supportive of ideologies of the family that are both hetero- and homonormative. Whilst heterosexual sex or the monogamous, dyadic relationship form are socially sanctioned via the ‘alibis’ of biological and social reproduction, the queer comes to represent the ‘violent undoing of meaning, the loss of identity and coherence, the unnatural access to jouissance’ (Edelman, 2004: p. 132). It is the irredeemable, unrecoverable other. The only proportionate response to this state of affairs is, for Edelman, refusal – the refusal of politics, the refusal of the future, the refusal of the Child. Those beyond the sanctified confines of heteronormativity are, according to his analysis, to embrace the death drive and to become ‘what reproductive futurity has already decided that they are – just a bunch of selfish queers.

Edelman’s work is quite clearly a polemic, gleefully spooking the straights and denouncing the ‘fascism of the baby’s face’ (2004: p. 75). As such it is perversely seductive – not to mention seductive in its perversity – and compellingly, charmingly, spiteful. It also alerts those of us with an interest in eco-queer perspectives to some of the risks inherent in framing the future. Think of the imagery used to promote the People’s Climate March in London, New York, Paris and elsewhere. On posters spread across urban transit networks, we encounter an ethereal nymph-child, clutching a toy windmill whilst staring wide-eyed into the future. In positioning what we do as an agitating on behalf of generations to come, we may unwittingly participate in the cult of the Child that is so central in determining which lives are prioritized and whose needs are seen to matter. However, the limitations of the argument for refusal and withdrawal sketched out in No Future are quite clear. What does it mean to cede the entire territory of politics to ‘family values’? What are the implications of celebrating ‘the act of resisting enslavement to the future in the name of having a life’ (Edelman, 2004: p. 30)? Living for the now and saying ‘fuck the future’ hardly seems like an apt response to impending ecological disaster – and, indeed, the fact that Edelman’s analysis largely proceeds via queer readings of classic Hollywood cinema suggests that such crises are not really within his purview. He’s not actually considering the brute reality of the contemporary Anthropocene here, so perhaps it is unfair to frame his argument in these terms; and yet, the undesirable implications of No Future remain.

Nina Power is amongst those who have sketched out objections to this account of reproductive futurity. She points out some of the ways in which Edelman’s seemingly radical position plays into existing structures of neoliberalism, remarking that ‘capitalism depends upon the reproduction of sameness in the guise of difference, the idea that there is no alternative, and [that] no future [in the sense of new ways of living] is possible’ (2009: p. 2). She also comments that Edelman’s conflation of politics-with-the-future-with-the-child does not hold in every situation: the question of a “queer” (that is, non-futural) resistance to communal relations has in fact been an issue for various twentieth century political movements. There have been various kinds of ‘queer’ resistance to the organizing principle of heteronormativity, which have at the same time been explicitly political projects (2009: p. 8). Pow-
er gives the example of the kibbutz movement – to which we might add numerous forms of eco queer activism and theory. Alexandra Pirilä and Rolou Vainoa’s work on the “Manifesto for Gynecene” is one helpful signpost here – a project that advocates for a move towards care, whilst indicating that any imaging of the future is not merely about protecting our children but is in fact key to fostering a collective politics. 

In acting on behalf of future generations, we must be careful not to foster ‘the supreme value of species survival as a discursive technology of compulsory heterosexuality’ (Sheldon, 2009 n.p.). As I have suggested elsewhere, framing our concern around activism as protecting the earth for ‘our’ children, we risk promoting restrictive, exclusionary, and xenoinhabitable notions of what existence counts. Most obviating, by indirectly privileging lines of genetic descent and cultural inheritance, such approaches are distinctly speciesist – neglectful of the many other forms of life upon which environmental change might impact. How, then, can we think reproduction – even just in the sense of ensuring the survival of others into the future – without also reproducing the worst of reproductive futurity?

At this point, I would like to turn to the work of Donna Haraway, who has done so much over the years in terms of helping us to view our species within its wider biological and technoterritorial context. In an article for Environmental Humanities published early this year, Haraway offers us a new slogan for an era of climate crisis: ‘Make kin not babies!’ (2015: p. 161). This is, quite clearly, a slogan of two parts: perhaps the easiest to grasp directive is the suggestion that we, as species, reduce our birth rate. Official UN population projections now suggest that the number of people inhabiting the planet will pass the 10 billion mark by the end of the century, contributing to significant problems in ‘food availability and affordability’ (2011: n.p.). There are understandable fears that the carrying capacity of particular regions may be exceeded, as local environments approach the maximal population load that they can support. This would risk catastrophic impacts resulting in global crop yield losses of up to 30% by 2080 (Halletgatte et al, 2016: p. 4). There is reason to hope, perhaps, that a reorientation of that part of the social fabric which has been suggested check on fertility. ‘Over a couple hundred years from now,’ she muses, ‘maybe the human people of this planet can again be numbered two or three billion strong’ (2015: p. 160). However, a generalized cultural rejection of abortion was secure and the procedure itself culturally de-stigmatized, it seems likely that many pregnancies not chosen in advance would still, for various complex and sometimes personal reasons, be allowed to continue to term. And of course, who would want to step in to forcibly prevent people from having children! I can hardly imagine Haraway advocating for the imposition of fertility control – that is, if we wish to fight for the continued existence of all our alien kin. If xenofeminism wishes to develop a politics fit for the Anthropocene, it obviously needs to engage further with this issue of climate change and to insist upon the myriad interconnections between capitalism, gender politics, population, and ecology. With Muñoz, then, I assert that we must ‘vacate the here and now for a then and there. Individual transports are insufficient. We need to engage in a collective temporal distortion’ (2009: p. 185).

Bibliography


At the moment $2$ refugees escape in Europe. Denmark prefers to produce a xenocapitols $3$ blond heads with the campaign ‘De ier Maa!’ to encourage white Danes to go on holiday in a desperate bid to help boost the country’s falling birth rate. The campaign is aimed at older parents and recommends that they contribute to their adult children’s getaways so that they can get a granddaughter ‘nine months later’.

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In a novel entitled “From a flight over London”, published in 1950, Virginia Woolf delicately described a flight over the city of London and how this distance from the Earth modified her way of seeing the world, just as the first images of our planet seen from space, in 1972, shook our vision, awaking the feeling of a global responsibility. An adventure told with precision and emotion that evaporates immediately on landing, in reality, the flight didn’t take place. Today’s not possible to pretend the flight didn’t take place, as if we didn’t know the responsibility that weights on us and the distance from purely economic and material interests that it demands. We still need to identify what exactly this responsibility is.

So we propose a narrative and theoretical launch so that nobody can complain later that the flight never took place.

The change brought on by the use of the term ‘Anthropicocene’ for a geological period, the result of the impact of humans on the Earth, – even though the term has not yet been validated by the scientific community of the USGC which will meet in Cape Town in 2016 – requires a redefinition and a theoretical and feeling critique of ecology.

Although feminism has brought a lot to ecology through ecofeminist writing (including theory and science fiction), we can imagine going beyond Mother Earth in its original (archaic) sense through Queer theory which upsets gender tags such as the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature. As far as we’re concerned, the focus on “being” rather than “having” which initiates the idea of Nature.

