



AGROPOETICS

Reader

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Editorial Note

The *Agropoetics Reader* unfolds as a collection of texts that informed, grounded, and nourished SAVVY Contemporary's *Soil Is an Inscribed Body: On Sovereignty and Agropoetics* (30th August - 6th October 2019), an exhibition and research project curated by Elena Agudio and Marleen Boschen. The project was conceived in the framework of *The Invention of Science*, SAVVY Contemporary's 2019-2020 programme, devoted to questioning the presumed universality and objectivity of the scientific canon. In this context of reflections and cogitations about the epistemic violence perpetrated by the West against other forms of knowledges, *Soil Is an Inscribed Body* examined anti-colonial struggles of past and current land conflicts across the world in order to address the invasiveness of neo-agro-colonialism and its extractivist logics. Invited to contribute to the exhibition and to present an artistic position, *The Institute of Endotic Research* (TIER) proposed to edit a publication together with the curators. The path was longer than expected, the diverted tracks were not few, but here - for the use of readers and many other agropoets - you can find a materialisation of this collaboration. You can linger on a selection of sources that inspired this research and exhibition, retrace the discussions that appeared along the way of its realisation, and engage with the ideas that grounded and sprouted from the project. At the same time, interwoven, you also encounter texts and materials suggested by TIER in dialogue with the curators.

The texts reveal manifold approaches: Silvia Rivera Cusicanqui's opening piece introduces the application of her methodology of *sociology of the image*, where she works on decolonizing her own sight by analyzing the social text in everyday interchanges present in her context. Filipa César's *Mapping Agropoetics of Liberation*, Marisol de la Cadena's *Uncommoning Nature*, and Bouba Touré's *À présent, on n'attend plus la pluie* depart from anti-colonial struggles and propose tactics for emancipation and sovereignty. Maria Puig de la Bellacasa and Huiying Ng engage with scientific methods and provide insight to alternative ways of imagining them. Marwa Arsanios' and Bengi Akbulut's essays give voices to feminist agendas of soil and commons, unfolding the concept of care and its central role for the reader. Hervé Yamguen's and Yemisi Aribisala's pieces open up to other worlds of poetic and dreamy structures. The text of María Ptqk is an exercise of decolonial feminist sci-fi, where pepper would be sent to the space as a trace to understand Earth existence and the human's self annihilation. Ayesha Hameed's contribution interweaves a visit to a former sugar plantation with the often violent movements of plants and peoples in the Plantationocene. Asunción Molinos Gordo's project *World Agricultural Museum* poses an artistic commentary on the issues of agronomy and how it intersects

with contemporary artistic practices. Alex Ungprateeb Flynn's conversation with members of the Landless Workers Movement in Brazil highlights the importance of intersectionality in land struggles. Both Luis Berríos-Negrón and Mijo Miquel delved into their current academic research, suggesting ways to bring into conversation greenhouses and multitudes, respectively.

Our aim was to hint at the earlier stages of the project, to extend the thoughts and processes to the *outside* of the exhibition, and, for the reader, to take them into the world. Despite being far from covering the range of topics that the term *agropoetics* could evoke, we wish to present a variety of ways to express current struggles and practices revolving around issues of soil and extraction.

We'd like you to think of this collection as a tool to open up discussions about these issues. We invite you to take the reader to whatever soils on which your feet may find ground.

Soil is an Inscribed Body. On Sovereignty and Agropoetics.

Curatorial note by Elena Agudio
and Marleen Boschen¹

GROUNDING: BUILDING ON PLANETARY DEVASTATION

*The land, now,
(...)
it is the storm becalmed.*
— Amílcar Cabral²

We begin with the recognition that the Earth is wretched. This is not a metaphor. It is literally our ground. The Earth is wretched because its soil— that thin layer of earth at the surface of the planet upon which we depend for life — is contaminated, eroded, drained, burnt, exploded, flooded and impoverished on a worldwide scale.
— Shela Sheikh and Ros Gray³

Soil is and remains a space of struggle and conflict. Globally, the devastation of landscapes, consumption and exhaustion of natural “resources”, vanishing of species and ecosystems, and the proliferation of wars and cultural genocides have left their marks on the land for centuries. And yet, local communities across geographies and spaces are experimenting with forms of collectivisation, and autonomy as rejections of the capitalist and colonial model of agriculture.

It has become clear that most of the discourses around the violence of anthropogenic land-use raised in the past decades do not account for the deep interconnections of patriarchal, racial, and neocolonial patterns of extraction and destruction of lifeworlds.

In the face of terrestrial destruction, in which the Earth is both a skin of soil and the planet which we inhabit, contemporary experimental micro-economies of community subsistence farming put forward the power of food and land sovereignty as an affirmation “of the right of populations to decide what to eat and how to produce it,”⁴ to put it with Mariarosa Dalla Costa. Food is a common good rather than a commodity. Even when looking at soil or water as mere *resources* for the support of human life, threats of “peak soil” and water wars point to the states of exhaustion, contamination, and desertification inscribed into this thin layer of living matter. All conflicts in recent decades share “the aspect

¹ This text was made public as a commentary and concept note to the exhibition of the same title at SAVVY Contemporary, 31.08.- 06.10.2019.

² Amílcar Cabral, in the poem “Return”, in: *Unity and Struggle. Speeches and Writings of Amílcar Cabral*, (New York and London: Monthly Review Press, 1979): 4.

³ Ros Gray & Shela Sheikh, “The Wretched Earth”. *Third Text*, 32:2-3 (2018): 163.

⁴ Mariarosa Dalla Costa, “Food Sovereignty, Peasants, and Women”. *Commoner* June 21 (2008): <http://www.commoner.org.uk/?p=42>

of massive destruction of land and with it, resources for subsistence be they grazing lands or lands for sustainable and diversified agriculture primarily intended for domestic consumption.”⁵

The earth has reached a tipping point. Maria Puig de la Bellacasa suggests that infrastructures often only become visible once they start to break down. On a planetary scale, soil becomes a bio-infrastructure necessary for the support of all life: “Today, the worrisome state of soil in many places has made of it a public matter of concern. We could say that this global perspective alone reveals it as a vital infrastructure of bios on Earth. A flow of catastrophic messages is making more visible its vital importance.”⁶ Soil as an infrastructure, in this case literally a structure from below, is the living ground for human and more-than-human life. It is both biological and geological; its materiality is a partiture of dependencies and interrelations. As Bellacasa suggests, against less ecological and uncritical modes, we should engage with “the disruptive pace of care,” reconsidering anthropocentric notions of care and understanding the fundamental collaboration of many agents and communities as the real living web of care circulating in and constituting the “natural” world.

Elia Nurvista’s *Sucker Zucker* installation in the exhibition ponders on sugar and its history, opening up narratives of material extraction, slavery and exploitation. It renders evident the geographical divide between a world of raw materials, cheap labour, trading companies, and consumption. The artist is conducting research in Indonesia, exploring the patterns of exploitation of the palm oil industry and the land grabbing politics performed by local governments through foreign investment. Agrarian law and coloniality are inherently linked in Indonesia, which translates into arbitrary and unclear situations, allowing opaqueness and the perverse liaison between corporations, multinationals, politicians, and local speculators. As Elia puts it herself, “Mostly the foreign investment was stimulated by the spectacle of colonial fantasies of conquest and discovery, including risk, virility, and violence. This fantastic or spectacular form of investment, transnational in nature, in turn colluded with Indonesian corrupt government practices, mostly in the time of new order (1966–1998) under the term of ‘developing’ the country.”⁷

5 *ibid.*

6 Maria Puig de la Bellacasa, “Encountering Bioinfrastructure: Ecological Struggles and the Sciences of Soil”. *Social Epistemology* 28(1) (2014): 36.

7 Elia Nurvista, quoted from a conversation between the artist and the curators.

Coloniality was and is always not only imposed on human beings, but also on the more-than-human, on plants and microbial life, and in the making of the binaries of “nature” and “culture”. It inscribes itself even into the soil through the decomposed traces of its past and continuing brutality, bodies and bones left and kept, others removed and repatriated. The botanical sciences of classification and plant modification emerged alongside the establishment of plantation economies, made possible by the transatlantic slave trade. Historian Londa Schiebinger suggests that botanical gardens were set up as “experimental stations for agriculture and way stations for plant acclimatization for domestic and global trade;”⁸ they became institutional test sites of “improvement”. There is a green thread from this colonisation of more-than-human vegetal life, its conversion into capitalist resources and land dispossession, to current forms of agricultural biotechnology. In this exhibition, Uriel Urlow’s *Soil Affinities* and Luis Berríos-Negrón’s *Wardian Table* confront us with the politics of transplantation and reflect on the geopolitical and economic movements of plants for agriculture, between colonies and European imperial powers. Drawing upon the entanglement between modern botany and colonialism, the film *Linnaeus and the Terminator Seed* by Pedro Neves Marques connects the modern obsession with classification and indexation of life forms with the politics of contemporary transgenics.

Extraction has moved to the genetic scale and the realm of intellectual property in the engineering of genetically modified seeds. It is a new technology for making farmers dependent on a global scale. Anna Tsing and Donna Haraway speak of the “Plantationocene” to describe these material histories of life forms under capitalism in “the devastating transformation of diverse kinds of human-tended farms, pastures and forests into extractive enclosed plantations, relying on slave labour and other forms of exploited, alienated, and usually spatially transported labour [...] moving material semiotic generativity around the world for capital accumulation and profit - the rapid displacement and reformulation of germplasm, genomes, cuttings, [...] plants, animals, and people.”⁹ The logic of the Plantationocene is embedded across all relationality. In the exhibition Binta Diaw’s sculptural installation *Chorus of Soil* points to these (geo)traumatic residues of memory that remain attached to material as it travels and transforms.

8 Londa Schiebinger, *Plants and Empire* (Cambridge: Harvard University Press, 2009): 11.

9 Donna Haraway, “Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin”. *Environmental Humanities* (2015). Retrieved from <https://read.dukeupress.edu/environmental-humanities/article-abstract/6/1/159/8110>.

While we are writing this text, the Amazon rainforest is burning at an unprecedented scale. The government of Brazil is accusing NGOs to have started these fires, and has declared this emergency a domestic affair, where no international interference will be accepted. In these same days the Waorani indigenous community in the Pastanza Province have beaten big oil and the Ecuadorian government in a court battle, rendering a land sale that was unknowingly being signed by the tribe null, and saving millions of acres of rainforest. To challenge uncritical narratives of the Anthropocene, 'the Age of Man', Marisol de la Cadena proposes the concept of the *anthropo-not-seen*. Rather than referring to a "regime of non-visibility" and passivity, the *anthropo-not-seen* brings to the fore the antagonistic and disobedient practices recalcitrant to classification. As she writes, it gives image and voice to the process of destruction of worlds and the resistance to this destruction. "As an organised process of destruction—sometimes through benevolently offered assimilation—the anthropo-not-seen included and continues to include, a silent war waged against entities and world-making practices that ignore the separation of entities into nature and culture."¹⁰

Agroecology, wherever it is practised, is about resistance and resilience, according to food justice activist Mama D Ujuaje. Questioning techno-scientific epistemologies and agriculture as a biopolitical tool, this exhibition wants to ask: How could entangled anti-colonial and environmental alliances nurture each other? How can we transform ruins, colonial erosion, and damaged landscapes - and take up tactics of precarity to make living possible despite economic and ecological ruination? How can we enable interspecies entanglements and collaborations to imagine polyphonic multidirectional futures?

RE-ROOTING: SUBMERGED PERSPECTIVES

Staying alive – for every species – requires livable collaborations.

Collaboration means working across difference, which leads to contamination.

Without collaborations, we all die.

— Anna Tsing¹¹

10 Marisol de la Cadena, "Uncommoning Nature: Stories from the Anthropo-not-Seen", p.8. (2018) Retrieved from: <http://www.lasisummerschool.com/wp-content/uploads/2018/12/Uncommoning-Nature-Anthropos-and-the-Material-July-5th.pdf>

11 Anna Lowenhaupt Tsing, "The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins, Princeton University Press (2015): 28

Throughout the development of the project, we sought to learn from an "ecology of practices"¹² of cultivation to re-root and re-ground questions of sovereignty and land rights. Understanding and witnessing the practical care and intimate relations of cultivation towards sovereignty was crucial to go beyond theoretical epistemologies. During the workshop *Seed as a Relation* developed in collaboration with artist Hassan Darsi, we got to learn about the practices of the agroecological gardens in the Ben Aïssi village and Benslimane forests outside Casablanca in Morocco. Learning from local farmers and artists who engaged with the landscape and soil as a form of resistance to large-scale quarries threatening the villages' water supply, economic and social life, we understood and experienced first-hand the deep and existential interconnections of agroecology, sovereignty, and activism. The urgency of this agroecological fight against corporate destruction of the possibilities of independent and healthy living, materialised into a heuristic and empowering alliance between farmers, artists, activists, and cultural workers on a larger scale. Another deeply formative moment in understanding the strength, resilience and care held within farming practices was the *Convention of Women Farmers*, organised by artist Marwa Arsanios in the context of the Warsaw Biennale in Poland. We took part in the convention, exchanging knowledge, stories, and materials of soil transformation, witnessing and learning from the coming together of women farmers from across the globe who traded not only strategies and methodologies, but also bridged ecofeminist experiences of practiced autonomy and self-sufficiency.

The defence of sovereignty, land rights, the commons, and the broader struggle over natural "resources" emerged as a common thread across these initiatives, as well as many others within the wider ecology of practices.¹³ Among them, we conversed with, followed, and have been inspired by the Garifuna OFRANEH (Black Fraternal Organisation of Honduras), Jinwar village in Rojava, Northern Syria, Sakiya, an arts, science and agriculture initiative in Palestine, the INLAND art collective's gathering in an abandoned village in rural Northern Spain, the Foodscape Collective in Singapore and the Associação para o Desenvolvimento Integrado da Mulher (ADIM) in Guinea-Bissau. These practices and initiatives embody forms of communal resistance and lived

12 A term we are borrowing from philosopher Isabelle Stengers: "Introductory Notes on an Ecology of Practices", *Cultural Studies Review* (2013).

13 We also learned from other curatorial projects such as Natasha Ginwala and Vivian Zihrl's research project Landings: On Sounding the Earth, which opened up the connections of geological inscription as cultural expression, the construction of 'rurality' and what a listening to land as a historical agent might mean.

resilience by battling for the commons and situated knowledges that go beyond and below agri-scientific concepts of cultivation in sustaining relations of belonging. Narrating and giving a different sensitivity to these struggles through art became an important way to make visible slow (and fast) environmental violences.

To continue supporting each other's struggles and providing an open platform for the exchange of knowledge and strategies, Archipel Stations Community Radio (Monaí de Paula Antunes and Ela Spalding) conceived of a participative and generative radio format. On a tablet at SAVVY Contemporary, you can also follow Archipel's Telegram messaging group connecting rural social movements, researchers, activists and artists around the world. The audio content of this thread will become a generative radio experiment, made possible with the support of radio aporee (<https://aporee.org/>). Members of this group, the agropoets, are invited to share their stories, experiences, dreams, singing, and situated knowledges in different languages and formats.

Across the project we sought to work with a positionality that Macarena Gómez-Barris describes as "submerged perspectives"; she urges us to see "social ecologies that reorganise and refute the monocultural social imperative."¹⁴ In the following, we think through our engagement with the materiality of soil and agroecological artistic entanglements by reference to what we call patterns of epistemological and ontological dispersal:

DISPERSAL 1 AGROPOETICS

"Soil is the inscribed body and erosion is the scar left by historical violence."

— Filipa César¹⁵

We take a cue from what Filipa César named "Amílcar Cabral's *agropoetics of liberation* to articulate how political theory can be informed and subverted by agricultural practice. Cabral is most known as leader and Secretary-General of the African Party for the

Independence of Guinea and the Cape Verde Islands (PAIGC), and was assassinated by Portuguese agents in 1973. As Filipa César suggested, Cabral's practice as an agronomist for the Portuguese academy can be read as a subversive strategy that germinated in his political formation and militancy, to advance "the liberation struggle from inside, using colonial resources to inform and strengthen the liberation movement."¹⁶

Can we engage with some of Cabral's studies and writings on soil epistemology to analyse and enlighten current struggles against monoculture, land grabbing, and neo-colonial extraction across the globe? César compares Cabral's methodology to Fred Moten and Stefano Harney's concept of the *undercommons*,¹⁷ "a practice that undermines the neoliberal academic edifice through clandestine activities that exceed the limitations and desires imposed by the capitalist agenda."¹⁸ Can we read some of the current experiments that merge agrarian traditions of self-sufficiency, contemporary art, and ecological practices as heuristic systems of knowledge production and sharing?

Bouba Touré and Raphaël Grisey's contributions to the exhibition show the ongoing work of the self-organised Malian agricultural cooperative Somankidi Coura, founded by former African migrant workers and activists in France. Touré was one of the cooperative's co-founders and documented its development from the very beginnings. They highlight the connections between liberation struggles and collective practices of care in permaculture through seeking to narrate one's own narratives of empowerment.

Relations of cultivation not only have inscribed themselves into the soil but also become cultural objects and carriers of rituals. Artist Dina Amro speaks of these poetic cultural objects in her sound installation *time flows in all directions_ water flows through me* as "technologies" towards future sovereignty in describing Palestinian songs performed to summon rain in a context where most water resources are currently controlled by Israel. These manifestations of a sonic identity hold memories, but also channel future imaginaries of the commons and collective living.

DISPERSAL 2 EDAPHIC AGENCY: A BODY, CARRIER AND VESSEL

The soil is an inscribed body, a scarred terrain. But it is also a multitude

14 Macarena Gómez-Barris, *The Extractive Zone*. (Durham and London: Duke University Press (2017): XV.

15 Filipa César's writing on Cabral, particularly her text "Meteorisations: Reading Amílcar Cabral's Agronomy of Liberation" was fundamental for this project, and has inspired its title: Filipa César, "Meteorisations: Reading Amílcar Cabral's Agronomy of Liberation". *Third Text* 32.2-3 (2018): 254-272.

16 Ibid: 261.

17 Stefano Harney & Fred Moten, *The Undercommons: Fugitive Planning and Black Study*. (Wivenhoe / New York / Port Watson: Minor Compositions, 2013).

18 César: 268.

of organisms that carry this history of erosion. It is a container and meeting space for collectivities. This project is a tentative testing ground for artistic engagements with the soil as vessel, as fragile global body for speculative, collaborative futures. Soil, a life world of organic matter, minerals, and organisms is a medium for plant growth and water storage, but also a habitat in itself, constantly shifting in metabolic processes. Soil is not just inhabited but made of these life forms, and as such alive itself.

Thinking with and through what we call *edaphic* agency (that is, of the soil) we engage with the intelligence of microbial life worlds and plants as social beings capable of care, relationality, and intentionality. As such, we continue the puzzle posed by Astrida Neimanis in *No Representation Without Colonisation*, wherein she speculates: “What if nature writes, thinks, is literate and numerate, produces patterns and meanings, expresses sociality, intelligence, changeability, invention?”¹⁹ With artistic and curatorial efforts to represent the more-than-human in relationships of cultivation, we need to be careful about what it means to speak for, to give voice to such more-than-human agents. If we want to listen to the soil as a living witness, also in forensic terms, it is by being cognisant of the fact that “we” are also always more-than-human already. Through processes of ingestion and digestion we are deeply connected with these food webs, we share the same organisms in our microbiomes. Local and global networks of cultivation and microbial collaboration come together in our bodies with their own cycles of life, death and “microbiopolitics”, to borrow a term from artist Zayaan Khan. In the exhibition, Yen Chao Lin’s film *Small Things* offers a glimpse into the life worlds of vermicompost, wherein worms are accelerating processes of decomposition and nutrient cycling to create fertile soils. Taking this practice further and into a different direction, geophagy, the practice of earth *eating* – sometimes for beneficial microbiological effects and sometimes as a destructive act to reclaim control of one’s life and death – is the subject of Lerato Shadi’s exploration in her video work *MOTLHABA WA RE KE NAMILE*, wherein she reveals the histories of not just inscription but also ingestion of the soil. Thinking with edaphic agency allows us to look at conflict as a productive space, to reject notions of purity, whether genetic or epistemic, to open up space, and to slow down time for radical pedagogies of learning.

19 She builds here on Gayatri Spivak’s question of “Can the Subaltern speak?” to take the dilemma of representation to the relationality of the more-than-human: Astrida Neimanis, “No Representation without Colonisation? (Or, Nature Represents Itself)”, *Somatechnics*, 5(2) (2015): 146.

DISPERSAL 3

AGAINST SOIL NATIONALISMS AND PATRIARCHAL DISPOSSESSION

Agriculture is being weaponised as a warden for national identity: the relationships between blood and soil, between identity and land are being essentialised and made the terrain for xenophobic arguments and paranoid constructs of “the other”. In the exhibition, Cedric Nunn’s *Unsettled* series of images of memorial sites, geographical formations, and agricultural fields reveals the longevity and resilience of the resistance of the Xhosa people against Boer and British colonisers in South Africa over the course of more than 100 years.

Artist Leone Contini, who is traversing art, activism, and anthropological research, works on the phenomenon of migrant agriculture in Italy, addressing how purist and ideological approaches to traditional farming cultures are nourishing nationalist xenophobic attitudes. In his work, he engages with practices of resistance developed by Chinese farming communities in Tuscany who are object of unanimous persecution by local authorities, media and citizens. They are responding by developing parallel food circuits contravening local legislation.

It is crucial to emphasise that many of the struggles we have learned from, be they from Guinea-Bissau to Palestine and Syria, are carried and pushed forward by women, reflecting what activist Miriam Miranda described in the Honduran context as follows: “everywhere throughout Honduras, like in all of Latin America, Africa, Asia, women are at the forefront of the struggles (...) not only with our bodies but also with our force, our ideas, our proposals. We don’t only birth children, but ideas and actions as well.”²⁰ This goes hand in hand with the deep historical-material connection of enclosures on land, the environment, and the commons that happened simultaneously to and was supported by the subjugation of women and reproductive labour and the instrumentalisation of “witchery”, as argued by Silvia Federici in *Caliban and the Witch*.

Thinking and doing *agropoetically* becomes an act of manifesting healing and repair in the face of environmental, patriarchal violence, and the weaponisation of agriculture. Soil as the earth’s vulnerable skin can hold *geotrauma* but also point to the possibility of collective care, healing and living. Hervé Yamguen’s installation *Une cabanes d’histoires* creates a space for poetry and images of ritual sites in West Cameroon, linking both cosmo- and geopoetics to a metaphorical space of belonging. Agroecology is poetic but also resistant in its relating. It is an attempt towards building a culture that values soil and the

20 Interview with Miriam Miranda. As referenced here: <https://rightsandresources.org/en/blog/defending-afro-indigenous-land-black-fraternal-organization-of-honduras-wins-food-sovereignty-prize/#.XVFx7pNKgWo>.

predominantly female, black, and indigenous people who have taken care of the Earth, and continue to do so. As artist Mia Harrison explores in her work, connecting with the Earth in this sense is also about unearthing stored memories and wounds that have been left open.

DISPERSAL 4 SOIL EPISTEMOLOGIES

SAVVY Contemporary is located below ground, in the shadows of a Bayer factory that dominates the first impressions of Berlin's Wedding neighbourhood. In *Cartography of an Experiment Under Open Sky* artist Julia Mensch explores the connection between Bayer's Wedding location and the Argentine soy monopoly and networks of activism against these global transactions of genetically modified organisms. In the aftermath of Bayer's merger with Monsanto, the largest in the history of corporate mutations, this exhibition thinks through what it could mean to work invisibly and from the ground up, while a new era of regimes of life through agriscience is being ushered onto the scene.

We learn from a poetics of dormancy and germination to think with edaphic agency about what it means to lie in waiting, touching, and sensing the surrounding matter. It is easy to fetishise the caring relationships of cultivation at the root of agricultural practices, but Vilém Flusser's "Gesture of Planting" points to the "unnatural," perverse nature of this gesture, which forces nature to deny itself. Agriculture here is always already an act of "not only planting and harvesting but above all greedily and jealously watching".²¹ Planting is a gesture at the foundation of claims of ownership, it is "a powerful and violent gesture". We need to look critically at both the farmer and the curator in their roles as carers and acknowledge the power dynamics at play in these relationships. When it comes to representations of "nature" we often tend to fetishise the "natural", the "local", the "indigenous", and the "traditional".²²

21 Vilém Flusser, "The Gesture of Planting", in: *Gestures*. (Minneapolis: University of Minnesota Press, 2014).

22 Throughout the project we are seeking to work from the ground up, thinking both in terms of the poetic and political potential of the metaphors created from working with the edaphic but also of resisting the fetishisation of indigenous or "grassroots" practices and cosmologies. We recognise what Zoe Todd describes as that "we are just an invasion or economic policy away from re-colonising at any moment. So it is so important to think, deeply, about how the Ontological Turn—with its breathless 'realisations' that animals, the climate, water, 'atmospheres' and non-human presences like ancestors and spirits are sentient and possess agency, that 'nature' and 'culture', 'human' and 'animal' may not be so separate after all – is itself perpetuating the exploitation of Indigenous peoples." (Zoe Todd, "An Indigenous Feminist's Take On The Ontological Turn: 'Ontology' Is Just Another Word For Colonialism", *Journal of Historical Sociology*, 29 (1) (2016): 4–22.)

Barbara Marcel and Ana Hupe explore another extractive link with Berlin, they seek to make visible the survival of indigenous cultivation technologies and knowledges and work towards a decolonial listening practice in their work *Maniok reibe ich dir, Schwesterchen* which traces the voice recordings of Macushi indigenous people singing a women's labour song. The recording was done by German naturalists and is held in the Phonographic Archive in Berlin-Dahlem. Throughout this project, we have been careful to reflect on how we engage with the fetishisation of indigeneity and soil epistemologies developed by indigenous practices without reproducing the same patterns of dispossession to which they have been subjected.

If we talk about soil epistemologies, it is urgent and impossible not to take into account movements for social change. When dealing with care, whether agricultural or curatorial, one needs to then be sensitive to how this is embedded in the control of knowledges – that which can be said, done, and the way in which it is said and done. Maria Puig de la Bellacasa suggests that "scientific knowledge about soil is not just *used by* but may well be *produced by* movements for social change, in a quest to transform ecological relations between different beings sharing the Earth".²³ What does a decolonial, more-than-human sensitivity challenge and make possible when bringing together practices of cultivation and liberation?

We express deep and heartfelt thanks to the artists, farmers, activists and agroecological initiatives that allowed us to learn from their practices, and generously shared their spaces and knowledges throughout this project. Among them, apart from the artists in the exhibition: ADIM, Samanta Arango Orozco, Marwa Arsanios, Biowatch, Florence and Hassan Darsi, Mama D Ujuaje, Ayesha Hameed, Bertrand Houin, Fadma Kaddouri, Jaques Lopez, Antje Majewski, Jumana Manna, Zahia Rahmani, Youssef Ouchra, Prinzessinengärten, Sakyia, Jonas Tinius, Mercy Vera, Nicole Wolf, Alex Ungprateeb Flynn, Surplus Movement

23 Maria Puig de la Bellacasa, "Encountering Bioinfrastructure: Ecological Struggles and the Sciences of Soil", *Social Epistemology* 28 (1) (2014): 31.

SOIL IS AN INSCRIBED BODY. ON SOVEREIGNTY AND AGROPOETICS
(exhibition 31.08.– 06.10.2019) is a project by SAVVY Contemporary.
It forms the second chapter of SAVVY Contemporary's longterm
investigation THE INVENTION OF SCIENCE. The project is funded by
Hauptstadtkulturfonds and the Foundation for Arts Initiatives.

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Reading Soil as Cultivation: Agropoetics Reader

Text by Lorenzo Sandoval/
The Institute for Endotic Research

In 1928, Juan Carlos Mariategui published the book *Seven Interpretative Essays on Peruvian Reality*¹ composed of texts originating in the magazines *Mundial* and *Amauta*. His work helps to understand the complex array of conflicts that were seeded with the distribution of land in Peru throughout the process of independence from the Spanish rule. Colonial governance had passed from Spain to the local upper classes – thinking with Silvia Rivera Cusicanqui, a phenomenon we can regard as *internal colonialism*² – which took advantage of the Incan heritage primarily as a cultural means to bestow an identity to the new state. The critique of Mariategui showed how after the process of independence, the social structure remained untouched, and the landowners kept their property for further exploitation, leaving the “Indians” neither with agency nor with rights. In the essay *The Problem of Land*, he stated that structural racism was intimately connected to the lack of access to property by the indigenous population after Peruvian independence. The set of legal and representational technologies developed to create the modern nation-state of Peru used the Inca image as a symbol, but they simultaneously excluded Incan descents from the newly gained rights of Peruvian citizens. Also excluded was the Incan descents’ unique *cosmovision*, which was back then and remains today importantly linked to a redistributive economy as opposed to a capitalist one.

Alongside his critical writing, Mariategui also worked (performed) as the founder and editor of the magazine *Amauta* in 1926.³ The magazine was an ideological apparatus that worked toward the understanding of the Peruvian national identity under the prism of connecting the diverse backgrounds and positions. Using art and culture, the magazine sought to connect the pre-Columbian traditions with the avant-garde, bringing together local practitioners and others from South-America and Europe inside the scope of the publication. Although we must regard the work of the writer as inextricably tied to a specific time and space in a truly situated way, the ideas Mariategui proposed can still be approached as an evergreen garden of powerful tools to understand the intricate connections entangled in land and culture, with all the different systems of property and social organization that exist. We can translate his model of reading into other locations and contemporary situations.

1 MARIATEGUI, José Carlos, *Seven Interpretative Essays on Peruvian Reality*, U. of Texas Press, Austin, 1971. <https://www.marxists.org/archive/mariategui/works/7-interpretive-essays/>

2 RIVERA CUSICANQUI, Silvia, *Sociología de la imagen*, Nociones Comunes/Tinta Limón, Buenos Aires, 2015

3 VVAA, *The Avant-garde Networks of Amauta*, MALI, Lima, 2019

One of the threads that compose the fabric of The Institute for Endotic Research (TIER) is *cultivation*. We are interested both in the literal use of the word as much as in its metaphor. For the latter, we are interested in how the pace of working with soil and plants is radically different from that of exhibition making. Instead of renovating constantly over a spatial *tabula rasa*, as in most cases of exhibition making, the practice of gardening deals with how different entities are affected by each other over extended periods of time. The notions of cohabitation, co-responsibility and reproductive labor inscribed in cultivation are fundamental: to work with a diversity of positions (and therefore possible conflicts), cultivation is a fundamental mode of operation considering our way of understanding the process of becoming an institution. As we learn from and with SAVVY Contemporary, *Soil is an Inscribed Body*. The word *cultivation* is intimately connected with *culture*. As Mariategui proposed, art-making relates directly with the events that happens in its place of production. The cosmovisions of the lawmakers are not far from those of the artists when it comes to configuring collective consciousness. As in his work on reading the territory as an array of conflicts and possibilities, his critique of land and his practice as editor, Mariategui's proposal of diverse possible positions serves as a great experience to learn from.

In the former intonation of the word, *cultivation* is, generously speaking, a quite literal element at TIER. We do work with many people whose research is related to land and plants. This practice is embodied through the three main formats we work with at TIER: encounters, workshops and interventions. Each format has its own rhythms, its own transferability, its own permanence. For instance, one of these interventions was created by Luis Berríos-Negrón, which is also present in this reader at hand as well as the attendant exhibition. Apropos, the invitation to collaborate in the present reader with SAVVY Contemporary emerged from a request to loan the *Wardian Table* from TIER for SAVVY Contemporary's comprehensive exhibition, and then thinking how to activate the artwork afterwards. Berríos-Negrón's project reveals to us the history of movable soil – the *wardian cases* used in the colonial enterprise – and how this process of dislocation has a direct impact on our current global climate emergency.

The idea of this reader emerged in our first conversation given our will to collaborate after speaking about the importance and legacy of the *Wardian Table*. We have joined forces in selecting a collection of texts complementary to the exhibition *Soil is an Inscribed Body* curated by SAVVY Contemporary. As with Mariategui, let us hope that the different positions brought together in this modest reader can offer a

prism with diverse, radiant hues, as well as shadows, to think about soil and cultivation. Let our thought and work become a great common garden, an expansive forest, a vast desert, a throbbing jungle, and let these pages serve as nutrition.

Amo la Montaña
(ensayo visual performativo)

Silvia Rivera Cusicanqui

SILVIA RIVERA CUSICANQUI is a renowned Bolivian sociologist and theorist linked to the Indian Katarista and the coca-growers movements. Rivera Cusicanqui is part of the self-organized Colectiv Ch'ixi. She was a senior lecturer in Sociology at the Universidad Mayor de San Andrés de La Paz (UMSA), where she is currently an emeritus professor, and visiting lecturer at the Universities of Columbia (New York, USA), Austin (Texas, USA), La Rábida (Huelva, Spain), Jujuy (Argentina) and the Universidad Andina Simón Bolívar de Quito (Ecuador). Together with other intellectuals, she founded the Andean Oral History Workshop (THOA) in 1983, with which she worked on themes of orality, identity, and indigenous and popular social movements, mainly in the Aymara region. In recent years, she has promoted the El Tambo Colectivo space, a cultural centre in La Paz that seeks to unite theoretical knowledge with manual and environmental work.

Rivera Cusicanqui's work addresses the continuity of the logics of domination of indigenous identities and cultures, even in contexts where there has apparently been a formal recognition of the diversity and value of the indigenous. She has authored several books, and has made videos and films, both documentary and fiction. In foregrounding the combination of languages, she has worked as an essayist, documentary maker, art critic, and exhibition curator.

This text was originally published as:

RIVERA CUSICANQUI, Silvia, *Sociología de la imagen. Miradas ch'ixi desde la historia andina*, Ed. Tinta Limón, Colección Nociones Comunes, Ciudad Autónoma de Buenos Aires, 2015

A mi hermano de montañas, Rubén Vargas; que ellas lo acojan en su viaje

Quisiera comenzar con algunos apuntes que me ayuden a clarificar qué hago en Ecuador y de dónde vienen mis palabras.¹

Soy practicante de una artesanía intelectual que he bautizado sociología de la imagen, a raíz de que, cuando era estudiante, en mi universidad, la sociología era la única disciplina que me parecía iba a conectarme con el hacer político/creativo, que considero mi auténtica e irrenunciable vocación. No elegí el arte, a pesar de que cuando era niña en el “juego del futuro”, si me preguntaban qué quería ser de grande, decía “pintora”. Enamorada de los impresionistas, de los expresionistas y cubistas, tanto como de los y las artífices e imaginexs, de las tejedoras, picapedreros y escultores de mi tierra, un día me di cuenta de que el Van Gogh que amaba venía en varias reproducciones diferentes, con colores levemente alterados por las tecnologías mecánicas de impresión, lo que me hizo cavilar sobre cuál podría haber sido el color del original. Eso, junto al hecho de que en Bolivia había muerto el Che Guevara, estallado la revolución universitaria, y varios de mis compañeros de curso se habían ido a la guerrilla en Teoponte (1970), me hizo botar pinceles y pinturas y dedicarme de lleno a la política estudiantil, aunque la frustración en ese campo no se dejó esperar. Oscar Eid –quien luego sería brazo derecho del exizquierdista Jaime Paz, en cuyo pacto con el ex-dictador Banzer, “cruzó ríos de sangre” para llegar a la presidencia– agitaba en esos tiempos lejanos el libro rojo de Mao en plazas y mitines, hablando de la alianza obrero-campesina. Yo me preguntaba si alguna vez este personaje habría hablado con algún campesino o campesina de carne y hueso (más allá del modo imperativo), y decidí irme a Apolo, una región qhichwa hablante del departamento de La Paz, a aprender como “maestra ignorante”, el qhichwa, junto a mis alumnos, que aprendían a la vez el castellano, en un librito escolar bilingüe del Instituto Lingüístico de Verano que me dieron en el ministerio de educación (nada tan sofisticado como el *Telémaco* de Jacotot, cf. Rancière).

El qhichwa lo olvidé por aprender el aymara, a mi retorno de dos exilios en este continente que poco a poco se ha vuelto propio para

1 En los cursos de Sociología de la Imagen suelo participar del examen final, presentando mi propio ensayo visual junto a lxs estudiantes, no solo como ejercicio de desmontaje de la “autoridad pedagógica” (Bourdieu), sino también para expresar lo que aprendí en cada situación de interacción y en cada espacio de paisaje donde me toca dar el curso. *Amo la Montaña* fue mi ensayo de final de curso en la Maestría de Antropología Visual de la FLACSO-Quito, julio-agosto 2010. Agradezco a lxs estudiantes que participaron en él por la estimulante interacción humana e intelectual que nos brindamos en aquella ocasión, y a Libertad Gills y Edward Cooper por sus fotografías.

caminantes y emigradx como yo. Pero no olvidaré las lecciones de vivir en una remota región rural boliviana, aquellas lecciones que el Che Guevara no tuvo tiempo de aprender por estar entrampado en la visión eurocéntrica de que la historia es una sola y el camino tan recto como la perspectiva Nevsky. Dice que dicen los campesinos del Chaco que estando el Che enfermo de asma, no pudo curarse a pesar de que en sus recorridos los guerrilleros andaban pisando algunas plantas que las mujeres y curanderxs de la región conocían por sus virtudes curativas para males respiratorios como el que aquejaba a nuestro héroe.²

Lo que sigue es un intento de abordar las aporías del conocimiento racional a partir de unas viñetas que ilustran ese acto cotidiano que realizo—en Ecuador o donde me encuentre—por descolonizar mi mirada, desmontando el texto social que subyace a las interacciones cotidianas en las que participo, para que de ellas afloren algunas alegorías y memorias.