The encoded priority, as will be revealed later to the crew, is in fact to bring the alien back to Earth, even at their own expense. The true mission was present from the start as a subtext. When the film opens with the awakening of the 7 crew members to reply to a signal, recognized too late as a warning rather than a SOS, it opens with the true mission of the flight, to make contact with or ingest the alien on board the mother ship. It’s here that the feeling of Gaia is superimposed over the Mother of Alien “Three times, Earth gives decisive advice […] she insinuates, she indicates by words rather than signs, she also knows how to say everything clearly when necessary, but she always foresees, she conceives the designs that orientate decisively the unfolding of events.”

Haw then to hear this message and carry out a healing reading of the horrific fiction proposed by Ridley Scott, leaving aside the double paranoia warning (that of Mother and the film itself)? What dance to invent then, following Bruno Latour who, in his introduction to Face of Gaia (3) starts his questioning with the anatomy of a fleeing dance which, in its nub, never stops looking over its shoulder, giving birth to another monster even more terrifying than the one it seeks to escape? This second monster, the double paranoia, the first, is none other than paranoia. The ecofeminist theorist Ynestra King uses as the title of one her most important texts a quote from the anarchist Emma Goldman: “If I can’t dance I don’t want your revolution.” (4) Thus reaffirming the power of positive affects to confront catastrophe. What, if not fleeing, should the steps of our dance be?

We could look for help in anthropology. For the Brazilian anthropologist Eduardo Viveiros de Castro, (5) our contemporary world is saturated with humanity, considered dangerous by the Amerindians, due to this humanity itself, in the metaphorical sense of the term. He proposes an anthropomorphism rather than an anthropocentrism, based on the principle that the best way of feeling connected to the future of our Earth is by infusing it with human qualities (a concern that stems directly from anthropomorphism). Anthropocentrism on the other hand leads to the errors of waste and misuse. Viveiros de Castro proposes adapting Winnicott’s key concept of the sufficiently good mother – rather than the perfect and the horrific – to that of Mother Nature, of Gaia. A sufficiently good Earth rather than a perfect one. The search for perfection leads last to death, even to horror.
ALIEN CITIZENS
WHO IS WHO ALIEN?
A POLITICAL QUESTION

Let’s speculate about passports being made and issued to alien entities. Would they only be issued by the little green men that Men in Black are taking care of? Wouldn’t they also be useful to the “unidentified migrants” and sans-papiers who spread over Europe just like UFO’s? The field of questions opened by the notion of alien also opens the question of the limits of political institutions, and what Hannah Arendt called non-humans, having no status, and therefore no rights. Gathered together at the border, from now are economical migrants, political refugees, climate refugees, cosmic refugees, interstellar castaways and inter-dimensional survivors.

BI-NATIONAL IN SCHENGEN SPACE: THE LATVIAN NON-CITIZENS CASE

Non-citizens in Latvian law are individuals who are not citizens of Latvia or any other country but, who, in accordance with the Latvian law “Regarding the status of citizens of the former USSR who possess neither Latvian nor other citizenship”, have the right to a non-citizen passport issued by the Latvian government as well as other specific rights. Approximately two thirds of them are ethnic Russians, followed by ethnic Belarusians, ethnic Ukrainians, ethnic Poles and ethnic Lithuanians.

Children born after Latvia reestablished independence (August 21, 1991) to parents who are both non-citizens are entitled to citizenship upon request of at least one of the parents.

ALIEN CITIZENS, 60TH YEAR OF METALAW

Metalaw is a legal concept closely related to the scientific Search for Extraterrestrial Intelligence (SETI). First conceived by pioneering space lawyer Andrew G. Haley in 1956, Metalaw was the term Haley coined to refer to fundamental legal precepts of theoretically universal application to all intelligences, human and extraterrestrial.

In 1956, Haley published an article entitled “Space Law and Metalaw – A Synoptic View” (1), in which Haley first proposed his “Intergalactic Golden Rule”. Do unto others as you would have done unto them. Haley rejected the traditional formulation of the Golden Rule as articulated by philosophers through the ages (from Confucius to Aristotle to Rabbi Hillel and Jesus to Abdullah Ansari) because, Haley said, in Metalaw “we deal with all frames of existence – with sapient beings different in kind. We must do unto others in different frames of reference . . . To treat others as we would desire to be treated might well mean their destruction. We must treat them as they desire to be treated.” According to Haley, we can project only one principle of human law onto our possible future relations with ETI: “the stark concept of absolute equity.”

It is clear the metalegal precepts Haley proposed are squarely rooted in natural law theory and flow from Kant’s Categorical Imperative in a largely deductive manner rather than being drawn empirically from actual human legal institutions in an inductive fashion. Despite this, Haley acknowledged the obvious anthropocentric limits of natural law theory but could not ultimately divorce Metalaw from this intellectual construct. This failure led former Smithsonian general counsel George Robinson to note that the cultural concept of rules or law is itself anthropocentric (2). Robinson urged space lawyers, when engaging in metalegal research, to adopt an empirical approach similar to that used by cultural anthropologists. Robinson proposed an empirical analysis of Metalaw by studying human values formed with respect to totally alien concepts and potential situations, in particular “in all bio-ecological and cultural regimes wherein categories of relationships occur and may be distinguished.”


While the issue of non-citizens is often equated to the problem of statelessness, other sources consider that the status of non-citizen in both Latvia and Estonia is unique and has not existed previously in international law: “Non-citizens” of Latvia enjoy a benefit not afforded to citizens of being able to travel to both the Schengen Area (where citizens of Latvia can travel visa-free, too) as well as Russia, without the need for a visa.”


“Melvin Dane has been seeing a vision of a green girl since he was a child. Images of her came over the ether. Is she just fantasy? Or a reality that managed to cross time and space? And now, with the Earth under threat of extinction, will Melvin ever meet that girl of his dreams? With an alien hero trying to bring Earth back to the Ice Age, Melvin and his foster father, scientist Sam Walden, embarked on a heroic quest to save their world. Their adventures takes them to the unexplored and totally unexpected world beneath the ocean.”

The Green Girl by Jack Williamson (1930) is one of the first “green” alien occurrence in science-fiction and great transformation literature. 

“Foster Father, scientist Sam Walden, embarked on a heroic quest to save their world. Their adventures takes them to the unexplored and totally unexpected world beneath the ocean.”

The Green Girl by Jack Williamson (1930) is one of the first “green” alien occurrence in science-fiction and great transformation literature. 