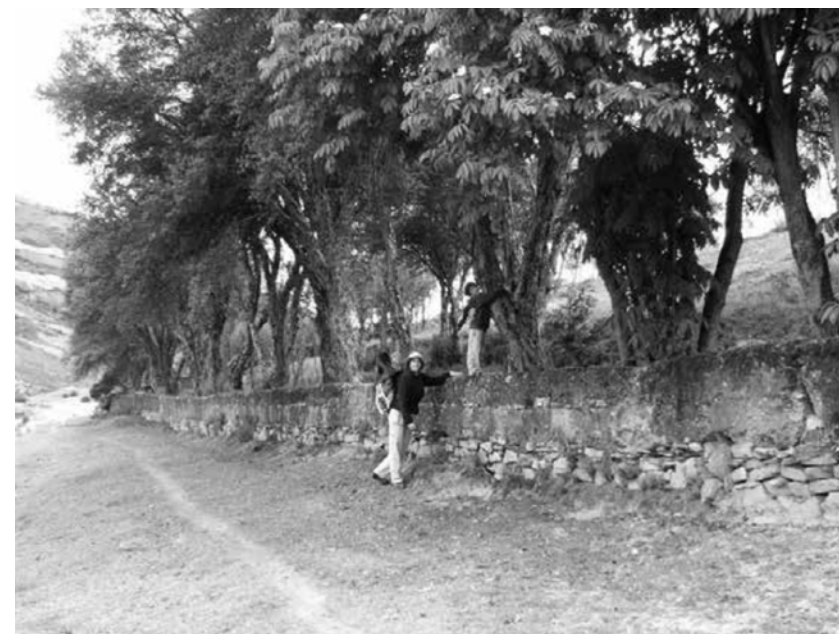
1. EVOCACIONES EN LA APACHITA DE PAPALLACTA

A los 3000 m.s.n.m., comienzo a sentir una gran familiaridad con el paisaje, a pesar de la penetrante humedad y la neblina. ¡Claro! Es que los andes de páramo también existen en mi tierra: esa franja angostita por la que se cruza de la cordillera del Quimsa Cruz hacia Punku, Unduavi y Chaku, y que cede muy pronto a la apertura del fondo de los valles yungueños. Es extraño sin embargo que la *qiñwa*—que la ciencia llama *Polylepis*—pueda coexistir con *siwinqas*, *chillkas* y helechos, que son plantas de cabecera de valle. Los *qiñwales* que he visto en mi tierra tienen hermosos troncos retorcidos, pero en su mayoría crecen en la puna alta y en los alrededores del lago Titicaca, aunque mi hija Clea, que es bióloga, dice que hay tantas especies como alturas y climas se suceden en el paisaje vertical de las sierras andinas. El bosque de *qiñwa* más grande que he conocido estaba en la Ciudad de Piedra, ayllu Päsä de la provincia Pacajes. En 1976, cuando Clea tenía 4 años, nos fuimos a recorrer varios espacios de esa provincia: una comunidad/ayllu, una comunidad de ex-hacienda y la mina de Corocoro. Las laberínticas formaciones de Ciudad de Piedra estaban antaño pobladas de inmensos *qiñwales* que hoy habían casi desaparecido. Fue allí donde esos árboles centenarios (una de las pocas especies arbóreas nativas) resultaron amenazados por la fiebre del cobre de Corocoro, cuyos ingenios consumían ingentes cantidades de carbón. A esa región de arenales y alpacas fui a los 27 años a averiguar por qué mi apellido era Cusicanqui, pregunta narcisista que fue sobrepasada muy pronto por hechos colectivos y personajes ejemplares de otro orden. Así, supe de la larga batalla legal que libró el comunario Eduardo Apaza, de Estación

Campero, para evitar que esos bosques de *qiñwa* le fueran arrebatados a su comunidad con la invasión de comerciantes mestizos de carbón, que proliferaron desde la llegada del ferrocarril.

La *qiñwa* que conozco tiene una corteza rojo sangre, y recubre el tronco en láminas como de papel cebolla. Es esta cascarilla un afamado remedio para los males del riñón. He sembrado una *qiñwa* en el terrenito de mi hijo Kilko, en la comunidad Uni, que era antaño el centro de los

Qhirwas de Oyune, frente al *mallku* mayor Illimani. Acabo de enterarme, mayo 2015, de que mi arbolito de *qiñwa* ha sido destruido por la envidia de un vecino que no respeta las normas de la comunidad. Para afirmar ese lazo entre los Andes de Páramo y los Andes de Puna (Troll) tengo en mi altar un poco de corteza de *qiñwa* y dos piedras recogidas en la apacheta de Papallacta. El apu Antisana y el apu Imbabura (que se dejan ver raras veces) y el Illimani (que en esta época invernal resplandece como su nombre) dialogarán tal vez entre ellos, iluminados por la Cruz Chakana. Los dos lados de la pirámide (apachita) y las dos macro estructuras de la cordillera andina serán así evocados, cuando regrese a Bolivia, en ese microcosmos que es mi altar de muertos, a la vez álbum fotográfico y palimpsesto de mis recorridos por el planeta.



Clea con mis nietxs Melina y Santiago en un *qiñwal*. Foto tomada en 2004 por Steve Taranto en Curva, cordillera de Apolobamba.



El volcán Antisana visto desde Papallacta, foto tomada en 2013 por Libertad Gills de la Maestría de Antropología Visual, Quito

2. ENSEÑANZAS EN LA HUERTA DE ANITA

Frente al Imbabura, en la comunidad Angla de la parroquia de San Pablo (Otavalo) recogí *aliq qura*: cualquier yerba, esas que se pisan a diario en el campo, y que se toman mezcladas en un mate, en ayunas, para prevenir las enfermedades y penas del año. En la región circunlacustre de Bolivia/Perú, ese mate se toma una sola vez, en Viernes Santo. Es el día en que la Pachamama se vuelve alegre y despliega todos sus poderes de vida y curación. Es el día en que Cristo está en un sepulcro bajo tierra, alimentándola con su cuerpo/semilla.

Doña Anita Camuendo me explicó el nombre de cada una de las hierbas que pisamos al recorrer su huerto: el *Quwi qallu*, que la gente de la región no quiere porque sus raíces son duras y tenaces, el Ino para la amigdalitis, y el *Félix muju* en infusión para la fiebre y en semilla tostada para la sinusitis. El trazo que hizo en la tierra era un diagrama de surcos donde se intercala quinua con papa y maíz con tarwi (que se llama *chocho* en Ecuador). Manos trabajadas por una vida de labranza y cuidado, se unieron a las mías, trabajadas por la escritura, la cocina y el aprendizaje de la tierra, en el centro de un mapa donde Anita me enseñó cómo se combinan los cultivos para que se protejan entre sí de las *aliq qura* y de los bichos hambrientos.



Reconstrucción de una foto perdida, Tambo Colectivx, junio 2015. Foto de Marco Arnez.

3. ENREDOS ESTATALES

Un encuentro bizarro, en una eco-aldea de altura, pasando la apacheta de Papallacta. Allí hace frío y llueve cuando en Quito pela el sol, y se muestran las estrellas cuando al otro lado de la montaña la neblina cubre la ciudad. En ese escenario tan propicio a la reflexión sobre la geografía, el arte y lo sagrado, el ministro de cultura del Ecuador había organizado un gran evento de diplomacia cultural: la visita de cinco artistas de China, para un “intercambio de experiencias” con artistas plásticos del Ecuador. Para propiciar el acercamiento, al ministro no se le ocurrió mejor cosa que hacer un gesto orientalista cuya precisión geográfica deja mucho que desear: invitó a una artista practicante del Zen (escuela del budismo cuya cuna está en Japón) y de la psicología jungiana (anatema para el PC, en China o en cualquier parte), para hablar a los visitantes en nombre del arte ecuatoriano. Extraordinaria y bella mujer de casi un siglo de vida, quizás no supo en qué guión la había metido el poder, ni se percató de cuán distantes de lo que ocurre en la escena artística ecuatoriana se colocó a los invitados de ese enorme país-continente, situado al oeste de nuestra mirada, si nos orientamos por el ciclo solar. China está al poniente, o sea que resulta el occidente geográfico de Abya Yala, y podríamos decir que hoy es también un occidente simbólico y económico. De modo que, en honor a la geografía, deberíamos hablar de Europa como nuestro Nor-Oriente. ¿Desde dónde hablamos cuando despotricamos contra la “cultura occidental”?

“Nos trajeron de sus puerquitos”, me dijo Sonia Rosales, aludiendo a una película de Cantinflas que no recuerdo haber visto.

Cuando anotaba esto en mi cuaderno, me di cuenta que un agente de inteligencia del ministerio intentaba leer mi escritura con el rabillo del ojo. Entretanto, el eje del intercambio parecía centrarse en las fotos que quedarían como testimonio de algo que nunca ocurrió. Efectivamente, nos trajeron de relleno porque mientras el ministro, sus gentes y los artistas chinos posaban para unas 5 o 6 cámaras de foto y video, los artistas ecuatorianos invitados –a los que me colé, acompañando a mi estudiante Cooper– nos arracimábamos entre las piscinas de piedra, arreados por dos corpulentos vigilantes, hasta que se oyó la orden: “vamos regresando a la sala de reunión”.

Allí el tono se tornó más pedagógico: “cada uno de ustedes puede hacer 5 preguntas, que serán traducidas al chino y respondidas por los artistas, quienes a su vez les harán a ustedes otras 5 preguntas”. Con Sonia nos miramos e hicimos un amague de aritmética risueña: si cada pregunta dura 5 minutos y la traducción otros 5 minutos, tendríamos que estar echando carreta durante unas 10 horas para terminar el dichoso intercambio. Ni bien se fue el ministro, los pinceles y las láminas tomaron el lugar de las palabras. Aunque uno que otro seguía dándole al fetichismo de las fotos y los autógrafos, varios nos concentramos en descifrar esa escritura que es a la vez dibujo, gesto del cuerpo y potencia metafórica del pensamiento. Con ayuda de Sonia, que habla mandarín, le expliqué a un joven artista de pelo largo y blujines, que quería que me dibujara con su pincel la frase que da título a este ensayo. Con una elegante caligrafía escribió los caracteres *Amo la Montaña* sobre una hoja de papel de bambú. Y para mí, la montaña parece ser esa letra E echada, en cuyo eje se articulan los 4 fragmentos de este ensayo. En el *taypi* o espacio vertical del medio he entrelazado al Ecuador con la Energía del cosmos, para dar forma a una dialéctica sin síntesis en la que se se encuentran/ chocan la mitad *kupi*, estatal y masculina, con la mitad *chiqua*, terrestre y femenina.³

³ El ensayo fue leído fragmento por fragmento mientras ejecutaba ciertas acciones, vestida de blanco. Me acompañó mi maestra de yoga apoyando la performance. El escenario era la sala vacía, con una pequeña mesa al centro en la que estaban desparramadas unas cuantas fotografías en desorden, sobre una cartulina azul. El elemento fuego gobernaba el primer fragmento: yo quise conjurar una desgracia que acababa de sucederme (el robo de mis viáticos y documentos) y quemé un billete de 10 dólares en un brasero de barro. El elemento agua dominaba el segundo: mientras alguien lo leía, yo me metí bajo la mesa y en postura de loto canté un mantra en aymara, bebiendo a sorbos de un vaso. Al finalizar el tercer fragmento todos comenzaron a soplar las fotografías para representar el elemento aire. Finalmente, al descubrirse la cartulina azul se dejó ver el fragmento cuatro, regado de grumos de tierra. Como las fotos originales se han perdido, he reconstruido las imágenes de modo situacionista, apelando a estudiantes, a compañerxs y a mis hijos Clea y Kilko.



Intercambio en Papallacta, fotos de Edward Cooper, julio 2010.



Reconstrucción de una imagen perdida.
Caligrafía: Mamoru Fujita; Preparación de imagen: Kilko Paz.

Mapping Agropoetics Of Liberation

Filipa César¹

FILIPA CÉSAR is an artist and filmmaker interested in the porous boundaries between the moving image and its reception, the fictional dimensions of the documentary and the economies, politics and poetics inherent to cinema praxis. Characterised by rigorous structural and lyrical elements, her multiform meditations often focus on Portuguese colonialism and the liberation of Guinea-Bissau in the 1960s and 1970s. This research developed into the collective project *Luta ca caba inda* (The Struggle Is Not Yet Over). She gained an MA Art in Context at the University of Arts, Berlin. Selected exhibitions and screenings include the São Paulo Biennial, Manifesta 8, Cartagena, Contour 8 Biennial in Mechelen, Belgium, and Gasworks, London. Festival screenings include the Kurzfilmtage Oberhausen, Curtas Vila do Conde, Forum Expanded at the Berlinale and the International Film Festival Rotterdam.

A version of this text was first published as: Filipa César, "Meteorisations: Reading Amílcar Cabral's Agronomy of Liberation", in Ros Gray & Shela Sheikh (eds.), "The Wretched Earth". *Third Text* 32.2–3 (2018): 254–272.

*Our people are our mountains*²

— Amílcar Cabral

Mining historical strata to almost a century ago, Amílcar Cabral describes the state of the armed guerrilla struggle in one of Europe's last colonial theaters of war, at the time known as Portuguese Guinea. It is the 27th of October 1971, and Cabral is talking at the University of London: "*We are in a flat part of Africa. (...) The manuals of guerrilla warfare generally state that a country has to be of a certain size to be able to create what is called a base, and, further that mountains are the best place to develop guerrilla warfare.*"³ After eight years of this anachronistic war that started in 1963, two thirds of the small West African country had been freed from Portuguese occupation — schools, hospitals, courts and people's communal shops had been established in the jungle and rural areas, known as Liberated Zones. Cabral, the leader of the African Liberation party, the PAIGC (African Party for the Independence of Guinea and Cape Verde), moved between Conakry, the headquarters of the party and where the struggle was being organised, and the world where he propagated it.⁴ PAIGC was then laying the ground for a unilateral declaration of independence for Guinea Bissau. This momentous event took place only two years later, in September 1973, although Cabral was not there to witness this achievement. He had been assassinated in January 1973. "*Obviously, we don't have those conditions in Guiné, but this did not stop us beginning our armed liberation struggle. (...) As for the mountains, we decided that our people had to take their place, since it would be impossible to develop our struggle otherwise. So our people are our mountains.*"⁵

His audience was composed by young Brits, migrants, students, leftist activists and other supporters of the London-based Committee for Freedom in Mozambique, Angola and Guinea (CFMAG) in a post-'68 Commonwealth UK, who had gathered to hear a

1 Edited in conversation with Diana McCarty

2 Amílcar Cabral, *Our People Are Our Mountains*: Amílcar Cabral on the Guinean Revolution, Committee for Freedom in Mozambique, Angola and Guinea, London, 1971, p 11

3 Ibid

4 Operating from Conakry -the capital of The Republic of Guinea, the allied southern neighbour, already liberated from French colonialism in 1958.

5 Cabral, *Our People Are Our Mountains*, op cit, pp 11-12

first-hand account of an ongoing anti-colonial struggle.⁶ It's unlikely that this public could fathom that Cabral's metonymy — mountains = people. This did not only refer to the morphological flatness characterizing the surface of that West African terrain, and even to the lack of a hierarchical structure in the people's movement acting against the colonial power,⁷ it also referred to the intimate relation Cabral maintained with the material matter of mountains — the soil. His image was in response to the strategic use of mountainous land as a resource of natural force by Che Guevara's guerrilla in Cuba, as the mountains were a resource that secured locations where they could establish their bases and consolidate their power. Cabral had flattened that power within his specific geo-political circumstances⁸ — the people united through a single uniform that made no distinction of rank. He chose education and humility as the preferred weapons of the militants. The mountain was the multitude made potent.⁹ Furthermore, and even less metaphorical, this recurring pattern — masses of militants as the strategic force of mountains — is his understanding of the world in ecosophical terms.¹⁰ This resonates with a lesser known and often neglected

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- 6 The UK and Portugal formed an alliance in 1386, which benefitted both Portugal's determination to hold on to its colonies, and Britain's attempt to maintain its neocolonial dominance through international institutions such as the Commonwealth. CFMAG was founded on the instructions of Frente de Libertação de Moçambique (FRELIMO) to pressure the British government to cease its support for the Portuguese colonial war.
- 7 The PAIGC guerrilla forces operating inside the country were mainly formed by elements of the Balanta ethnic group, a society structured horizontally, without kings, chiefs or hierarchy and therefore with no military rankings. See Amílcar Cabral, P.A.I.G. C.: *Unidade e Luta*, Nova Aurora, Lisbon, 1974, p. 83.
- 8 'Fighting on favorable ground and particularly in the mountains presents many advantages'. See Ernesto 'Che' Guevara in *Guerrilla Warfare*, New Statesman, 1967, pp. 19–23.
- 9 Here I recall the use of the term 'the multitude' by Baruch Spinoza, later developed by Antonio Negri and Michael Hardt as a concept of people that have not yet entered a social contract with a sovereign political body, such that individuals still retain the potential capacity for political self-determination. See Michael Hardt and Antonio Negri, *Multitude: War and Democracy in the Age of Empire*, London, Penguin, 2005.
- 10 Ecosophy is a term introduced by Félix Guattari to define 'a multi-philosophy that encompasses social and individual practices with the aim of opening up the possibility of thinking social, mental and environmental matters as interconnected reciprocal ecologies... Here we are talking about a reconstruction of social and individual practices which I shall classify under three complementary headings, all of which come under the ethico-aesthetic aegis of an ecosophy: social ecology, mental ecology and environmental ecology'. Félix Guattari, *The Three Ecologies*, Ian Pindar and Paul Sutton, trans, The Athlone Press, London, UK and New Brunswick, New Jersey, 2000, p. 41.

dimension of Amílcar Cabral, namely his agency as an agronomist. It shows how his soil-epistemology materialistically germinated his political formation.

In Cabral's thought the geological is not separated from human history, the soil is not an inert and static 'ground' subjected to human agency, but rather has a dynamic relation to human social structures, evident in its different responses to forms of colonial extractivism. An example of this interrelation was the devastating drought in Cape Verde in 1941, which took the lives of twenty thousand people, and was witnessed by Cabral at the age of seventeen. According to his daughter, Iva Cabral, this experience influenced his decision to become an agronomist.¹¹ While in the twentieth century geology was for the most part understood – at least in the West – as the static backdrop to human action, recent scholarly work by thinkers such as Dipesh Chakrabarty has recognised that to fully apprehend the unfolding environmental crisis sometimes referred to as the cause for defining a new Earth epoch – the Anthropocene or Capitalocene –¹² it is necessary to question and put in dialogue the concepts of natural history and human history.¹³ Cabral was prescient when he said 'we can affirm, without fear of contradiction... that, to defend the Earth is the most efficient process to defend Humankind'.¹⁴

This text has been fermenting since 2009, when I first encountered the tome collecting Amílcar Cabral's agronomic studies from 1948 to 1960 and started to read them in relation to his more widely translated and published speeches and political writings.^{15,16} As an essay it

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- 10 The biographical note organized by his daughter Iva Cabral refers to the immense drought in Cape Verde in 1941, which took the life of 20,000 people, witnessed by Amílcar Cabral at the age of 17. This experience and the awareness produced by it were, according to Iva Cabral, influential on his decision to become an agronomist and in 1945 he was presented with a scholarship to join the Higher Agronomic Institute at the University of Lisbon.
- 12 Capitalocene is a term coined by Jason W Moore in 'Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism', PM Press, Oakland, 2016, p. 6.
- 13 Dipesh Chakrabarty, 'Postcolonial Studies and the Challenge of Climate Change', *New Literary History*, vol. 43, no. 1, winter 2012, p. 13; and Dipesh Chakrabarty, 'The Climate of History: Four Theses', *Critical Inquiry*, vol. 35, no. 2, winter 2009, pp. 197–222.
- 14 Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, p. 63.
- 15 *Estudos Agrários de Amílcar Cabral*.
- 16 For several years now, I've been testing different forms to think with the agronomic studies of Amílcar Cabral and this is reflected in films such as *Mined Soil* (2013) and *Cuba* (2012), as well as readings such as "Humble Derives from Humus" at e-flux, New York, 2017 among others. More recently a shorter edited version of this text was published as "Meteorisations: reading through Amílcar Cabal Agronomy of Liberation" in the Third Text Issue *The Wretched Earth*, edited by Ros Gray and Shela Sheikh.

ventures to slide through the strata of Cabral's early soil science as not dissociable from his project of liberation struggle and navigates through his definitions of soil, erosion, reports on colonial land exploitation, and the trade economy. It unearths his double agency as a state soil scientist for Portugal and as a seeder of African liberation movements, and reflects on how all of this may constitute a militant soil semantics for a proliferant liberation epistemology. *"In 1960, I was the only agronomist in my country — what a privilege! — but now there are twelve agronomists in my country, all trained during the struggle."*¹⁷ Cabral understood agronomy not merely as a discipline combining geology, soil science, agriculture, biology and economy but as a means to gain materialist knowledge about peoples' lived conditions under colonialism - data that would first become precious to a theoretical denunciation of the injustice of a land inscribed by colonial rule and later informed the warfare itself. The operation of reading the "people" as "mountains" in the context of colonial extraction, oppression and exploitation evidences a visionary understanding of the Capitalocenic condition of the edaphosphere, and lays the ground from where to think the struggle.

The scientific data Cabral gathered during his work as an agronomist first became instrumental in the theoretical and political arguments denouncing the injustice perpetrated on land inscribed by colonial rule, and would later inform his military strategy. Care for the soil was crucial for Cabral as part of the work of reclamation (of soil and more) necessary in the project of national reconstruction in the postcolony. The operation of reading the 'people' as 'mountains' in the context of colonial extraction, oppression and exploitation evidences a visionary understanding of the Capitalocenic condition of the surface of the Earth. In his agronomic writings Cabral refers to the edaphology - from the Greek ἔδαφος, edaphos, or 'ground', and λογία (logia) - as the science that is concerned with the influence of soils on living things. The logic of this concept - from the ground up - and the reciprocity it conveys lays the groundwork for the principles from which he articulated the struggle.

LITHOS-ATMOS CONFLICT

The soil is a natural, independent and historical body

— Vasily Dokuchaev¹⁸

As a young student of agronomy, Amílcar Cabral carried out research in Cuba, a flat and dry area in southern Portugal. In his 1949 bachelor degree

¹⁷ Amílcar Cabral, *Our People Are Our Mountains*, op cit, p7.

¹⁸ Vasily Dokuchaev, cited in *ibid*, p 89.

dissertation, 'O Problema da Erosão do Solo. Contribuição para o seu Estudo na Região de Cuba (Alentejo)' ('The Problem of Soil Erosion. A contribution for its Study in the Region of Cuba (Alentejo)'),¹⁹ he described this economically poor area whose land was rapidly desertifying during the fascist dictatorship of Antonio de Oliveira Salazar between 1933 and 1974.²⁴ This fieldwork introduces his distinct interest in concepts of soil and the phenomenon of erosion, their origins and their political and historical readings. He studies Justus von Liebig's chemical definition — *soil is a laboratory in which to verify the most varied chemical reactions* — Ferdinand von Richthofen's geological perspective — *soil is a pathological condition of the rock* — and is mostly interested in Vasily Dokuchaev's definition²⁰ — *the soil is a natural, independent and historical body*.²¹

Cabral stressed the importance of not defining soil through its 'static morphological' aspect but through its variables and its relational and dynamic potential: 'The being from which the soil derives is the rock. Through natural or artificial action the rock is fragmented, disintegrated and forms what is called in edaphology "original matter". The "meteorisation of the rock"'.²² He refers to this as a relative 'negation' of the rock, where natural agents destroy its structure and negate it, creating 'original matter' - the matter resulting from the destruction of the rock before it has become soil. Subsequently, a second negation in the meteorisation process corresponds to the development of the 'body-soil' - which he identifies as independent, natural and historical. 'This balance is sustained through the contradiction generated by successive transformations. Oxidations, reductions, carbonisations, dissolutions, hydrolysations, volume variations, compost translocations, micro-organic activities.'²³ Cabral elaborates on a coequality of the 'lithos' (rock) and 'atmos' (climate) forces, a zone of destruction and transformation between independent elements and from which life is possible. From this, soil can be understood as 'the crust of meteorisation'.²⁴

The definition of 'meteorisation of the rock', as a negation of one order to give rise to another, informs a dialectical and materialistic search to redefine soil as a zone of conflict. Cabral carefully notes the utility of embracing conflict and contradiction (negation and destruction):

¹⁹ First published in Lisboa, Instituto Superior de Agronomia, 1951. Re-published in *Estudos Agrários de Amílcar Cabral*, op cit, 1988, pp 81-148.

²⁰ Amílcar Cabral in *Estudos Agrários de Amílcar Cabral*, Instituto de Investigação Científica Tropical, Instituto Nacional de Estudos e Pesquisa Lisboa-Bissau, 1988, p 89.

²¹ *Ibid*, p 89.

²² *Ibid*, p 91.

²³ *Ibid*, p 91.

²⁴ *Ibid*, p 91.

*“The conflict between lithos and atmos is due to the antagonisms between rock and climate – if we admitted the existence of intention in natural phenomena, we could argue that this ‘opposition’ demands that the rock transforms itself in order to subsist. Neither the rock disappears completely, nor the climatic phenomena cease to operate – rather the rock gets integrated into a new form of negation-existence.”*²⁵

This observation – intention in natural phenomena – can be read as an urge to allow for a kind of rock agency: the rock/soil as carrier of a prose, a narrative, the substrate where everything is inscribed.²⁶ This echoes what Chakrabarty describes as a ‘geophysical force’; this, he writes, ‘is what in part we are in our collective existence – [it] is neither a subject nor an object. A force is the capacity to move things. It is pure, non-ontological agency.’²⁷ Cabral reads the soil, the historical body, listening to its processes and later parsing a parallel with what was occurring within the Guinean people (‘the mountains’). He operates a subversive agency within the field of institutional science on behalf of the oppressing ruling power – the undercommons agency of the geological works. As stated earlier, meteorisation – the conflict between *lithos* and *atmos* – involves two elements in a relation of contradiction. This geomantic drive, a channel to read the earth – its future inscribed in its pasts – gives access to an epistemology of the edaphosphere (the layer of soil that supports and effects multiple interconnected forms of life) that speaks of how the soil’s discrete elements contain valuable information for the decolonial struggle. The metonymy is that people are a part of the soil, the soil is a part of the people. Cabral stating that the people are our mountains means that the people themselves are the terrain of the struggle in contrast to Guevara’s notion of geological mountains as an instrument offering refuge to militants. The approach Cabral takes is reminiscent of the historical materialist operation Karl Marx carries out in *Das Capital*, although expanding the analysis in order to include environmental phenomena as having agency.²⁸ He summarises the definition of soil with an equation, where soil is the sum of all the properties and meteorisations in a given period of time:

²⁵ Ibid, p 92.

²⁶ Eduardo Viveiros de Castro writes about a ‘prosopomorphic agent capable of affecting human affairs’; Eduardo Viveiros de Castro, *Cannibal Metaphysics*, Univocal Publishing, Minneapolis, 2014, p 58. The word ‘prosopomorphic’, a form with prose, with agency, derives from the Greek *prosopopoeia*, ‘the putting of speeches into the mouths of others’ or an imaginary or absent person or thing is made to speak or act.

²⁷ Chakrabarty, ‘Postcolonial Studies and the Challenge of Climate Change’, op cit, p 13.

²⁸ Karl Marx, *Das Kapital: Kritik der politischen Oekonomie*, Erster Band, Buch 1: Der Produktionsprozess des Kapitals, Otto Meissner, Hamburg, 1867

$$tS = \{f[c(t), o(t), v(t), h(t), r(t), p(t), t, \dots]dt$$

S – properties of soil; c – climate; o – organism; r – topography; p – original matter; t – time; s – soil; v – vegetation; h – human being [dt – development in time]²⁹

This could correlate into the equation: the palimpsest of the soil + inscriptions over time = history.

COLONIAL EROSION

*Planting is the root of ownership and the waging of war.*³⁰

— Vilém Flusser

After defining soil as a place of conflict, Cabral continued with concepts of erosion. Operating under the constraints of dictatorial Portugal, his activity as an agronomist was subversive — he advanced the liberation struggle from the inside, using colonial resources to inform and strengthen the liberation movement. Cabral defines erosion, the displacement of soil from the surface of the earth by natural agents such as water and wind, as a natural phenomenon that is ‘realised slowly and gradually within the heart of balance soil-life-climate’.³¹ This natural balance can be threatened by the erosion caused by human intervention. Cabral’s works on documenting the loss of balance produced by colonial intervention should be read in the context of an oppressive system utilising censorship to enforce its power.³²

The critical situation of Portuguese agriculture led him to study Alentejo’s edaphosphere,³³ with a specific focus on the main cause of its

²⁹ Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, p 94.

³⁰ Vilém Flusser, ‘The Gesture of Planting’, *Gestures*, Nancy Ann Roth, trans, University of Minnesota Press, 2014, p 101.

³¹ Amílcar Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, p 102.

³² For more information on the ‘New State’ Portuguese Government, see: Patricia Vieira, *Portuguese Film, 1930-1960: The Staging of the New State Regime*, Bloomsbury, New York and London, 2013 and on the Portuguese political State Police PIDE (Policia Internacional de Defesa do Estado), Irene Flunser Pimentel, *A História da PIDE*, Círculo de Leitores, Temas e Debates, Lisbon, 2007.

³³ New State Portugal (1933-74) suffered a decades-long agricultural crisis that followed the world depression of 1929. In the fifties, when Amílcar Cabral made his studies on Alentejo’s soil, industrialisation of agriculture was almost non-existent and the poor rural areas of Portugal suffered an exodus to the colonies and other countries, particularly France.

crisis — soil erosion. He examined the colonial mainland and interpreted the condition of its soil depletion as the result of Portugal's exploitation of land elsewhere.

“[T]he Alentejo panorama clearly reflects the influences of the historical process in the province. [...] the maritime voyages of discovery resulted in the creation of an empire which led to the neglect of domestic agriculture as the riches from India were more attractive than the uncertainty of labouring their own land.”³⁴

$$E = f(c, r, v, s, h)$$

E—erosion, f—factors, c—climate, r—topography, v—vegetation, s—soil, h—human³⁵

Soil is the inscribed body and erosion the scar left by historical violence.

Although in his official agronomic work, Cabral's references to Justus von Liebig solely address issues concerning the chemistry of the rock ('soil is a laboratory to observe chemical reactions'), it is likely that Cabral would have also read Liebig's political positions on the geo-economical discussion on soil.³⁶ Liebig was important for Marx in his analysis of soil and historical materialism as John Bellamy Foster points out: 'when he wrote Capital [in the 1860's], Marx had become convinced of the contradictory and unsustainable nature of capitalist agriculture', mainly due to historical developments such as the depletion of soil fertility through the loss of soil nutrients and the shift in Liebig's own work towards an ecological critique of capitalist agriculture.³⁷ Marx underlined the ecological impacts of these developments: 'All progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is a progress toward ruining the more long-lasting sources of that fertility.'³⁸

Although Cabral had read Liebig, Dokuchaev, Marx and others, when he was later asked about his ideological sources at his University

of London's lecture, he responded: 'Moving from the realities of one's own country towards the creation of an ideology for one's struggle doesn't imply that one has pretensions to be a Marx or a Lenin or any other great ideologist, but is simply a necessary part of the struggle.'³⁹ It was politically expedient for the leaders of the African liberation movements to stress that their political organisations were grassroots, and that their theories were based on the experiences of their struggles rather than imported political theory. However, they were of course influenced by European and pan-African thinkers. Cabral does not emulate the words of Liebig or even the theories of Marx, but operates similar gestures of cognisance assembled with situated knowledge, ie, from a non Eurocentric perspective.⁴⁰ Instead of studying the colonised African soil (his primary concern), Cabral began with the specificities of the oppressor's terrain: Portugal's own systemic crisis and its inherent propensity for violent solutions. This work on Portuguese soil erosion qualified Cabral to be employed as an agronomist by the colonial state in the 'overseas provinces'.⁴¹ In 1952, Cabral was employed by the Overseas Ministry to engage in a one-year study on the farming practices in Portuguese Guinea, the land of his birth. Here, Cabral established what he called an experimental laboratory at Pessubé Farm and, in 1953, undertook an agricultural census: a process of data collection that provided him with a direct connection to the population and access to topographical data throughout the country. This census, which comprised a study of the state of agriculture in Portugal's colonies, had been demanded of the Portuguese Government by the United Nations' Food and Agricultural Organisation (FAO).⁴² As Guinean

39 Cabral, *Our People are our Mountains*, op cit, p 21.

40 This is an appropriation of Donna Haraway's concept of 'situated knowledge' as developed in 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective' in *Feminist Studies*, vol 14, no 3 Autumn, 1988, pp 575-599. Haraway introduced this concept in the context of a feminist critique of hegemonic modes of historical knowledge production. Situated knowledge is a knowledge produced by and producing a specific subjectivity. It is a call to give the right of speech to those historically kept silenced, the workers, the women, the oppressed, the enslaved and nature.

41 It is worth mentioning that the African colonies were defined by the New State as 'overseas provinces' - i.e., part of Portugal rather than separate colonies, and the claim was that the assimilated elite of Africans (actually a minute proportion of the colonised population) were Portuguese, by virtue of economic status, education and renouncing their African languages and culture.

42 As Schwarz states: 'The FAO agricultural census project approved by the Portuguese government in 1947 and soon put in the drawer where it slept for more than four years, is quickly retaken by Cabral, few months after his arrival at Pessubé, which he studies, plans and executes. For him, the census was not only a set of tables and numbers, but also the possibility to read, comprehend and act on the

34 Amílcar Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, pp 120-121.

35 Ibid, p 109.

36 Ibid, p 89.

37 John Bellamy Foster, 'Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology', *American Journal of Sociology*, vol 105, no 2, The University of Chicago Press, 1999, p 376.

38 Karl Marx, *Capital*[1867], vol 1, Vintage, New York, 1867-1976, pp 637, 638.

agronomist Carlos Schwarz suggests, when Cabral started work as an agronomist in Guinea he was convinced that the independence process would unfold peacefully, in the form in which it proceeded in many of the African countries that had been colonised by other European powers. Accordingly, he started work on a new concept of agriculture intended to replace the existing colonial model.⁴³

Cabral published a series of agronomic articles including 'In Defence of the Earth I-IV' and 'Acerca da Utilização da Terra na África Negra' ('On the Use of the Earth in Black Africa') in 1954. In the first, Cabral sought out historical global economic cases, addressing soil reclamation: 'Examples of propaganda are insufficient to solve a problem whose roots plunge into the very economic structure of societies.'⁴⁴ In the second, he centred on the principal human components of agriculture and its economies: 'The fundamental source and determining aspect are the human-social-beings themselves, whose actions are dependent upon the economic structure sustained by agricultural activities.'⁴⁵ He goes on to address the state violence imposed on soil politics and their contradictions:

*'The cultural system redolent of Black Africa is an itinerant system. [...] a portion of jungle or savannah is chosen for cultivation; the natural vegetation is thinned and then burned; the earth is exploited for a short period and then abandoned; the forest or the savannah then reclaims the land. [...] The itinerant system (nomadic agriculture) demands a high level of settlement instability. The people don't attach themselves to the land. This attachment would seem to be an essential condition of the process of development.'*⁴⁶

Cabral explained how the itinerant agricultural system is an endemic solution to the problems imposed by the Black African environment and became acute in his criticism of colonial agricultural measures:

*'In short, colonialism has introduced a new system of production into Africa, which translates as an économie de traite (trade economy).'*⁴⁷

prevailing agricultural dynamic'. Carlos Schwarz, *An Agronomist Before His Time*, Nov. 2012, <http://www.adbissau.org/pensar-amilcar-cabral>, accessed on 5 May 2016.

43 Ibid.

44 Cabral, 'Em Defesa da Terra I-V', 1949-1950 and 1952, in *Estudos Agrários de Amílcar Cabral*, op cit, pp 63-79, pp 177-179.

45 Cabral, 'Acerca da Utilização da Terra na África Negra', 1954 in *Estudos Agrários de Amílcar Cabral*, op cit, pp 241-249.

46 Ibid, p 245.

47 'Économie de traite', trade economy meant all economic relationships associated with the marketing of agricultural products that African farmers offered for sale for the purpose of exploitation.

*However it maintains the nomadic system of cultivating the land. Attempts are made to apply this to the itinerant system without taking into account the specificities of the mesologic [ecological] conditions. These differ from European agricultural practices, but Europe is convinced of the "superiority" of its own practices.'*⁴⁸

Cabral denounced the exploitative effects of the extractionist trade economy. He built on Liebig's description of the situation created as soon as the empirical agriculture of the trader becomes a spoliation system, and the conditions of reproduction of the soil are undermined – 'every system of farming based on the spoliation of the land leads to poverty.'⁴⁹ Cabral acknowledged that itinerant agriculture does not allow for certain cultural and infrastructural developments because of its rootlessness. However, he argued that:

*'The evolution of new African cultural technologies in the sense of better serving the progress of black African people cannot ignore the fact that they have a profound knowledge about the environment and its possibilities. [...] The fact that this vital need is neglected has already led to several catastrophes. At the heart of these can generally be found a complex mesh of components introduced into the life of black Africa by a new entity — colonialism.'*⁵⁰

As Bellamy Foster points out, Marx was initially interested in Liebig's pioneering developments in artificial fertiliser, although he later became sceptical about their long term value: 'Fertility is not so natural a quality as might be thought; it is closely bound up with the social relations of the time.'⁵¹ This emphasis on historical changes in soil fertility in the direction of agricultural improvement becomes a constant in Marx's later thinking, though it is eventually coupled with an understanding of how capitalist agriculture could undermine the conditions of soil fertility, resulting in soil degradation rather than improvement. 'It is in his later work on political economy that Marx provided his systematic treatment of such issues as soil fertility, organic recycling, and sustainability in response to the investigations of the great German

48 Mesology, in the fifties, was used in scientific jargon for what is called 'ecology' today. Amílcar Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, p 248.

49 Justus von Liebig in his *Letters on Modern Agriculture* (1859), as cited by John Bellamy Foster in *Marx's Ecology - Materialism and Nature*, Monthly Review Press, New York, 2000, p 153.

50 Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, p 248.

51 John Bellamy Foster, *Marx's Ecology - Materialism and Nature*, op cit, p 132.

chemist Justus von Liebig – and in which we find the larger conceptual framework, emphasising the ‘metabolic rift’ between human production and its natural condition.⁵² Cabral was efficiently compiling a body of situated knowledge – the specificities of the conflict between Africa and Portugal, a colonial power – informed by Marx and Liebig about the global dimension of the agricultural crisis nearly a century earlier.

Fascist colonial Portugal was a very particular corporate Catholic paternalistic regime, characterised by a dictatorship sustained by censorship and the rhetorical construction of fantasies about the power and reach of its empire. In reality, the country was deeply backwards. The illiteracy rate of the population was close to fifty percent in 1952. Within this context, Cabral initially avoids overt politics and diligently develops constructive alternatives to the colonial system. One of his last official acts as a state agronomist was to propose sugar beet plantations in Portugal.⁵³ Given the increasing European demand of sugar, this was a profitable option for the ‘mainland’ to replace the exploitation of sugarcane plantations in its tropical ‘overseas provinces’.

Cabral turned the mirror back to Europe, suggesting a solution to a European agricultural crisis. It was, after all, partially as a consequence of agricultural crisis (as previously addressed from a Eurocentric perspective by Liebig and Marx)⁵⁴ that European powers had accelerated their colonial projects, a process consolidated with the scramble for Africa at the 1884–1885 Berlin Conference:

‘[E]conomic factors in Europe were one of the causes behind the European settlement of Africa after the Age of the Discoveries. With the simple trade in goods, including enslaved black men, Europeans spent the rewards of the exploitation of the land. But like black Africans, the aim was to produce essential food. Europeans cultivated or forced black Africans to cultivate farm products. [...] From the contradictions created, African land is being devastated day after day.[...] In a life that is out of balance, obliged to satisfy not

52 John Bellamy Foster, ‘Marx’s Theory of Metabolic Rift: Classical Foundations for Environmental Sociology’, op cit, p 370.

53 Amílcar Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, pp 613–699.

54 For further considerations on a contemporary critique of Karl Marx’s Eurocentrism, see Gayatri Chakravorty Spivak, *A Critique of Postcolonial Reason: Towards a History of the Vanishing Present*, Harvard UP, Boston, 1999. In an ambitious attempt to complicate the Eurocentric narrative of globalised capital, Spivak moves to consider the rhetorical and geopolitical blind-spots in Marx’s definition of capitalist modes of production. As Spivak suggests, the conditions for radically disempowered social groups in capitalist production present a crisis in the cognitive abilities of Western critical theory and cultural politics.

only the new demands created but the requirements of a new social condition, he (the African subject) slowly uproots himself, migrates or is forced to migrate. He abandons the land or doesn’t have the time to assimilate the knowledge that he has created and accumulated over centuries, based on the transmission of empirical knowledge about the environment. [...] The lack of balance in the management of Black African soil encourages the emergence of diseases that debilitate the human organism.’⁵⁵

Later in 1969, already in the midst of the war of independence, in a workshop with the PAIGC political bureau, Cabral discussed different modes of resistance (political, economic, cultural and military). One argument he made for economic resistance was the awareness of the bureaucratic ‘nullity’ of the value of Black African labour through the manipulation of tax, prices and wages: ‘We have analysed the cultivation of peanuts in depth and we have reached the conclusion that it is forced labour.’⁵⁶ This calculation demonstrated the perpetuation of an exploitative system of labour that continued in Guinea even after slavery was officially abolished. Cabral’s critique of the exploitation of Black Africans and their land chimes with Denise Ferreira da Silva’s recent elaboration on the negative value culturally imposed on Blackness throughout the West’s historical narrative of transparency. Da Silva proposes to recalculate Marx’s theory of value to acknowledge that, ‘in the modern Western imagination, blackness has no value; it is nothing’. This move, substituting Blackness’s negativity (-1) with nullity (0) as its operational value, not only denounces the racialised aspect of the Capitalist system by highlighting its bias towards Black subjects, but also disrupts any attempt at calculating the value of Blackness.⁵⁷

Cabral works with the tools of Western science in order to diagnose the conditions of the peoples of Guinea-Bissau in relation to soil degradation. In drawing attention to this relation, he anticipated today’s forced migration of African subjects as a result of the historical devastation of the soil.

55 Amílcar Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, p 248.

56 Amílcar Cabral, ‘Resistência Económica’, (‘Economic Resistance’), *Análise de Alguns Tipos de Resistência*, Filipa César, trans, Coleção de Leste a Oeste, 1969/1975, pp 35–36.

57 Denise Ferreira da Silva, ‘1(life) ÷ 0 (blackness) = & - & or &: On Matter Beyond the Equation of Value’, *e-flux Journal*, no 49, February 2017, pp 9–10.

*I got myself a contract as an agronomist and went to Angola taking the opportunity to gather comrades to discuss with them the new path we should follow in the struggle for our lands. Under the control of PIDE, comrades.*⁵⁸

— Amílcar Cabral

Cabral's subversive double agency becomes evident when viewing, side by side, his co-current curriculum vitae as political activist and agronomist between 1948 and 1960. Articles like "On the use of the earth in black Africa"⁵⁹ made it difficult for Cabral to operate in colonised Guinea. When his attempt at creating a sports and cultural association in Bissau failed, he left the colony. This didn't hinder him from acquiring other duties as an agronomist on behalf of the portuguese State,⁶⁰ which points to a certain ineptitude of the Portuguese state police.

In 1955, Cabral founded the MING (National Independence Movement of Guinea) and transferred his agronomic work to Angola, Cape Verde and Lisbon. Then, in 1956 he co-founded the MPLA in Angola, the PAI (later PAIGC) in Guinea, and in Lisbon the Movement for the liberation of the people of the Portuguese Colonies (MLPCP) and the MAC (anti-colonialist movements from Angola, Mozambique, Guinea, Cape Verde and São Tomé and Príncipe).

Looking back to 1948, when he was starting his dialogue with the soil and conflict with *lithos* and *atmos*, Cabral had just joined the House of the Students from the Empire (Casa dos Estudantes do Império, 1944-65) or CEI in Lisbon. This academic institution had been created

by the Overseas Ministry to propagate a sense of global "portugality" among the students from the colonies. Here he commune with Eduardo Mondlane (later FRELIMO), Mario Pinto de Andrade (later MPLA and partner of pioneer filmmaker, Sarah Maldoror), Agostinho Neto (later MPLA) and many other future resistance leaders. The students of this "institution" quickly subverted the official agenda and the CEI became a hotspot for the young intellectuals to develop a critical discourse about colonial politics and, later, to prepare for armed struggle.

The CEI published numerous short poetry publications and edited a magazine called "Mensagem" (Message) that focused on non-European Lusophone poetry. The "cultural" disguise of these increasingly politicised young poets, used poetry as an encrypted language, not only by addressing the burdened imaginary of the oppressed African and Asian subjects within a poetic channel only accessible for those sharing the code, but the fact that the code was embedded and embodied by an empathic inheritance with what was transmitted. Technically, the Portuguese political police (PIDE), in the various raids on the CEI and surveillance reports of the students' cultural activities had difficulty decoding the poetic musings of an inconspicuous political organization that was smouldering inside colonial academia.⁶¹ The young Cabral and his kindred academics were already practicing the undercommons as designed by Fred Moten and Stefano Harney.

*'The university needs what she bears but cannot bear what she brings. And on top of all that, she disappears. She disappears into the underground, the downlow lowdown maroon community of the university, into the undercommons of enlightenment, where the work gets done, where the work gets subverted, where the revolution is still black, still strong.'*⁶²

Meanwhile, Cabral continued his studies in agronomy now directing it to the phytosanitary condition of food storage,⁶³ as seen in his work

58 Cabral, 'Resistência Política', ('Political Resistance'), in *Análise de Alguns Tipos de Resistência*, op cit, p 26.

59 Article originally published by Boletim Cultural da Guiné Portuguesa, 1954, subsequently reproduced in *Estudos Agrários de Amílcar Cabral*, Instituto de Investigação Científica Tropical, Instituto Nacional de Estudos e Pesquisa Lisboa-Bissau, 1988, pp 241-249.

60 Biographical note: Senior Board of Extraordinary Inquiry of Overseas (Lisbon); Permanent Assistant Professor C. M. Baeta Neves in Agricultural Entomology chair; Higher Institute of Agronomy (Lisbon); Full Member of the Society of Agricultural Sciences (Lisbon); Senior Special (charge of the investigation) of the Services Directorate Agricultural (Lisbon); Director of the Office of Agronomic Studies (Lisbon); Teacher Contributor J. V. Botelho in Soil Conservation chair of the Institute Superior of Agronomy (Lisbon) for soil studies of Angola; Teacher standing Contributor Arie L. Azevedo in Tropical Agriculture chair Soil Institute of Agronomy (Lisbon) for the studies of soil technology certain regions of Angola. - Study of charge Agrológico of coffee plants of the Angolan Plantations Company Agriculture. (Amboim, Angola). In 1959 1959 - Organizer and leader of the Brigade agrológic Studies of the Angolan Company Agriculture.

61 For more information, see Patrícia Leal, 'House of the Students of the Empire: An Unexpected Antechamber of the African Liberation Movements', in *The struggle is not over yet*, op cit, pp 87-114 and Manuela Ribeiro Sanches, '(Black) Cosmopolitanism, Transnational Consciousness and Dreams of Liberation', in Mark Nash, ed, *Red Africa: Affective Communities and the Cold War*, Black Dog, London, 2016, pp 69-79.

62 Stefano Harney and Fred Moten, *Undercommons*, Minor Compositions, 2013, p 26.

63 "The phytosanitary conditions of products stored in warehouses at the Port of Lisbon." in *Estudos Agrários de Amílcar Cabral*.

on the ports of Angola,⁶⁴ Cape Verde and Lisbon⁶⁵ and was able to move freely between these places as he gained firsthand data about the dependency of the Portuguese economy on overseas products, projecting the potential questions between food storage and an archival drive.⁶⁶ Then, in August of 1959, sailors and merchants demonstrated for better working conditions at Pinjiquiti port in Bissau — it turned into a massacre with 50 people killed and hundreds wounded. This halted all attempts at peaceful negotiations to end colonial Portuguese occupation. Half a year later, in 1960, Cabral gave up his job as agronomist and went underground,⁶⁷ leaving Portugal forever to become a full-time political strategist and theorist of the liberation movement. The following spring, in June 1961, hundreds of students from African colonies secretly fled from Portugal and the forced recruitment to the

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- 64 Amílcar Cabral, 'Condições fitossanitárias de produtos ultramarinos em armazéns do porto de Lisboa' ('The Phytosanitary Conditions of Overseas Products Stored in Warehouses at the Port of Lisbon'), in *Estudos Agrários de Amílcar Cabral*, op cit, pp 703–778.
- 65 Amílcar Cabral, 'O problema do estudo macro e microclimático dos ambientes relacionados com os produtos armazenados', 1956, pp 269–273; 'O estudo do microclima de um armazém em Malanje (Angola)', 1956, pp 275–290; 'Sobre a acuidade do problema do armazenamento no Arquipélago de Cabo Verde' (Conferência Internacional dos Africanistas Ocidentais), 1956, pp 445–513. All three essays in *Estudos Agrários de Amílcar Cabral*, op cit.
- 66 From 1957 onwards, Cabral intensified his operations in both fields and it is clear to see how not only strategically but also in terms of content both agencies were interweaved: in 1957 he had a meeting in Paris, where he consulted and studied the development of the struggle against Portuguese colonialism; in 1958 he attended the 1st Conference of African Peoples in Accra as an observer and the XXIV Luso-Spanish Congress on the progress of Sciences in Madrid. In December he chaired an enlarged meeting of the PAI, in Bissau, where he decided on the reorganization of the party and drew up an action plan whose priority was to mobilize the people in the countryside. In 1959, during a brief stay in Bissau, he presided over a meeting for the merging of other anti-colonialist movements with the PAI, which resulted in a single unified party – the PAIGC. And in Dakar he founded the Liberation Movement of Guinea and Cape Verde (MLGCV) with connections to the PAIGC.
- 67 His former colleague the Portuguese agronomist Ário Lobo de Azevedo states 'At the end of 1959, I mean, I can't say precisely the exact date, I was discussing a new task with Amílcar Cabral in Angola. Amílcar had difficulties in committing himself. That was when he informed me that he was going to move away from the team; for many reasons, his life was about to change direction. () Was Amílcar Cabral fully aware of his option while abandoning the group of agronomists he was collaborating with? I believe he was. As far as I'm concerned, remembering that day, I would say that the world of agronomy and I became a bit poorer but the world definitely richer' in 'A propósito de dimensão humana de Amílcar Cabral', *Estudos Agrários de Amílcar Cabral*, Instituto de Investigação Científica Tropical, Instituto Nacional de Estudos e Pesquisa Lisboa-Bissau, 1988, p 13.

colonial military to fight on the other side of the same war. The CEI functioned as the main organizational hub for the escape operation. 1963 marks the start of the armed struggle in Guinea.

SEMANTICS FOR SOIL RECLAMATION

As mentioned above, Cabral's first job in Portuguese Guinea was directing the State Farm of Pessubé (Granja de Pessubé) in 1952, which he quickly transformed into an experimental farm.⁶⁸ The agricultural research centre was an attempt to put into practice his vision for the development of Guinea after independence. As Schwarz summarises, Cabral established three main goals for his programme at Pessubé:

- '- the first one was to transform the Farm from a mere unit of vegetable production destined to the colonial political and administrative authorities of the praça [city] and a place for picnics and recreational walks, into a centre of agricultural research – a tool to improve and modernise the production of the farmers;*
- the second was to tear down internal walls within which the agricultural services were confined, to approximate them to the farmers, who should be the main beneficiaries;*
- the third was that of the interaction of Guinean farmers with those in the neighbouring countries of the sub-region.'*⁶⁹

The experimental farm project was intended to change the farming practices, with the aim of emancipating people and repairing the land. The intrinsic operations of the agricultural research institute, rooted in the motto 'experimentation-dissemination', already show traces of what later became Cabral's 'Theory of Culture'.⁷⁰ Cabral developed his revolutionary theory following his emergence from this earlier period of double agency when, under the alias of Abel Djassi, he led the nascent anti-colonial movement while still working as an agronomist for the Portuguese regime. With the launch of the armed struggle he entered the world stage as the leader of PAIGC and a theorist of anti-colonial resistance. The three principles for the experimental farm of Pessubé can be extrapolated to the agricultural programme he devised for a future Guinea: no elitist production of farming products; no walls between the governance at the service of people/farmers, and finally the encouragement — through Creole and cinema — of the exchange

68 Amílcar Cabral, *Estudos Agrários de Amílcar Cabral*, op cit, pp 181–206

69 Carlos Schwarz, *An Agronomist Before his Time*, op cit

70 Ibid.

of agricultural knowledge and interaction among the different ethnic groups in the region.

Cabral initially trusted that the liberation process would be possible through non-violent protests and the legitimate demand of independence. These strategies were supported by a permanent pedagogical effort towards self-emancipation employing what radical pedagogue Paulo Freire later coined as the coding of language through a situated process of 'consciencialisation' (from the Portuguese *consciencialização*), an active form of consciousness raising as part of an emancipatory political process.⁷¹ Unfortunately the violent Portuguese repression of Guinean protests, intensified by the tragic massacre at the Pidjigiti port, made clear that the Portuguese had no intention of emulating other European colonial countries by recognising the right of independence of their former colonies, thus provoking the eruption of the guerrilla war.

In many of his political speeches to guerrillas and peasants in the context of the armed struggle, Cabral insisted in re-naming and re-defining words, geographies and concepts as a decolonising process of 'consciencialisation' about systems of power, a semantic operation that enhances the strategic efficiency of warfare. For example: 'In Guinea, land is cut by arms of the sea that we call rivers, but in depth they are not rivers [...] because until we arrive on dry land there is only salty water'⁷² Guinea's morphology is a mountainless alluvium, with 70 percent of its soil under sea level.⁷³ These 'arms of the sea' have no word in the colonial lexicon. The awareness of this lack signals something amiss in the colonial epistemology – you only see what you already know. The inadequacy of the Portuguese lexicon is proof of the illegitimacy of

their occupation. This tidal condition also suggests the vulnerability of a permeable land inscribed with centuries of invasion. Another example is the tactical and simultaneously semantic concept of 'centrifugal movement': '[W]e adopted a strategy that we might call centrifugal: we started in the centre and moved towards the periphery of our country. This came as the big surprise to the Portuguese, who had stationed their troops on the Guinea and Senegal borders on the supposition that we were going to invade our own country.'⁷⁴ This demonstrates how effective tactics result from the coherence and legitimacy of a conscious situatedness by occupied people. Cabral proves the ignorance of the colonial military forces in their miscalculation of where the rebels or terrorists (as the militants of Cabral's movement were called in new state propaganda) would attack from and with which tactics, and the error of all colonial construction and occupation. The struggle begins in the centre of the land, because it is a people's struggle, and then moves in a centrifugal manner like a kind of expanded version of the geometric form etymologically embedded in the term 'revolution' – the revolving turn or course described by celestial bodies.

As Cabral explained at Syracuse University 'it is not possible to harmonise the economic and political domination of a people, whatever may be the degree of their social development, with the preservation of their cultural personality.' He argued that 'the so called theory of progressive assimilation of native populations' is nothing but a violent attempt 'to deny the culture of the people in question'.⁷⁵ For Cabral, the liberation of African people necessitated an act of cultural emancipation at the grassroots level. His speeches addressed to the global population, the UN, the guerrilla fighters, guerrilla teachers are imbued with an ecology of liberation informed by a decolonisation of language itself:

The greatest battle we must engage in is against ignorance. Only when men and women understand this can they lose their fear. Fear of the river too full and running quickly, fear of thunder, fear of lightning, fear of radio, fear of the kapok tree, fear of the dark path, fear of the Cobia bushlands, fear of the Quinara bushlands, fear of clairvoyants, fear of sorcerers, fear of healers, fear of spies or the police, fear of political leaders, fear of armed men, fear of forces that

71 In 1975, Paulo Freire is invited by Commissioner of Education Mário Cabral to work with the post-revolutionary government of Guinea Bissau on the development of a pedagogical system for the newly liberated nation. Freire develops the concept of *political literacy* that includes a specific concept of *language literacy* that is never detached from a process of consciencialisation of pupils' own life conditions and practices of solidarity, and underlines the dynamic aspect of his pedagogical concept as being developed in and for the specific context. See Paulo Freire, 'Introduction' and 'Coding and Generative Words', *Pedagogy in Process: Letters to Guinea Bissau*, Bloomsbury, London and New York, 1978/2006, pp 2, 81.

72 P.A.I.G.C. *Unidade e Luta*, Filipa César, trans, Publicações Nova Aurora, Lisbon, 1974, p 108.

73 I remember that film director Sana na N'Hada told me that close to his village in the interior of the country there is a particular phenomena named "macaréu", tidal bore, created when in the rainy season the water level rises and at high tide the seawater and river water come together in a unique collision forming a wave producing a unique sound. He also told me one day we will find a way to shoot that phenomenon together.

74 Amílcar Cabral, *Revolution in Guinea – An African Peoples Struggle*, op cit, p 10.

75 Amílcar Cabral, *National Liberation and Culture* (this text was originally delivered on 20 February 1970 as part of *The Eduardo Mondlane Memorial Lecture Series* at Syracuse University, Syracuse, New York, under the auspices of The Programme of Eastern African Studies. Maureen Webster, trans) <http://www.historyisaweapon.com/defcon1/cabralnlac.html>, accessed on twenty-second January 2018.

lie ahead. [...] That is why the teacher's work is the front line of our struggle; the vanguard.⁷⁶

In 1967, Cabral addressed an assembly of guerrilla teachers in the Liberated Zones of Boé. Here, another dimension of language appears. The word fear, the most feared of all, is put into a mantra of declension. Fear and its instrumentalisation is the true enemy, and it can only be exorcised through education. This rapping of the word and the analogous agents of its production are spoken out, while the rhythmic declension of the word causes its erosion. The literal sense of the declension of the word fear and its agents get bent, and stop moving downwards — the alluvium gently declines toward the sea.

Cabral's prism is refracted by shrapnel, a soil composed of scrap weaponry. Another word under scrutiny is NATO in this 1965 speech in Dar Es Salaam when NATO stops being an acronym for a northern deal and becomes concrete matter, exploded bombs and mines, artillery, the technology of warfare. Cabral doesn't care about the acronym. He focuses on the archeological site that is the soil of Guinea Bissau. With this rhetorical gesture Cabral refuses to accept the abstraction of the initials of a Western deal. He addresses the core of all wars, the weapon industry and its lobbies, making his own spelling of NATO: *NATO is the USA. We have captured in our country many US weapons. NATO is the Federal Republic of Germany. We have a lot of Mauser rifles taken from Portuguese soldiers. NATO, for the time being at least, is France. In our country there are Alouette helicopters. NATO is [...]*.⁷⁷ Once again, the organism that is soil speaks and its original matter is not only rock but also its component shrapnel from the battlefield.

In September 1973, in the hills of Boé, the only elevated area of this flat and flooded country, the leaders of the PAIGC reunited its militants in the 1st Popular Assembly. A bureaucratic ritual in the midst of the jungle declared unilaterally the Republic of Guinea Bissau independent.⁷⁸ Amílcar Cabral was not present to attend the event he slowly and carefully seeded and germinated, he had been assassinated eight months earlier. Cabral knew that such acts cast spells in the geopolitics of warfare.

A country that declares its own independence changes the meaning of the signifier intrinsic to an armed conflict: from a colonial war in a Portuguese

76 From *O Regresso de Amílcar Cabral*, 1976, a film by Sana na N'Hada et al.

77 Opening address at the CONCP Conference held in Dar Es-Salaam, Tanzania 1965 published in 1974.

78 In 24th September 1973 the PAIGC declares its unilateral independency in the bushes of Boé. Within less than a month 80 countries around the world had recognized the independence of Guinea Bissau, despite the ongoing armed conflict with colonial Portugal.

overseas province with a local rebel uprising to an armed struggle to liberate an independent nation from Portuguese occupation.

In 1966, during the first Tricontinental Conference in Havana, Cabral delivered his paper 'The Weapon of Theory.' One year later, as part of an agreement with Fidel Castro, Cabral sent young Guineans to Cuba to be trained in medicine, warfare and cinema. Four of them – Sana na N'Hada, Flora Gomes, Josefina Crato, and José Bolama – went to the ICAIC (Instituto Cubano del Arte e Industria Cinematográficos) to learn filmmaking under the guidance of Santiago Álvarez. But first, they were introduced to the Spanish language and the practice of voluntary work: labour that is not necessarily profitable but teaches an experience of the common and, as Sana N'Hada puts it, a practice for learning 'humility'.⁷⁹ To be humble is to be next to the humus, to be earthed, to not lose contact with the ground, to stay close to the soil. This voluntary work (and its inherent humility) informed Guinean film production as a grounded cinematic practice at the service of a grassroots revolutionary process. In 1972, the Guinean filmmakers returned from Cuba to begin documenting the on-going war of liberation against Portugal and, after the unilateral declaration of independence, to build the capacity to make moving images in and of an independent nation.⁸⁰

Cabral never lived to witness the cinema he envisioned. However, it was two of the Guinean filmmakers whom Cabral had sent to Cuba for training, Sana na N'Hada and Flora Gomes, who produced the cinematic document of the event that Cabral had worked towards, namely Guinea-Bissau's unilateral declaration of independence on 24 September 1973. In the hills of Boé, the only elevated area of this flat and marshy country, the leaders of the PAIGC gathered their militants for the 1st Popular Assembly.⁸¹

In an interview in 2014, Sana na N'Hada explained the cinema programme of the Guinean National Film Institute for the newly liberated country: 'How would cinema work in an [institutional] way? We had been shooting for about five or six years when we founded the Film Institute.

79 Sana na N'Hada in *Spell Reel* (César, 2017).

80 Regarding the birth of Guinean cinema as part of the decolonising vision of Cabral, see Filipa César's collaborative project with Sana na N'Hada, Flora Gomes, and others, *Luta ca caba inda (The struggle is not over yet)*. *Luta ca caba inda* starts as a project of digitalisation of the remains of militant Guinean cinema and takes the form of discursive screenings, mobile cinemas, encounters and discussions, writings, walks, film productions and publications. See *Luta ca caba inda: Time Place Matter Voice, 1967-2017*, Berlin, Archive Books, 2017.

81 On 24 September 1973, the PAIGC declares its unilateral independence in the bushes of Boé. Within less than a month eighty countries around the world had recognised the independence of Guinea Bissau, despite the ongoing armed conflict with colonial Portugal. Only the Carnation Revolution in Portugal in April 1974 finally ends Portuguese occupation in Guinea.

Now, what ought to be done? So we created the “Programme of Rural Promotion by Audiovisual Media”, which meant that, with cinema – along with Creole – we could make people from there understand people from here. We would contribute to imagining a national space.⁸² Although some film production took place in Guinea-Bissau after independence, the aspirations to national film production remained unfulfilled. To look at the remains of this militant Guinean cinema today gives us an insight into both their representation of the revolutionary process and the inscription of time, climate and war in the materiality of the now-ruined celluloid.⁸³ The erosion visible in the remaining celluloid from this militant cinema praxis speaks of an abandonment of revolutionary ambition and care in the postcolony. Neo-colonial erosion is at stake not only in the soil of the nation but also on any surface inscribed by opposition to power.

While national film and television institutions that were set up in Angola and Mozambique after independence actively promoted Standard Portuguese as a national language to promote political unity, in Guinea-Bissau Creole was chosen as a lingua franca between over thirty different ethnic communities. The re-coding of disparate farming practices was entangled with an encoding of language and media, in this case the development of Creole as a new transversal language was harnessed in film as the vehicle of translocal agronomic exchange. Documentaries were planned to be disseminated by mobile cinema units, with the aim of creating a shared knowledge of situated modes of living and farming.

TO MATTER MATTERS

*It matters what thoughts think thoughts. It matters what knowledges know knowledges. It matters what relations relate relations. It matters what worlds world worlds.*⁸⁴

— Donna Haraway

Amílcar Cabral insisted on the need to *return to the source*⁸⁵, but this should not be confused with return to an origin, or a root that could be linked to an essentializing and identitarian claim of radicality.

82 Sana na N’Hada in *Spell Reel* (César, 2017).

83 *Spell Reel* (César, 2017).

84 Donna J. Haraway “Staying with the Trouble”.
Duke University Press, p 35.

85 in Unidade e Luta “To depart from the reality of our land. To be realistic”.

But rather a turn to the *original matter*. Cabral departs from the specificities of a land and the conditions of people’s lives on and in it. This position partially fills in the void left by the Eurocentric Marxist critique and demands a return to the rock — to the *edaphos* conflict *sphere* — refusing to reify the definitions enforced by the blindspot of the colonial *thesaurus*. This proposition to return to the matter of the ground also implies going underground, both in the sense of the subversive meaning of mining through the system from which one operates and in the material meaning of being within the humus and inhabiting its metabolic processes, pace and rhythm. This crust of meteorization reclaims its own epistemology that follows a cognitive humility — humble derives from humus — that is not compatible with a particular ruling system. Humility is not a submissive mindset, it is also not a religious abdication of individualist forces of desire; it doesn’t mean a submission to power, but rather a mission under, a creeping agency linked to the multitudinous soil phenomena.

The useful contradiction of humans as the antithesis of nature within nature itself is latent in Cabral’s writings, anticipating what Flusser later describes as *a human being waits for nature because he himself is not in it (...) to set traps, that is, to exist he must categorize, that is, “ex-ist.”*⁸⁶ Exist, *ex + sistere*, to make stand out of nature. And outside of nature is the gesture of planting seeds and also of planting mines – the digging of holes to place detonable explosives. The Guinean guerrilla war, the war of seeding traps, where mines sojourn in wait of the occupier. The contradictory gesture of undermining lies within the process of contaminating one’s own soil, the blackboard of the guerrilla, onto which the secret tactics of a mission are drawn up and easily swept away. This undermined soil implies a drive towards the ingestion of the toxic, a disruptive gesture towards a particular system, the self-destruction of an oppressed and violated body, the transformation of the desired and disputed land into a toxic and impregnable body. The invisible grid encloses a geometry of danger — an activated ground under. *The riches of a land in the midst of a struggle become a poisoned resource, impossible to exploit. A mined soil, an opaque science.*⁸⁷ *[T]he digging of holes to turn the unpredictable into the inevitable*⁸⁸. Only an understanding of Cabral’s stratified operations makes sense of his strategy of conducting a slow war.⁸⁹

86 Vilém Flusser in ‘The Gesture of Planting’, *Gestures*, trans. Nancy Ann Roth, University of Minnesota Press, p 99.

87 Quote from Mined Soil, 2013-15 film by Filipa César written in collaboration with Olivier Marbouef.

88 Flusser, *ibid*, p 102.

89 During the 1st Tricontinental Conference in Havana, Fidel Castro

A slow war fertilizes the terrain for Harney and Moten's undercommons: *where the commons give refuge, where the refuge gives commons*.⁹⁰ Slow war, apparently a paradox. Unlike his fellow Angolan fighters' accelerated militarization, Cabral refuses Fidel Castro's offer of foreign forces and instead opts for education and medical care with support from Cuba,⁹¹ the Soviet Union, Sweden, Romania and Yugoslavia. Cabral envisioned a slow move of people-mountain towards a reclamation — *the life stolen by enlightenment and stolen back*⁹² — of the occupied terrain, occupied languages and occupied bodies while simultaneously germinating the infrastructures of a future independent society behind the frontline in the Liberated Zones. A guerrilla war waged centrifugally, from inside to outside, circling towards a utopian society, a vindication of ecosophical force.⁹³

The armed militants would then drop their weapons on the liberated soil. Cabral elaborated on the definition and technologies of reading soil, not only expanding original matter from rock to shrapnel, but also anticipating what Jameson W. Moore coined as the Capitalocene.⁹⁴ As a transcendent historical materialist, Cabral not only envisaged a

proposes military support to Amílcar Cabral to get rid of the Portuguese. Cabral rejects the military forces stating he needs a war made by its own people and not external forces, because he needs a slow war to have time to parallelly educate the population to share a common language and a sense of unity and nation.

90 Fred Moten and Stefano Harney, *Undercommons*. Minor Compositions, 2013, p.26.

91 Alliance protocols that were born after the 1st Tricontinental Conference in Havana, Cabral sends in 1967 the first group of Guineans to be trained in field such as medicine, education, warfare and cinema. This research on Cabral soil evolves and informs and dialogues with my long year research on Guinean militant cinema, and its ruined archival remains, that resulted in the project *Luta ca caba inda*.

92 Stefano Harney and Fred Moten, *Undercommons*. Minor Compositions, 2013 p 26.

93 Félix Guattari, *The Three Ecologies*, The Athlone Press, 2000, p. 41. "Here we are talking about a reconstruction of social and individual practices which I shall classify under three complementary headings, all of which come under the ethico-aesthetic aegis of an ecosophy: social ecology, mental ecology and environmental ecology".

94 Jason W. Moore, *Capitalism in the Web of Life* (2015), p. 206.

"The *Anthropocene* makes for an easy story. Easy, because it does not challenge the naturalized inequalities, alienation, and violence inscribed in modernity's strategic relations of power and production. It is an easy story to tell because it does not ask us to think about these relations at all. The mosaic of human activity in the web of life is reduced to an abstract Humanity: a homogeneous acting unit. Inequality, commodification, imperialism, patriarchy, racial formations, and much more, have been largely removed from consideration. ... Are we really living in the *Anthropocene*, with its return to a curiously Eurocentric vista of humanity, and its reliance on well-worn notions of resource- and technological-determinism? Or are we living in the *Capitalocene*, the historical era shaped by relations privileging the endless accumulation of capital?"

capitalocenic understanding of the edaphosphere, but translated that into action. "The Weapon of Theory" and "Our people are our mountains" are not metaphors in the least, rather words cast as deeds. Data collected over years processed into an armed epistemology.

The original matter is no longer only the rock but also shrapnel and gunpowder building a soil library for a geoliteracy. Stones and pebbles composting into a theory traversing Marx's *Metabolic Rift*, Liebig's critique of capitalist agriculture, anticipating Flusser's perverse *gesture of planting*. All grounded in the contention that European riches and accumulated capital come at the expense of colonized subjects and their exhausted soil. This historical blindspot of the western "Theory of Value" pointed at by Denise Ferreira da Silva is also well synthesized in Jennifer Wenzel's equation,⁹⁵ inverting the "Third World" deficits fabricated by neocolonial accounting where *Africa will have paid at least four times for the development of the First World*.⁹⁶

At the same time contradiction and self-criticism were essential for Cabral as he clearly states in the opening of his contribution in Havana, in 1966 — *We note, however, that one form of struggle which we consider to be fundamental has not been explicitly mentioned in this programme [...]. We refer here to the struggle against our own weakness*.⁹⁷ One of those weaknesses was certainly the use of a national model based on a colonial paradigm, the fragility of which became evident in the descent into neocolonialism after independence.

My reading of Cabral's scientific, economic and political writings proposes to understand 'meteorisation' as an operational tool in a permanent struggle that is the only possible state of liberation. Cabral was not advocating for a utopian postcolonial oppression-free future from which reparation would follow, but was rather preparing militants, language and soil for a permanent becoming, one that even then could confront threats to the environment, anticipating what has been named the 'Capitalocenic' Earth epoch. The current situation in Guinea-Bissau is one of slow neoliberal takeover of territory by multi-nationals, upgrading historical extractivist models to new global

95 Denise Ferreira da Silva, 1(life) ÷ 0 (blackness) = & - & or &: On Matter Beyond the Equation of Value, *e-flux Journal* #49 □ February 2017, p 9.

96 Jennifer Wenzel, *Reading Fanon Reading Nature* "[...]once in human capital through the slave trade; again in natural capital in the extraction of resources during high imperialism and after; again in financial capital (and the social costs of structural adjustment) through debt-servicing in the era of development and neoliberalism; and finally in the disproportionate effects in Africa of climate change that is largely caused by carbon emissions elsewhere".

97 Amílcar Cabral, *The Weapon of Theory* (Address delivered to the first Tricontinental Conference of the Peoples of Asia, Africa and Latin America held in Havana in January, 1966).

corporate-colonialist systems, rendering again the complex alluvium ecologies as a contemporary terra nullius. 'Our people are the mountains' is a counter-extractivist mindset, an animistic activation of the soil, a convocation of various knowledges and a negation of coloniality. A tool operating the coequality of two organisms — people/mountains — fused by *meteorizations* and *negation-existences*. The negation of the rock to give rise to the soil; the negation of the soil to give rise to life; the negation of life to give rise to riches; the negation of riches to give rise to uprisings. The mountain is at war. Armed struggle is not a stage upon which to kill, but a state of exception to encircle and centrifugally expand another type of cognitive mode and an awareness of a permanent *mesological* state of war. A soil reclamation. The inscriptions on and in the palimpsest of the soil tell narratives of both the wretchedness and the liberatory potency of its humus. It matters what matters matter matters.