“Foster Father, scientist Sam Walden, embarked on a heroic quest to save their world. Their adventures takes them to the unexplored and totally unexpected world beneath the ocean.”
**Xeno-Money**

It was in the early 1970s that a fundamental shift took place in the financial practices that underlie the circulation of money—signs. What occurred then was an historically unique confluence and structural integration of four separate monetary phenomena, none of which was novel, but which together created a multi-billion dollar a day global currency market and a radically new highly volatile, world monetary order. A realistic description of the workings of these phenomena—floating rates of exchange, an inconvenient world currency, the growth of off-shore money in the Euromarkets, the emergence of secondary markets in financial futures/options contracts—would need much esoteric discussion that lies far outside the scope of this text. (…) For “Euro” and “dollars” one should write “xeno” and “money,” respectively. More specifically, it signifies the possible relationships it can establish with future states of itself. Its “value” is the relationship between what it was worth, as an index number in relation to some fixed and arbitrary past state taken as an origin, and what the market judges it will be worth at different points in the future. For what it signifies to be a market variable, and for it to be futured in this sense as a continuous time-occupying sign, xeno-money must be bought and sold in a market that monetizes time, a market in which there exist financial instruments that, by commoditising the difference between the value of present money (spot rate) and its future value (forward rate), allow “money” to have a single time-bound identity. In the early 1970s, the appropriate instruments, that is tradeable financial futures and options contracts, came into prominence in the Chicago Financial Futures Market. (…) (Xeno)Money being floating and inconvertible, is forced as a sign to create its own significance: one which is written in the only terms available to it, namely future states of itself. Xeno-money is thus a certain kind of meta-sign. Recall that the scandal of paper money for its detractors was its ability to increase the supply of money, in effect to create unlimited money, at the same time as the promise that it carried, to deliver palpable, uncreatable money, did not fulfill this promise. Xeno-money, by making no promise to deliver anything, avoids such double dealing. Its scandal, if such exists, is the fact that it is a sign which creates itself out of the future.

Planetary Resources and 3D Systems turned a meteorite into a 3D print. The space mining legislation signed by Barack Obama gives U.S. space firms the right to earn and sell natural resources mined from asteroids and other space bodies. The act represents a full frontal attack on settled principles of space law which are found in international agreements including the Outer Space Treaty of 1967 and the moon agreement of 1979. Planetary Resources CEO Chris Lewicki believes we’ll need to figure out how to build and manufacture in space. “Instead of manufacturing something in an Earth factory and putting it on a rocket and shipping it to space,” Lewicki mused, “what if we put a 3D printer into space and everything we printed with it we got from space?”

**ARCHEOLOGY OF CAPITAL**

**GOLD: METALS AND SOLAR ECONOMY**

The Extraterrestrial origin of Capital (a): Earthly yield of the Solar Economy

La biosphère, Alcan, p. 37

(1) Vernadsky, La biosphère,

“Breathing, a manifestation of the sun’s shining, controls the multiplication of terrestrial organisms. The production of organisms depends on the intensity of light and heat from the sun.

“The movement of multiplication is the reflexion of a sun ray. Indeed, breathing itself, the gaseous exchange between life and the surrounding atmosphere, is a manifestation of the energy of this same ray” (1).

“The change provoked by the multiplication always takes place rhythmically. This change corresponds to the annually repeated oscillations of the environment. It is closely connected to the rhythmical movements of the oceans. These movements of the oceans, tides, temperature changes, saltiness of evaporation, intensity of sunlight, are all of cosmic origin” (2).

The Extraterrestrial origin of Capital (b): Metalization

Gold, and numerous other precious metals such as platinum, palladium or iridium, is of extraterrestrial origin. Two hundred million years after its formation, the Earth was heavily bombarded by meteorites containing different alien materials, amongst which was gold. This theory was confirmed in September 2011 by a team of geologists from the University of Bristol (3) who became interested in the role of celestial bombardments in the formation of the planet. The collision with celestial bodies as big as the Moon led to an explosion of heat which caused the precious metals to melt. This magma was then drawn to the earth’s core. An incredible treasure now sleeps at 3000 kilometers beneath our feet: according to scientists there is enough gold in the earth’s core to cover the whole planet with a layer four meters thick.

Although the earth’s core abounds with gold, this metal has become valuable because it is rare on the earth’s surface. Matthias Willbold and his team from the School of Earth Sciences in Bristol (UK) explain the presence of gold on the earth’s surface by a “late bombardment” of smaller meteorites, some 3.8 billion years ago. The particles of gold which then landed stayed on the surface, in the places where they are currently mined.

To prove the hypothesis Matthias Willbold and Tim Elliott have compared the composition of contemporary rocks and others over 4 billion years old, preexistent to the main meteorite bombardment. An infinitesimal difference in the quantity of tungsten, a metal very similar to gold, was detected which enabled them to calculate the weight of meteoric matter on Earth.

Wojciech Wilbold: “Our work shows that the majority of precious metals upon which our economies and numerous strategic industrial processes are based appeared by coincidence when the Earth was struck by about twenty billion billions of tons of asteroids”.

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(1) Vezzoli, Alcione, Alcan, p. 37
(2) Vezzoli, Alcione, Alcan, p. 172
ASIH-COMPUTER, ADAM SMITH’S INVISIBLE HAND COMPUTER

Tadeusz Szuba (University of Cracow), author of the model for the phenomenon of collective intelligence, proposes a theory that Adam Smith’s Invisible Hand metaphor is an occurring phenomenon that can be formalized, simulated and most probably used to propose all-new tools to analyze and predict markets in the future.

The proposed theory states that the Invisible Hand is a symptom of the existence of another dimension of a market, which is of computational nature. A market and its agents are unaware of this, because only piece(s), or result(s) of this symptom can be observed. In a market, the nature of a market and agents creates a complete, programmable computer on the platform of brains of agents and the physical structure of the market. This computer is self-programming and because it exists and functions on the platform of market agents’ brains, results of computations are outputted via the brains of agents and represent themselves as the behavior of a market.

According to this theory, the Invisible Hand is much more powerful and universal than Adam Smith and contemporary economists even expected. “Adam Smith’s statements provide a clear hint on how to transform human agents as market elements, into ‘business-thinking and planning virtual processor’.”

Using this processor under concept of molecular model of computations, we are able to convert a market into a specific, nondeterministic, parallel computer. It is an altogether different kind of computer, when comparing it to its digital counterpart – business-thinking and planning virtual processor. Using this processor under concept of molecular model of computations, we are able to convert a market into a specific, nondeterministic, parallel computer. It is an altogether different kind of computer, when comparing it to its digital counterpart – business-thinking and planning virtual processor.

ADAM SMITH’S INVISIBLE HAND OF JUPITER

“The history of capitalism is an invasion from the future by an artificial intelligent space system of nature”. For Macfie the invisible-hand passage in The Wealth of Nations (written before 1758), the instrument of “the author of the nature’s gods, linked to an age of ‘superstition’. Adam Smith speaks of the invisible hand, to which ignorants refer to explain natural phenomena otherwise inexplicable: Fire burns, and water refreshes; heavy bodies descend, and lighter substances fly upwards, by the necessity of their own nature; nor was the invisible hand of Jupiter, or appreciated to be employed in those matters. In The Invisible Hand of Jupiter (1971), Alexander L. Macfie provides an insight on Adam Smith’s conception of the relationship between divine guidance, the system of nature and human behavior. For Macfie the Scottish Enlightenment had made interpretations of history close to the one of Glambattista Vico who was separating the age of gods, the age of heroes and the age of men. For Macfie, Adam Smith’s Invisible Hand of Jupiter symbolises the capricious and uncomprehensible intervention of Antiquity’s gods, linked to an age of “superritious”. Adam Smith’s definition of the “invisible hand” would be then more applicable to the Second God of Supreme Being that developed in the XVIIIth century and to the conservative force that gravitates towards natural order disturbed by self interested individuals. In such a way that it becomes, in the Theory of Moral Sentiments (1759) and in the Wealth of Nations (1776), the instrument of “the author of the nature who governs and animate the entire machine of the Universe”. For Macfie the invisible-hand passage in The Theory of Moral Sentiments is an effort to bind the theological ethical and economic arguments into one comprehensive system of thought of the “large system of nature.”

MUSHROOM-MASTER OF GLOBAL CORPORATE CONTROL

The control class is that which, consciously or unconsciously contributes to achieve the goals of the alien capitalism. The graph uses a Swiss study that carried out the first investigation about the architecture of the international ownership network, along with the calculation of the level of control held by each global player. This study shows that, on a sample of 37 million actors contained in the Orbis 2007 database, 737 holders accumulate overwhelming control over 80% of all corporate control, almost 40% of 45 686 local transnational corporations are controlled by a group of 147 companies with interlocking interests, this group has virtually complete control on itself. Much of this control is drained to a tight heart of financial institutions, set of the first fifty transnational banks and financial institutions.

"The ENIAC (Electronic Numerical Integrator and Computer) was the first general-purpose computer, a digital Turing-complete machine built in secret during World War Two. In the fall of 1945 Manhattan Project computer scientists went to design a calculation that would determine the likelihood of being able to develop a fusion weapon. Edward Teller, the "Martian of Science," used the ENIAC results to prepare a report in the spring of 1946 that answered this question in the affirmative."
rigor of its objective calculations seemed attractive. Of control with authority anchored in the scientific of tedious negotiating processes automated systems internalized logic towards selfish ends. Self-interest as long as it does not deviate from an imposed of decisions. Behavior is only considered rational normative prescriptive and descriptive in all forms rational agency must conform, rational choice is management as gateway to fundamental political and militarization of outer space, concepts like game theory promised solid tools for tactical and strategic decisions. From an Air Force expanded warfare program, RAND developed its then unique product of “System Analysis” to impress military elites with illusions of objectivity. At the dawn of the cybernetic control revolution, new decision technologies established a regime of knowledge production, channeling democratic decision making towards a specific agenda. By mapping perception through the lenses of their systems, Cold War rationality creates worlds and social theories turn into social facts. RAND, the first US think-tank, became a breeding ground for a self-replicating cult at the center of American Cold War efforts. Think-tanks use epistemological leverage to muscle into the central processes of control.

Decision tools for warfare from a science of military theory and the algorithmic prediction industry have an impact comparable to Nastradamus - not just in the context of managing capital but all human affairs. You trace this cult of scrying the future to the Sciences of War and Mutual by Konrad Becker. El Iblis Shah Alongside the construction of transcontinental missiles and the nuclear standoff between the US and the USSR, the Spunkish shock and militarization of outer space, concepts like game theory promised solid tools for tactical and strategic decisions. From an Air Force expanded warfare program, RAND developed its then unique product of “System Analysis” to impress military elites with illusions of objectivity. At the dawn of the cybernetic control revolution, new decision technologies established a regime of knowledge production, channeling democratic decision making towards a specific agenda. By mapping perception through the lenses of their systems, Cold War rationality creates worlds and social theories turn into social facts. RAND, the first US think-tank, became a breeding ground for a self-replicating cult at the center of American Cold War efforts. Think-tanks use epistemological leverage to muscle into the central processes of control.

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The ticking was not heard, and as anticipated by Akira Kurosawa in his 1990 film Dreams, the celestial fire burned in four of the reactors at the Fukushima Daichi 1, emitting a estimated 260 tons of radio-isotopes to the biosphere, contaminating the Ocean, rivers, fields and forests, just 200 kilometers from the planet’s most populous urban area.

As stated by John Downer from the Centre for Analysis of Risk and Regulation at the London School of Economics and Political Science, the 2011 meltdowns at Fukushima might have falsified long-standing expert assertions that nuclear power is "safe", yet it has failed to do so. He explores in his paper "In the shadow of Tomioka. On the institutional invisibility of nuclear disaster" the two core mantras of post-Fukushima nuclear discourse: (1) that nuclear meltdowns will not occur; and (2) that nuclear accidents are "tolerable". In each case, Downer outlines how accounts of the disaster shield the credibilis of the wider nuclear industry; and it then explains why these accounts are misleading.

This anti-epistemology is produced by established networks and organizations that intentionally pursue their interests by cultivating the doubt, ignorance or false knowledge. In front of them are TEPCO, the operator of Fukushima Daichi; IAEA (International Atomic Energy Agency), which tend to portray the nuclear catastrophe as a communication problem rather than public health, and Sinto Abe, the current militarist Prime Minister of Japan. Abe just passed Secrecy Law that threatens freedom of speech to press to publish critical information about the sector; while promoting Fukushima Prefecture as an innovation center for "specialized in disasters" robotics.

In April 2015, a drone with radioactive sand from the beaches of Fukushima mysteriously appeared on the roof of Abe's official residence to denounce the pro-nuclear government policy. Situated struggles continue against the re-start of the archipelago nuclear reactors. Occupied Kasumigaseki, the Ministry of Foreign Affairs, the pro-nuclear government policy. Situated struggles continue against the re-start of the archipelago nuclear reactors. Occupied Kasumigaseki, the Ministry of Foreign Affairs, the pro-nuclear government policy. Situated struggles continue against the re-start of the archipelago nuclear reactors.
At the center of Leiber's story is an inversion that had found man. "In brief," the narrator concludes, "Daloway's theo-

form: Daloway's rather crackpot theories into coherent

channels of modern industrial civilization, from the

surface, and that immanently courses through all the

The image of oil as stealthily waiting gives the

ooze the vague quality of intelligence and intent –

and, more specifically, of malefic intent. In Leiber's

The unhuman is not simply that which is

made human, in

though all of these play a role in Leiber's story. The

unhuman is distinct

and anthropomorphism, respectively.

At the first level, we encounter the unhuman only as

it exists for the human. This is the normative world of

modern industrial capitalism described by Daloway

in the story. At this level, the unhuman is everything

that is for us and for our benefit as human beings, living in human cultures, and bearing some unilat-

eral and instrumental relation to the world around

us. This relation between human and unhuman relies

upon an anthropic subversion. The unhuman is only

that which exists within the scope of the human; in

a sense, there is no outside of the human, in so far as

the unhuman is always fully encompassed by human

knowledge and techniques. At this level, the unhuman

is everything that is subject to and produced by

human knowledge. At this level, anthropocentrism

overlaps almost perfectly with anthropomorphism.