Berlin/Bissau, May 2019

The content in this text was researched over several years and appeared in several versions, under different titles and formats such as public readings, films and printed matter. It is deeply indebted to conversations with Diana McCarty, Clara López Menéndez, Ros Gray, Shela Sheikh, Olivier Marboeuf, Volker Pantenburg, Tobias Hering, Suleimane Biai, Stefanie Schulte Strathaus, Aissatu Seide, Flora Gomes, Sana na N'Hada and many other 'ciné-kins' in the context of the project Luta ca caba inda. This version was edited with Onur Çimen. Thanks to Luís, Mark and Rosa for their care.

À Présent, on n'Attend plus la Pluie

Bouba Touré

BOUBA TOURÉ was born in 1948 in Tafacirga near the Senegal river in the former French Sudan that became Mali, and lives in Paris, France and Somankidi Coura, Mali. He is a photographer, a projectionist, and a peasant activist. He went to school in Tambacounda, Senegal, before emigrating to France in 1965. Touré lived in the migrant worker hostel Foyer Pinel in St Denis. From 1965 to 1970, he worked in the factory Chausson and took part in the strikes from 1966 to 1969. After studies at the University of Vincennes and in Montrouge in 1969, he worked from 1971 as a projectionist at Cinema 14 Juillet Bastille and at Cinema L'entrepôt, Paris. A photographer since the late 1960s, Touré has been documenting the lives and struggles of migrant workers' movements, as well as the foundation of the agricultural cooperative of Somankidi Coura in Mali. Since 2008, this working photographic archive has been complemented by video productions. Touré co-founded the ACTAF (Cultural Association of African Workers in France) in 1971 and the Cooperative of Somankidi Coura in 1977. In 2015, he published his novel *Notre Case est à Saint Denis* (Our House is in Saint Denis, Éditions Xérogaphes). Since the 1980s, Touré has exhibited works and given talks in France, the UK and Germany in associative and migrant workers housings' circles (foyer) and more recently together with Raphaël Grisey at the Contemporary Art Center Les Églises, Chelles, France; Caméra des Champs Festival, France; Arsenal Kino, Documentary Forum, HKW, Germany; and Archive Kabinett, Germany; Kunsthall Trondheim, Norway; Forum Festival Kàddu Yaraax, Senegal; 9thContour Biennale, Belgium, amongst others.

First published in: Uriel Orlow, *Soil Affinities*, 2019, Shelter Press.

Je suis Bouba Touré. Venu en France en 1965. J'avais 17 ans. Et comme beaucoup d'entre nous à cette époque, je ne fréquentais pas l'école. J'ai quitté mon village pour des raisons économiques, comme la majorité d'entre nous, les villageois d'Afrique de l'Ouest, du Mali, du Sénégal et de la Mauritanie. Hélas, nous étions les premiers de cette partie du continent à immigrer en France, dès l'année 1958. C'est mon père qui voulait que je vienne travailler afin que je lui envoie de l'argent. Certes, j'étais jeune mais, dans ma société, un garçon devient un homme dès qu'il est circoncis! Une fois arrivé en France, j'ai travaillé à l'usine Chausson, à Gennevilliers. Une usine de métallurgie. C'est là que j'ai eu ma prise de conscience politique. 1968 était passé par là! Dans mon usine, la CGT était majoritaire. Grâce à mes camarades de travail, j'ai compris que nos conditions de vie dans les foyers n'étaient pas normales et qu'on devait lutter pour les améliorer: plus de 20 hommes dans une chambre, c'était inhumain! C'est ça que nous vivions.

J'ai travaillé à l'usine Chausson de 1965 à 1970. En 1973, notre région (Kayes, Mali) a connu une très grande sécheresse qui a fait des victimes dues à la famine. Beaucoup des bêtes sont mortes. Cette situation nous a profondément bouleversés. Nous avons pris alors conscience que seul le système d'irrigation pouvait éviter une future catastrophe. Au sein de notre association, l'ACTAF (Association culturelle des travailleurs africains en France), nous avons réfléchi pour trouver une solution à long terme. Le maraîchage apparaissait comme la seule solution. Nous avons sollicité les trois gouvernements touchés par le départ massif des jeunes vers l'Europe: ceux du Mali, de la Mauritanie et du Sénégal. Le fleuve Sénégal traverse ces trois pays. La Guinée en fait également partie, mais ce pays n'était pas encore concerné par l'émigration, à cette époque-là. Le Mali nous a proposé de nous accueillir sur son sol et de choisir un lieu pour notre projet de maraîchage.

Maintenant que nous avons trouvé une terre, il fallait nous organiser. En 1975, nous avons pensé qu'il était nécessaire de faire un stage pour six mois chez des paysans en France, avant de nous engager ailleurs. On s'est retrouvés 14 volontaires très engagés! Moi, j'ai travaillé un mois dans une famille paysanne dans les Ardennes, à l'est de La France. Un mois très riche humainement et intellectuellement! C'était la première fois que ces petits, nés dans un environnement loin des villes, voyaient un Africain. Et pour moi, c'était la première fois que je me retrouvais dans la campagne française. J'ai découvert des paysans bien équipés en matériel agricole. Bien que je vienne du monde paysan en Afrique, c'était en France complètement différent. Ces céréaliers se plaignent toujours que l'État ne les aide pas assez et que les machines agricoles coûtent trop cher! J'ai passé un mois très intéressant au cours

duquel j'ai appris des choses sur le monde rural français. Heureusement que l'ACCIR (Association champenoise de coopération interrégionale), l'association champenoise de notre contact, avait organisé ce stage préliminaire, pour nous préparer à nous adapter aux exigences du monde agricole. Pas de week-ends, pas de fêtes! Quand il y a le travail aux champs, on travaille! En 1976, l'ACCIR nous a trouvé des familles, chez lesquelles nous avons effectué six mois de stage, entre mai et novembre. Tous nos maîtres de stage étaient installés dans l'est de la France. Moi, j'étais aux Grandes-Loges, dans le département de la Marne, à quelques kilomètres de Châlons-en-Champagne. Là aussi, j'ai fait une découverte importante sur la vie de ces gros céréaliers. Mon maître de stage, M. Janson, élevait jusqu'à 9 000 poulets de chair! C'était un aviculteur très connu dans la région de la Marne. Je suis donc devenu aviculteur en revenant au Mali, en 1977. La famille Janson m'a accueilli comme son fils. Nous continuons à entretenir aujourd'hui des liens très forts, même si M. Janson n'est plus de ce monde. Paix à son âme! Je suis très fier de lui car il fut le premier maître de stage à venir nous voir au Mali dès notre arrivée, en 1977. On était en plein dans les travaux et il a vécu avec nous pendant un mois, dans des conditions pas confortables du tout! Pour moi, il est immortel comme tous ceux et celles qui sont ou étaient importants pour moi! Merci à lui, à sa famille, et à tous les amis-paysans de la Marne, grâce auxquels nous avons pu faire notre village, Somankidi Coura, au Mali.

Après ces six mois de stage, les 14 volontaires sont rentrés en Afrique, au Mali, au Sénégal, en Guinée et en Haute-Volta, le Burkina Faso actuel. Après quelques semaines dans nos familles, nous nous sommes tous retrouvés au village de Somankidi, à 15 kilomètres de Kayes, sur la rive droite du fleuve Sénégal. L'État du Mali nous avait autorisés à faire des travaux sur 60 hectares de terre. La terre appartenait à la famille Diabira de Somankidi. C'est cette famille qui nous a autorisés à nous installer là et à créer la Coopérative de Somankidi Coura. On était les premiers à faire du maraîchage, dans la région. Nous avons commencé les travaux le 16 janvier 1977.

LA CONSTRUCTION DU VILLAGE

Il y a eu de grandes étapes de construction du village. Avant qu'on arrive, au moment où nous avons fini notre stage, il n'y avait rien. C'était la brousse. Première étape, les villageois de Somankidi nous ont reçus. Ils nous ont donné des cases où nous avons dormi pendant six mois. Pendant ce temps, nous faisons le va-et-vient entre Somankidi et le périmètre alentour. Il n'y avait rien du tout. Quand nous avons décidé de

ne pas faire le va-et-vient toute notre vie, nous avons construit le village à côté du périmètre. Ce fut une autre étape que les demandes de terrain pour construire le village. Ils nous ont autorisés à construire le village juste à côté du terrain. On était 14 seulement. On avait fait des équipes pour l'organisation de la construction. Il fallait confectionner les briques. Pour aller vite, nos premières maisons étaient en krinti, du bambou crépi avec de la terre, mais malheureusement, avec les termites, ça n'a pas tenu, tout a été bouffé. Mais nous, on ne savait pas tout ça. On aurait pu faire un traitement avec du talc mais on ne savait pas. On a quitté Somankidi pour aller habiter à Samé, le village juste en face. On a défriché, dessouché, déblayé le sol en équipes. Certains travaillaient sur le terrain du périmètre, d'autres pour la construction du village. Comme on avait cotisé un peu d'argent avant de partir, on a embauché quelques jeunes avec les maçons pour que le village se construise petit à petit. Ce n'était pas le village traditionnel africain. Dès notre arrivée, dès qu'on a choisi l'emplacement du village, on a planté des arbres. Il y avait 14 maisons, construites de cette manière.

Nous avons commencé les travaux le 16 janvier 1977 et, au mois de juin, nous étions presque au top. Nous avons eu de la chance parce que tous les jeunes de Somankidi sont venus nous donner un coup de main, pas pour le défrichage et le dessouchage que nous avons faits tout seuls mais pour déblayer le terrain, enlever les souches, les arbres, ce qui demandait beaucoup de main-d'œuvre. Au mois de juillet, au moment de la saison des pluies, on était au top. C'est surtout la construction du canal qui nous a pris du temps parce qu'on l'a construit avec la technique de détournement des eaux des rivières, et personne n'avait jamais vu ça. On a aussi eu la chance d'avoir un gars; vous savez, au Mali, après l'indépendance, le premier dirigeant a pris l'agriculture au sérieux, et nous avions alors beaucoup de jeunes formés à ces techniques-là. Nous avions des techniciens dans toutes les régions et quand on est arrivés, ils nous ont mis des techniciens à disposition, bien que ce fût la dictature et qu'eux soient des militaires, mais, quand même, l'agriculture était prise au sérieux. Un des techniciens, qui était topographe, nous a dit que si on n'avait pas de moyens, au lieu d'utiliser du ciment, la terre des termitières est très bien. Je ne sais pas comment il a appris ça. Et ça nous a pris beaucoup de temps mais au mois de juin, on était prêts. Nous avons commencé l'irrigation après la saison des pluies, on s'est dit qu'on n'allait pas irriguer pendant qu'il pleut, pour l'économie de gasoil, etc. On avait une pompe et on a attendu après la saison des pluies, ou contre-saison, pour commencer les cultures maraîchères.

LE TYPE DE CULTURE

Notre préoccupation, c'était la culture vivrière. La première culture, à notre arrivée, c'était le maïs, le mil parce que c'est la consommation de la région. C'est ce avec quoi on était nourris quand on était petits. Les légumes, ça a été plus tard, une fois qu'on a commencé à ce niveau-là. Et c'est pour ça qu'on a fait le canal, car il n'était plus question d'attendre la pluie. Après la saison des pluies, on faisait le maïs, le riz et l'arachide pour les femmes. Après ça, on a commencé à faire des légumes, des salades, des tomates, des concombres. C'était révolutionnaire dans la région, à l'époque, on ne connaissait pas du tout ça. On a eu de la chance d'avoir comme première clientèle, à Kayes, les bonnes sœurs de l'église.

Assurer notre autosuffisance alimentaire, c'était le principal. L'excédent, c'était autre chose. Quand j'étais en France, j'envoyais l'argent à mon père pour acheter le mil, le maïs, etc., mais quand on est arrivés, on s'est dit qu'on ferait d'abord la culture vivrière pour notre consommation, et le reste serait distribué à nos familles.

POURQUOI UNE COOPÉRATIVE

Au Mali, le gouvernement voulait vraiment développer les coopératives pour que les paysans s'organisent mais, malheureusement, il n'a pas eu le temps. On est huit ans après 68 et c'était un gouvernement qui n'était pas d'accord avec la France. Je reviens à la politique française, mais tout gouvernement qui n'est pas d'accord avec la France ne reste pas longtemps. La France a organisé le coup d'État. Donc, ce système de coopérative existait déjà depuis 1960. Notre premier nom était JRF, Jeunesse rurale du fleuve. Nous avons décidé, en France, de nous appeler comme ça, évidemment, on était jeunes. Mais ce n'était pas encore un statut de coopérative. À Kayes, il y avait des techniciens de l'agriculture qui s'occupaient de ces différents statuts. L'un d'eux est venu nous voir pour nous expliquer qu'il fallait que nous ayons un statut de coopérative pour être reconnus par l'État. Il nous a dit : « Jeunesse rurale du fleuve, ça n'est pas bon, vous n'allez pas rester jeunes longtemps, comme moi » (rires). Ce qui était juste.

Il nous a proposé un certain nombre de statuts, très nombreux. Nous avons choisi CAMS, Coopérative agricole multifonctionnelle de Somankidi. Avec ce statut, nous pouvions faire de l'élevage, de l'agriculture, le maraîchage et même vendre des voitures au nom de la coopérative, dans la mesure où c'est multifonctionnel. En 1985, nous avons créé une structure régionale, l'URCAK, Union régionale des coopératives de la région de Kayes, pour organiser les maraîchages qui commençaient à être nombreux afin d'éviter que nous nous retrouvions

tous au marché. Si tout le monde fait la banane ou les oignons, c'est problématique. Cela nous permettait de nous organiser au niveau de la production.

LE RÔLE DE CHACUN DANS LA COOPÉRATIVE

Quand on est à Somankidi Coura, on voit que les femmes ont certaines activités, les hommes d'autres, même pour ce qui concerne le maraîchage. Quand on crée une coopérative, on apprend des choses tous les jours. Un exemple : on a eu une clientèle du côté Sénégal pour le piment. Il y a eu la grève du piment parce que les femmes récoltaient les piments en tant qu'ouvrières. Or elles ne voulaient pas continuer à être ouvrières mais membres à part entière de la coopérative, et elles avaient raison. Elles ont gagné la grève du piment, elles sont depuis membres à part entière de la coopérative. On fait presque la même production, on n'a pas les mêmes besoins que les femmes au niveau organisation, donc il vaut mieux que chacun s'occupe de son domaine. Les femmes ont leurs parcelles pour mettre les produits qu'elles veulent, on a tous le même champ. La chance qu'on a, c'est qu'on ne bouge plus du village, les gens viennent acheter. L'avènement des portables nous a beaucoup facilité, les gens téléphonent pour nous dire : « J'ai besoin de tant de gombos, tant de tomates, d'aubergines, de bananes », et si c'est le moment de récolter, on dit « Tu peux venir tel jour ». Tout est précis, maintenant, ce n'est plus comme avant, où on ramassait et on allait attendre au marché, c'est fini. C'est une révolution.

Le village de Somankidi était différent des autres villages par beaucoup d'aspects. Nous, les 14, on s'est connus en France, c'est après notre prise de conscience du problème que nous nous sommes retrouvés au sein de l'association, dans laquelle on était plus de 200. C'est surtout la grande sécheresse de 1973 qui nous a vraiment réveillés. En 1973, il y a eu une grande sécheresse au Sahel, les gens mouraient de faim. Ce qui nous a choqués, c'est qu'en étant au bord du fleuve, il y avait des gens qui avaient faim. Ce n'est pas normal, il y a de l'eau ! Donc c'est là que l'idée de faire des cultures maraîchères, irriguées, est arrivée. C'était complètement révolutionnaire. Nous venions de différents horizons et notre histoire n'avait rien à voir avec l'histoire locale. C'est la raison pour laquelle notre village était complètement différent d'un village traditionnel, qui n'est pas du tout organisé pareil. La grande différence, c'est aussi que nous, on n'attendait pas la pluie. On était les premiers mais aujourd'hui, il y a des maraîchages partout, tout le long du fleuve. L'OMVS, l'Organisation de mise en valeur du fleuve Sénégal, qui comprend le Mali, la Guinée, la Mauritanie et le Sénégal, veut

organiser, tout le long, des cultures et je trouve que les gouvernements ont raison, ces terres-là ne doivent pas rester comme ça. Malheureusement, bien que dans notre coin l'immigration soit très forte, tous les jeunes sont partis. Mais quand même, il y a la possibilité de faire le maraîchage. L'autre particularité de Somankidi Coura est que l'agriculture est naturelle, biologique, il n'était pas question, depuis le départ, d'utiliser les produits chimiques. On n'avait pas de moyens, mais aussi, maintenant, on a pris conscience de la nocivité de cette histoire-là. On ne fait que de la culture biologique avec ce qu'on ramasse chez les bêtes, le compost.

La question de l'accueil de la coopérative par les autres villages, à l'époque, est très importante. Dans notre zone, on n'avait jamais vu quelqu'un quitter la France pour faire de l'agriculture. La réaction de mon père, qui est pulaar, a été une réaction économique, il s'est dit : « Qui va l'envoyer, l'argent ? » mais il n'a pas vu l'avenir. On a vu, bien qu'on était jeunes, que l'avenir ce n'est pas d'envoyer de l'argent, d'envoyer des mandats. Les villageois proches nous regardaient bizarrement. Ils font tout pour que leurs enfants aillent réussir en France et nous, on quitte la France pour venir faire de l'agriculture. Ils se posaient énormément de questions. Ce n'est pas seulement eux, c'est la raison pour laquelle nous avons eu des problèmes ou plutôt une méfiance terrible de la part du gouvernement. Ils ne croyaient pas en notre sincérité, c'est pourquoi on était très surveillés. Mais moi je le comprends bien, parce qu'on peut se dire : « C'est bizarre, ça, des gens qui quittent la France pour venir faire l'agriculture ».

Vous savez, chez nous, quand on parle le français, ça veut dire qu'on est allé à l'école, et quand tu es allé à l'école, chez nous, tu ne retournes pas au village pour faire de l'agriculture. La population n'avait pas bien compris notre démarche, au départ. Mais ils ont bien vu que notre détermination, c'était pour quelque chose ; il n'était pas question que l'eau de ce fleuve, sans barrage à l'époque, se jette dans l'Atlantique à Saint-Louis sans qu'on l'utilise.

IDÉOLOGIE POLITIQUE

Mon parcours personnel fait partie de mon engagement politique. On voulait donner un exemple dans nos pays, et ça a réussi! À présent, on n'attend plus la pluie, grâce au système d'irrigation mis en place dans tous nos pays, au bord du fleuve Sénégal. Et, surtout, lutter contre le départ de nos jeunes des villages. Cela fait maintenant quarante ans que nous nous battons pour que l'autosuffisance alimentaire devienne une réalité pour nos pays. Non, les mandats ne développent pas un pays! C'est notre certitude!

Nous étions tous soixante-huitards! Dans notre groupe, la raison même de l'association créée en 1971, c'était la lutte des pays lusophones, l'Angola, le Cap-Vert, la Guinée-Bissau et le Mozambique. Ces luttes-là nous ont beaucoup éveillés, politiquement, en tant que Maliens, Sénégalais prétendument indépendants, même si ce n'était pas l'indépendance, mais au moins, il n'y avait pas les tueries de masse que les Portugais commettaient dans ces pays-là. En ayant les images de tout ça, nous avons créé le comité de soutien aux luttes dans les pays lusophones, mais on était énormément surveillés par la police française. Le Portugal massacrait la rébellion avec le matériel français. Combien de fois nous ont-ils confisqué les films sur les luttes dans ces pays-là pour les projections dans les foyers? Donc après, nous avons créé l'ACTAF, l'Association culturelle des travailleurs africains en France, comme comité de soutien au nom de la culture.

Nos collaborateurs, nos copains, c'était la gauche française, surtout le PCF. Quand j'étais à l'usine, arrivant à peine de mon village, je ne savais même pas ce que c'était un syndicat. Dans mon usine, la CGT était très forte et j'ai adhéré, mais je n'ai jamais été militant. Le Parti communiste soutenait les luttes de libération de ces pays lusophones. Tout cela nous a aussi réveillés sur le type d'indépendance que la France nous a prétendument accordée. La preuve, le franc CFA géré par la Banque de France appartient à la France. De Gaulle l'a dit clairement : « Vous aurez votre indépendance politique, peut-être, mais pas économique ». Les Africains sont encore soumis au poids économique de la France qui les exploite. Quand un président africain veut de l'argent, c'est la Banque de France qui lui prête. C'est pourquoi, actuellement, les Africains veulent sortir du franc CFA, qui veut dire Colonie française, en Afrique. À l'époque, donc, nos collaborateurs militants, c'était la gauche française. Alors qu'on luttait dans les foyers, combien de fois Mitterrand a visité ces foyers dans les années 1970 et rencontré les comités de locataires en lutte. À l'époque, dès qu'on luttait, on pouvait être facilement expulsé. D'ailleurs, avant 68, aucun étranger n'avait le droit de se syndiquer, même moi qui suis venu avec la nationalité française. En 68, on a obtenu que tout travailleur puisse se syndiquer sans être licencié par son patron.

PANAFRICANISME

À propos des relations panafricaines à cette époque, beaucoup de gens de ma génération ont compris que sans l'unité de l'Afrique, rien n'était possible. Par exemple, le Sénégal et le Mali étaient un seul pays, mais de Gaulle a tout fait, en appelant Senghor, pour que ça ne soit pas le

cas. Dakar était la capitale administrative de toute l'Afrique de l'Ouest, ce qu'on appelle l'AOF, Afrique occidentale française. Il y avait des gouverneurs dans d'autres régions mais le gouverneur général était à Dakar. C'est pourquoi, pendant la guerre, tous les Africains étaient considérés comme tirailleurs sénégalais.

Le panafricanisme, c'est quelque chose que nous avons bien compris. Pour le moment, la génération qui gouverne l'Afrique, ce n'est pas la génération qui va le réaliser mais la prise de conscience est là quand même. La génération en place comme Boubacar Keïta, Macky Sall, bien que lui soit jeune, malheureusement, il est dans le système français à fond. La nouvelle génération réfléchit bien. Moi qui viens de Dakar, j'ai bien vu la prise de conscience des jeunes de cet enclos dans lequel on nous a mis, Mali, Mauritanie, Sénégal, Guinée, etc. La création de la Mauritanie, par exemple, c'est une catastrophe pour nous. Mais la prise de conscience, à travers l'idée panafricaniste, est là.

We No Longer Wait for The Rain

Bouba Touré

I am Bouba Touré. I came to France in 1965 when I was seventeen years old. And like many of us at the time, I didn't go to school. I left my village for economic reasons, like most of us villagers from West Africa, Mali, Senegal, and Mauritania. Sadly, we were the first from that part of the continent to immigrate to France, as early as 1958. My father wanted me to work there so that I could send money back to him. I was young, to be sure, but in my society, a boy becomes a man as soon as he's circumcised! When I arrived in France, I worked at the Chausson metalworking factory, in Gennevilliers. That's where I had my political awakening. You could feel the events of 1968 had arrived there! At the factory, the majority of people belonged to the General Confederation of Labor (CGT). Thanks to my fellow workers, I came to understand that our living standards in the workers' residences were unacceptable, and that we had to fight to improve them: more than twenty men to a room, it was inhumane! That was how we lived.

I worked at the Chausson factory from 1965 to 1970. In 1973, my home region (Kayes, Mali) went through a serious drought in which many people died of hunger, and many animals died. These circumstances shook us deeply. We understood that only an irrigation system could avoid future catastrophes. In our organization, ACTAF (Cultural Association of African Workers in France), we put our heads together to come up with a long-term solution. Market gardening seemed like the only solution. We contacted the governments of the three countries affected by the massive exodus of young people to Europe: Mali, Mauritania, and Senegal. The Senegal river runs through these three countries. Guinea also belongs to this group, but at the time, the country hadn't yet been affected by emigration. Mali proposed to host us on its land and find a space for our market gardening project.

Now that we had found our land, we needed to get organised. So in 1975 we spent six months interning with farmers in France, before committing ourselves elsewhere. We ended up being fourteen very enthusiastic volunteers, and I worked with a family of farmers for a month in the Ardennes, in eastern France. A very enriching month, both humanly and intellectually! It was the first time that the youngsters there, born in a world far from the cities, saw an African person. And for me, it was the first time I found myself in the French countryside. I learned that the farmers there were very well equipped. Even though I came from a farming background in Africa, things were completely different in France. These wheat growers were always complaining that the state didn't help them enough and that agricultural machinery was too expensive! I spent a very interesting month there learning about the world of rural France. Luckily, the ACCIR (the Champagne-based

organisation that had put us in touch) had organised this first internship to prepare us for the demands of farming. No weekends, no parties: when there's work to be done in the field, you work!

In 1976, the ACCIR found families to host us for our six-month-long internships, from May to November. All of our supervisors were based in eastern France, and I ended up in Grandes-Loges, in the Marne department, a couple of kilometres from Châlons-en-Champagne. There too, I learned something important about the life these large-scale wheat growers led. My supervisor, Mr. Janson, a well-known poultry farmer in the Marne region, raised up to 9,000 broiler chickens! So I became a poultry farmer when I returned to Mali, in 1977. The Janson family welcomed me like their own son, and we remain very close, even though Mr. Janson has passed on. May peace be with his soul! I'm very proud of him because he was the first internship supervisor to come visit us in Mali when we arrived in 1977. We were in the middle of construction and he lived with us for a month in conditions that were far from comfortable! In my mind, he's immortal, like all of the men and women who have been important to me! I thank him and his family and all of the Farmer-friends of the Marne. Thanks to them we were able to build our village, Somankidi Coura, in Mali.

At the end of these six-month internships, we fourteen volunteers returned to Africa, to Mali, Senegal, Guinea, and Upper Volta, now known as Burkina Faso. After a couple of weeks with our families, we met back up in the village of Somankidi, fifteen kilometres from Kayes, on the right bank of the Senegal river, where the Mali state had allowed us to build on sixty hectares of land. The land belonged to the Diabira family of Somankidi. They allowed us to set ourselves up there and create the Somankidi Coura Cooperative. We were the first to farm in the region. We began construction on January 16, 1977.

THE CONSTRUCTION OF THE VILLAGE

The village was built in several stages. Before we arrived, when we were finishing our internships, there was nothing there. It was scrubland. First step: the villagers of Somankidi welcomed us. They gave us the huts that we would sleep in for the next six months. During this time, we would move back and forth between Somankidi and the surrounding area. There was nothing there at all. Once we decided not to spend the rest of our lives to-ing and fro-ing, we built the village right by the designated site. Requesting the land to build the village was a whole other step, but they allowed us to build the village right next to the land. There were only fourteen of us. We made teams to manage the construction. We had

to manufacture the bricks. To move quickly, our first homes were built with krinti, bamboo with earth plaster, but unfortunately, it didn't hold up to termites, and they all got eaten up. We didn't know that we could have treated it with talcum power. So we left Somankidi to go live in Samé, the village across the way. In teams, we cleared out the land, ripped out the stumps, and prepared the terrain for farming. Some of us worked the land in the delimited area, others worked the land to build the village. As we had collected a bit of money before leaving, we hired some young people alongside the brick-layers to help build the village progressively. It wasn't your traditional African village. As soon as we arrived and chose a location for the village, we planted trees. Fourteen homes were built this way.

We began construction on January 16, 1977, and by June, we were almost there. We were lucky because all of the young people from Somankidi came out to give us a hand, not for the groundwork, which we did ourselves, but to prepare the land, remove the stumps, the trees, which required a lot of physical labour. In July, during the rainy season, we were at the top of our game. Building the canal is what took the most time, as we built it by rerouting river water, something no one had ever seen before. We were also lucky to have some technical experts around; you know, in Mali, after independence, the first leader took agriculture seriously, so we got a lot of young people trained to have those kinds of skills. There were technicians in every region and when we arrived, they made some available to us; even though it was a dictatorship and they were military men, they still took agriculture seriously. One technician, a topographer, told us that if we didn't have the means to use cement, the soil from termite mounds worked just as well. I have no idea how he learned this. It took us a lot of time, but by June we were ready. We had begun irrigating after the rainy season, telling ourselves that we weren't going to irrigate while it was raining, to save money on diesel, etc. We had a pump, and we waited until after the rainy season, or counter-season, to begin cultivating farms.

FARMING MODEL

Our main focus was farming for food. The first things we farmed when we arrived were corn and millet, because that's what people in the region consumed. It's what we ate when we were little. Vegetables would come later, once we had set things up on that level. And that's why we built the canal, because it was out of the question to have to wait for the rain. After the rainy season, we farmed corn, rice, and peanuts. After that, we began to produce vegetables, lettuce, tomatoes, and cucumbers.

At the time, in that region, it was groundbreaking, unheard of. We were lucky enough to have the nuns from Kayes as our first clients. Our main goal was to ensure our self-sufficiency in food production. Surplus was another question. When I was in France, I would send money back to my father to buy millet, corn, etc., but when we arrived, we agreed that we would work on farming food for our own needs first, then distribute the remainder to our families.

WHY A CO-OP

In Mali, the government really wanted to develop co-ops to help farmers get organised, but unfortunately didn't have the time to do so. This was eight years after 1968, and we were talking about a government that didn't get along with France. I'm mentioning French politics again, but at that time any government that didn't get along with France didn't last long. France organised a coup d'état.

So, the co-op system had already been in place since 1960. Our original name was JRF, the Rural Youth of the River. We settled on that name in France, when we were young of course. We still didn't have any official set of statutes as a co-op, but there were agricultural technicians in Kayes who helped us deal with these various legal issues. One of them came to see us to explain that we had to have an official set of statutes as a co-op in order to be recognised by the state. He told us: "Rural Youth of the River, that's no good, you won't be young for long, like me" [laughter]. Which was true. He proposed a few statutes to us, quite a few of them. We chose CAMS, the Multifunctional Agricultural Cooperative of Somankidi. With this model, we could take part in livestock farming, agriculture, food production, and even sell cars in the co-op's name, as it was multifunctional. In 1985, we founded a regional branch, the URCAK, or Regional Union of Cooperatives of the Kayes Region, to unionise food producers, which there were starting to be quite a few of, in order to avoid us ending up at the market all at once. It becomes a problem if everyone's producing bananas, or onions. This allowed us to organise ourselves at the level of production.

EACH PERSON'S ROLE IN THE CO-OP

In Somankidi Coura, women took care of certain tasks, men others, even in market gardening. When you start a co-op, you learn something new everyday. For example: we had clients in Senegal who bought chili from us. There was a chili strike because women harvested chili as workers. However, they didn't want to continue being workers but fully

fledged members of the co-op, and they were right to want this. They won the chili strike, and they became fullfledged members of the co-op. We do nearly the same kind of production, but we don't have the same organizational needs as the women do, so it's best for each group to take care of their own domain. Women have their plots to plant the products they want, and we all use the same fields. We're lucky because we no longer have to leave the village, people come to us to buy. The arrival of cell phones really helped, people call to say: "I need such amount of okra, such amount of tomatoes, eggplants, bananas," and if it's harvest time, we say, "You can come on this day." Everything is precise now, not like before when we did our collecting then went to wait at the market, and that was it. It's a revolution.

The village of Somankidi was different from other local villages in many ways. We, the fourteen volunteers, had met in France, and it was after becoming aware of the problem that we took part in the organization that brought more than two hundred of us together. We came from different worlds and our stories had nothing to do with local history. That's why our village was completely different from traditional villages, which was not at all built in the same way. The main difference was also that we didn't wait for the rain. We were the first to do this, but today, there are food farms everywhere, all along the river. The OMVS, the Organization for the Development of the Senegal River, which includes Mali, Guinea, Mauritania, and Senegal, wants to build farms all along the river, and I think that governments are right to want this; that land shouldn't stay the way it is. Unfortunately, even though there is significant immigration to our area, all of the young people have gone away. Still, it's possible to make market gardening happen. The other specificity of Somankidi Coura is that its agriculture is natural, organic; from the beginning it was out of the question to use chemicals. We didn't have the means to do so, but also, now, we're aware of how harmful that whole thing is. We only do organic agriculture, using what we collect from animals and compost.

At the time, the question of other villages welcoming the co-op was a very important one. It was unheard of, in our area, for someone to leave France then come back and start farming. My father, who is Pulaar, reacted in economic terms, he asked himself: "Who's going to send back the money then," but he couldn't picture the future. We were young, we could see that the future wasn't in sending back money, sending back money orders. Some people from nearby villages looked at us strangely. They do everything to help their children succeed in France and us, we leave France to come back and start farming? They had many doubts. It wasn't just them; the government gave us trouble, or at least they were

very suspicious. They didn't believe we were honest, which is why we were under heavy surveillance. But I can understand this, because it's easy to say to yourself: "That's strange, people leaving France to come back and start farming."

For us, you know, when someone speaks French it means they've been to school, and for most people here, when you've been to school, you don't come back to the village and start farming. At first, people didn't understand our approach. But they saw that our determination had a goal; it was out of the question for this river's water, which was not dammed at the time, to flow into the Atlantic at Saint-Louis without us putting it to use.

POLITICAL IDEOLOGY

My personal journey is part of my political engagement. We wanted to be an example for our country, and we succeeded! Thanks to the irrigation systems installed in each of our countries along the Senegal river, we no longer wait for the rain. And, above all, we wanted to fight against the exodus of young people from our villages. We've now been fighting for self-sufficiency in food production to become a reality in our countries for forty years. Money orders don't help develop a country! That we can be sure of!

We were all from '68! The very purpose of the association we created in 1971 was to support the struggles of Portuguese speaking countries: Angola, Cap-Vert, Guinea-Bissau, and Mozambique. Those struggles really awakened us politically, as supposedly independent Malians and Senegalese; even if we weren't independent, at least we weren't subjected to the mass killings the Portuguese were carrying out in those countries. We created a committee to support the struggles of Portuguese speaking countries with those images in mind, though we were still under heavy surveillance by the French police. Portugal was massacring those involved in the uprisings using French equipment. How many times did they confiscate our films about the struggles in those countries for projections in workers' residences? So, after that, we created the ACTAF, the Cultural Association of the African Workers in France, as a committee for cultural support. We had many partners and friends from the French left, especially the French Communist Party (PCF). When I worked at the factory, having just barely arrived from my village, I didn't even know what a union was. As mentioned, the CGT was very powerful in my factory, and I although I joined it, I was never an activist. The Communist Party supported independence struggles in Portuguese-speaking countries. All of this also awakened us about

the kind of independence that we had supposedly been granted by France. The proof being that the CFA franc, managed by the Bank of France, belonged to France. De Gaulle himself said it clearly: “You’ll be politically independent, maybe, but not economically.” And Africans are to this day subject to the economic power of France, which still exploits us. When an African president wants money, it’s the Bank of France that lends it to him. That’s why Africans now want to get rid of the CFA franc, which stands for French Colony in Africa. At the time then, our activist colleagues were of the French left. How many times did Mitterrand visit the workers’ residences we were fighting for to meet with the committees for renters’ rights! At the time, even someone like me who had been granted French citizenship. In ’68, we succeeded in making it legal for every worker to unionise without being fired by their boss.

PAN-AFRICANISM

Regarding pan-African relations at the time, many people from my generation understood that without African unity, nothing would be possible. For example, Senegal and Mali were one country, but de Gaulle did everything in his power, even calling Senghor, to prevent it from happening. Dakar was the administrative capital of all of West Africa, what was called the AOF, or French West Africa. Other regions had their own governors but the chief governor was in Dakar. That’s why during the war, all Africans were considered to be Senegalese riflemen.

Pan-Africanism is something we have understood very well. At the moment, the generation that governs Africa won’t be the one to make it happen, though the awareness is there. The current generation – including people like Boubacar Keïta and Macky Sall, young as they may be – is unfortunately still locked into the French system. But the new generation is also putting close thought into this, and reconsidering. In Dakar, I’ve seen young people gain awareness about the enclosure we’ve been put in – in Mali, Mauritania, Senegal, Guinea, as well. The creation of Mauritania, for example, was a catastrophe for us. Pan-African awareness is here.

Women in Movement, the Patriarchy of Land

**Mirelle, Jennifer, and
Alex Ungprateeb Flynn**

With an estimated 1.5 million members, Brazil's Landless Workers Movement, or in Portuguese, the Movimento dos Trabalhadores Rurais Sem Terra (MST) is one of the largest social movements in Latin America and is currently active in twenty four of Brazil's twenty six states. Officially founded in 1984, the movement coalesced around two objectives: the struggle for a fairer society, and the means to achieve this, a programme of agrarian reform. The movement uses direct action tactics in pursuit of these goals, organising occupations of unproductive or otherwise questionably held lands while simultaneously lobbying the Brazilian government to expropriate these assets for the use of those encamped. The background from which the movement has emerged is underlined by the fact that 15% (56m ha), of the total area of 376m ha of farmland in Brazil is taken up by 0.03 per cent of holdings. As Almeida and Sánchez noted in 2000, 'it is as if just 35,083 people possessed an area equal to the combined area of France, Germany, Spain, Switzerland, and Austria'. To date, some 350,000 families have been granted land to establish largely small-scale agro-ecological farms through their participation in the MST.

ALEX UNGPRATEEB FLYNN is an anthropologist who has worked with the MST since 2007. He works on aesthetics, politics and subjectivity and has conducted ethnographic research on these issues in Brazil since 2007. Working with social movements as well as with actors from within contemporary art, his research explores how activist intervention and artistic practice can be understood as relational and transformational processes, prompting the theorisation of fields such as the production of knowledge, the configuration of the 'Global South', and the unmaking of utopian horizons. Alex has convened undergraduate and postgraduate modules at the Universities of East Anglia and Durham and is the co-convenor (with Jonas Tinius) of the Anthropologies of Art [A/A] network.

What follows is a transcription of a 2017 conversation between Mirelle, Jennifer, and Alex. Mirelle and Jennifer are mother and daughter. Mirelle joined the movement in 1996 and was encamped for nine years before being granted land. Jennifer was born in an MST occupation and is currently studying at an MST agrarian technical institute.

Mirelle: Yesterday a friend dropped by the house, and I said that you were here and that we had been talking about questions of gender within the movement. And she said to me, 'don't hide anything. We need to talk about these things. If the movement doesn't want to discuss this, we'll talk to people outside the movement and people will write about this, and we'll read it.' She said, 'I can't bear to lie anymore', in the sense of hiding things. She said, 'I'm no longer like that, and I will no longer be like that'.

We are a movement, that in some ways, and in some moments, is separate from the rest of Brazilian society. In my case there were moments when the movement really should have intervened, but it was a question of my partner at the time, and it was such a difficult situation: the question of sexism and patriarchy in the movement became so clear at that moment. My partner and the way the movement dealt with this domestic violence really showed the verticality of the MST, in that machismo, that situation. In the movement we are free, we can plant what we want, no one orders you around. But then again, in the encampments, not everyone will gain land, no.

Jennifer: The movement is made up of the people who are in it, the name MST is a connection between these people, but fundamentally, the MST is the people. So, if we think like that – the movement is made up of people – it is clear that some of these people are problematic. That means that often, you can't resolve problems through the movement, these channels can't resolve the problem, or don't want to, because there are tensions present and competing within the collective. For example, problems that have, what we might call, human dimensions, these questions generally have to be resolved through other channels. The MST as a banner needs to exist so that people have a reason to occupy land, to take up the struggle, to attach themselves to a flag and a cause, but at the end of the day the movement is the people.

Mirelle: It's not an object.

Jennifer: You can't think of the movement, with its many facets and members, as a beautiful and wonderful thing, it's not as

if this will change huge things and structures, it's not the case. Huge things? I refer here to the third dimension of the MST's struggle: to create a new society. Or even the second, to being about agrarian reform. This isn't something that is solely within our control. We can't see ourselves as separate to society: this utopia, requires the approval of society, so we can study and talk about the subject with people that want to come into contact with the movement, people who are supporters, people who support this cause, but we also need to speak with other sectors of society who understand that a new society is created through a process of construction. Agrarian reform and the MST, all together, is a utopia, it's something that drives us forward, because it would make things better, as much for us as for people in the city, but people won't know this if they are not involved as well. There is a certain conflict, I mean, the MST is a utopian movement at the end of the day. It's an impossibility, but it's also a way forward [uma saida]. Utopia is a dream, but it's also the mechanism, [o dispositivo]. But it is possible to discuss, in these small spaces, not the big ones. But the MST is also not totally utopian, I mean, you get land. You achieve agrarian reform in small spaces.

Mirelle: The process is slow. For example, with the question of psychological problems, human questions, if you discuss them here in small spaces first, perhaps you can then bring them to a bigger debate. It's always a question of trying to understand these things, we can't do these things like capitalism does, capitalism has arrived at the apse of the apse. I think we have to address how to create these discussions in smaller spaces because, for example, when you take a discussion to the plenary, to the state meeting, some subjects are taken up, but of course the majority of them are not. There is the question of imposition, people at that level, they make the choice, and that subject, particularly concerns that pertain to women, don't get taken up. There are blockages, and these blockages are the result of sedimentations [engessamentos].

Jennifer: But maybe the plenary would lose force if it took into account all these smaller questions, there are so many local differentiations. There are so many members of

the movement. The problem is that the way of thinking here among the movement leadership, it's a countryside mentality, and you know what, it's the mentality of 1990, or the period of 1984-85, when the movement started. Ok, maybe not all of the leaders, but there are many from that period who are still there. It's this question of roots: sometimes I wonder maybe we can never fully leave behind our roots, and that's why I ask myself, why did my father not respect my mother? He never lost his roots, he participated in the movement for 16 years, but his dad beat his wife, his grandad did the same. There's this question of roots, the thinking continues the same.

Mirelle: If we try and organise an event for women, well, often there's no support. Where are the men? And the men say, 'discuss it in the meeting, and we'll support it', which is a bit like, if the event happens, we'll support it, but we're not going to take an affirmative position.

Jennifer: More spaces for new questions are beginning to appear but it's not occurring on a wider level. It's on the smaller level, and they are important questions, questions that have to do with the everyday. And this is so necessary, because we can open new spaces, we renew ourselves, and the MST will not continue in this old fashioned way of thinking. Because we can study, we can learn, we can live with each other. It's that, we can't just have one way of solving things. I don't see it that way. 'For this, the movement says we have to do that etc', no it's not like that. There are diverse ways to solve things. In my own family, this question of women and violence and problems related to that, it might be that we have to resolve things through the town council, outside of the movement. So we can't say 'the MST is responsible for solving ethical and human questions'. As women we try to meet up, and we get taken to task for this 'ah, you're proposing separate meetings' – 'you're breaking the hierarchy, regional, state etc'. We struggle to create informal spaces, away from these 'instâncias', this hierarchy. But these small level discussions do make a difference. The movement is the people. You shouldn't have to sacrifice yourself for the collective.

**Who's Afraid of Ideology?
Ecofeminist Practices Between
Internationalism and Globalism**

Marwa Arsanios

MARWA ARSANIOS is an artist, filmmaker, and researcher who reconsiders the politics of the mid-twentieth century from a contemporary perspective, with a particular focus on gender relations, urbanism, and industrialisation. She approaches research collaboratively and seeks to work across disciplines.

This text was first published online on: e-flux journal #93 — September 2018. Marwa Arsanios *Who's Afraid of Ideology? Ecofeminist Practices Between Internationalism and Globalism.*

THE COMMONS MEETS NGOS

In a cooperative in Hermel, east of the Bekaa Valley in Lebanon, on the border with Syria, Khadija is running a workshop teaching Syrian women living in neighboring refugee camps how to preserve seasonal vegetables for the winter. She is cooking green fava beans on one side of the oven and tomato paste on the other. While explaining every step in the cooking process and the benefits of each vegetable, its type, origin, and local source, she pours the beans and the paste in a jar, closes it, and turns it upside down on the table. “That’s how you keep the pressure in and avoid any air leaks.” Every jar will serve as a meal for the family, with a portion of rice on the side. It’s spring and the contents of these jars will be eaten next fall or winter. Buying fava in March is very cheap, since it’s in season. “We are learning how to eat cheap and healthy,” she says while stirring the tomato paste, which has been cooking on a low fire for the past thirty minutes. “Always buy seasonal vegetables and conserve them for the coming season. Each season has its vegetables and each vegetable has its preservation process.”

I met Khadija in her cooperative, which consists of a three-room workshop and a big kitchen. It is surrounded by a plot of land that she inherited from her mother and turned into a food production cooperative, where she grows most of the crops and where women can gather, share knowledge, and learn from each other about food preservation, crop cultivation, seed preservation, and different ways of treating the soil. She has been running this cooperative for seven years, despite the local politics and the tensions with Hezbollah (the dominant party in the area), which often tries to make it difficult for her to continue with the cooperative. Meanwhile, she has continued to pursue her activities, producing seasonal jams and other food provisions that she sells to sustain the cooperative. Regarding the political tensions, she says to me: “Hezbollah could benefit from the fact that I am creating a micro-economy and transmit forgotten knowledge, but instead all they think about is how to have sole hegemonic power. They don’t want any growth that is outside of their control.” In fact, small independent organizations and cooperatives supported by international funders are usually left to do their work, unless it is believed that they oppose the dominant political power; the latter situation leads to clashes, tensions, and difficulties, such as indirectly pressuring the farmers to slow down their work or to stop it completely.

This cooperative is funded by USAID (United States Agency for International Development) and has collaborated with different groups since 2013, especially humanitarian refugee organizations. When Khadija was approached by USAID (as part of their program to fight

hunger), she was already known for her skills and knowledge regarding the edible and medicinal wild plants she gathers. It is an old practice that many women carry on. Usually it is transmitted to them by their mothers or another elderly woman in the family.

Khadija opens a folder where she has gathered an extensive archive of dried wild edible weeds. She has a precise knowledge of the use and medical benefits of each plant. “This is precious knowledge from my mother. She was also a farmer and owned this piece of land that I inherited from her.” After each workshop on cheap, healthy food and edible wild plants, the products are equally divided between the women to feed their families.

Since 2012, the flow of refugees from Syria has led about fifty international NGOs to set up camp in the Bekaa region. As the immediate crisis-solving apparatus, they settled in the area with the highest density of refugees. The few food cooperatives and NGOs run by women in the region became spaces where the transmission of knowledge happens. A few have begun to be used as support spaces for refugee women, in collaboration with humanitarian NGOs.

Before 2011 and the eruption of the Syrian revolution, these kind of initiatives (mostly funded by USAID and the EU) had found their place on the map of Lebanon’s eco-conscious urban middle class. In urban areas they could sell produce to restaurants and directly to customers at farmer’s markets. After 2011, many employed low-wage Syrian women, turning the cooperatives into fully-fledged businesses or transforming themselves into useful spaces for women from the camps—sometimes both.

The cooperative Khadija runs seems to want to reinforce the politics of the commons through the transmission of a knowledge that is embedded in a very specific geography and seasonal landscape. This knowledge of wild plants, often considered “bad herbs” in modern agricultural practice, is at the core of this cooperative.

What makes this construction of the commons possible in this case is in fact the global aid economy (USAID funding). The cooperative cannot fully sustain itself yet, since the food and herbs it produces doesn’t bring in enough money.

Many nongovernmental women’s organizations have emerged in the Arab world in the past twenty years, and even more since 2011 to deal with the refugees crisis, a lack of nutritional resources, domestic violence, and women’s health issues. Though some do not present themselves as explicitly feminist, many deal with women’s issues or create spaces that specifically support women. Others more directly present themselves as feminist through research, discourse, and knowledge production. Often compensating for a lack of state structures,

NGO structures work within the global economy and produce discourses that travel within and are shaped by this global economy. While many of these small initiatives adopt a language of “empowerment,” “development,” “economic independence,” and “women’s entrepreneurship,” they also function within a very small locality, and their political struggle often becomes isolated in local politics. Gender essentialism—“women’s empowerment”—overtakes any class or race discourses, which are at the core of internationalist feminist politics. “Global womanhood” becomes a category or a class in itself. Hunger is separated from class and from the failure of states to provide and distribute wealth equally. The main political aim becomes fighting hunger, without any reflection on what has caused this hunger—for example, the failure to subsidize farmers’ material needs; the historical mismanagement of water distribution, which has led to drought in many areas; the overexploitation of underground water (like in the Bekaa valley); the distribution or subsidization of fertilizers for farmers, which over many years has damaged the soil; toxic waste polluting the water; and more generally the laws around property or land ownership, which favor the few at the expense of the many. NGOs do not address this mismanagement at the state level; instead, they try to compensate for it.

“Entrepreneurship” and “independence” become the ultimate goals of women’s emancipation, privileging narratives of individual achievement (as in the case of Khadija’s co-op); rather than demanding redress from the state for its failure, individuals are expected to bear the responsibility building structures to make up for where the state has failed. Terms like “empowerment” are used to describe these projects, which really only emphasize “powerlessness” and corner women into a narrative of victimhood. The mission of NGOs is then to intervene in order to empower the victim and “save her,” without taking into consideration the existing and historical collective support networks among women—especially among women farmers; this ill-considered intervention often risks breaking up these networks in order to single out individuals and support them. These nongovernmental structures, functioning within the global capitalist economy, produce an apolitical managerial discourse that risks erasing the existing struggles of feminists.

In 2008, as the price of cereals doubled across the world leading to hunger riots in Egypt (April 2008), Syria's policy of food self-sufficiency pursued since the Ba'athist revolution of 1963 appeared vindicated. Syria had the most thriving agriculture of the Middle East. It was highly subsidized and accounted for up to one third of the Gross Domestic Product and employing up to a third of the working population. It enabled almost half of the nation's inhabitants to stay in the countryside, especially in the North East of the country, the Jazira, which is the source of two thirds of cereal and cotton production, partly thanks to irrigated zones developed as part of the State Euphrates Project. However, this achievement was in question after three consecutive dry years (2008–2010), in which Syria had to receive international food aid for nearly one million persons, its emergency cereals reserves were exhausted and tens of thousands of peasants fled to main city suburbs in search of informal work. Its agricultural work force may have dropped from 1.4 million to 800,000 workers in this period. Some believe this is also linked to the dismantlement of Syria's socialist agriculture.

Myriam Ababsa, "Agrarian Counter-Reform in Syria (2000–2010)"¹

One immediate trigger of the 2011 uprisings throughout the Arab world was the increase in the price of bread and other nutritional basics due to the failure of self-sufficient agricultural production. Movements, whether grassroots or opposition parties (such as the Muslim Brotherhood in Egypt), were met with repressive state violence, and in the case of Syria this has led to the ongoing war, the displacement of about six million people, the killing of half a million, thousands of rapes and abuses against women, disappearances, torture and unaccounted deaths in the regime's prisons, the use of chemical weapons by the regime—all this without having a clear account of the consequences of this violence in the domestic sphere, and without having a clear account of the damage and violence inflicted upon animals, trees, plants, water, and the land. The demands of the uprisings, from very basic food and economic needs to human rights, have been met with brutal crackdowns. States reacted to their own collapse with violent repression. (The one exception might be Tunisia, where certain laws that used to enshrine gender inequality have been abolished.)

¹ In *Agriculture and Reform in Syria*, ed. Raymond Hinnebusch (University of St Andrews Centre for Syrian Studies, 2011), 83.

The lack of capacity to produce cereal and to meet the demand for bread was one of the factors that finally cracked the repressive regimes' system of control. In the case of Syria, this lack was partly due to the slow dismantling of socialist agriculture and to the ensuing liberalization process, most apparent after the reforms of the 2000s. Could we talk about a failure of the agrarian revolution's ideal of self-sufficiency? We can certainly talk about a failure of the whole ideological apparatus that brought about the agrarian revolution, with its industrialized monoculture. Perhaps we can talk about the failure of the myth that monoculture will resolve the problem of hunger. Within the ecology of uprisings, the question of agriculture and the dismantling of the socialist agrarian revolution was at the core of the ideological failures of the repressive regimes. The anti-hunger program that Khadija's cooperative is part of comes in the wake of this slow dismantling of the self-sufficiency ideal.

On the one hand there is a broad network of women's NGOs spread across the region, which are dealing with the immediate consequences of the refugee crisis. On the other hand we have witnessed the emergence, in the Kurdish area of northern Syria, of a feminist and ecological agenda that is nonetheless in a precarious situation, since it depends on an alliance with Washington, which allied with the Kurdish forces in order to fight ISIS. Though we should not necessarily compare the Kurdish struggle to the rest of the Arab uprisings—since the Kurdish autonomous women's movement has been organizing for forty years—new potential was given to this movement by the Syrian regime's loss of full control and by the 2011 revolts. The Kurdish experiment in autonomous governance (a bottom-up democratic confederalism) might have to shift from its current form, as the Syrian regime is unlikely to accept a regional fully autonomous government. But what is certain is that it has already established and institutionalized a feminist and ecological popular movement.

Perhaps the already established agricultural cooperatives and ecofeminist projects will be able to tackle the failures of the agrarian revolution, poised as they are to renew the ideal of self-sufficiency.

NO-STATE SOLUTION, AUTONOMY, AND NGOS

Pelshin is a guerilla fighter. We set up a meeting with her in one of the women's houses in Sulaymanyah, Iraqi Kurdistan. She happened to be in the city because she was undergoing a foot operation. She was walking with crutches but remained surprisingly nimble, moving alongside me at a normal pace and climbing stairs without help. We sat with her for

about five hours, first discussing a text she wrote about ecology during wartime, and then conversing freely for the rest of the time. I was trying to understand how the ecological paradigm is practiced in the communal life of the guerillas, how it is inseparable from the feminist paradigm and the gender struggle, how all these paradigms were made possible structurally through different organizations and committees, through the production and transmission of knowledge, and through the relation between this knowledge and praxis.

Pelshin:

There is a contradiction between ecology and war. When I joined the guerrillas twenty-four years ago, I entered a war atmosphere. The conditions were such that you sometimes needed to cut parts of trees, to have something to lie down on or to protect yourself from animals. The understanding of ecology in the women's movement was strongly influenced by these kind of experiences and contradictions. Our ecological consciousness within the movement evolved within our communal life in these conditions of war.

There's always a strong parallel between the massacre of nature and that of women. We, the women's movement, had to protect our existence.

I was in the mountains of Dersim for three years, where there are a lot of mountain goats. We were hungry many times during those three years, but only once did we kill goats for food. That is a rule of the guerilla.

I want to point out something about my personal experience. I remember my childhood. My first ecological teacher was my mother. She taught me that we as humans have a place in nature, like trees and birds. I have the right to exist, like all other species in the same place. You shouldn't hurt the earth, you should protect it. Don't kill trees, don't kill animals. But we are the children of the twentieth and twenty-first centuries, so it took a long time for this philosophy to reach us. But these things transmitted by my mother are the signs of this old philosophy.

Pelshin is one of the ideologues of the women's movement. She serves on multiple committees; one of them is the *jineology* committee (Kurdish for "the study of women"), which is a project to rewrite the history of science from the perspective of women. The committee also

publishes a quarterly journal, *Jineology*. Thinking of different paradigms of the communal life within the party and the relationship between knowledge, ideas, and practice, Pelshin presents us with so many contradictory ideas and situations from guerilla life. How to inhabit these contradictions? In the case of the autonomous women's movement, the conditions of existence are in complete contradiction with the ecological paradigm, due to the war situation. But the ecological paradigm itself and the way it is practiced were born from the guerillas' communal situation and their life in the mountains.

The gender struggle within the Kurdish guerilla movement began forty years ago. Since then the women's units have built a solid autonomous structure on an ecofeminist and socialist foundations, following the "cutoff theory," which calls for the establishment of all-female units separate from male units, in order to build an independent female structure and leadership. The Kurdish movement has been influenced by Murray Bookchin's concept of social ecology, which proposes that the world's ecological problems stem from social problems, which themselves arise from structures and relationships of domination and hierarchy. At the core of this internationalist movement is the concept of self-defense (with an ecological bent).

On the subject of self-defense—the core concept of the women's movement—I interviewed Dilar Dirik over Skype. Dilar is a member of the Kurdish women's movement. She spoke to me from her apartment in Cambridge, where she is now finishing up her doctoral thesis on the movement.

Dilar:

Self-defense actually comes from nature itself. It is something that is very organic. Every existence, whether human or not, relies on a means of protecting itself. In the human context it cannot just be in the sense of the army or states or police and so on. Rather, we must think of collective ways of protecting ourselves, because in a world in which indigenous cultures are being eradicated, in which women are being subjected to modern-day sex slavery, rape culture, domestic violence, and so on, it is simply not an option to not think about how we can defend ourselves. In liberalism, in liberal thought and philosophy in general, the expectation is that people should surrender the means of protection to the state. The state should have a monopoly on the use of force. The assumption is that you as an individual member of society should not have the agency to act because the state should decide on your behalf what is dangerous to your existence.

Look at the universe itself, how ecologies work, how environments work, how beings and existences interact with each other. They do not necessarily do so according to the social Darwinist concept of competition and survival of the fittest. Ecology is always based on interaction, on mutualism—on cooperation, if we want to use human terms. We need to understand ourselves as part of nature, but with the acknowledgment of course that the capitalist system has made us alienated from nature. In the case of the Kurds, for example, the mountains have historically always been a very strong protector of people who have been persecuted. In 2014, when ISIS attacked the Yazidis, the first thing that they did was to flee to the mountains. Landscapes, natural geographies, and water have always been sites of protection for people. This is not because nature is there to serve humans, but rather because humans are part of nature. Until the creation of states, big cities, and especially capitalism and industrialism, people understood how to live together with nature. I know this from my own grandparents' village. They have a very different relationship to the animals they raise. They sing songs to the mountains, not about the mountains. I think many different cultures, especially indigenous people, have this kind of relationship with nature, which is very much a comradeship. For the Kurds and other groups who have always understood themselves in relation to a specific geography, who have never been part of a dominant state, and who have in many ways very local ways of organizing their lives, relying on geography to survive, the relationship to nature is like a friendship rather than an alliance.

Destroying nature is part of a policy of assimilation on the part of the dominant nation-states. The less people are aware of their link with nature, the more likely they are to become liberal individuals, with loyalty only to the state. So the more we are connected to nature through geography, the more likely we are to be conscious of ourselves, be conscious of our place in the universe, our place in ecology in general. The state is actively trying to destroy that because the state is very well aware of the connection between humans and nature. The state knows that in order for it to be legitimized and justified, it needs to break this link between humans and nature.

It is important here to think about the ways in which nongovernmental organizations can learn from the autonomous women's movement, whose politics go far beyond liberal pacifist feminism. As Dilar states in her article "Feminist Pacifism or Passiv-ism?": "Liberal feminists'

blanket rejection of women's violence, no matter the objective, fails to qualitatively distinguish between statist, colonialist, imperialist, interventionist militarism and necessary, legitimate self-defense."² Could nongovernmental organizations, which often emphasize individualistic achievement, learn from the collectivist principles of the autonomous women's movement and resituate the struggle in a collective and historical context? Instead of talking about "independence" as a goal, could we think about "interdependence"? Within a neoliberal global economy, discourses on "empowerment" replace discourses on "emancipation." Rights are emphasized over demands. Self-defense becomes a legal issue that is handed over to the state.

The agricultural cooperatives that are being implemented by the autonomous women's movement specifically in Northern Syria also come as a response to years of state agricultural policies that tried to break the ties between farmers and the land through strict agricultural and land laws. The purpose of the cooperatives is now to repair this damage through the collective work that a cooperative demands.

LAND, COMMUNES, COOPERATIVES, AND SELF-SUFFICIENCY

In between wheat fields a small village is being built up. The houses are made of mud in the traditional and most sustainable way, just as they have been built here in the region for thousands of years. The newly planted garden makes a change in the landscape; little fruit trees, olive trees, tomato plants, cucumber, watermelon, paprika, aubergine and a lot of wildly growing portulac all around, needing just a little water and earth to grow. The village is called Jinwar, and it is a women's village.

With the planting of the communal garden the women are aiming to create a base of self-sufficiency for the village, but also to maintain the connection to the earth and food. In an area of quasi-desert and wheat mono-culture, being the result of the Syrian regime's policy to industrialize agriculture since the 1970s. It will change the territory, revive the ground and create an example of how a commune can live and work with the land in a sustainable way.³

This is how a women's commune that is being built in the north of Syria describes itself. It is one of the ecofeminist projects of the autonomous women's movement, striving to create self-sufficient agricultural production for the village but also trying to repair the land after a history of industrialized wheat monoculture and drought. At the

² Dilar Dirik, "Feminist Pacifism or Passiv-ism?" *Open Democracy*, March 7, 2017, <https://www.opendemocracy.net/5050/dilar-dirik/feminist-pacifism-or-passive-ism>.

³ see <https://internationalistcommune.com/jinwar/>

same time, the members of the commune are repairing themselves, their relationship to the earth, creating an intimacy with the land. This intimacy encompasses different dynamics and affective relations between humans, nonhumans, and matter.

The commune is built on state-owned land that was taken over by the autonomous government after the Syrian regime's forces were pushed out of the north. Eventually, thirty houses will be built on the land, inhabited mostly by widowed women with their children, and other women who want to live away from traditional domestic life. Most of the state-owned land was turned into agricultural cooperatives, some of which are women-only. The cooperatives are run by the farmers themselves, with technical supervision from the autonomous government's agricultural department. In this area of the country—the Jazira region—the Ba'athist regime had established state farms and cooperatives in the late 1960s. They were run by representatives who strongly supported the regime, and the cooperatives functioned as a control mechanism for propagating Ba'athist ideology. In addition, the Ba'athist regime paid the farmers a paltry monthly salary for their labor, and this intentional impoverishment was a way for the regime to maintain control over the different ethnic groups living in the area. Today, almost all of the territory formerly occupied by these state-owned farms has been taken over by the autonomous Kurdish government. There are now about fifty-eight cooperatives spread all over the region, which have helped make the region agriculturally self-sustaining for the past seven years.

It remains to be seen how many of the ecofeminist projects spearheaded by the Kurdish women's movement will survive this tumultuous period, as the autonomous region begins to negotiate with the Syrian regime over territory and resources (oil), and as reconstruction deals are made in the wake of major fighting. For all the power and success of these projects, a crucial question must be asked: Are we falling back into a gendered division of labor, where women are placed in the role of caretakers?

At a conference on “decolonial practices” held at the Akademie der Kunst in Berlin this summer, Françoise Vergès said:

Women are often put in the position of cleaning and caring for what is broken. There are fifty-three million domestic workers in the world who are cleaning the city for the white middle class ... We must think about waste and the production of waste as a capitalist mode of production. Women are now expected to clean and care for what has been broken in the earth, for the damage that has been done to the

earth, to the land. But before rushing and doing the naturalized work of “repair” and care, let's take a moment to think about how it was broken, why it was broken, and by whom.⁴

All the projects I have discussed—from the NGOs working within the constraints of the international aid economy to the ecofeminist projects of the autonomous women's movement—are necessary alternatives. But they can only exist in a more sustainable manner if the question of responsibility is articulated: Who has inflicted the damage?

The Syrian regime has pointed to drought and climate change, rather than their own crimes and corruption, as reasons for the uprisings that began in 2011. In this way, the regime has used ecological concerns to cover up its own repressive violence and intentional mismanagement of resources. In an interview with a Russian TV channel in 2016, Asma al-Assad talked about the 2008–11 drought as one of the worst in the history of the modern Syrian state and as the main reason for what she called the “crisis.”

The response to this should not be to dismiss climate change and drought as factors in the uprisings, but rather to insist that the regime should bear the responsibility for the drought—another one of its many crimes. Only then can the ecofeminist work of repair and growth begin to bear fruit.

⁴ Françoise Vergès, comments made during panel discussion at “Colonial Repercussions” conference, Akademie der Künste, Berlin, June 23–24, 2018, <https://www.adk.de/en/projects/2018/colonial-repercussions/symposium-III/programme/index.htm>.

Carework as Commons

Bengi Akbulut

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This text was first published in February 2017 on the Degrowth web-portal: <https://www.degrowth.info/en/2017/02/carework-as-commons-towards-a-feminist-degrowth-agenda/>

The debates around post-growth transitions to just socio-ecological futures – while undoubtedly variegated – all emphasize that such a transition will involve a fundamental change in the way we organize economic relations and processes. At a first glance, this implies both a *nominal* and a *structural* change with corresponding shifts in production, labor and consumption patterns. Whereas *nominal* change is understood as a reduction in the volume of material and energy throughout, *structural change* is a shift in the relative importance of economic sectors. At the same time, it also implies reorienting economic relations and processes towards other objectives than growth with different motivations.

Care and carework have gained heightened attention within this context: emphasis is put on care labor and care-centering of communities, understood not only as caring between humans, but also between humans and the non-human environment. In the words of Kallis, Demaria and D'Alisa, “the degrowth imaginary centres around the reproductive economy of care”.¹ A similar emphasis on care and broader reproductive activities is found within other central debates of the degrowth proposal, such as those on conviviality, worksharing, commons, etc.

RECOGNITION IS NOT ENOUGH

Such focus on care and carework is crucial, especially in broadening the existing notions of labor and production and recognizing that reproductive activities are essential forms of work that contribute to our well-being. Yet recognition, though welcome, is not enough. What is largely missing from the celebration of care as the cornerstone of the post-growth transition is how carework is to be organized in a socio-ecologically just future. This is crucial, since re-centering a society around care does not imply gender justice. Quite the contrary, *carework has historically been one of the most exploitative, flexible and invisible forms of labor performed by women*.

Especially at a time when the need for building alliances between degrowth and feminism is being stressed, problematizing care from a feminist perspective is imperative for the degrowth proposal. Feminist economists, among others, have for long emphasized that gender implies different constraints and opportunities in the face of socio-economic change. And a post-growth transition, envisaged to reorient both the motivation and the organization of economic processes, is one such change.

¹ D'Alisa, G., Demaria, F., & Kallis, G. (2014). *Degrowth: a vocabulary for a new era*. Routledge.

What I propose here is to approach carework from the perspective of commoning as a possible starting point for a feminist agenda for degrowth.

WHAT IS CAREWORK?

The most straightforward (yet admittedly narrow) definition of carework is labor performed to fulfill the needs of those who cannot do so themselves, such as food provision, cleaning, health, etc. Broader understandings of carework stress that such work is often performed in tandem with and complementary to other types of (unpaid) reproductive labor and cannot be considered separate from the broader sphere of social reproduction. That is to say, carework is better seen as the *more comprehensive field of paid and unpaid labor that ensures social reproduction in general*.

A long tradition of feminist activism and scholarship has problematized carework, in particular its gendered performance, its high invisibility and flexibility. Carework is often performed by women as unremunerated labor under patriarchal relations. Gender norms and gendered division of labor often make it difficult for women to bargain away carework responsibilities. Even when care services are provided via the state or the market they are highly feminized; and subsidized by the substantial amount of unpaid carework that continues to be performed by women within households. On the other hand, women rarely have control over the timing, amount and the conditions of the care labor they perform. That care is predominantly seen as a part of the reproductive rather than the productive domain and the fact that it is usually unremunerated serves to codify it as non-work and renders it invisible.

CAREWORK AS COMMONS

Yet the field of care is not only a realm of immense value and production, but it is arguably the largest and the most fundamental commons on which all of us depend. Carework is a basic form of labor that sustains social life and enables any kind of social system to function; it is a field that all of us draw upon to survive. All of us have relied and continue to rely on care provided through families, friends, and other types of social networks and relations. In return, all of us perform carework and contribute to the sustenance and well-being of others. Relations of mutuality, sharing, and reciprocity that sustain our daily lives and social interactions (as well as economic transactions) all involve an element of care. In that

sense carework is a commons: it is the most fundamental basis of social reproduction to which we all contribute and to which we all owe our existence.

Carework, just like other types of commons, has historically served to support capital accumulation. Especially when it is performed as unpaid and flexible labor, carework serves to lower the monetary cost of labor's reproduction for capital: the cost of sustaining the laborer such as healthcare or eldercare are not shouldered by the capitalist, but rather shifted to the households. This is particularly so within the contemporary era where state-supported care services (e.g. healthcare, childcare, eldercare) are increasingly withdrawn. Seen in this way, carework commons resonate closely with ecological commons insofar as they provide unpaid goods and services that support capital accumulation.

However, what distinguishes carework most significantly from other types of commons are perhaps the egregious inequalities involved in its production (rather than its consumption). Many have discussed commons from a social justice perspective by focusing on who can access them and who can appropriate their benefits (e.g. enclosures). Yet who is involved in the production and reproduction of the commons, and what this implies in terms of social justice are questions that have received remarkably little attention. And this is arguably a more pressing issue for carework as a commons.

COMMONING CARE

Locating carework within the perspective of commoning offers a way to not only draw attention to the inequalities in its production, but also to complement the degrowth emphasis on care. This perspective is outlined, for example, in the works of Silvia Federici, George Caffentzis, Massimo de Angelis and the broader Midnight Notes Collective on commons and commoning.²

These works emphasize an understanding of the commons not only as fixed entities between the market and state to include an amalgam of social relations and practices. This perspective conceptualizes commons as non-commodified modes of social reproduction, accessing resources and fulfilling social needs. As such, they include forms of relationships, networks, practices and struggles (in addition to shared forms natural and

² De Angelis, M. (2004). Separating the doing and the deed: Capital and the continuous character of enclosures. *Historical Materialism*, 12 (2): 57-87; Federici, S. and G. Caffentzis (2014). Commons against and beyond capitalism. *Community Development Journal*, 49 (1), 92-106; Midnight Notes Collective (1990). *The New Enclosures*, New York: Autonomedia

social wealth) that provide varying degrees of access to means of material and social reproduction – outside the mediation of the market.

This perspective also stresses the particular characteristics of the social practices constitutive of the commons: open to all who contribute to their reproduction; sustained and reproduced by collective and cooperative labor and regulated non-hierarchically.

More specifically, then, commons are defined as spaces and processes of social reproduction that are non-mediated by the state or the market and ensure equitable access. Their reproduction and production take place under collective labor, they provide equal access to means of (re)production and they are marked by egalitarian forms of decision-making.

By organizing carework in a way that is not mediated by market or state, commoning care implies a range of practices that provide various degrees of autonomy from both. It involves performing care labor – whose benefits are to be received and shared by all – collectively and cooperatively. Perhaps most importantly, commoning care would mean organizing carework in a non-patriarchal, egalitarian and democratic way. In this sense, the commoning perspective does not only locate care within collective-cooperative production and use, but highlights the fundamental gender dimension implicated especially in carework.

Existing practices of commoning care can be found in radical childcare cooperatives, neighborhood care collectives, and community-based care provision. One notable example within this context is the Regeneración Childcare Collective in New York City. Regeneración aims to link household laborers, radical parents and immigrant and queer families active in social struggles. It was originally founded to provide care services to low-income queer and minority parents so that they could participate in social struggles. Today, Regeneración collaborates with other independent childcare collectives and cooperatives to foster relations of collective self-management and mutual empowerment across care workers and radical parents, especially within the field of care.

FEMINISM HERE AND NOW

In their piece on the commons, De Angelis and Harvie write “it is difficult today to conceive emancipation from capital – and achieving new solutions to the demand of *buen vivir*, social and ecological justice – without at the same time organising on the terrain of commons, the non-commodified systems of social production.”³ This resonates closely

with the centrality of both care and the commons within the degrowth debates. Yet, romanticizing care (and reproductive activities in general) can also serve to mask the gender injustices implicated within it. It is this junction of feminism and degrowth that calls for more thinking and action; something commoning care can be part of.

On the other hand, perhaps the most important point illuminated by the experience of Regeneración is that commoning care can effectively support and strengthen struggles in other fields, including those for degrowth. In that sense, commoning care is not only a vision for a post-growth future, but a necessity to be organized here and now in order to realize potential paths towards that future.

3 De Angelis, M. and Harvie, D. (2014). ‘The Commons’. In Parker, M., Cheney, G., V. Fournier and Land, C. (eds) *The Routledge Companion to Alternative Organization*, London: Routledge: 280-294.

Uncommoning Nature

Marisol de la Cadena

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This text was originally published on e-flux journal #65
SUPERCOMMUNITY — May-August 2015.

On June 5, 2009, at dawn, a violent confrontation took place between police forces and a large group of Peruvian citizens declaring themselves as belonging to the Awajun-Wampis indigenous groups. The police’s objective was to break up a blockade at a major highway near the town of Bagua in the Amazonian lowlands of northern Peru. The Awajun-Wampis had taken control of the highway at a place called La Curva del Diablo (Devil’s Curve) as part of a general strike that started on April 9 that same year, organized by several Amazonian indigenous groups. They were protesting a series of legislative decrees conceding their territory to oil exploration without abiding by the Indigenous and Tribal Peoples (ILO) Convention No. 169, which requires that governments consult inhabitants of territories that corporations may approach for exploration and exploitation. Accordingly, the concession was illegal, as the protestors declared. The clash yielded more than thirty deaths between policemen and the Awajun-Wampis, according to the official count. On June 19 that same year, against the will of then president Alan García, the congress canceled the decrees. The local state ordered the arrest of a number of indigenous leaders, among them Santiago Manuín Valera, the prominent Awajun-Wampis leader. They face thirty-three counts of death. During his testimony on April 10, 2014, Manuín said:

The government is taking away our territory, the territory of the Awajun-Wampis people, so that we become dependent on its [form of] development. The government never asked: Do you want to develop? They did not consult us. We responded: “Cancel the legislative decrees that affect our existence as a people.” Instead of listening to our complaint, the government wanted to punish us—other peoples surrendered, we did not. The government ordered our forced eviction.

The event is part of what I am calling the *anthropo-not-seen*: the world-making process through which heterogeneous worlds that do not make themselves through the division between humans and nonhumans—nor do they necessarily conceive the different entities in their assemblages through such a division—are *both* obliged into that distinction *and* exceed it. Dating from the fifteenth century in what became the Americas, the anthropo-not-seen was, and continues to be, the process of destruction of these worlds *and* the impossibility of such destruction. It might very well represent the first historical apocalypse: the will to end many worlds that produced the *one-world* world and its excesses.¹

¹ I will use examples of events and conditions of life in Latin America because it is the space that I am familiar with. However, anthropo-not-seen is an event throughout the planet.