But Leiber's story steadily moves towards a sec-

ond level, which explores a notion of the unhuman

through an inversion of the relation between human

and unhuman. The key phrase in Leiber's story is the

following: "man hadn't discovered oil, but . . . oil had

found man." We don't use oil, oil uses us. Note

that a relation of unilateralism still exists, except

that it has been reversed. Instead of human beings

making use of the planet for their own ends, the

planet is revealed to be making use of human be-

ings for its own ends. Humans are simply a way for

the planet to produce and reproduce itself. Clearly,

with this sort of epiphany all bets are off – one can

no longer regard the human endeavors of science, technology, and economy in quite the same way. But

the terms of this relation are still "human" – inten-

tionality, instrumental rationality, and even a touch

of malice are attributed to the anonymous ooze of

oil. It is as if the unhuman can only be understood

through the lens of the human. We can call this the

anthropic inversion. The anthropic inversion allows

for a concept of the unhuman to emerge, but it is

ultimately recuperated within the ambit of human
categories, such as intelligence and intentionality.

Towards the end of Leiber's story, this anthropic

inversion undergoes another turn, leading to a third

level where the unhuman is encountered. As Da-

loway is weirdly carried off into the viscous night

where oil and nocturnal darkness merge into one, ef-

facing all horizon lines in a nameless, black blur,

Daloway's own individuality slips away and is en-

gulfed, and at this moment he realizes that the hu-

man categories of life, mind, and technics are them-

selves simply one manifestation of the unhuman.

In other words, as opposed to the anthropic inversion

(human don't use oil, oil uses humans), here Daloway

experiences another kind of inversion, an ontogenic

inversion in which everything human is revealed to

be one instance of the unhuman. The ontogenic in-

version is both ontological and ontogenetic, at once

the evisceration of thought from the human, as well

as an epiphany about the essentially unhuman qual-

ities of the human. In the ontogenic inversion, the

human is only one instance of the unhuman.

At this point thought falters, and here we enter a

fourth stage that we can call misanthropic subtrac-

tion. At this point, thought falters, and language can

only continue by way of an apophatic use of neg-

ative terms ("nameless," "nameless," "faceless," 

"featureless"), which are themselves doomed to failure. This failure is leveraged with great effect in the literary tradition of

supernatural horror and weird fiction. Authors

such as Algernon Blackwood, William Hope Hodg-

son, and of course H.P. Lovecraft excel at
driving language to this breaking point. Here one notices two strategies that are often used, often in concert with each other. There is a strategy of minimalism, in which language is stripped of all its attributes, leaving only skeletal phrases such as "the nameless

thing," "the shapeless thing," or "the unnamable"

(which is also the title of a Lovecraft story). There

is also a strategy of hyperbole, in which the unknow-

ability of the unhuman is expressed through a litany of baroque descriptors, all of which ultimately fail to

inscribe the unhuman within human thought and language. Some examples from Lovecraft follow:

. . . the rayless gloom with Miltonic legions of

the misshapen damned . . .

. . . the nameless bands of abhorrent elder-

world hierophants . . .

. . . breeding, half-material, alien Things that

festered in earth's nether abysses . . .

. . . a pandemonial vortex of loathsome sound and

utter, materially tangible blackness . . .

Often these two strategies – minimalism and hyper-

bole – dovetail into a singular epiphany concerning

the failling not just of language, but of thought as

well. At the end of Lovecraft's story "The Unnam-

able," one of the characters, speaking to his friend

Carter from a hospital bed, attempts to describe his

(1) – Fritz Leiber, "Black Gandollor," in Night Mon-


(2) - Ibid., p. 12.

(3) - Ibid., p. 15.

The Baku Ateshgyakh was a pilgrimage and philosophical centers of fire worshipers from Northwestern

Indian Subcontinent. who were involved in trade with the Caspian area. The Fire Temple of Baku on

the northern edge of the Temple was a castle-like temple and monastery complex incumby locally as the

Ateshgyakh or Ateshgyakh. It was a Hindu temple. The complex was built on a pocket of natural gas that once

produced a flame from natural gas seepage. The local name f the ranc is said to related to "the

Persian words 'Sura'k' (holy) or 'Surkh/ Sorkh' (holy) and

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The Laboratory Planet

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the beginning and) the end of a glacial period is
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have been, during several centuries or even just a
few decades, a period of diluvial downpours
accompanied by gigantic floods in many regions of
the world.

The myth of the Flood can thus be seen from
three angles: global warming and its catastrophic consequenc-
es; the extinction of species and the divine mis-
sion to save non-humans; the reduction of lifes-
pan, immortality for a few chosen ones.

Concerning this last point, the Bible states that,
before the Flood, the patriarchs lived for a thou-
sand years. Noah was the last patriarch to live
so long, after the Flood God reduced the lifes-
span of humans. But the Flood is not a Semitic
myth, it is Sumerian. The myth of Noah (2000 BC)
is inspired by the myth of Atrahasis as told in the
Epic of Atrahasis (1700 BC) which also inspired
the character of Ziusudra (1200 BC), the last of
the kings before the Flood (Ziusudra means “long
life” in Sumerian), and that of Uta-Napishtim in
the Gilgamesh Epic (1200 BC). In this myth, Atra-
hasis (or Ziusudra or Uta-Napishtim, depending
on the versions) receives a message in a dream
telling him about the coming Flood and com-
manding him to construct an ark in order to take
with him specimens of all living beings. Having
carried out the mission successfully, God rewards
Atrahasis with the gift of immortality, but also
makes sure that humans disturb his peace less
by reducing their lifespan, introducing sickness,
sterility and so on.

Contemporary transhumanism can thus be seen
as a myth of victory over the Holocene by a “good An-
thropocene”, the return to the pre-Flood state of semi-gods, a victory
that reconquers the long lifespan of the pre-Flood patriarchs, or,
even better, the gift of immortality accorded to Atrahasis.

In the same way the catastroph-
ism of the apostles of the “bad Anthropocene” can be seen as a
quest for becoming perfect like Noah, saviour of the simple and
pure non-human souls, as devel-
oped in the Sethian Gnostic myth –
from Seth, third son of Adam, the
only pure one after Cain’s murder of Abel. Noah is a descendant of Seth (seed of Seth), in charge of
the divine mission of saving the
non-humans from the Flood caused
by the Demiurge, son of the Aeon
Sophia-Gaïa and creator of mat-
ter, and getting rid of Cain’s de-
scendants, fruit of the suiling of
Eve by the Demiurge (the bad
humans of the Pleistocene?).

The Demiurge tried to destroy Seth’s
seed by causing the Flood, but in
vain: Seth’s descendants are by
essence phylolozomenoi, saved
by their very nature.

THE HYPOTHESIS OF
THE TWO ANTHROPS
BY Ewen Chardronnet

L

ets start from the idea that the Flood can be
seen as the founding myth of the Holocene. It
is actually possible that the myths of the Flood
could stem from the great melting that occurred
at the end of the Pleistocene, tales born of a dis-
tant memory of the end of the last great glacial
period (the Würm glaciation or Würmzeit) about
8000 years BC when the interglacial age of the
Holocene began. We can also note that, if (the
beginning and) the end of a glacial period is
certainly a transition (from a glacial period to an
interglacial period) defined by the albedo
of the Earth – the amount of solar energy re-
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by their very nature.

The Gnostic equivalent of the Fall, as
described in the Apocalypse of Adam (a prophecy given to Seth
by Adam, included in the Nag Hammadi Codex),
seems to indicate the division of the Anthropos in
two distinct and parallel incarnations, two cre-
ations, two streams of the physical expression of
humanity, the mortal form and the immortal
double.
I propose that there are forms in the text, such as systems of coordinates emergent in the cut-ups, as W.S. Burroughs did in ‘The Ticket That Exploded’, a work by William S. Burroughs (1967) with contributions from Bri-on Gysin, Michael Portman and Ian Somerville. The book was developed mainly out of the permutations and juxtapositions executed over a pool of written material (2).

Nova criminals are described in The Ticket That Exploded as non-tridimensional organisms active as systems of coordinates that unfold throughout the “addicts of the world” and other confluences. (3)

The basic Nova technique is very simple: Always create as many insoluble conflicts as possible and always aggravate existing conflict – This is done by dumping in the same planet life forms with incompatible conditions of existence. W.S. Burroughs (1962) The Ticket That Exploded, p.55

I propose that there are forms in the text, such as systems of coordinates emergent in the cut-ups, juxtaposed and permuted text, that evidence reduced subject-object distinctions. These systems of coordinates are networks that contain angles, and degrees of deviation or separation, so that, from degree 0 in perception, meaning the total fascination and loss of boundaries, to those angles within the systems of coordinates that spread over into the “tissues of predication.” (4) 0 degrees of total immersion is the instantaneous multidimensional. Word pushes us away from degree 0. That degree 0 is the fully liberable place of fulfillment. Burroughs asserts that the same infectious organism, the “word virus”, is a key to having access to Operation Rewrite (5), since, because everything is pre-written (6) and pre-recorded, (7) it is possible to access the pre-recordings. I now will introduce the concept of the “instantaneous multidimensional”, in relation to the exploration of systems of coordinates in the juxtaposed text, as this serves as an interface with which to explore landscape, since it is executed to become an index of site. The exploration takes place through a completion of degrees.

Degrees of separation between the subject and the object, the writer and the writing, landscape and the self, the self and “The Other Half”. Burroughs, in The Ticket That Exploded, asks, “You know about the logos group??” and describes them as discharging “engram tapes” for domination (8) Allen secret groups and bureaucratic clear and discharge strains of viral infectious words, with sequences to control degrees of effect. (9) The process of “word virus” infestation can be compared to a process of indistillation such as the promotion of an ideology. Fredric Jameson (1981) points out that Althusser’s concept of ideology is “a representational structure which allows the individual subject to conceive or imagine his or her lived relationship to transpersonal realities such as the social structure or “the collective logic of history.” (10) The infestation of the “word virus” described by Burroughs may be seen as a similar for the operations of scripture performed in late antiquity in relation to the Old and New Testament that Fredric Jameson uses as a proof of a large project of indistillation, in the medieval and patriarchic systems known as the four levels of scripture, which was used, “as a strategy for assimilating the Old Testament to the New...” (11) These operations of rewriting the Life of Christ as a re-writing of the Old Testament seem, according to Jameson, to have been based on a system of categories. Thus writing and re-writing might be seen as a technology applicable to scripture. “It is precisely by way of the moral and analogical interpretation (the collective meaning of history) that the textual apparatus is transformed into a biblical apparatus.” (12) Once libidinal, contagion is widely spread as the need is established. A kind of “full spectrum dominance” (13) operates instantaneously from inner speech to the Nova Police, with the police working through your inner speech. Burroughs relates domination to lines of pleasure and the “algebra of need”, a series of cycles.

NECROCRACY, Reza Negarestani
In Defining the Ancient Persia, Hamid Farrokh describes how, before the Aryans settled in what would later be called the Iran plateau, the land was not empty; it was occupied by mysterious people with outlandishly complex beliefs, who knew nothing but demons, Daivas and Druj (also Druga : the Mother of Abominations). These pre-Aryan sorcerous people regarded everything as an avatar of horror, of a radical Outside; even the fertilizing forces of nature such as wind, rain, thunder, soil and growth were Daivas (demons). Lige was Druj itself, the Mother of Abominations, the radical Outside. The entire universe was saturated with horror. (...). Generally, we believe that life makes survival possible, but life is the source of living then why do we need to survive? If life is the so-called vital source, then why is the act of living an appropriating and a survivalist regulation necessary? Why is survival possible, or do we need to survive if life is already a source of living? Once we realize that the ethics of life is external to that of survival, and that survival is a resistance to the epidemic and overpowering presence of life, then we can say that to be pro-life is to be essentially anti-survival. (...). Survival presupposes death from the beginning; so-called actual death is merely the eventuation of the real death, or the impossibility of survival in affording the exteriority of life. The course of living or survival is where death not only becomes a terminus-event but a propulsive and conducting force which starts to work even before one begins to live (death becomes the director of one’s life).

The ethos of survival or vitalism is necrocracy. For the sorcerous crowd of the pre-Aryan Iran plateau, survival was not supposed to hold death back as long as possible but to feed the (Un)life. For them, survival and the scrabbling will to survive were sorcerous rituals to feed the Outside, to feed what is external to ‘so-called life’. An occult practice for feeding the avatars of the Outside. Living was itself a feeding project, and survival in general was a strategy, the most pragmatic polities for engag- ing the Outside. They believed that survival fed an unkillable Abomination, an ultimate outsider which their Zoroastrian descendants called Druj. The longer you endure, the more you feed the Outside (interlocking with the outside on the plane of strategy). In the Avestan language of Ancient Persia, Druj — from a Sanskrit origin — meant blackening, the chaotic aspects of falsity, fraud and strategy. The idea of ritual as a communion with this openness, then, developed the pragmatics of a new survival system practically and religiously conscious of its own repression and the exteriority of life. (...) As the ovum of monothelism, Zoroastrianism became a vehicle for the sabotaged Aryanism of the Iran plateau. Now it was the task of monothelism to disseminate the Outside-oriented experiments and rituals of the sorcerous crowds. The mission of monothelism was to fuse with planetary events in order to systematically transform every shadow into a sacrificial meal for the Outside” (Negarestani, Cyclopolis: complicity with anonymous materials, p.210-213).
related to scarcity, satisfaction, fear, withdrawal and waiting. (14) Burroughs describes virus domination spreading through vibrating photos, flicker ghost, spliced records, engram tapes, juxtapositions, the other half, permutations, pattern pulsing, remote mineral silencing, writing machines. The sequences of relations, established by the method of the four senses, convert the particular into the universal, daily life into human universal history. It is an algorithm, it is software performed over words that have since been repeated over the centuries. Those words, the scriptures, transported a logic, a virus, as Burroughs named it, an infectious logic of ideology. They are streams of words that, for Burroughs, correspond to a form of alien invasion, or a "biological mutation". The nature of these alien invaders is poly-morphous, sometimes "alien", sometimes undercover police agents, an "inflexible machine", a mixture of radioactive vapor bureau officers. (15) Nagasaki - Injury Headquarters - Dual mammalian structure - Hiroshima People - Or some disgusting officers produced the rest of it. (Burroughs, W.S. (1964) Nova Express. p.37).