Awajun-Wampis protest in Bagua, northern Peru. Police violence sent many of the protesters to the hospital, despite a peaceful blockade of the Corral Quemado Bridge, June 5, 2009.

Scholars have discussed the Anthropocene as a transformation of humanity into a geological force capable of affecting, and possibly destroying, what we currently know as the world. The *anthropo-not-seen* has been sustained since its early beginnings by a human moral force—and the unseen part of its destructive dynamic can be found in how this force has been considered constructive. Counterintuitively, this particle of the word (the not-seen) does not refer only to the anthropos—“the one who looks up from the Earth”—and is capable of destroying what refuses to be made in its image.² Exceeding this destruction, the anthropo-not-seen includes more-than-human assemblages, both in the usual sense (i.e., that they may include humans and nonhumans), and in the sense that these categories (human and nonhuman, and therefore species) are *also* inadequate to grasp such compositions, which as said above, may not become through these categories.³ The assemblages of the anthropo-not-seen may be translated as “articulated collectives” of nature and humans, yet may also express conditions of “no nature, no culture.”⁴

2 Karolina Sobiecka, “Last Clouds,” in *Art in the Anthropocene*, ed. Heather Davis and Etienne Turpin (London: Open Humanities Press, 2015), 215, http://openhumanitiespress.org/Davis-Turpin_2015_Art-in-the-Anthropocene.pdf

3 Dorion Sagan, “The Human is More than Human: Interspecies Communities and the New ‘Facts of Life,’” *Cultural Anthropology Online*, April 24, 2011, <https://culanth.org/fieldsights/228-the-human-is-more-than-human-interspecies-communities-and-the-new-facts-of-life>

4 Donna Haraway, “The Promise of Monsters: A Regenerative Politics for

The *antropo-not-seen* was, and continues to be, a war waged against world-making practices that ignore the separation of entities into nature and culture—and the resistance to that war. The antagonism was clear in the seventeenth century: Christian clerics walked the Andes from Colombia to Argentina and Chile “extirpating idolatries” that the friars conceived as “devil-induced worship.” Extirpation required dividing entities into God-created nature (mountains, rivers, forests) and humans, and saving the soul of the latter. The invention of modern politics secularized the antagonism: the war against recalcitrance to distinguish nature from humanity silently continued in the name of progress and against backwardness, the evil that replaced the devil. Incipient humans became the object of benevolent and inevitable inclusion, enemies that did not even count as such. Until recently, that is.

THE WAR IS NOT SILENT ANYMORE (BUT IT CONTINUES UNDECLARED)

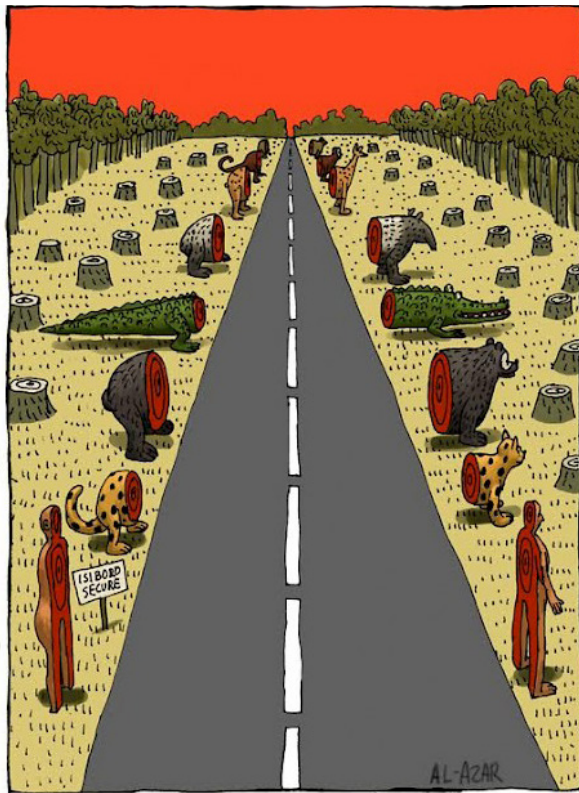
The expansion of markets for minerals, oil, and energy, as well as for new technologies that allow for their quick and profitable extraction, stimulate what appears to be an unprecedentedly unstoppable—and mighty—corporate removal of resources in places formerly marginal to capital investment. The construction of infrastructure (necessary to send the resources to market) sponsored by central financial institutions like the IMF, the World Bank, and new regional financial entities like the Latin American Development Bank has made even the most remote territories the object of financial investment. The reach of the current destruction of indigenous worlds is historically unparalleled; the anthropo-not-seen (the destruction of worlds and resistance to it) has acquired a scope and speed that early extirpators of idolatries and nineteenth-century explorers (turned rubber and sugar plantation investors) would envy.

Overlapping with environmental devastation and converging on Anthropocenic forces at the planetary level, the transformation of territories into grounds for investment has met with strong local opposition and forceful disagreement—transforming the silent war into a relentless demand for politics that reveals, to paraphrase and tweak Rancière, the presence of many worlds being forced into one. Digging a mountain to open a mine, drilling into the subsoil to find oil, damming all possible rivers, and razing trees to build transoceanic roads and railroads translates, at the very least, into the destruction of networks

Inappropriate/d Others,” in *Cultural Studies*, ed. Lawrence Grossberg, Cary Nelson, and Paula A. Treichler (New York: Routledge, 1992), 314; Marilyn Strathern and Carol MacCormack, ed., *Nature, Culture, and Gender* (Cambridge: Cambridge University Press, 1980).

of emplacement that make local life possible. Among other demands, local worlds—labeled indigenous or not—defy the monopoly of modern practices in making, inhabiting, and defining nature. With their hopes for economic growth at stake and the sovereignty over their territorial rule threatened, national states waver between rejecting the proposal for politics that local worlds extend and ending the silent war to wage it overtly—always in the name of progress. The confrontation in 2009 in La Curva del Diablo is emblematic of the war becoming public: those who oppose the transformation of universal nature into resources and oppose the possibility of the common good as the mission of the nation-state are its enemies and deserve prison at the very least.

Conceptualized through the anthropo-not-seen, the war is, however, peculiar. Defending themselves, worlds whose sacrifice progress demands have publicly revealed their practices through television stations and newspapers. Thus, it has come to the attention



The cartoon Paving Bolivia shows the road across TIPNIS, which stands for "Territorio Indígena y Parque Nacional Isiboro Sécuré."

of the public (and majoritarian derision) that nature—as the alleged grounds for the common good—is not only that. For example, warning about the destruction of its world, the Awajun-Wampis leadership has described their sibling relation to the Amazon rainforest: "The river is our brother, we do not kill our brother by polluting and throwing waste on it"—kinship transforms rivers, plants, and animals into entities that financial capital, infrastructure, and contamination can kill rather than "merely" destroy or deplete. As ubiquitous as the war, these revelations slow down the translation of those entities into universal nature. The one-world world that Christianity and modernity collaboratively built and sustained is perhaps being challenged with an unprecedented degree of publicity for the first time since its inauguration five hundred years ago. This possibility needs to be cared for.

UNCOMMONING NATURE: OR, A COMMONS THROUGH DIVERGENCE⁵

Analogous to the Awajun-Wampis's claim of kinship with the forest, in a dispute about petroleum extraction in a site called Vaca Muerta (Argentina) a Mapuche group declared "Our territories are not 'resources' but lives that make the Ixofijmogen of which we are part, not its owners".⁶ In contrast, developers from Neuquén defined Vaca Muerta as one of the states included in the alleged hydrocarbons deposit: "Vaca Muerta is an immense *páramo* [a barren cold plateau]. A desert that extends beyond what the eyes can see ... It is a hostile territory that shelters enough energy to make Argentinian self-sufficient and even export gas and oil to the world." The stark contrast suggests that the dispute about the extraction of petroleum is also a dispute about the partition of the sensible into universal nature and culturally diversified humanity, to paraphrase Rancière and Latour, respectively.⁷ Emphasizing the inherent relationality between local entities (humans and other-than-human beings), the dispute questions the universality of the partition: what is enacted as humans and nature is *not only*

5 Divergence is a notion I borrow from Isabelle Stengers. It refers to the constitutive difference that makes practices what they are and as they connect across difference, even ontological difference. See Isabelle Stengers and Philippe Pignarre, *Capitalist Sorcery: Breaking the Spell*, trans. Andrew Goffey (London: Palgrave MacMillan, 2011).

6 "Vaca Muerta, Una Situación Urgente Que No da Para Más," *Argenpress*, October 7, 2014, <https://misionesonline.net/2015/03/07/un-viaje-a-las-entradas-de-vaca-muerta-el-futuro-energetico-del-pais/>; and "Un Viaje a las Entrañas de Vaca Muerta, el Futuro Energético del País," *Misiones Online*, March 7, 2015. "Ixofijmogen" is the Mapuce concept of "biodiversity."

7 Jacques Rancière, "Ten Theses on Politics," *Theory and Event* 5:3 (2001).

enacted as such.⁸ John Law calls this the capacity for *both/and* (rather than *either/or*). The interruption of the universal partition is a political and conceptual worlding event; what emerges through it is not a “mix” of nature and human. Being composed as humans *with* nature—if we maintain these categories of being—makes each more. Entities emerge as materially specific to (and with!) the relation that inherently connects them. An example located in the Andes of Cuzco: the materiality that relates modern humans *and* mountains is different from that which makes *runakuna* (the local Quechua word for people) *with* Earth-beings—entities that are also mountains.⁹

The processes questioning the universality of partitioning the sensible into universal nature and humans, of course, do not require *runakuna* with Earth-beings. Here is another example: in the northern Andes of Peru, a mining corporation plans to dry out several lagoons to extract copper and gold from some, and to throw mineral waste into others. In exchange, reservoirs with water capacity several times that of the lagoons would be built. Opposing the plan, environmentalists argue that the reservoirs will destroy the ecosystem of the lagoons, a landscape made of agricultural land, high-altitude wetlands, cattle, humans, trees, crops, creeks, and springs. The local population adds that the lagoons are *their* life: their plants, animals, soils, trees, families *are with* that specific water which cannot be translated into water from reservoirs, not even if more water is provided, as the mining corporation promises to do. It would not be the *same* water, which they defend as “guardians of the lagoons.” People have died in this making-public of another instance of the war against those who oppose the translation of nature into resources. Yet the guardians of the lagoons have never said that the water is a being—it is local water, and as such, nature, yet untranslatable to H₂O.

An iconic “guardian of the lagoons” is a peasant woman whose property the corporate mining project wants to buy to fully legalize its access to the territories it plans to excavate. The woman refuses to sell—even for what is most likely an amount of money she will not see in her lifetime. Countless times, the national police force has attacked her, her family, even her animals—as I was writing this piece, the police

destroyed the woman’s crops. The property has been under siege for more than three years now. “I fight to protect the lagoon” has been one of her responses. And asserting attachment to place, she adds: “I am not going to stop; they will disappear me. But I will die with the land.” Like *Bartleby*, she “would prefer not to” sell; yet she is not politically a-grammatical, at least not in the usual sense.¹⁰

Within the grammar that separates humans and universal nature, this woman can be interpreted as defending the ecosystem: an environmentalist, and thus an enemy (and a fool), or an ally (and a hero), depending on who speaks. In both cases she is a subject in relation to an object. However, the “refusal to sell” may express a different relation: one from which woman-land-lagoon (or plants-rocks-soils-animals-lagoons-humans-creeks—canals!!!) emerge inherently together: an ecological entanglement needy of each other in such a way that pulling them apart would transform them into something else¹¹. Refusing to sell may also refuse the transformation of the entities just mentioned into units of nature or the environment, for they are part of each other. The woman’s refusal would thus enact locally an ecologized nature of interdependent entities that simultaneously coincides, differs, and even exceeds—also because it includes humans—the object that the state, the mining corporation, *and* environmentalists seek to translate into resources, whether for exploitation or to be defended. Thus seen, she is a-grammatical to the subject and object relation—or, she is *not only* an environmentalist.

Occupying the same space (that “cannot be mapped in terms of a single set of three-dimensional coordinates”), this complex heterogeneous form (universal nature, the environment, and what I am calling ecologized nature—or nature recalcitrant to universality) allows for alliances and provokes antagonisms.¹² Confronted with the mining company’s proposal to desiccate the lagoons, its local guardians and environmentalists have joined forces against the mining corporation. Yet their shared interest—to defend nature, or the environment—is not only the same interest: ecologized nature and universal nature exceed each

8 I have explained this in other works. Dwelling across more than one and less than many worlds, practices may enact not-only entities: other-than-human beings emerge not only as such, but also as nature and humans. See Marisol de la Cadena, “Indigenous Cosmopolitics in the Andes,” *Cultural Anthropology* 25:2 (May 2010); and Marisol de la Cadena, *Earth Beings* (Durham, NC: Duke University Press, 2015).

9 Marisol de la Cadena, “Runa: Human But Not Only,” *Journal of Ethnographic Theory* 4:2 (Fall 2014).

10 Gilles Deleuze, “*Bartleby, ou la Formule*,” in *Critique et Clinique* (Paris: Editions de Minuit, 1993), 89–114.

11 Another example of a similar relational materiality: peasants in the Isthmus of Juchitán (Oaxaca, Mexico) have rejected the installation of windmills which would transform the relationship between air, birds, ocean water, fish, and people. See Cymene Howe, “Anthropocenic Ecoauthority: The Winds of Oaxaca,” *Anthropological Quarterly* 87:2 (Spring 2014).

12 Annemarie Mol and John Law, “Complexities: An Introduction,” *Complexities: Social Studies of Knowledge Practices*, ed. Annemarie Mol and John Law (Durham, NC: Duke University Press, 2002).

The Materiality of The Immaterial

Mijo Miquel



Police guard the machinery of Yanacocha, the largest gold mine in South America.

other; their agreement is also underpinned by *uncommonalities*. This condition shapes a possibility for an alternative alliance, one that, along with coincidences, may include the parties' constitutive divergence—even if this opens up discussion of the partition of the sensible and introduces the possibility of ontological disagreement into the alliance. An oxymoronic condition, this alliance would also house hope for a *commons* that does not require the division between universal nature and diversified humans: a commons constantly emerging from the uncommons as grounds for political negotiation of what the interest in common—and thus the commons—would be.

Instead of the expression of shared relations, and stewardship of nature, this commons would be the expression of a worlding of many worlds ecologically related across their constitutive divergence. As a practice of life that takes care of interests in common, yet not the same interest, the alliance between environmentalists and local guardians (of lagoons, rivers, forests) could impinge upon the required distribution of the sensible into universal nature and locally differentiated humans, thus disrupting the agreement that made the anthropo-not-seen and questioning the legitimacy of its war against those who question that distribution. The alliance would also queer the requirement of politics for sameness and provoke ontological disagreement *among those who share sameness*—inaugurating an altogether different practice of politics: one across divergence.

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This text is first published here.



*"The cosmos is within us.
We are made of star-stuff.
We are a way for the cosmos
to know itself."*
— Carl Sagan¹

1. INTRODUCTION

Faced with the challenges posed by this new century and benefiting from the transformations that technological advances have allowed us in the fields of genetics, robotics and studies on microbiota,² we consider the possibility of approaching the evolutionary vision of sciences, nuanced by *symbiogenesis* together with certain vibrant materialism (Bennet, 2010) to think about our drift.³ All of them question the implacable

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- 1 Documentary series *Cosmos* (1980), first episode, "On the Shore of the Cosmic Ocean", 00:01:04.
 - 2 Set of microorganisms that are located in the bodies of multicellular living beings such as the human body. This microbiome or microbiota establishes a commensal symbiotic relationship with the host.
 - 3 Symbiogenesis is the result of long-term stable endosymbiosis leading to the transfer of genetic material, passing some or all of the DNA from the symbionts to the genome of the resulting individual. From the symbiogenetic process arises a new organism in which its cell or cells are integrated symbionts. According to Margulis, "The pact is symbiosis. Nobody wins and nobody loses but there is a recombination. Something new is being built. Life is a symbiotic and cooperative union that allows those who associate to triumph" (2013, p. 98).

taxonomic ordering of reality which, since the Enlightenment, meant the conceptual separation of humanity from the rest of the material world. The indifferentiation proposed by new materialisms can be applied to social sciences by modifying the anthropocentric and dematerialized analysis we make of our behaviors, even of what we call consciousness and which sustains our fundamental theoretical difference with the rest of living matter. With an unimaginable technological development, in a process of digital externalization of our intelligence, transforming our forms of governance that are a reflection of our collective behavior, we are incapable of considering ourselves equal to any other form of life on the planet, denying as we have done until now our similarities with other animals and plants. This recognition of the materiality of our existences, from digital environments to ideas, may perhaps help us to understand the irrational suicidal drift of *Homo sapiens*, which ceases to be the "conscience" of the universe as preached by Carl Sagan, instead to become his own executioner.

Bruno Latour (2008) has already proposed overcoming anthropomorphism, the dichotomy between humans and non-humans with his Actor-Network Theory. Subsequently, he has insisted on his conviction that Nature is not an end in itself and has raised the demand to develop a political philosophy to account for it, stressing the fact that science and politics cannot be separated and that an essential effort must be made to democratize the former (Latour, 2013). Beyond this effort to introduce ethical standards into what was supposed to be neutral, it seems fundamental to us to apply, as he does, a cross vision to knowledge that opens it up to the recognition of the agencies of the non-human in our reality. Today, we could find similar examples in the figures of Lynn Margulis (2003), when she analyzes cellular evolution from the point of view of cooperation against competition or random mutation in symbiogenesis and questions the classical theory of natural selection, or Mancuso (2015) who developed the notion of plant intelligence to the point of creating a discipline called plant neurobiology. All of them show us the need to relearn to be sensitive, to recover the Schillerian notion of "cultivation for a certain sensitivity" that allows us to see beyond our own species, as Bennet herself proposes.

2. ANOMALOUS (R)EVOLUTIONS

The transformation we are undergoing as a species is partly due to the progressive registration and shared outsourcing of our knowledge. We have developed in such a way that none of us possesses the necessary knowledge to even make a pencil; we have placed in the hands of the

collectivity our immediate survival through successive specialization, until to the point that we almost become different organs of a social body or different functions within a scheme of eusociability.⁴ At the same time, our technological prostheses allow us to increase the content but also the extent of information that is available to a previously unimaginable number of subjects, with whom we not only communicate but also remodel our own channels, establishing more or less reciprocal relationships and articulating ourselves to respond in a collective way to the stimuli of our environment. Our starting hypothesis is that this externalization of intelligence and knowledge in human beings by socio-technological means not only does not distance us from other natural kingdoms but also brings us closer to collective functions similar to those of social animals such as bees or starlings (Couzin, 2011), colonies such as symbiotic bacteria (Yong, 2017) or plants considered as colonies in themselves for their modular design (Mancuso, 2017), because of the way we react to stimuli with partial and decentralized information, creating an emergent wave that modifies trajectories globally.

In this biotechnological framework, perhaps evolutionary theories can help us understand where we are going and what our uniqueness as a species is, if any. We resort to these theories as we could say we resort to matter, since what we are highlighting is the need to make a link between our behavior, our essence and the matter of which we are made, because we think that since we operate a necessary and adaptive separation from the rest of the universe, we have sought explanations for our own being outside the material order. As we commented, the modern project was based on separating us from the world (Fowles, 2015), on separating people from things (who is subject and who can only be an object and to what degree), on establishing a distance that prevents, for example, that we feel empathy toward non-human animals. The term "non-human animals" shows an approach to our common condition, exhibited by the fact that we have recently granted the category of non-human person to an orangutan female and that from the associations for the defense of the animals, we are fighting to extend this juridical figure to all the great apes. In spite of these timid advances, our imaginary resembles more what is expressed in this fragment of Kant in his *Fundamental Principles of the Metaphysics of Morals* (1785), which still underlies the basis of our legislative systems:

4 "Eusociability is the characteristic of a society or species in which the organisms work harmoniously together for the good of the society (e.g. a hive of honeybees)" in Stuart Sutherland, *The Macmillan Dictionary of Psychology*, 2nd Ed., Red Globe Press, (1995).

"The beings whose existence does not rest in our will, but in nature, have, when they are irrational beings, a merely relative value, as means, and that is why they are called things; on the other hand, rational beings call themselves people because their nature already distinguishes them as ends in themselves, that is, as something that cannot be used merely as a means and, therefore, limits in this sense every whim (and is an object of respect)" (2011, p. 23).

In turn, we order the world to create a distance between natural sciences that present knowledge, and social sciences that represent it. Therefore, when we approach the human condition from psychology or social sciences, we decide ideologically that all those laws that operate hierarchically in the universe (the laws of physics, chemistry and biology) cease to do so when what we analyze is the human condition, considering that we are exempt from all material laws, perpetuating Cartesian dualism as if all human behavior were explainable through social parameterscultural transmission. This observation does not mean admitting all biological behavior as ethically correct or pretending that what survives justifies its adaptability *ad eternum*. Evolution is not equal to progress. Evolution is effective because it produces adaptations that allow us to survive at the lowest possible cost. Evolution is necessary change but not intentionality or meaning; it is readaptation to variable conditions in a perpetual dance of elements that seek balance to avoid crossing red lines in which survival is at stake. That is, exactly where we are now, where our ecosystem enters a global critical phase. One of the problems that prevents us from responding adequately to this urgency is the fact that our brain has evolved to think in short terms that make it very difficult for us to project even three generations at a glance, so the alarm is sounding but not in the "rational" way it should, locating a serious problem and stopping or slowing down the energy dedicated to solving other issues, to redirect it to the one that will really solve all the rest: our imminent disappearance as a species.

Although the genealogy of the fundamental concept of evolutionary theory comes from an anthropocentric vision centered on productive efficiency that has protected ideas ranging from the regulation of the free market to the myth of the self-made man, with Weber and the hard Protestant work in the background—not to mention the eugenic current that developed almost parallel to the diffusion of Darwinian evolutionary theory—we cannot fail to recognize the usefulness of accepting filiation with all forms of life in this new socio-technological era, in order to investigate possible derivations of our behaviors. Modern evolutionary synthesis argues that gradual changes by accumulation

of genetic mutations and natural selection are the main mechanisms of evolutionary change that would explain variability in speciation. However, the admission of horizontal genetic transmission as well as the activation or silencing of genes with hereditary character currently studied by epigenetics, both defended by Margulis and only recently accepted, would modify the point of view by shifting the axis from competition to collaboration. Margulis, we recall, openly states that the symbiosis between microorganisms is an important force of evolution and affects the mutualist condition of the symbiosis where two forms of life merge to form a single entity which, thanks to this combination, has allowed us, among other things, to have access to multicellular development.

3. MATTER AND TRAJECTORIES

Harlow Shapley, who directed the Harvard University Observatory, already reminded us in 1929:

*"We are made of the same matter as stars, so when you study astronomy you are somehow investigating our remote ancestry and our place in the Universe of stellar matter. Our own bodies are composed of the same chemical elements found in the most distant nebulae, and our activities are guided by the same universal rules."*⁵

The recognition of the continuity of matter is based on the conviction that the architecture of reality in its physical/chemical/social/mental organization is always established on material bases, and that any difference at a higher ontological level implies a difference in its material base, but also an essential similarity. Material bodies and artefacts, such as historical events, are the product of material trajectories, and many centuries of evolution are marked in them. Walter Benjamin calls it natural history to underline the double social and material component, because in us there is a nature-culture continuum that doesn't allow us to differentiate. Failing that, we could speak of the environment as an extensive context in which life takes place, where genotypes are manifested in phenotypes. Therefore, we are matter modeled by time and the environment even in our last details, even in our most complex ideas such as the theory of evolutionary synthesis that our *momentum* allows us to review.

If we think that pluricellular organisms come from the indissoluble union of prokaryotic cells and bacteria and that this form of augmented dissolution (symbiogenesis) is the origin of the variety of functions and

⁵ In "The Star Stuff That Is Man", *The New York Times*, August 11, 1929.

species, we could perhaps question, on the one hand, the western armored conception of the subject as an individuality and, on the other hand, the evolutionist paradigm that puts competition above mutualism. To a vision of animals, plants and multicellular organisms as individual beings, Margulis opposes the vision of communities of self-organized cells giving them the maximum evolutionary potential, perhaps allowing us to speak of colonies rather than individuals and paralleling the functioning of neurons, bacteria, fish, starlings and humans.

In the vegetable kingdom this proposal does not need any metaphorical adaptation since, according to Mancuso, the individuality of plants is clearly questioned, since if the individual could be defined as a biological entity that cannot be divided into two parts without one of them dying, plants are often multiplied by division. Genetically speaking, if an individual is a biological entity whose genome is stable in space and time, we can talk about bud mutations in plants or "chimeras", mutant branches, so that they could be thought more than as individuals as decentralized and modular fractal colonies that exist to avoid fatal damage, since (central) organs are vulnerable structures. Similarly, an analogy could be established with animals, with the idea of swarm, common to many social insects that appear to function with a simple design, with very simple rules of transmission of information. Mancuso says (2017, p. 141):

"Any set of individual agents that decides autonomously, that lacks centralized organization, that uses simple rules to communicate and that acts collectively can be considered a "social animal" so that plants would fall into this category by being able to equate to colonies of insects."

Francis Hallé also defines plants as metameric organisms whose bodies are composed of a set of unitary parts to the extent that the recursion of the modules and the repetition of the levels of their radical apparatus has allowed the roots to be studied by means of methods typical of fractal analysis. Of course, we are not stating that we are the same as plants, we are totally different—that is exactly what has prevented us from understanding their "entity", in the same way that we only understand intelligence as encephalic. This is our peculiar form of blindness, not seeing 80% of the planetary biomass, not to mention the much greater percentage in terms of the variety of the microorganisms that live directly with us, although from this blindness we can still apologize for the previous impossibility of perceiving them without visual prosthesis. Yong makes an analysis of the modes of relationship

of bacteria, both between them and with entities of another order, and there is no doubt that stable relationships are usually balanced: the guests respect the host to the extent that their survival interests them. A more detailed investigation includes the viruses among our benefactors, for example the balanced combination of leukocytes, bacteria and virus being the one that allows us to maintain a healthy intestinal activity, the three equally necessary to maintain an optimal functioning. In our bodies, the colonies are the queens, we are multiple and we contain multitudes. We do not know to what extent this modifies our conviction that we are independent entities, perhaps we should replicate the notion of ecosystem for our own organisms and put interdependence at the center and individuality at the periphery.

Myers and Hustak (2012) in turn try to re-read evolution by linking it to the close relationship of mutual dependence that plant and insect behaviors develop, defining it even as articulated communication. They question whether the behaviors of plants and insects are based on deterministic models that reduce interactions between species to the actions of "selfish genes" aimed at reducing an organism's energy expenditure while maximizing its reproductive capacity for the long-term survival of species. Instead of reaffirming this neo-Darwinist history, they work in a line very similar to that of Mancuso, but applying a feminist point of view that allows us to approach relationships taking into account both their haptic condition (which includes chemical communication) and their capacity for affectation. A neo-Darwinian economy, it seems, cannot admit pleasure, play or improvisation within or between species as values *per se*, a question that is nevertheless contemplated in the model of affective ecology.

In order to try to explain these changing ecosystems with the capacity to be actively affected, Bennett has analyzed the relationships established in the matter defining them as the agency of their respective assemblages and develops a theory of distributive agency based on the "affective" bodies of Spinoza and on the "assemblages" of Deleuze and Guattari. She considers that each of the elements that participate can have the condition of agents as long as they have the capacity to affect and be active, either individually or assembled with other bodies by means of *ad hoc* groupings of diverse elements, of vibrating materials of all kinds. In them, power is not distributed equitably over the surface, nor are the elements governed by a central element, as is the case in the different examples we have mentioned. The effects generated by an assembly are emerging properties with the capacity to make something happen, such as our own consciousness as an emerging property of the colonies that we are, of the electrical and chemical sequences that

dance inside us, but that we could not deduce from the functioning of each one of our cells separately. In addition to the life force of each member of the group, there is a grouping efficiency of its own: an assembly agency, according to Bennett. This could be applied from the creation of intestinal ecosystems to the disappearance of the ozone layer as well as to our own consciousness of individuality. If we were to be consistent with all this, we would have to replace the notion of subject with that of system rather than considering objects as subjects.

Therefore, if we think of our functioning as a species, we must recognize that individuality is ultimately not that important. We sacrifice soldiers and workers, and the machine continues to function as it does with ants and termites; we group around shared ideas of absurdity, gods, kings or various hypes lacking any weight, the infinite lightness of being that keeps us united and makes us march with the tight rows towards the abyss. Could perhaps a modification of the discourse that keeps us together change our destiny, since it seems we are going to share it anyway?

Let us now see what we can learn from the global functioning of these superorganisms, from their forms of governance. Mancuso, when he compares the way neurons and bees work, says that in both systems, the mode of choice basically consists of a competition between the different options: whether they are neurons that produce electrical signals or dancing insects, the option that obtains the greatest consensus prevails. This assertion could be interpreted following the general trend of evolutionism, in terms of competition between beings. But Mancuso adds that there are general principles that govern the organization of groups and that make possible the appearance of a collective intelligence superior to that of the individual members that compose them, concluding that in Nature making consensual decisions is the best way to solve complex problems in a correct way.

In this way, we could also conclude that consensus is not a question of competition but of cooperation, and that the electrical impulses of neurons (or that emergent property of all of them that we consider consciousness) does not necessarily have to be based on existing at the expense of the other. All this war vocabulary that is used to talk about bacteria and viruses, considered until now only as pathogens, or about species that fight for survival niches, is giving way to visions such as those offered by Yong or Margulis, where cooperation is the basis. If, as Condorcet said in 1785, groups are more intelligent than the most intelligent of the individuals that compose them, could we speak of the emergence of a collective intelligence in our species and, if so, of democratic modes of decision making? Is the generalized implantation of this socio-technological prosthesis a transformation of a higher

order or not? To what extent does it modify our condition? Are we more autonomous or more manipulable, more aware of interdependence or more focused on the salvation of a few? Who is the pilot of this supersonic aircraft?

4. COLLECTIVE INTELLIGENCE AND NEW PREDATORS

In this state of things, admitting that we are as material as a flock of starlings although our anomalous condition allows us to elaborate mirages as complex as free will, or devices as disturbing as artificial intelligence, we cannot help but ask, does this externalization of intelligence through technological devices and hyper-specialized praxis favor another type of participative, digitalized, dematerialized and global democracy, or rather a new unified material regime? Couzin (2011), after many years researching birds, fishes and other social animals, affirms: "Conflicting interests among group members are common when making collective decisions, yet failure to achieve consensus can be costly. Under these circumstances individuals may be susceptible to manipulation by a strongly opinionated, or extremist, minority. It has previously been argued, for humans and animals, that social groups containing individuals who are uninformed, or exhibit weak preferences, are particularly vulnerable to such manipulative agents" (2011, p. 1578).

Their experiment however demonstrates that, for a wide range of conditions, a strongly opinionated minority can dictate group choice, but the presence of uninformed individuals spontaneously *inhibits* this process, returning control to the numerical majority. His results emphasize the role of uninformed individuals in achieving democratic consensus amid internal group conflict and informational constraints. This process of consensus can be considered democratic, but if our socio-technological majorities are artificially oriented through these prostheses in such a way that, responding to very simple rules of affection and aversion, we can be directed politically or neutralized, our future does not seem very clear to us.

As Streeck (2017) suggests, capitalism as we know it would be entering a terminal phase propitiated by the successive unresolved crises (of indebtedness, banking, democracy, ecology and geopolitics) that not even the doctrine of the most forceful shock has managed to hide. The financial stagnation that since the 1970s has led to a systemic crisis has not produced a renewal of the system itself, but a growing structural inequality and an erosion of the liberal model of government. It would seem that instead of going towards a re-democratization of society and therefore towards a separation of the previous identification

between capitalism and nation-state democracy, we are heading towards an increase in the degree and extension of authoritarian regimes as a mode of planetary management. At present, precarization and the absence of political legitimacy break the fragile equilibrium of social peace. The climate emergency, the development of artificial intelligences, the oligarchic redistribution of wealth and power together with the disappearance of the middle class can precipitate the multiplication of conflicts. Under these conditions, it is likely that a revolutionary ideology of a democratic nature will emerge again, but it is even more possible that this factor, added to all the previous ones, will provoke a resurgence of authoritarianism. In order to remain on its feet, capitalism will need more State to contain all reaction, but not more democracy.

With an estimate of global unemployment rates of 50% by 2050, due to the automation of productive and managerial processes, the State will continue to exercise thanatocracy through the different mechanisms of exclusion to which Sassen alludes (2014) and can do so through the depoliticization of uprooted and/or migrant populations, state bonding through confusion between the notions of State and nation that leads to the application of exclusion rights and, finally, the maximum precariousness of broad sectors of the population. This cocktail of factors will undoubtedly generate great instability that can be used to legitimize both active repression and negligence in assistance. Everything will depend on the type of governments that we can maintain and this political future we are sowing at present, with a perspective of climate catastrophe on the horizon that is not at all flattering.

In this pulse, fear will play an important role, and the transformation of humanity from techno-social subjects (who are built and socialized through and with technologies) will facilitate the emergence of collective networks that try to generate opposition, but also increase the vulnerability of the nodes since, as Sassen says, we are in the hands of new predators. These highly complex, cross-cutting predators hide their status under sweeping know-how and technologies, legal and accounting strategies, algorithmic mathematics, high-level logistics with a great capacity to maintain inequality and unprecedented environmental destruction, as well as the capacity to expel the middle and working classes from the possibility of living a dignified life, falling outside the scope of the usual political measures.

In addition to these digital white-glove wearing criminals, the medium itself facilitates the emergence of much more powerful and equally overlapping alternative surveillance and control mechanisms in the very architecture of the network. In this context, the creation and resonance of emotions through networks, the algorithmic complexity

of these waves in the digital sea, is already being used by Data Farm milkers. The internet is dominated by an economic model based on the extraction of data for the manipulation of people in order to sell them objects, services, experiences, political candidates. The internet is in the hands of a few companies that fight among themselves to dominate that market. Governments are in fact clients of these companies and use their infrastructures to control the population, produce fake news or persecute dissidents.

The key to all this is that we are vulnerable to certain kinds of stimuli and there is an industry that hires geniuses to exploit that vulnerability. If governments and companies succeed in hacking the human operating system, the easiest people to manipulate will be those who believe in free will, Harari (2016) says. To succeed in hacking human beings, at different levels, through the information they receive, through the information they produce—through the net but also through the Internet of Things and, lately, by biometric sensors—and through their DNA material, we need a solid knowledge of biology, a great deal of data and a great deal of computer capacity. Until now, hackers have only analyzed external signals, but in a few years' time, or even less, biometric sensors could provide direct access to our inner reality and know what is happening behind our emotions. To survive, we need to leave behind the naïve vision of human beings as merely free individuals, a conception inherited in equal parts from Christian theology and the Enlightenment, and to accept what we human beings really are: *hackable animals*. Facebook is already developing an interface that "reads the brain", using the argument of assistance to people with functional diversity, capturing all the information with which to carry out the analysis of data collected with biometric sensors. The combination of both registers will provide the necessary material to hack us at many levels, influencing the decisions we believe to take as individuals and move the majority (weak or uninformed included) to the desired direction.

Likewise, 5G infrastructure is a necessity created for the exploitation of data in which the objective does not seem to be anything other than to increase the control of everything that circulates through it. This fact can be a big problem if we think that with its precipitation into our reality, we are also losing control of our critical infrastructures, not only our own information. The new ideological devices are those that reduce our free will to choose whether we want a Chinese or an American company to extract all our data and have the power to block any coordinated response. On the other hand, as Busch (2019) states, self-management of the networks is objectively a requirement for non-capitalist systems of governance, where the sovereignty that we can opt

for in the future is really being played out. States will not be enough to protect our independence, we have to reappropriate not the production sources but the sources of life that today are the networks where we communicate, manage and produce in the eyes of those who can see and turn off the switch when needed if what they see does not please them. And that is also a matter that matters.

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Black Atlantis// The Plantationocene

Ayesha Hameed

AYESHA HAMEED's work explores contemporary borders and migration, critical race theory, Walter Benjamin, and visual cultures of the Black Atlantic. Her work has been performed or exhibited at ICA London (2015), Haus der Kulturen der Welt, Berlin (2014), at The Chimurenga Library at the Showroom, London (2015), Oxford Programme for the Future of Cities, Oxford (2015), Edinburgh College of Art (2015), Kunstraum Niederoesterreich Vienna (2015), Pavillion, Leeds in 2015, Homeworks Space Program, Beirut (2016), the Bartlett School of Architecture (2016), Mosaic Rooms (2017) and RAW Material Company (2017).

Her publications include *Futures and Fictions* (co-edited with Simon O'Sullivan and Henriette Gunkel Repeater 2017), *Visual Cultures as Time Travel* (with Henriette Gunkel Sternberg, 2018); and contributions to *Forensis: The Architecture of Public Truth* (Sternberg Press 2014), *We Travelled The Spaceways* (Duke University Press, 2018) and *Unsound/Undead* (2018).

This text was originally published as "Black Atlantis: The Plantationocene" in MAP Office eds. *My Ocean Guide*. Venice: Lightbox Publishing, 2017.

*

Speed



This is my first evening at Walker's, once a sugar plantation and now a dairy. It is dusk.

I step outside of the flat, climb the slightly mossy stairs and turn right into the purpling light. To my left are horse stables, behind me is the house and in front of me are fields of grass.

The sound of the frogs begins at dusk and it gets louder. The paved drive I am walking on ends at the field, and I turn right onto a dirt path. The grass is long on either side of the path. When I reach a lone tree to my left, the path dips down a small hill and continues to a line of trees in the distance. To the right is the South and there are some twinkling lights in the distance. A small bat swoops over my head.

Underneath the alien and screechy whir of the frogs there is a silence. A black dog runs up to me from the big house and then turns around and goes back, looking back at me as if trying to get me to follow it. I walk away from it and into the long grass and listen.

The frogs get louder. The sky turns black.

*

Another beginning: It is half past two and I've been waiting in the parking lot outside Harrison's Cave for about thirty minutes. Tour buses and hired taxis efficiently pull in and out of the parking spaces, loading and unloading their American passengers.

Two men are chatting beside me, one of them offers the other one a lift and they walk over to a brightly painted bus. I figure I have 20 minutes more to wait.

I hear a loud noise and look up from my book to see a diesel powered mini bus hurtling through the lot like a getaway car for a heist. It abruptly stops at a hasty angle near the bus stop where I am sitting. The sign on the bus just says 'city'. People climb out quickly with the diesel engine rumbling.

As I climb the stairs the bus speeds up again so fast I trip onto a seat. I pull myself up holding out my 2 Barbadian dollars to the driver with an apologetic 'excuse me?' and the man in the passenger seat waves impatiently at me to sit down.

I look out the window as the bus hurtles down dirt roads hewn through fields of cane speckled with sun and dust. We screech to another stop and the engine grumbles and roars.

Outside are the fields of cane and men and women waiting on the side of the road.

*

What is the relationship between climate change and plantation economies? This is an exploration of many things – the beginnings of a fourth chapter of an ongoing performance called *Black Atlantis*, visiting the heartland of one of the three stops of the triangular trade, and taking seriously Donna Haraway's and Anna Tsing's use of the term 'plantationocene' which connects the development of a plantation form of production to the beginning of the current geological era that we are in.

The 'plantationocene' is a placeholder for the relationship between agriculture and the new geological era we find ourselves in called the anthropocene. But the kind of agriculture they are thinking about is the violent replacement of diverse farming tactics, of forests and of pastures by the factory-like extractive structure of plantations – the cultivation of

single crops like sugar and cotton for export, produced by enslaved and indentured laboring bodies forcibly transported across vast distances. Plantations eradicate the diversity of what is cultivated, devastating the land, violently exploiting and expropriating the bodies working on the land and destroying any possible autonomy for self sustenance for those living in these areas.

[we use the term] Plantationocene for the devastating transformation of diverse kinds of human-tended farms, pastures, and forests into extractive and enclosed plantations, relying on slave labor and other forms of exploited, alienated, and usually spatially transported labor... Moving material semiotic generativity around the world for capital accumulation and profit—the rapid displacement and reformulation of germ plasm, genomes, cuttings, and all other names and forms of part organisms and of deracinated plants, animals, and people—is one defining operation of the Plantationocene, Capitalocene, and Anthropocene taken together (Haraway 162).

The plantationocene suggests that the geological force of humans on the planet's ecosystem had its roots in plantation slavery, its instrumentalisation of the soil for a singular kind of production and its violent enslavement of bodies to be used as machines to cultivate and harvest the cane, and to ideally reproduce and sustain itself. As Anna Tsing says, the plantationocene is formed of "machines of replication" or "simplified ecologies, such as plantations, in which life worlds are remade as future assets" – in other words it highlights the aftermath of a radical and violent incursion and its effects on lifeworlds that intertwine the human and the natural.

It is a nearly impossible endeavour to read an over three hundred year old history of plantations and their continually evolving social relations in the wake the oldest instance of plantation slavery, and in the continued presence of descendants of slaves and plantation owners and overseers, against the slow temporal swings that mark climate change. Reading a still living and present history against a slowly unravelling future of increasing frequencies of natural disaster, the warming of the ocean, the jeopardisation of sea life is incommensurable and probably pointless as they operate on such different registers, and the possibility of finding common ground at ground level is nearly nil.

*

Atlantis



After day after day after day of sun in the morning, sun in the afternoon, rain sliced through the sky in a gash. The rainy season has just ended and at the margins there is still the threat of water. This has taken centre stage, today of all days. The taxi drives up to the house and the rain is so fat and plummy that it is impossible to sprint up the stairs to the car door without getting wet.

The taxi approaches the outskirts of the city with the wipers barely clearing the view. Each stroke of the blade makes a grating sound. We drive past the terminal where all the ocean liners anchor, their bulky bodies indistinct in the distance with the thickness of the pelting water. And then we arrive at the Atlantis office. It is brightly coloured and full of tourist memorabilia: rum and beaches, coasters and keychains. There is some free fruit punch in the corner. On the wall is a mural, a window painted and encrusted to look like a coral wall. There are two TVs on either side of the room – one with a looping documentary promo on the submarine, the other tuned into CNN, an endless loop of Trump's winning the Electoral College vote in late December. We wait.

Two overwhelmed parents try to keep their identically dressed daughters calm on what appears to be their birthday. Busloads of tourists arrive and they watch these two children indulgently, or look at CNN. We all sit on purple leather benches. Outside the rain lashes at the windows.

Finally the door opens and we are ushered out to walk the 100 metres to the waiting boat. It is raining so hard that we are instructed to share the umbrellas they hand out to us. Still I am drenched by the time I get to the boat. After a safety demonstration, and lots of loud music, we head off. The water is grey and the sky is also grey. The rain falls so thick on the window that the seascape falls into blurry pixels. Finally we arrive at a point in the middle of the water where a small metal structure protrudes from underwater. We've arrived at the Atlantis Submarine.

*

In the early 20th century John Ernest Williamson, son of an English sea captain, was fuelled by the stories about lost Atlantises and the sinking of pirate towns like Port Royal in Jamaica. With his brother George he designed and built a structure called the photosphere, an underwater chamber with a glass panel, that was connected to a boat on the surface of the water by a tube made of concentric rings.

Williamson moved to the Bahamas to build his photosphere as the surrounding waters are shallow, and the coral sand is sparkling and white. The sea is largely free of clouding photoplankton so the water is clear. The photosphere was used for a number of purposes, as a chamber to film the first underwater moving images, as a tourist novelty, where visitors could send postcards from the bottom of the sea through an underwater post office, and reportedly, to salvage ships underwater. It is here that the 1916 film *20,000 Leagues under the Sea* was filmed, the figures ghostly still. So was the film made in 1954.

Krista A Thompson describes how these early immersions into the photosphere were dreamlike, but that the vista of the underwater was also perceived to be menacing. This was reflected in Williamson's own thinking as he travelled to present his work on the sea in a lecture called "Beauty and Tragedy". Bahamian land was not remarkably fertile but its marine life was blooming and fertile and multiplying.

In the late nineteenth century underwater life as a kind of spectacle flourished as an elite pastime. Young Black men would dive to the bottom of the sea to grab momentos for genteel women waiting on boats, who peered into the sea through ‘tropical lorgnons’. The submarine world was seen as an underwater garden, a landscape or a forest.

Hutchinson... re-envisioned coral sponges as “welcoming palms,” fish as “hummingbirds,” and coral as “great trees” and “stately forests”... Charles Ives also contended that the seascape bore similarity to “the vast and magnificent tropical forests, clothed in perennial green, adorned with graceful vines, teeming with flowers of every hue, and vocal with countless birds of the most varied and of the richest plumage, bear to a lady’s little but luxurious boudoir, with its evergreen branches, climbing vines an captive birds in their small but gilded cages.” (Thompson 170-1)

*

Jessica Lehman describes the sinking of the Dutch slave ship *Leusden* in Atlantic waters off the coast of Suriname in 1738. The captain nailed shut the hatches to the hold of the ship which held 680 women, men and children. Although well- documented the wreck has not been found. In thinking of the ocean depths as archive, she writes

If the ocean has concealed some of slavery’s ruins, it has not so readily hidden all of the more recent traces of capitalist imperialism. In July 1964, during one episode in a long history of marine toxic dumping, the British merchant vessel Halcience began to discard packages of radioactive waste from several state-operated sites into the Bay of Biscay. (Lehman n.p.)

The items of radioactive waste, gloves and bottles left more of a trace and yet even in 1964 were preceded by a substantial history of toxic dumping. This she sees as connected to the slaves buried in the *Leusden* hull, the ocean a repository and archive defined by ruin. The radioactive bottles float on the surface, and following Edouard Glissant’s telling, their counterpart are the Atlantic’s undersea currents, ‘signposted by “scarcely corroded” balls and chains’ (Lehman n.p.).

And then there are the corroded currents themselves, waves laced with oil after the Deepwater Horizon oil spill in 2010 where 210 gallons of oil and natural gas slicked down the continental slope into deep water. This



Atlantis is not an archive of the dead, the radioactive, the oil slicked and the corroded. It *is* all these things. This is its tragedy and maybe its beauty.

*

<----->
coasts

I meet Aaron after 12 years when he picks me up for a drive around the island. We decide to go to the Atlantic coast, the first of two trips. It seems like a set of journeys of attrition as during the first trip we drive to a village called Bathsheba, and the second time to another part of the coast called Bath. I’m convinced that had we made a third trip it would have conjured a third stretch called Ba. But this kind of bad humour can’t hold.

The Atlantic coast is the wild coast of the island. The water here is choppy, the settlements more sporadic and the roads more intermittent and winding. As we drive through a sunny road we see a woman waiting patiently at the side. Aaron stops and offers her a lift to where she works, which turns out to be a restaurant called the Roundhouse on the water, which apparently serves great cocktails. How were you planning to get there he asks her, and she points to a tiny path that disappears in the long grass. Not a great idea he says as we drive to the restaurant and she agrees. Next cocktail is on me she calls as climbs out the car and waves.

The first time I jump in the Atlantic, I feel the water pull and push against my skin. It is warm and swirling. The sand below my feet is rocky and rough. The beach is empty. Behind me in the sand are stumps of wood periodically placed, remnants of a railway track used to transport sugar along the coast. The coast has receded since then and the stumps which once circled dry land are now half underwater.

I look to the East, across the water and see that there is no land in sight. Following my gaze Aaron tells me that the next landmass is the Senegalese coast.
I keep staring East.

*

On April 29 2006 a 20-foot boat was spotted off Ragged Point on the south-eastern coast of Barbados. On board 11 bodies were found by the coastguards, preserved and desiccated by the sun and salt water. This was a ghost ship adrift for four months on the Atlantic Ocean. It set sail on Christmas day in Praia in the Cape Verde Islands full of migrants from Senegal, Guinea Bissau, and Gambia en route to the Canary Islands. Each of these people paid £890 for their place on the boat.

The boat ran into trouble at Nouadhibou, a Mauritanian port, and was towed for a time by another ship. An article in *The Guardian* conjectures that the line was possibly severed by being hacked by a machete. Once adrift this ship began its slow movement across the Atlantic, buffeted by the winds, rain and pulled westward by the ocean's currents. By January all the passengers had died either with many of their bodies jettisoned into the sea or washed overboard. This ghost ship then travelled the 2800 miles to Barbados.

A note written by one of the men who died on board and a ticket for a Senegalese Airlines flight found on the boat provided the first pieces of the puzzle.

According to *The Guardian*, these are two notes found on board:

"I would like to send to my family in Bassada [a town in the interior of Senegal] a sum of money. Please excuse me and goodbye. This is the end of my life in this big Moroccan sea," the note said, according to a Barbados paper, the Daily Nation.

I am from Senegal but have been living in Cape Verde for a year. Things are bad. I don't think I will come out of this alive. I need whoever finds me to send this money to my family. Please telephone my friend Ibrahima Drame.
Signed Diaw Sounkar Diemi.

*

In the morning hours, radiations from the sun warm the land faster than they warm the sea. The hotter, lighter air of the land pulls the wind from sea to land. So as the sun rises, the island is surrounded on all sides by winds that blow inland from the sea.

Barbados has only two species of plants that are unique to the island, "a common gully shrub *Phyllanthus andersonii* sometimes called broom, and a rare slender climber; *Metastelma barbadense*, which has no common name" (Carrington 1). The rest of the nearly three thousand varieties of plants came from across the water – some borne on ships from across the ocean and violently cultivated, and others carried by forces of nature – by birds flying across the water and by the wind.

[In Barbados] flora reach the shores on winds and ocean currents and with the help of birds. In addition many of our wild plants are deliberate introductions which have since become self-seeding and naturalised. It is often said that many of the wild plants of Barbados are exotic weeds. (Carrington 1).

Plants grown from seeds blown across the Antilles were replaced by annihilating fields of sugar cane. These decimated plants, blown by wind and carried by ocean currents and birds now grow thickly across dirt-hewn paths, on fields grown for grazing, and in gullies carved through coral caves.

A stronger system of winds travels from farther away. Trade winds blow across the Atlantic Ocean to the Caribbean Sea, carrying the weather, and for centuries the sails of ships from East to West. Dust from the Sahara Desert blows across the Atlantic, moving grain by grain the matter of one continent onto a line of islands on the other side of the ocean. Barbados is the first coast that these particles of dust touch, and for spring, summer and autumn the air is full of matter of the Sahel, and the earth is carpeted with its phosphorescence.

*

For Mark Fisher.

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L'Agropoétique est une Conscience

Hervé Yamguen

HERVÉ YAMGUEN is a Cameroonian artist living and working in New Bell, Douala. His artistic practice is transdisciplinary; he is a poet, sculptor, painter, and performer. As a member of various art groups (Cercle Kapsiki, Marche des Arts Bali), Yamguen actively participates in self-organised art projects and social spaces of agency in his home country. Since the 1990s, he has been publishing editions and showing his artistic work in exhibitions and in public space. In 2014, his solo exhibition *L'Oiseau Conteur* at the Fondation Donwahi in Abidjan was met with much acclaim. For Hervé, being an artist is a way of existing in the world, closely associated with spirituality. His imagination makes cultural, personal, and social memory visible in his own artistic practice.

These drawings were included in Yamguen's installation for the exhibition *Soil Is An Inscribed Body: On Sovereignty, Agropoetics and Struggles for Liberation* held at SAVVY Contemporary from the 30th of August till the 6th of October 2019.



El laboratorio a cielo abierto

Maria Ptqk



MARIA PTQK (PhD), is an independent curator, editor and producer. Her work focuses on cultural approaches to technoscience, inspired by gender studies, artistic research and critical epistemologies. She currently collaborates with cultural institutions such as Azkuna Zentroa Alhóndiga (Bilbao) and Medialab Prado (Madrid).

This text is a fragment from Maria Ptqk, *Breve historia del pimiento para uso de la vida extraterrestre*, Gabinete Sycorax, 2015.

El caso más extremo de la tendencia a objetivizar los organismos vivos, como si fueran productos manufacturados, son las biopatentes.

Los derechos de propiedad intelectual sobre la materia viva aumentaron de forma exponencial en las últimas décadas del siglo XX, a la vez que se perfeccionaba la ingeniería genética. La invención en 1973 de la tecnología del ADN recombinante, que permite transferir el ADN de un organismo a otro, abrió un tiempo nuevo para las ciencias naturales.

A partir de entonces, en los laboratorios fue posible diseñar la estructura genética de potencialmente todas las formas de vida, ya sean bacterias, plantas o animales.

A este tipo de tecnología pertenecen los transgénicos (organismos genéticamente modificados: OGM), habituales en la industria de la alimentación. Las biopatentes aparecieron desde el principio unidas a los OGM sencillamente porque constituyen la forma más rápida y eficaz de rentabilizar las innovaciones industriales, destinadas a la comercialización a gran escala.

El caso más polémico de patente sobre el pimiento fue la concedida a la multinacional Syngenta en 2013. La variedad patentada provenía de un pimiento silvestre de Jamaica especialmente resistente al trip y la mosca blanca, dos tipos de plagas habituales en las cosechas. El pimiento había sido llevado desde Jamaica a la Universidad de California en los setenta, apenas una década después de que el país caribeño se independizara de su antigua metrópoli, Gran Bretaña. Años después, fue trasladado al Centro de Recursos Genéticos de los Países Bajos y de allí a los laboratorios de Syngenta, donde se aisló el rasgo genético de resistencia y se cruzó con pimientos comerciales convencionales. Syngenta obtuvo la patente para su comercialización en todos los países de la Unión Europea.

Organizaciones ecologistas denunciaron la ilegalidad de la patente, al considerar que la capacidad de resistencia de la planta no es de ningún modo resultado de la acción de Syngenta, ni siquiera de la intervención humana, sino que se encuentra “naturalmente” en el pimiento jamaicano. A pesar de ello, esta patente, como otras semejantes, sigue siendo técnicamente legal y prohíbe a los agricultores utilizar el pimiento jamaicano en sus propios procesos de mejora.

Al modificar el sabor, el color, el olor, las propiedades nutritivas y a veces incluso la forma de los vegetales –ahí están las sandías cúbicas, más baratas de almacenar y transportar–, la ingeniería genética ha transformado el concepto mismo de alimento.

Angello®, por ejemplo, es un pimiento de diseño. Desarrollado y patentado también por Syngenta, ganó el premio al producto más innovador en la edición 2012 de *Fruit Logística*, feria internacional de

la industria de las hortalizas que se celebra cada año en Berlín. En su cultivo no se emplean insecticidas, sino organismos provenientes de biofábricas. Tampoco se usa tierra, sino una composición hidropónica de fibra de coco, reciclada de la industria del automóvil. Angello® no tiene pepitas y puede llegar hasta los 12 grados *brix* (una unidad para medir la cantidad de azúcar), lo que lo convierte en un pimiento mucho más dulce que los demás. Se vende solo en la cadena británica Marks & Spencer y se cultiva en exclusiva en los invernaderos de El Ejido, en Almería.

En el caso de Angello®, la ausencia de pepitas –es decir, de aparato reproductivo– es una decisión de diseño de producto, para facilitar su manipulación. Pero no es excepcional. Una de las modificaciones genéticas más habituales es precisamente la esterilización de las semillas. El objetivo: impedir la reproducción natural de las variedades patentadas.

El Ejido, donde se cultiva Angello®, es la capital mediterránea de los transgénicos, también conocida como “la huerta de Europa”. Se trata de un verdadero mar de plástico de 12.500 hectáreas de extensión donde se cultivan, con métodos de agricultura intensiva, pimientos, tomates, berenjenas, calabacines, pepinos o melones. Sus invernaderos son famosos también por emplear, como mano de obra barata y muy precaria, un número extraordinariamente alto de trabajadores venidos del otro lado del estrecho, a menudo sin papeles, en una siniestra recreación contemporánea de los peores capítulos de la economía colonial.

En El Ejido se cultivan solo unas pocas variedades de pimiento: sobre todo, morrón rojo, morrón verde y pimiento verde italiano. Pues otra de las peculiaridades de la agricultura transgénica es que –al estar orientada a la búsqueda de economías de escala: producir mucho de lo mismo para reducir costes y aumentar la rentabilidad– fomenta los monocultivos y, en consecuencia, reduce drásticamente la biodiversidad.

En términos de biodiversidad, el pimiento, como otras especies, ha recorrido un camino de ida y vuelta. Si durante siglos mutó en un sinfín de variedades, aclimatadas en culturas y geografías heterogéneas, con la producción industrial de organismos genéticamente modificados, se ha dado el fenómeno contrario: los cultivos se han vuelto uniformes, se siembra y se cosecha lo mismo en casi todas partes.

Es la lógica de la fábrica, a escala mundial. O, en palabras del filósofo de la ciencia Bruno Latour, la lógica del laboratorio un espacio de experimentación con la materia viva extendido a la totalidad del planeta.

No obstante, en las primeras décadas del siglo XXI, han empezado a manifestarse formas de resistencia vegetal basadas en la reivindicación de técnicas agrícolas tradicionales y el desarrollo o recuperación de circuitos de consumo de cercanía. Estos movimientos están en el origen de la recuperación de muchas variedades que de otro modo no habrían sobrevivido, pues han sido descartadas para la explotación comercial.

En algunos casos, se trata de comunidades campesinas e indígenas que han recurrido a todos los instrumentos a su alcance para defender sus tierras y su soberanía alimentaria. Estas comunidades se han mostrado especialmente activas en la lucha contra las biopatentes. En otros casos, son subculturas urbanas que reclaman el derecho a una dieta saludable, cuestionan el funcionamiento de la sociedad de consumo o buscan experiencias gastronómicas más ricas que las que proporciona la industria de la alimentación. Como consecuencia, se ha generado una importante ola de cultivos domésticos, huertas comunitarias y proyectos de producción ecológica de pequeña o mediana escala, así como numerosas redes de intercambio de semillas y bancos de variedades. Tratándose del pimiento, existen también clubes de amantes del picante que, además de cultivar variedades raras o en peligro de extinción, organizan pruebas de resistencia física en las que miden y premian la tolerancia a niveles extraordinariamente altos de capsaicina. Muchas de las variedades de pimiento recogidas en este banco de semillas provienen de este tipo de comunidades y sus prácticas de resistencia. En términos de biodiversidad, a partir del siglo XXI se han activado todas las alarmas.

Con el cambio de milenio, ciertas ramas de la climatología empezaron a advertir del advenimiento de una nueva era geológica, marcada por el impacto de la acción humana: el Antropoceno. Del griego *anthropos* (ser humano), el Antropoceno supone el final del Holoceno, iniciado hace 11.500 años, y el comienzo de una etapa en la que el ser humano se ha convertido en una fuerza de amplitud telúrica. La tesis tomó fuerza tras un artículo del químico Paul Crutzen publicado en la revista *Nature* en 2002. Años después, sus hipótesis fueron confirmadas por la Unión Internacional de Ciencias Geológicas y hoy la comunidad científica habla ya abiertamente de “sexta extinción”.

Desde principios de siglo ha ocurrido una serie de cambios medioambientales que, con toda probabilidad, acabarán con la especie humana en las próximas décadas. Entre otros: la modificación de la atmósfera y el aumento de la temperatura media causada por los gases de efecto invernadero; la degradación irreversible de la biosfera, resultado de la destrucción de los ecosistemas por la agricultura, la deforestación y la urbanización; y el cambio en los ciclos

biogeoquímicos del agua, el nitrógeno y el fósforo. Desde 2030 ha desaparecido un sesenta por ciento de las especies vivas. Entre ellas, muchas que prestan servicios esenciales a la supervivencia humana, como la polinización o la regulación de los ciclos del agua.

Sabemos que nos extinguimos. Y uno de los momentos en los que más conscientes somos es cuando nos sentamos a la mesa. Es un hecho: los alimentos frescos han perdido consistencia. Su forma es siempre idéntica. Su piel, lisa y brillante. Su olor, sin matices. Su sabor, apagado y artificial, como el de cualquier otro procesado. Sentimos que es nuestra propia aniquilación la que nos llevamos a la boca.

Así que aquí estamos: la humanidad al final de su aventura, decidiendo qué rastros quiere dejar tras ella.

Después de un sinfín de deliberaciones –en las que han participado especialistas de todas las disciplinas–, una delegación de representantes internacionales ha tomado la determinación de enviar al espacio un vegetal con posibilidades de sobrevivir en un entorno extraterrestre. La especie elegida para tentar la supervivencia fuera de la Tierra ha sido el pimiento. De esta manera, el pimiento continúa el periplo que inició con las primeras comunidades humanas hace cincuenta millones de años y que le llevó a prácticamente todos los confines del mundo. El éxodo, esta vez es extraterrestre, pero de nuevo es la especie pionera.

Sus semillas son nuestro legado.

*Centro de Operaciones Aeroespaciales Jiuquan,
República Popular Imperial China, 10 de agosto de 2056*

Encountering Bioinfrastructure: Ecological Struggles and the Sciences of Soil

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'Encountering Bioinfrastructure. Ecological Struggles and the Sciences of soil' María Puig de la Bellacasa (2014) Post-review (final author submitted) version – Please refer to the final published version for citations: *Social Epistemology*, Vol. 28, 1, 26-40, 2014.

INTRODUCTION: REVEALING THE UNIVERSE BENEATH

A quote, attributed to Leonardo da Vinci, circulates in networks of soil lovers and bloggers:

'We know more about the movement of celestial bodies than about the soil underfoot.'

Resuscitating a sentence dating from the 1500s dramatises the perseverance of our lack of knowledge of the soil, adding credence to contemporary attempts to reinstate the vital value of this underground world. Many of those calls for enriching our knowledge of soil are coming from the margins of science – ecological activism, organic farming etc. What is mostly challenged here is not science per se, but rather scientific approaches that support industrial and intensive ways of knowing and treating the soil. The absent made present here is *soil-as-living*, a relational entity of which humans are part. The space-time of this essay is this emerging presence by which soil passes from background to focus. This is a localised and culturally specific process. It is mostly westerners who are speaking out for a 'novel' awareness of the living world beneath. Others, notably indigenous people around the world, have entertained different relations to the soil for which its liveliness is not necessarily new, even when they have suffered the effects of hegemonic agricultural practice (1996: 113, quoted in Lyons, (forthcoming): 380). Nonetheless, the changes affecting humans' relation to the soil concern a range of collectives and individuals striving to renew human interactions with Earth, its non human inhabitants and organic forms of life, at the heart of a world and epoch marked by technoscientific management of the environment. The aim of this essay is not only to modestly contribute to this new visibility of soil, but to treat this passing into visibility as an event in its own right.

For this purpose, I am drawing from Susan Leigh Star's work on 'residues' and 'infrastructure' – developed particularly in different collaborations with Geoffrey Bowker and Karen Ruhleder Surely, what comes to mind when we think of residual categories within working infrastructures are mostly human-built technoscientific worlds. But what happens if we immerse into the soil with Star's mode of attention? What kind of 'invisible work' becomes visible? And at what cost? Through this vision the material, cultural, and ecological significance of soil appears not only as the final home to all residues but also as the dismissed infrastructure of *bios*. In what follows, I first discuss the shifting value of soil as 'residue' through contrasting epistemic sites. Soil shifts from container of worlds to a world in itself showing how its worth – from

residual to essential – is not fixed. Secondly, the notion of infrastructure acts as a revelatory of the ‘working’ quality of this universe, opening into the perception of a whole world of invisible labours that are more than human. Star’s notions of the residual and the infrastructural help to reveal the importance and effects of soil’s shifting worth. When ecological conceptions reclaim this mistreated living ecosystem it is not only the knowledge about soil that could be transformed but the soil itself.

SOIL AS DIRT: THE RESIDUE OF ALL RESIDUES

Soil carries many material and literal meanings as well as metaphorical (Landa & Feller, 2010), some of which this article explores. In this section I unfold its material meaning as the home of all residues to start exposing its shifting value. At a basic material-scientific meaning, soil refers to a thin layer of the earth, composed by organic materials or, more precisely of ‘remains’, such as rock particles. This layer is in itself composed of different layers or ‘horizons’ – that go from the thin yet nutritious layer of ‘humus’ to the solid bedrock. This multilayered universe is a ‘boundary object’ (Leigh Star & Griesemer, 1989) of the interdisciplinary field of ‘soil science’ that interests physical geographers, agricultural scientists, biochemists, microbiologists and even archaeologists. But it is also an object of attention, concern and care outside the scientific establishment for ecological activists and lay gardeners. Interest and focus varies in this multifarious context. For Star and Griesemer a boundary object is that which allows cooperation between heterogeneous scientific work ‘to create common understandings, to ensure reliability across domains and to gather information which retains its integrity across time, space and local contingencies’ (Leigh Star & Griesemer, 1989: 387). Their definition of ‘scientific work’ includes not only what scientists do but also amateurs, humans and animals etc. In that sense, the meaning of soil as a boundary object is not fixed to a sole disciplinary focus. Soil can be treated as a mineral and chemical composition or as a web of living organisms, or both. It also has an informative dimension that justifies an impressive range of planetary projects of information systems, soil mapping, and quality testing. Yet more commonly, the very word carries additional cultural material-metaphorical meanings that are transversal to communities of (scientific) practice. In many cultures for instance, soil is the final ‘home’ to most residues. In that sense it carries Earth’s material memory and that of its creatures. In cultures marked by horror of decay the status of this massive memory storage easily shifts between treasure beholder and trash dump.

This ambiguous perception as well as shifts in focus are illustrated by how archaeologists at the University of Leicester speak of the work of distinction between ‘remains’ and the soil that hosts them: ‘delicate remains are carefully separated from the soil in running water so that they can be identified under the microscope’. Here ‘delicate remains’ refer to all sorts of residues from past humans and other creatures. These are valued today as revealers of our ancestors’ practices, cultures and natures:

‘Rubbish pits are also a good source of evidence because they often contain charred remains which do not decay, mixed with animal bones and pottery which can be used to date the material ... pollen samples from a buried soil under the defensive rampart ... will indicate what the area was like just before the Roman defences were constructed’.

Archaeological Services, University of Leicester, 2007

A residue, is a name for that which doesn’t fit a particular category scheme, or that which is irrelevant to a data collector (Leigh Star & Bowker, 2007). Bowker and Star show how what becomes ‘residue’ can be ethically charged, because it involves exclusions from knowledge and thus invisibility and objectification. What is residual depends on focus. In our case, the scientific focus of archaeologists corresponds to what enters in their category of ‘evidence’, including here, somehow paradoxically, residues that resisted to the dissolution resulting from decay. Soil is, by contrast, the actual result of decay, of remains that didn’t resist to dissolution. As residues become ‘delicate remains’ the remaining soil becomes the container of this evidence – a more or less irrelevant *background*. Its relevance is reduced to how its quality will guarantee better or worse conservation, nonetheless, the indistinct residue that soil has become, once the first selection of remains has been done, can also be a valuable provider of other types of information, for those who can interpret more hidden ‘data’: ‘the soil will be analysed for pollen and seeds by a specialist and this will tell us about the environment at the time the ditches were in use’ (Archeological Services, 2007) What will remain soil for archaeologists at work is the utmost residual, that which has escaped categorisation as evidence.

Isn’t it like that for most humans as we go about our business? We class things and make irrelevant the ones we do not need to focus on. Is not that they are ontologically absent, but that we become absent minded to them. This lack of awareness does not respond just to ‘negative’ qualities – disregard for instance, or to immoral erasure - but is also a symptom that to forget, to ‘sort things out’, is human (Bowker

& Star, 1999). And not only human, as Star put it humorously: 'I love the idea of being a residual category to a mountain lion' (Leigh Star, 1995: 3). So let's take the material meaning of residue at face value in its everyday meaning. Soil is where most residues end up, all the unclassifiable in the everyday 'sorting out' of things. It is significant that 'non recyclable' materials - including plastics - can that way become part of categories of 'organic waste'. As a child, when I lost something like a coin, or a toy in the middle of the countryside, I remember thinking that it would become an archaeological object for future people, who would study it to learn about us. But if we look at the category of archaeological evidence with the contemporary notion of ecological living, waste resistant to decay becomes a highly ethically charged category of matter. In short, if it cannot become soil, we have a problem. Civilisations that didn't leave any trace might become the ones to celebrate. The value of well decayed soil shifts when it takes status of host of natural resources - soil being the ground where 'our' food and that of many other beings in this planet grows. Yet still, from these radically dissimilar and somehow incomparable perspectives on soil, it still appears as the home for all residues, what is in question is what residues become once within it, once they are absent to our everyday perception. Here is different types of knowing and perceiving speak to each other. Depending on who is looking at the data and for whom that work is done some things are considered data and others not. In classification systems, the very category of data exposes that something is 'not data'. Ethical and political issues however arise when the 'not elsewhere classified', the residual category par excellence, becomes dumped as not interesting (Leigh Star & Bowker, 2007). So more generally, what these considerations point at, is the shifting value of soil as the home of all residues and the possible consequences of this change for this boundary object and those who depend on it. This brings the actual sciences of soil at the foreground of societal interest, but how is the science of soil, for which soil is not background but focus, affected by this change in culture? And how are different practices involved in this shift?

SOIL SCIENCE: A RESIDUAL SCIENCE

Interestingly enough, 'soil science' was developed initially by a gathering of residual topics of different sciences, all concerned by one or other bit of what makes the soil, or can be found in it. Still in 1958, Dr. W. T. H. Williamson asked, in his Presidential Address to the British Society of Soil Science: 'Is there such a subject as soil science, or is there merely ... a 'hot-potch of sciences' applied to the study of soils?' (W.T.H., 1959)

Scientific disciplines can start as residual categories. It happens that those who do not fit anywhere else, some of those inhabiting the indefinite 'not elsewhere classified' gather to become something visible as one. In the beginning of the 1960s a science of soils is still struggling for identity by detaching itself from other categories of origin. In the same address, Williamson argues that: 'Application of the techniques of other natural sciences is very necessary, but these should be directed towards the end of explaining soil features recorded in the field, *and not of isolating some problem primarily of interest to these sciences themselves*' (my emphasis). Yet since soil becomes a scientific object in its own right, soil science has been borrowing from multiple disciplines: chemistry, physics, mathematics and applied practices such as 'ecology' or 'geostatistics', with one of the main sites of 'application' being agriculture and issues related to the environment. The field remains heterogeneous, and specialization is strong, so what is accounted for as the history of soil science will depend on who among its participants tells the story and what questions are asked to the soil. And these are not isolated from larger societal and cultural issues.

The relation between soil science and 'society' remains a relatively unresearched one even if the development of this discipline historically resonates deeply with societal concerns. Scientists Johan Bouma and Alfred E. Hartemink (2002) have examined how, in the Dutch context and more broadly Western Europe, this relationship has worked thorough three historical periods. First, a 'production wave (1945-1970)', in which the authors highlight a focus on food production (after the Second World War). The agricultural industry was boosted then by incorporating soil science research into plant nutrition for instance. Bouma and Hartemink also highlight the price of this success: an excess of agricultural production by the early seventies. Also, 'the excessive use of agrochemicals ... had unwittingly polluted soil, water and air, and had contributed to the destruction and deterioration of natural habitats for animals and plants' (Bouma & Hartemink, 2002: 134). This resulted in boosting an interest in 'environmental research' giving way to what they call the 'Environmental Wave (1970-late 1980)'. Finally, in the third wave, starting in the late 1980s, a 'postmodern phase', capitalism has become the 'only major political system'. This phase, they argue, is transforming soil science with the emergence of interdisciplinary, non-traditional and flexible initiatives that involve concerned citizens, policy makers, and non-governmental organisations that *invite soil scientists to participate* not to give solutions within 'problem-solving' modes of operation but in which 'soil science input was derived from discussions in the team and was part of a joint learning experience' (Bouma & Hartemink, 2002: 137).

I find their typology particularly interesting in that it highlights for each wave the correspondent level of public trust in science. High in the Post-War period, decreasing by the end of the 1980s, and finally, in this 'third wave', affected by a changing relationship between science and society: 'the linear model transfer' gives place to a 'much more flexible network structure in which various stakeholders such as citizens, politicians and scientists, work together' (Bouma & Hartemink, 2002: 135).

This late phase is well recognisable from the perspective of the social studies of science – one could argue that scholars in this field have also contributed to develop these new forms of knowledge production (Callon, Lascoumes, & Barthe, 2009). Yet it is not a coincidence that capitalism appears associated to this third wave. We also know that the opening of science to society, like it happened with the 'third mission' of the university, has been in many cases just a way for the opening of science to the markets. But what I am interested in emphasising here is the shift in the developments of the science itself that Bouma and Hartemink would like to see associated with this transformation: more than soil science being just market driven, 'the living earth is placed in a central position, from which are derived the limits within which human societies can develop' (Bouma & Hartemink, 2002: 137). Though they see few activities in this sense in the early 2000s, they do point at the emerging presence of soil as a living entity and how this is happening throughout the initiatives in which scientists are involved in broad interdisciplinary contexts in dialogue with other communities and forms of knowledge. The orientation of a late International Conference on Applied Soil Science (University of Wageningen, 2011) could be also characteristic of these evolutions. Organised around topics such as climate change, food security and biodiversity it puts soil as a living entity at the centre of these issues treated interdisciplinary. Interesting enough one of the keynote speakers at the conference was initially programmed to be Vandana Shiva, the well known Indian ecofeminist activist and researcher.