The idea I propose is that text can be used to interface landscape, placing text against landscape or over it, becoming a mold of the real, being itself an index, a system of coordinates that parallels the multidimensionality of each site. Text molds the "instantaneous multidimensional", reducing it into a mold of a face, the traces left in topographies, traces of history, and in the particular case of Antarctica, and many other remote unaccessible places, traces of empire.

I will take my work, A common element (2013) (15) as an example of such performative text and propose it as a mimetic interface to the instantaneously multidimensional in the Antarctic landscape.

From time to time the murmurs continued. The sound also took the form of a continuous screeching or jingling comprised of many overlapping high-frequency whistles. The Very Low Frequency emissions involved in this universal interweaving, with the exception of sounds produced normally by natural noises, they are called Very Low Frequency emissions or VLF ionospheric noise. (…)

Sources of Very Low Frequency emissions

Nature and influence of VLF emissions using unusual society-community teams. The evidence is strong that VLF iononomology emissions in electromagnetic space are complex political geo messages remaining with no explanation. Various theories have brought up the presence of charged particles in the outer ionosphere.

Guided missiles, fife with amphibious submarines. North American Rockwell World War and the discovery of the magnetosphere was present during testing and in the way the sky lit up at night. (…) Report in itself: the Garrett Corporation has designed the motors. They bounce between the earth and the ionosphere and occasionally they take a ride in military planes; General electric has its own think transistor in order to reach the earth again in the opposite hemisphere. Hewlett-Packard company "radar control" Jet propulsion laboratory; Little town Industries build arching over the equator, in the opposite hemisphere.

"Junk yields a basic formula of evil virus: The algebra of need". The Naked Lunch (2004) p.4


Augmented intelligence is an umbrella-term used in media theory, cognitive science, neurosciences, philosophy of mind and political philosophy to cover the complex relation between human intelligence, on one side, and macro-techniques and computational machines, on the other, both understood as an expansion (also to a social and political degree) of human cognitive faculties. The concept field of augmented intelligence can be illustrated along two main axes: a technological axis (that describes the degree of complexity from traditional-memo-techniques to the most sophisticated ones of what he calls BIOLOGIC MUTATION effecting the biologic change in its host which was then genetically conveyed."


The funnel of i. (1) - This text has been written as a snapshot of a larger essay. It is using concepts found in the books, Naked Lunch (1959), The Ticket That Exploded (1962), Nova Express (1964) and The Trafalgar (1962) by William S. Burroughs.

(2) - The third mind (1978) p.10-11 The ticket that exploded (1962) p.65

(3) - op. cit. p.57

(4) - The Ticket That Exploded (1962) p.58-59

(5) - op. cit. p.49


(7) - "Everything is done with tape recorders!" The Ticket That Exploded (1962) p.160

(8) - The Ticket That Exploded (1962) p.20

(9) - As described in detail in: Nova Express (1964) and The Ticket That Exploded (1962)


(13) - A concept coined by the Pentagon (2000) and brought into academic discourse by Steve Goodman in Sonic Warfare (2010)

(14) - "Link yields a basic formula of evil virus. The algebra of need". The Naked Lunch (2004) p.4

T

The problem of the end of the world is always formulated as a separation or divergence, a divorce or orphaning resulting from the disappearance of one pole in the duality of world and inhabitants—the beings whose world it is. In our metaphysical tradition, this being tends to be the “human,” whether called Homa sapis or Dasein. The disappearance may be due to either physical extinction or one pole’s absorption by the other, which is called the end or the persisting one. We could schematically present this as an apposition between a “world without us,” that is, a world after the end of the human species, and an “us without world,” a humanity bereft of world or environment, a persistence of some form of humanity or subjectivity after the end of the world.

But to think the future disjunction of world and inhabitant inevitably evokes the origin of its present, precarious conjunction. The end of the world projects backward a beginning of the world: the future fate of humankind transports us to its emergence. The existence of a world before us, although regarded as a philological challenge by some (if Marcel Mauss’s argument is to be believed), (1) seems easy enough for the average person to imagine. The possibility of an us before the world, on the other hand, is less familiar to the West’s mythological repertory.

Yet in the hypothesis explored in several Amerindian cosmogonies. It finds itself conveniently summarized in the commentary that opens a myth of the Yanomana, a people of Pano-speakers from the western Amazon “The myth’s action takes place in a time which ‘had not been there before’ and which already existed.” (2) The variation of the Aike-waro, a Tupian-speaking people who live at the other end of the Amazon, adds a curious exception: “When the sky was still very close to the Earth, there was nothing in the world except people—and tortoises!”

At first, then, everything was originally human, or rather, nothing was not human (except for tortoises, of course, according to the Aike-waro). A considerable number of Amerindian myths—as well as some from other ethnographic regions—imagine the existence of a primordial humankind, whether fabricated by a demigod or simply presupposed as the only substance or matter out of which the world could have come to be formed. These are narratives about a time before the beginning of time, an era or eon that we could call “pre-cosmological.” (4) These primordial people were not fully human in the sense that we are, since, from the absolute past; thus, for example, the Peccary Yanomami—the tribe of originary people who had the name “Peccary” [queixada]—became the term “pecceary,” that is, the wild pigs that we hunt and eat today (Yanomam means “people” in their language). The whole world (though again, perhaps not the tortoise or some other oddity) is virtually included in this originary proto-humankind; the pre-cosmological situation might thus be indifferently described as a still worldless humankind or as a world in human form, an anthropomorphic multiverse that gives way to a world conceived as the result of the (never quite finished) stabilization of the infinite potential for transformation contained in humankind as universal substance, or rather universal “actance,” both originary and persistent. (13)

We thus see a multiple inversion of the cannibalistic, or zombie-apocalyptic scenarios that figure in Cormac McCarthy’s The Road and similar narratives: in indigenous mythology, human food consists of humans who have morphed into animals and plants; humankind is the active principle at the origin of the proliferation of living forms in a rich, plural world. But the indigenous scheme is also an inversion of the Garden of Eden myth: in the American case, humans are the first to come, and the rest of creation proceeds from them. It is as if what comes from Adam’s rib is much more than his female complement—rather it is the whole world, the entire infinite rest of it. And names, in their infinite variety, existed, as we have seen, before alongside things (the Pecari Yanomami, the Jaguar People, the Canoe People …); things did not wait for a human arche-namegiver to tell them what they were. Everything was first human, but everything was not one. Humankind was a polynomial multitude; it appeared from the start in the form of a world.
What we could call the natural world, or “world” short for, is Amazonian peoples a multiplicity of intricately connected multiplicities. Animal species and other species are conceived as so many kinds of people or peoples, that is, as political entities. It is not “the jaguar” that is human; it is individual jaguars that take on a subjective dimension (more or less pertinent according to the practical context of interaction) when they are perceived as having a society behind them, a collective political alterity. (16) To be sure, we too—by which we mean we, Westerners, a concept that includes, through mere convention, Brazilians of European descent—think, or would like to think that we think, that it is only possible to be human in society, that man is a political animal. But Amazonians think that there are many more societies (and therefore also humans) between heaven and Earth than have been dreamed by our philosophy and anthropology. What we call the environment is for them a society of societies, an international arena, a cosmopolis. There is, therefore, no absolute difference in status between society and environment, as if the first were the subject and the second the object. Every object is always another subject, and is always more than the platitude that every novice left-wing militant learns—that everything is political—acquires in the Amazonian case a radical concreteness (For the indeterminacy of this “everything,” see our forthcoming treatise) that not even the most enthusiastic activist in the streets of Copenhagen, Rio, or Madrid might be ready to acknowledge.

Translated by Rodrigo Nunes

(5) With some improvement in the moral field, literal connotation, for instance, becomes objectively unnecessary, since, with the advent of the cosmological era, animals and plants adequate for human nourishment appear.
(7) Gerald Weiss, “Campos Cosmology,” Ethnology 9 (2) (1972): 169-70. “Many, if not all categories”—compare this to the Akkarakara exception concerning tortoises in the character- residence of the “human state of pre-cosmological reality. These provisions are important because they highlight an essential dimension of American mythocosmologies: that expressions as “nothing,” “everything,” or “all” function as qualifiers (not to say “quasiquantifiers”) more than as quantifiers. We cannot delve deeper into this discussion here, but it carries obvious implications as to the adequate comprehension of the indigenous concepts of cosmos and reality. Everything, including “the Everything,” is only imperfectly translatable into the exception, the remainder, and the lazaos are (almost always) the rule.
(10) That statement requires naming and differentiating in regard to several American cosmologies, not to mention the occasional exception to it. There is an ongoing debate on the extension and comprehension of this mythocosmological scheme regarding a primordial or infrastructural humanindigenous in American Americas, a debate that is tied with another one around the concepts of “animal” and “perspectivism,” which we will not explore here.
(11) See Gerhard Andres, Temas de la fin (Paris: L’Eterne, 2007), 75: “the pre-human region whence we came is that of total animality.”
(12) “Ethnographic present” is what anthropologists call, nowadays almost always with a critical intention (although Huttzp has raised an important objection to that), the discipline’s classic narrative style, which allows anthropographic description in a timeless present more or less coeaneous with the observer’s fieldwork. This style pretends to ignore the historical changes of the Dancers (New York: St. Martin’s Press, 1976), 94.
(13) An Amazonian metaphysician could call this the argument of “human animality” or “the evidence of the anthropofossil.” (14) Those two ideas are a timeless present more or less coeaneous with the observer’s fieldwork. This style pretend to ignore the historical changes (colonialism, etc.) that allowed precisely for ethnographic observation. We shall use the expression, however, in a sense doubly opposed to that, so as to designate the attitude of “confrontation against the state” in regard to history. The ethnographic present is therefore the time of Lévi-Strauss’s “cold societies,” societies against internationalism, or slow societies (as we can speak of slow food or slow science—see-isabella Stengers), for whom all cosmopolitan changes necessary for human existence have already taken place, and the task of ethnics is to secure and reproduce this “always already.” See Kirsten Hastrup, “The Ethnographic Present: a Reconsideration,” Cultural Anthropology 5 (1): 45-61; Isabella Stengers, Une Autre Science Est Possible! Manifeste pour un Ralentissement des Sciences (Paris: La Découverte, 2000).
**HYPOTHESIS**

**A first hypothesis** speculates about a capitalism whose Earth devastation with a view to its future desertion would be the intelligent symptom.

The alien here, would be the one that would come out his terrestrial origin to become something else, to give himself other bodies, other becoming, possibly getting back this way, other origins that these his cradle pregnancy would have detracted from him. He would come from a possible effect who in the name of history in progress cosmic destiny, would strive to redefine or even free itself from humans and non humans terrestrial co-evolution to leave Planet earth and go into outer space.

Russian cosmism imagined this departure as a logical extension of humankind evolution, but the atom bomb deserved the right to remind us only chosen ones could reach it, leaving the post-atomic biopolar-literalist locked in a devastated planet.

This scenario opposing average earthlings versus cosmic elite could yet be reversed: isn’t disalienated working class utopian horizon to become non terrestrial, to become an Other? Isn’t it from now on deployed into space, away from a murdered planet controlled by capitalism chthonian forces? Isn’t there an ultimate way for men and women to renew with their stellar originality? The alien qualifying term depends here on the chosen centrenment categories radical crisis. The lack of consistent capitalism whose Earth devastation with a view to its future desertion would be the intelligent symptom.

**A second hypothesis** refers to Planet earth own alien roots. Earth would be far to self belong and would itself be part of cosmic economics, which loaded the planet with gold, water, precious metals, viruses, actors of its evolution and transfor- mation via asteroids bombing... to fertilize it, so metals, viruses, actors of its evolution and transformation via asteroids bombing... to fertilize it, so organic resources could come to its surface. Earth would then be a place of socialisation and acclimatisation of its future desertion would be the intelligent symptom.

**A third hypothesis** questions a triple privilege: privilege of humans on other species, terrestrial or not (speciesism), privilege of Earth on other cosmic environments (earth-centrism), privilege of living organisms on other carbon-free organisms (biocentrism). A post-humanism, a becoming alien of the human based on an intelligent agents plurality, relying on moral criteria freed from the humanistic canon or even from the terrestrial and biocentric canons, arises from these questions. This post-hu- manism would arouse the building of new ethical community forms, new functional assemblies, and the experimentation of new being processes, as non humans, could be defined as alien.

**A forth hypothesis** turns alien capitalism into a meta-discourse, an abstraction field looming over what is real, producing a strong effect of au- thority. It indexes resources from the labs abstracts sites the Market itself being sort of a lab), enunciates their respective roles in a same large system. This meta-discourse relates the planet turned into Capital, set to work, namely driven a stranger to itself, as managed an innovating company. This dis- cursive machine - substantiated by simulations, tech- nocratic narratives, convincing constructions of facts - produces capture devices and projective spaces orienting our actions, channelizing our desires, control- ling bodies, legitimizing regulations, driving industri- al mutations, scientifically governing or subverting mass cognition. Alien capitalism is used here as a calibration procedure of the real, as a strategic tool establishing things properties.

What are these alien capitalism investigations aiming to? It first means to open the Great transforma- tion imaginary space. From the factory planet and its shore of destructions and ecological disorders, to the laboratory planet meaning to substitute to it an engineered rational and organised resources man- agement, which are the decentrement procedures agents process could also invite to consider, as a last resort, extraterrestrial management monitoring and non humans terrestrial co-evolution to leave Planet earth and go into outer space.

**ALIENS IN GREEN**

Aliens in Green mobilise investigation laboratory is seeking collabora- tors to help to develop inquiries into alien agents of anthropo- centric xenopsychosis. The lab implements communication and media processes, reaching out and opening a critical public space. It aims to activate problematisation and analysis tools, attend rec-ognition events and intervene in public space. As addressing as much on popular sciences artefacts, mass culture and science fic- tion, as on analysis of current technological mutations, Aliens in Green connects open-science philosophy to DIY practices. One may understand the Aliens in Green tactical theatre lab as a symmetrical and antagonistic entity to Men in Black: They act as discerning agents dealing with human relations with life forms of a third type. But unlike Men in Black who operate secretly, Aliens in Green operations are open in order to allow earthlings to iden- tify the numerous exclusions between capitalist and xenopelitique interests.

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