In this paper I am interested in a plane of analysis that could add insight to the thinking of these phases, by identifying processes by which 'alternative ontological politics' are being created (see Papadopoulos in this volume). The question here is: where are 'constituent' radical politics of matter emerging at the heart of technoscience through the crafting of alternative relationships with the material world (D. Papadopoulos, 2011)? Focused here shifts onto how scientific knowledge about soil is not just *used by* but may well be *produced by* social movements, in a quest to transform ecological relations between different beings sharing the Earth. These are not

only so called 'activists' in the traditional sense of the term that alienates everyday practice (Dimitris Papadopoulos, Stephenson, & Tsianos, 2008; TheFreeAssociation, 2011) but just people changing their everyday material conditions, through common 'ethical doings' (Puig de la Bellacasa, 2010). From this perspective, the ongoing redefinition of the object of soil science could be further exploding out of scientific boundaries in a way that is not so much about citizens becoming experts but practices displacing knowledge. The words of these gardeners turned into writers of popular science with a book that explains soil biology to gardeners can give a hint of this process:

'What makes this book different from other texts on soil is our strong emphasis on the biology and microbiology of soils – relationships between soil and organisms in the soil and their impact on plants. We are not abandoning soil chemistry, pH, cation exchange, porosity texture or other ways to describe soil. Classic science is covered, but from the premise that it is the stage where the biology acts out its many dramas....

We think that learning about and then applying soil science (particularly the science of how various forms of life in the soil interrelate – the soil food web) has made us better gardeners'.

— Lowenfels and Lewis (2010, 14)

They distinguish their focus on the soil as a living web of interdependent beings from previous approaches. Their work is just an example of how, while ecological concern is growing at the heart of the sciences of soil, marginal reappropriations of soil science are happening among 'lay people', making change 'from below', as Sandra Harding (2008) would put it. As mentioned earlier, soil is a particularly rich boundary object for the precise reason that it gathers interests across a broad range of knowledge communities. Yet we can see that it would be inappropriate to oppose 'classic soil science' like an interest in soil as inert matter, versus an ecological lively approach – we know how natural scientists have a *feel* for their living objects whether these are organisms or molecules (Keller, 1984; Myers, 2008). However, the political and affective charge can be different whether we conceive the quality of living for the purposes of scientific interest, for saving resources for humans' food, or for the purposes of the world beneath *for its own sake* – a concern typically voiced by ecological movements. These modes of care for the living can be related, and these overlaps between science and ecology are precisely at the heart of this paper. Before coming to this aspect, I want to address a common cultural and affective space of this transformative relation: an increasingly

widespread acknowledgement that soil has been a forgotten, dismissed and shattered element of our ecosystem.

ENCOUNTERING THE INFRASTRUCTURE OF BIOS

*'People often cannot see what they take for granted
until they encounter someone who does not take it for granted'*
—(Bowker and Star 1999: 291)

To start approaching the emerging into visibility of a large scale multisite *topos* I find helpful to inquire into soil as the 'infrastructure' of our living ecologies on Earth – to which I refer here as *bios* as a way to emphasise everyday living with nature, rather than a more existentialist and humanist vision of 'Life' as a driving force. Approaching soil as infrastructure makes it appear as a highly lively entity. Not only living memories of exclusions and past organisational settings are archived and processed in it, but this work is only possible through *labours* invisible to most humans: of earthworms, fungi, microorganisms etc. I am drawing here upon Leigh Star's work on infrastructure developed in collaboration with Karen Ruhleder. I find Star's singular modes of attention particular helpful here, precisely because they are not neutral towards invisible labours but are moved by a yearning for social justice in naturecultures.

In 'The Ethnography of Infrastructure' Star looks at the specifics of studying large scale infrastructural objects, coming back through her discussion to a series of characteristics of infrastructure itself as 'ecology'. The most generic characteristic of infrastructure *is to be relational per essence*: 'Analytically, infrastructure appears only as a relational property, not as thing being stripped of use' Star and Ruhleder (1996: 113, quoted in Star, 1999: 380). What is infrastructure from the perspective of one practice, from another perspective is a focus, a topic. Infrastructure speaks about an invisible 'background for other kinds of work' (Star, 1999: 380), but one that gives meaning to the visible work. We have seen how soil as an entity shifts from background to topic and back to background. Following Star's approach, insisting on soil as infrastructure helps to reveal one of its dimensions, one of its modes of existence: that of a basic understated, stabilised, indispensable ground upon which a collective lives and works. In other words, the very gesture of *exhibiting* infrastructure is acknowledging simultaneously, the importance and the invisibility, or silence, of a vital component of a world. In that sense, when asserting that the world of soil has been

absent, this requires acknowledging the relational character of this truth. Again we can ask the question *Cui Bono?* (Leigh Star, 1995): *for whom* is the quest to reclaim the soil? And, why has it become important to reclaim soil's significance as the infrastructure of *bios*?

Star's work on infrastructure and residual categories is rooted in mostly often technologically human made material worlds, however – like the above explored attention to the 'residues' – it provides a lens through which to see differently all parts of the everyday. For instance, in everyday urban living, soil is mostly apparent as residue left in cracks between pavements and roads, to which most of us do not even pay attention to. Even when soil is extensively present, like in parks or farms, its importance in the ecosystem is shadowed to the passant by the other creatures of the green spaces that grow from it – most of us will enjoy the beauty of trees, the taste of good vegetables but never give a thought to the ecological continuity of this beauty and taste into the soil that makes it possible. Here it is important to add a 'personal' note. This paper is written by somebody for whom soil has passed from being unimportant inert matter to a lively *beingness* manifesting a world of 'companions' in trouble. This particular experience marks the way in which I understand here the importance of soil and its emerging presence. The vital liveliness of soil is something I 'learned as part of membership' – another characteristic of the different properties of infrastructure: 'Strangers and outsiders encounter infrastructure as a target object to be learned about. New participants acquire a naturalized familiarity with its objects, as they become members' (Star, 1999: 381). In my case, the membership was that of becoming an apprentice of permaculture practices with the trainings of the *Earthactivist* collective,¹ which give a prominent place to knowledge of the soil, of its inhabitants and its ecology because caring properly for the soil requires relearning to *know* it as living. In words of one of the leaders and trainers in this organisation, the neopagan ecofeminist witch Starhawk: 'Earth-honoring agriculture would generate abundance, but its primary intention would be not to grow profits, but rather *to grow soil* – living, healthy, complex soil – as a fertile matrix for living, vital, health-sustaining food. To grow soil, we need to appreciate and understand that soil is a living matrix of incredible complexity, the product of immense cycles and great generative processes' (Starhawk, 2004: 161, my emphasis).

Permaculture is just one of the names given to practices by which movements of ecological practice are converging today in a need to attend the health of soil by knowing it better. What these movements

¹ See Earth Activist Training. Planting the seeds of change: <http://www.earthactivisttraining.org> (last accessed January 2012).

have in common is a calling for *planetary* awareness but starting from the *local* level. This also reveals another characteristic of infrastructure: its particular 'reach or scope' always 'goes beyond a single event or one-site practice' (Star, 1999: 381)². Infrastructure manifests its existence locally, through our material everyday relationships with it. In that sense, renewed concern with the alarming state of planetary soils is gathering multiple situated perspectives, people for whom soil is at the heart of a practice – some soil scientists, organic gardeners – or the 'soul' of a way of life – indigenous communities fighting to protect a threatened ecology (McIntosh, 2004). For a range of human collectives soil conveys a strong cultural significance as the ground for communities in the most basic everyday meaning. This is a crucial infrastructural quality that could be named also after Star and Rudheler as *Embeddedness*. Embeddedness of infrastructure can be actually understood as a success, making its 'absence' from our thinking a normal quality, more than would be a constant presence: 'Infrastructure is sunk into and inside of other structures, social arrangements and technologies. People do not necessarily distinguish the several coordinated aspects of infrastructure' (Star, 1999: 381). Through passing into awareness however, it reveals new aspects of the world, and because of its relational essence, this affects its ontological quality and that of its 'members'. For instance, would the embeddedness of soil push humans to realise that 'In a sense we are unique, moist packages of animated soil'? (Hole, 1988) – in the lyric words of a soil scientist, also known for his delightful songs about soil. This can be read as a poetic reminder of what the ecofeminist environmental activist and researcher Vandana Shiva has made pretty clear in her recent book *Soil not Oil* (Shiva, 2008). Shiva makes a case to the truth that we are what we eat, and that what we eat is very much given its quality through the health of the soil. For instance, zinc deficient soils, produce zinc deficient food. All these changes on perspective about the soil and our relationship with it can be explained by a global sense of threat but something also very corporeal, that touches the most bodily aspects of our being. Why is this perception important? Does the affective shift that would make us care more for the soil pass by the acknowledgement that 'we are soil', that *we are our residues*? Or at least some among us need that. Maybe those who have pretentiously named ourselves after *humus*, the richest part of soil, that sturdy and stable end product of laborious processes of decomposition and decay – from which Latin derives *humanus*, human.

2 With the subtitle : 'Reviving the Dreams of Sir Charles Darwin'. Referring to a late volume, unpublished at Darwin's death: *The Formation of Vegetable Mould through the Action of Worms, with Observations on their Habits*.

However in researching infrastructure Star's work shows the importance of listening to its invisible workers. In the case of soil these are mostly non humans, the actual processors of decay. The workers of the soil need thus particular spokespersons: but who is bringing up the messages from the soil workers? Who is giving voice to the current breakdown of soil's nourishing capacities? And to say what? But again, making visible is not a neutral affair. A scientific paper on vermiculture technology (i.e. the recruitment of worms for the processing of waste) reveals the invaluable role of earthworms as 'soil managers' (Sinha, Valani, Chandran, Soni, 2011). Words matter: thinking of worms as managers reproduces the hierarchies of capitalist productionist culture. Humans remain shareholders, soil's inhabitants the managers of *our* biocapital and our excess surplus. Such a naming contrasts sharply to the approach to worms, fungi, microbial et al... as relatives, as creatures whose existence is not 'for us', but for itself. From the perspective of permaculture ethics, soil is revealed as the habitat of respectable beings that take care of its health: worms, fungi, nematodes, microbes (Starhawk, 2004; Lowenfels & Lewis, 2006). This revelation goes hand in hand with a particular consciousness – or it could be said spiritual wisdom – that soil is itself part of a living organic web of being of which many creatures including humans are part. Here *Worms et al.* are acknowledged as co-creators of our very matter while *composting* is our part of this collaborative and ongoing work of creation. These particular spokespersons of the labours of the soil are here humans striving to break up with a culture of human exceptionalism by changing our practices and consciousness and acknowledge that we humans are part of this ecosystem and we have a role to play that is not that of 'stewards' but more that of *relatives* in what soil scientist Elaine Ingham calls a *foodweb* (Ingham, 2004). The widespread interest in invisible workers of the soil is benefiting from the work of biologists and environmental scientists. Together, these perspectives are contributing to what Bowker (quoted in Star, 1999: 380) calls an 'infrastructural inversion' where the 'backstage of elements of work practice' are brought to the forefront: among these are the ecologies of taking care of excess waste, and of the invisible, non human, workers of the soil that make this possible.

COMMON SOIL SCIENCE

Soil is for many the most important *biotope* on earth, and the most endangered. The fact of the matter is that soil is also resource and thus, in humanist capitalist history, a valuable object of political economy, which as any 'good' in capitalism, becomes rapidly consumed and then

trashed. As such, soil it is also a site of what Dimitris Papadopoulos has called a 'politics of matter' in which constituent 'alter-ontologies' are at stake (see Papadopoulos' contribution to this volume). Today, the worrisome state of soil in many places that has made of it a public matter of concern. We could say that this global perspective alone precisely reveals it as the infrastructure of *bios* on Earth. A flow of catastrophic messages is making more visible its vital importance of soil. Here soil is a planetary word, literally, as a constitutive layer of the planet, and also in that it speaks of global ecological threats. Ecologists are warning of a 'peak soil' worst than 'peak oil' (Wild, 2010). The unhealthy conditions of agricultural exploitation are being linked to the most visible planetary disaster: global warming (Shiva, 2008) – and fascination with demise is fuelled by historical studies of how 'using up' the soil has systematically led to the 'erosion of civilisations' (Montgomery, 2008). This state of global awareness speaks well of a second relative dimension of infrastructure: it 'becomes visible upon breakdown'. In Star's words: 'The normally invisible quality of working infrastructure becomes visible when it breaks... Even when there are back-up mechanisms or procedures, their existence further highlights the non-visible infrastructure' (Star, 1999: 382). The drive to pour chemical fertilisers into the ground to enhance its quality can be seen as one of those 'back-up' mechanisms of the infrastructure that has, pushed many to try convincing fellow humans about the awesome invisible ecologies at play in soil's own fertilising cycles when conditions such as biodiversity are met (Shiva, 2010; 1995). If we understood/acknowledged the infrastructure before it broke down and back up measures kicked in we might be able to avoid some of the devastating effects of infrastructure breakdown. Exposing the stubbornness of the proponents of the 'green revolution' to accept its failures and instead continuing to extend its previous devastations into unexplored land (i.e. Africa), Shiva shows how the promises from ecological salvation coming from Science Inc. (in its alliance with agribusiness) reinforce the never-ending contradiction of science and technology to be called upon to *so/ve* problems that previous scientific and technological solutions might have created in the first place. Problems keep being read as an 'absence of (proper) technology' (see Bauchspies' contribution in this volume). Meanwhile, movements opposing such logics are dismissed as technophobic, or left to respond to problems formulated in a reductionist way, 'infernal alternatives' (Pignarre & Stengers, 2011: 23) such as: 'GMOs or Africa will starve'.

Technoscience thrives on 'seductive metaphor' – whether by scare and or promise. So do our social movements. Soil carries also cultural

meanings that are highly affective. The very word transpires intense material and metaphorical meanings in subjective-objective ways: dirt, erosion and decay as well as source of life. But at the same time that large scale salvation discourse and projects expose how it is a matter of urgency to act at a global level movements such as those promoting permaculture practices expose that people are getting involved in the most domestic level of ethicality, confronting this breakdown in an everyday way: organic agriculturists but also vacant lot gardeners applying themselves to 'heal the soil one garden at a time' (Carlsson, 2008). Permaculture movements are far from being 'against technology' but are calling for technologies that can work *with* nature's patterns (Mollison, 1988) rather than against them, or trying to *master* them (Merchant, 1990). Of course the development of these at a level that could transform scientific practice remains marginal, the mode of production of science today is far from being accessible to the average gardener and the drive of Science Inc. seems unstoppable, including to scientists themselves (Stengers, 2006, 2011). But though biotechnologies working 'with nature's patterns' are yet to be invented it is the point of this paper to insinuate that these could be fostered and that soil sciences might be offering glimpses of a common soil science, attentive to *ordinary* ways of knowing and calls from outside science.

But the need for collaboration between ecological movements and scientific practice into a common soil science comes also with one of the fundamental teachings of looking at soil as infrastructure: it cannot be engaged with from one sole perspective. 'Because infrastructure is big, layered and complex, and because it means different things locally, it is never changed from above. Changes take time and negotiation, and adjustment with other aspects of the systems are involved. *Nobody is really in charge of infrastructure*' (Star, 1999: 382). Who does the *soil* belong to? Of course, soil is a privatised universe, sold as resource. But what happens to local soil, even under a private golf course, exceeds the consequences of its enclosed boundaries. What we eat in the UK has consequences for the state of the soil in Kenya – from where vegetables are imported (Shiva, 2010). From a scientific perspective this is also true: which disciplines need to know about soil, about air, about water? The struggle to close up a list, confirms what contemporary *commoners* are claiming: some things shouldn't be for sale. This could be what common science means: one that engages with ecological concerns, steps out of traditionally aseptic boundaries of science, and resists the logic by which the 'social relevance' of science fuels for the capitalist appropriation of the material world and the commodification of scientific knowledge. Envisioning soil as the infrastructure of bios supports a

double argument for common soil science. Particularly Star's thinking of infrastructure, because it is not only an intellectual endeavour, nor a scholarly epistemic drive to know the unknown worlds but also an effort to attend to worldly struggles at the heart of the production of technoscience in order to hear voices that are made absent. In that sense it invites to go beyond a critique of science and technology, not just to a more benevolent form of description of technoscience, but to foster thinking with scientists who are trying to change the sciences from within.

CONCLUSIONS

Like most 'absences' produced by the focus of collective thought, the dismissal of soil is relative. What appears when we look at the wide range of scientific interest in soil, is that it not so much 'soil' that has been absent, but *soil as something to care for collectively*, beyond feeding the human at any price possible. What might seem absent from one practice's perspective, is at the core of another's focus. Thus, the invisibility of soil is not an essential absence, it is relative in that it is perspectival –something is invisible to who does not see it, or something is *made* invisible by who does not want to see. But invisibility does have ontological consequences. Being invisible can change the conditions of existence of the invisible, of those who would not see it, and the relations between them. And that is precisely the heart of the matter: the point is not to make 'visible' what has been rightfully or wrongly made 'absent', but to focus on what happens in and through this irruption into presence. Making something visible is never a neutral affair – *cui bono* would ask Leigh Star, in whose benefit? Like every innovation in the production of knowledge, this very move can change *what* is being made visible. In other words, the soil might never be the same after reappropriations of the science of soil within a quest aiming to benefit all earthlings, not only humans. This is just one of the questions that I have in mind when thinking about the significance taken by soil today. From being a scientific object to some or a matter of fact to other practices, to becoming a matter of concern (an issue for political ecology (Latour, 2004, 2005)), soil has also become a matter of global and local care, a 'being' that is asking to be taken care of, protected and engaged with (Puig de la Bellacasa, 2011). As a consequence, the living web in the soil being, as absence to (our) perspective is not just ignorance to remediate (see Croissant's chapter on this volume for an approach to the uses of 'agnotology'). The ignorance of soil cannot be just treated as an epistemic flaw that better

science could just correct. Concentrating on how soil is reappearing within some ecological practices as an emerging presence, and on how this could change the way we live, this paper has taken a specific path into attending to absences and presences particularly marked by the work of Leigh Star, now passed away, but present through memories, deeds and prolongations. Star's ways of thinking absences is about how these can break their silence and alter the present, disrupt the legitimacy of represented worlds by giving voice to the unrepresented, but also opening into new possible worlds. In that sense, commitments to social justice reveal new configurations through attention to worlds that have been forgotten, silenced, or erased. And in doing so, they also aim to do things differently. Here, shifts in epistemological frameworks have to be also affective, not just rational choices about the true and false. The change in ways of knowing we are witnessing is a change of relationship that may well transform the object of knowing itself, in our case, Earth's soil.

ACKNOWLEDGMENTS

I would like to thank the participants to this special issue for helpful commentaries on this essay. Special gratitude to Wenda Bauchspies for being the beating heart of this project and for her inspiring longstanding commitment to listening out for the made absent. My gratitude for their insights and generosity to the speakers and participants in the conferences *State of Science and justice: Conversations in honor of Susan Leigh Star* (June 2011) at the University of California, Santa Cruz and Celebration of Leigh Star: Her work and Intellectual Legacy, University of California, San Francisco, September 2011.

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Breathtaking Greenhouse Parastructures

Luis Berríos-Negrón

LUIS BERRÍOS-NEGRÓN (Puerto Rico, 1971*) explores unforeseen forms and forces of global warming through 'social pedestals'. Most recent exhibitions include 'Impasse Finesse Neverness' (Museum of Ethnography and Archeology of Bahia, 2017), 'Collapsed Greenhouse' at 'Undisciplinary Learning' (District, Berlin, 2016) and 'Earthscore Specularium' (Färgfabriken Konsthall, Stockholm, 2015). Previous exhibitions include the 3rd Biennial of Art of Bahia (2014), the 10th São Paulo Biennial for Architecture (2013), as core-collaborator with Paul Ryan at Documenta13 (2012), and "Future Archive" at the Neuer Berliner Kunstverein (2012). He is the founder of the Anxious Prop art collective and the Paramodular environmental design group. He is doctoral candidate and tutor at Konstfack and KTH Royal Institute of Technology, holds a Bachelor of Fine Art from Parsons New School, and a Master of Architecture from M.I.T. Berríos-Negrón lives and works between Copenhagen, Stockholm, and Berlin.

For this reader, Luis adapted a text of his current PhD research.

BRIEF FOR AGROPOETICS READER

This is an edited excerpt from one of the 'convolutes' that will appear on my PhD (Konstfack Collection, 2019-20). The book will accompany an online 'ledger' titled *Intransitive Journal* (that you can find on Medium.com), and a public installation titled *Neganthropic Anarchive / Anarquivo Negantrópico* (to open on 1st of Sept. 2019, please see Fig. 11). The work stems from testing the technology of 'greenhouse' as simultaneous specimen, display, and virtual reality. Briefly, what I mean is that I have been deposing, analysing, and testing 'greenhouse' as a triadic singularity: as self-referential object of study, as a support platform for scientific and cultural observation, and as original proto-technology that allowed humans to accelerate and decelerate time, to conserve, colonise, and project 'nature.' Over the years, the effort has been motivated by the *intuition that there is something odd about 'greenhouse.'* After a decade of 'playing' with this intuition, and as I finish my PhD titled *Breathtaking Greenhouse Parastructures*, I can now strongly sense that 'greenhouse' does play an uncontested role as chief *mnemotechnology* for the industrial, misogynist, ethnocentric conception of natural science and of natural history. 'Greenhouse' exemplifies the forced collapse of human spacetime. It is not just a physical and metaphorical blur. More so than the Platonic cave, it is the liminal space that first projects the illusion of interior and exterior, literally dividing us by the



(Fig.2) Montage titled "Um Charuto a menos para o tubarão..." ("One less cigar for the shark..."), laser print on all-weather polyethylene) shown at my exhibition Impasse Finesse Neverness at the Museum of Archaeology and Ethnography of Salvador da Bahia, Brasil (2017) based on the painting América, by Stephan Kessler, oil on canvas, 153 x 250 cm, datum ca. 1650-60, Pinacoteca de São Paulo.

illusory transparency of our ‘mastering’ over and above ‘mother nature.’ ‘Greenhouse,’ is the misnomer that is both sustaining the colonially extinct biological subject-matter as an ‘interior’ past, *all the while* it is being set to sustain the speculative, planetary agro-sustenance of a genetically mastered ‘exterior’ future. I test and inhabit ‘greenhouse’ as future spectre of human memory (see Fig.5) driving us to believe that we are fleeced by the ripe and bountiful future of an endless ‘superstructure’ devoid from the Earth. In short, it is the ‘crystallisation’ of the paranormal logic of advanced, free-market, consumerist capitalism. But, as I would like to unleash myself from that binary impasse—that ‘double-bind’ of interiority and exteriority that ‘greenhouse’ represents—I must first reticulate-away from the spiral of messianic promise and mythical violence that ‘colonial memory’ perpetuates. That reticulated emancipation, or rather, that associative detachment from the trauma of colonial violence, is motivated by the realisation that, buried in my technical predisposition, in the very act of externalising my knowledge, there lies, embedded, the ‘colonial drive.’ To uproot and question that facile, assumed, daily violence of externalisation does present optional paths away from the insidious logic of ‘greenhouse.’ It is the only form of relating to the ultimate object of the colonial-industrial form of capitalism that the messianic destining of Global Warming divides to contain, as an oppositional and dissociative form of trauma.

The following ‘convolute’ excerpt offers just a glimpse of how I begin to depose the polemical role of ‘greenhouse.’ Through this particular sample, I briefly begin to describe my research perspective as Puerto



(Fig.1) John Leech, “Crystal Palace—Some Varieties of the Human Race,” Punch’s Almanac for 1855.

Rican & Caribbean artist, and, hopefully, will leave you with a curious desire to look forward to the broader PhD work.

(C)2 COLONIAL MEMORY:

Greenhouse as the anarchive for the technical memory of the exotic

“Exoticism is not an adaptation to something; it is not the perfect comprehension of something outside one’s self that one has managed to embrace fully, but the keen and immediate perception of an eternal incomprehensibility. Let us proceed from this admission of impenetrability. Let us not flatter ourselves for assimilating the customs, races, nations, and others who differ from us. On the contrary, let us rejoice in our inability ever to do so, for we thus retain the eternal pleasure of sensing Diversity.”¹

“The human races on the lowest grade of evolution live merely for the day. The tomorrow and the yesterday have no interest for them, except in so far as their special daily cares are directly touched.”²

“Memory is entwined with place (it is localised, framed and made sense of through place) and the spaces (both physical and imagined) and times in which it occurs ... Memory is furthermore inscribed on and within the body of the person who remembers and helps form the ways in which they move, act and react.”³

There is something rotten in technics...⁴

...because the conception of ‘nature’ continues to be bound to colonialism. Because such putrescent binding, or, say, predisposed mediation, is what contradictorily worsens the fundamental rupture that

1 See van Alphen, Ernst (2017) *Exoticism Or The Translation Of Cultural Difference*, in reference to Victor Segalen in his *Essay on Exoticism: An Aesthetic of Diversity* ca. 1911. Translated and edited by Yaël Schlick, Foreword by Harry Harootunian. Durham, Duke University Press, 2002, pg. 21

2 citation by Svante Arrhenius, Swedish physicist that confirmed the ‘greenhouse effect’ from the work of French polymath Joseph Fourier. See Arrhenius, Svante (1909) *The Life of the Universe, Cosmogonies of the Primitive Races*, pg.1

3 See Hubbell, Amy (2017) *Made in Algeria: Mapping layers of colonial memory into contemporary visual art*, *French Cultural Studies*, Vol. 29(1) 8-18 in reference to (West, 2013: 177)

4 Walter Benjamin once wrote - “There is something rotten in the law,” see “Critique of Violence”, in *Selected Writings*, pg.242



Wardsche Kästen bei der Ankunft auf Samoa.

(Fig. 3) Montage for the Wardian Table. Images of Wardian Cases in Samoa and in Paris, being used for commodities and labour exploitation from, and in the colonies, ca. 1900. For more information see 'The Wardian Case: Environmental Histories of a Box for Moving Plants' by Luke Keogh (2017).

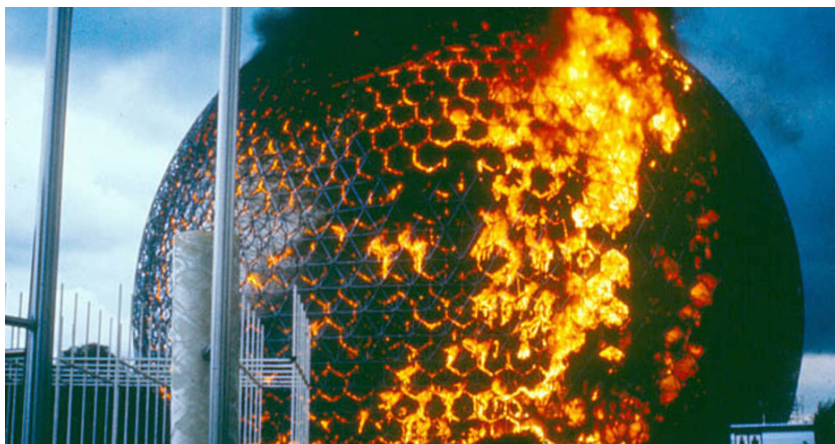
breaks the human away from nature. The contradiction lies primarily manifested in the aura of 'technoscience'⁵ as the collective delusion that makes believe the infantile, illusory, and misogynist mastering control over nature. All the while, we continue to dissociate ourselves further away from living.

Destined by that aura of technoscience, and its ensuing messianic promise of Global Warming, I take 'greenhouse' – with its physical, technical, and conceptual definitions – to be a potent *display*, most often an insidious one, of that contradictory, toxic binding that is buried-deep within human evolution: the colonial drive. I intuit that our collective delusion in the form of that technological aura is conjured by a powerful ghost that enforces three simultaneous traumas: (1) it absorbs and *suppresses-away* the violent history of colonialism; (2) it physically and conceptually *rips-apart, amputates, and remains-between*, thus interrupting the critical interrelations that are fundamental to living; and (3) it does so while 'promising' to be the *messianic* technology saving 'humanity' from the very effects of the suppression and amputation it itself creates. It is that ghostly, toxic, modern aura of '*greenhouse*' that signifies those delusional forces, strongly contributing to the systemic deformation we now know as accelerated climate change.

MOTHER. NATURE.

Zoë Sofia begins her text *Container Technologies* with:

"Since the birth of early modern science, Nature has been imagined in the west as a Big Mother full of treasures (material, land, knowledge) to be plundered and re-sourced. Through world-spanning technological and industrial enterprise, another "Super Mother" has been created in the matrix of mobile resources. We greedy metropolises (and many others besides) want a facilitating environment that smoothly provides year-round access to seasonal foods; we want 24-hour access to



(Fig.4) May 20, 1976 the burning 'Biosphère' (a Fuller Geodesic Dome as the U.S.A. pavilion) for the World's Exposition of 1967 in Montreal. Photo: Collections Canada

5 technoscience (n.) – "This term, which is hardly more than thirty years old, seeks to signify the non-separation of science and technology (which must remain distinguished). In a word, it means that the medium of science (in the double sense of environment and medium) is technical. But, technoscience also means that science is increasingly required by the economy. Contemporary science is no longer modern science in that it intrinsically deals with industry. [...] We must stop opposing science and technology, but we must continue to distinguish them. Science is not reduced to technique, science has a fundamental relation to ideality. A scientific ideality does not coincide with the real but exceeds it; it is the real that becomes possible." See Stiegler, Bernard – <http://arsindustrialis.org/vocabulaire-technoscience>

*hot water, gas, supermarkets, banking services, etc.; and we want technologies that help access other goods and services, such as cable TV, phones, fax, mobile phones, and e-mail (though these latter also have the effect of turning their supposed “users” into mobile resources themselves, accessible almost anywhere, any time). Yet in the midst of all this abundant supply, homelessness is rising both for humans and the non-humans whose habitats are destroyed or polluted. The specter of resourcelessness looms ever larger on the horizon as we reach the limits of a planet that had once been imagined as an infinite container of resources, now revealed as a finite resource itself.”*⁶

Luckily, but not surprisingly, we see ensuing revisions of how “we metropolises” conceptualise ‘Mother Nature’ as this endlessly fertile, giving, caring subject to dominate, extract from and master. Marisol de la Cadena also helps us clarify such misogynist conceptualisation by expanding the ways in which other societies, not unlike those indigenous to the Caribbean, have conceived of ‘nature’ in manners that do not play into this kind of submissive summations. For instance, de la Cadena elucidates upon terms such as *Pachamama* (Mother of Earth), *Yakumama* (Mother of All Water Beings), *Sachamama* (Mother of Forest), created by indigenous peoples of the Central and South American forests whom never intended to objectify nature as female (or as an object at all for that matter), but as androgynous ‘persons’ that facilitate meaningful, transformational discourses *with* forest ecosystems. These persons are more convincingly referred to as “Sources of Life.” Likewise, Donna Haraway further contextualizes these persons as names that signify complex nature-culture systems of temporal and spatial dimensions that are ‘entities-in-assemblage’ which include more-than-human, other-than-human, and inhuman worlds. This puts forth and positions a philosophy that Eduardo Viveiros de Castro refers to as a ‘perspectival multi-naturalism’ of the world, one “*inhabited by different sorts of subjects or persons which apprehend reality from distinct points of view.*”⁷ This is not just about the intersecting dimensions of multicultural worlds (which represents its own challenges, particularly with issues of geopolitical and environmental forced migrations), but also about including careful readings of what could be thought of as multi-lateral worlds, reviewed and sourced from pre-Columbian attitudes, practices, and beliefs that imply embodied, ‘corporeal’ diverging diversities of

6 Sofia, Zoë (2000) Container Technologies, *Hypatia* 15 (2):181–201, pg.181

7 See ‘Why Bears, Yukumama, and Other Transformational Beings are (Still) Good to Think’ by Joni Adamson and Juan Carlos Galeano, in *Ecocentrism and Indigenous Studies*. ed. Salma Monani, et al, Routledge 2016

perspective and of perception. They are compelling, remediating forms of conceiving life, to engage living beyond the splitting objectification of nature by, and away from, ‘man’... departing away towards the relations that constitute the process of learning to live again, of conceiving the multiplicity of environment as ‘persons’ we ought relate to, to survive.

From that departure, and through the following convolute of *Colonial Memory*, I will aim to continue to investigate and depose the potency of dis-play of ‘greenhouse,’ as that which carries the misogynist, colonial drive ‘superrepressed’⁸ within its ‘transparent,’ technical and historical surface-envelop. The *Colonial Memory* convolute before you will reflect my own perspective and psychic constitution as I struggle to parse the unprecedented catastrophe of two back-to-back Category 5 hurricanes that hit my home island of Puerto Rico right in the middle of my doctoral investigation; a practise-based investigation dedicated to understanding the form and force of what drives that destiny of Global Warming. Through this convolute you might notice that I cannot hold back from expressing urgency. You will probably sense how I attempt to situate the embodiment, beyond metaphor, of the condition of oppression of the societies that are already experiencing the onslaught of Global Warming, specifically from my own point of view as Puerto Rican.

LOOKING FROM THE CARIBBEAN

*“I have chosen the word transculturation to express the highly-varied phenomena that have come about in Cuba as a result of the extremely complex transmutations of culture that have taken place here, and without a knowledge of which it is impossible to understand the evolution of the Cuban folk, either in the economic or in the institutional, legal, ethical, religious, artistic, linguistic, psychological, sexual, or other aspects of its life.”*⁹

My commitment to exploring the forces of Global Warming, as core

8 “If repetition is thus inscribed at the heart of the future to come, one must also import here, in the same stroke, the death drive, the violence of forgetting, superrepression (suppression and repression), the anarchive, in short, the possibility of putting to death the very thing, whatever its name, which carries the law in its tradition: the archon of the archive, the table, what carries the table and who carries the table, the subjectile, the substrate, and the subject of the law.” – Derrida, J. (1995) “Archive Fever: A Freudian Impression”, in *Diacritics*, Vol. 25, №2 (Summer, 1995), Johns Hopkins University Press, pp. 9–63

9 See Ortiz, Fernando (1947) *Cuban Counterpoint, Tobacco and Sugar*, Alfred A. Knopf, Inc. First Printing in paperback by Duke University Press 1995, translated from by Harriet De Onís, pgs. 98–99



(Fig. 5) Nonsphere XV: Earthscore Specularium, Färgfabriken, Stockholm, 2015 was conceived as a messianic spectre, a greenhouse as a memory we never experienced before coming back from the future to talk to us in present time of global warming, again and again.



(Fig. 6) Montage, Hurricanes Irma on Sept. 6, and María on Sept. 20, 2017, resp., NOAA.

subject-matter of my work, stems from my life in Puerto Rico and the Caribbean. In that lifetime, I have had the dubious privilege of witnessing beaches disappear, the most beautifully diverse coral reefs of the most intense colour variations go grey and bleach-white, and hear what once were vibrant and loud rainforests go silent. I say dubious because I sometimes wish not to have witnessed any of it. I seldom wish that I was someone born on the global North... of never having lived at 'home', at that other 'half' that is the global South, that disproportionate 'half' that is infrastructural to planetary life. Because of that 'ailment,' I thus find myself deep in this state of reminiscence that is overlaid by a need to cut that cancerous organ; to forget.

*I remember the trauma in order to forget; "I want to learn to live finally."*¹⁰

It is not nostalgia but a deep melancholia. But, I try to resist the cynical, terminal part of the impulse. I instead dedicate myself to try and produce affirmative work that may uproot and display the forces that drives me and so many to involuntarily usher such disproportionate decay; the one that drives the specifically degenerative entropy that is called Global Warming. I aim to deliver work that may articulate and make-visible the forces and interrelations (or lack thereof) that operate remotely yet interdependently, generating specific moments of sensuous sensation towards supporting biodiverse dynamics for living. I am therefore driven to depose Global Warming, for it is ultimately the most insidious and violent form of colonialism. It is the ultimate toxic, contradictory, literally breathtaking type of entropy that, in the short-term privileges the very perpetrators of the industrial project, while slowly destroying it all... including those—human and non-human—who continue to be oppressed and enslaved in order to create, and further tautologically protract that industrial Enframing of toxicity.

I start by building a point of departure to define what I mean by *colonial memory* and set the tone for transforming what it generates and suppresses—within the envelop of the technological aura¹¹ of 'greenhouse'. I am compelled to offer that point of departure as a personal narrative that hopefully leads you to situate and intersect 'greenhouse'—through its technological effect, surface, and

10 See Derrida, Jacques (1994) *Spectres of Marx*, Peggy Kamuf trans., New York: Routledge, pg. xvi

11 "The (re)experience of aura . . . that exceeds the egocentric grasp of a humanistic self-consciousness and indeed points to a humanity beyond self-production and control." See Comay, Rebecca. "Framing Redemption: Aura, Origin, Technology In Benjamin and Heidegger." P.148

metaphor—as protagonist form of colonial violence that drives Global Warming.

TWO WEEKS. TWO HURRICANES.

My insistent and deepening investigation about the role of ‘greenhouse’ in the culture, industry, and technoscience of Global Warming has kept me motivated through many intensifying environmental crises. But, the most potent realisation about its role came on October of 2017, when, as part of my doctoral study, I returned to Puerto Rico, the island in the Caribbean where I was born, grew-up, and still have my entire family at.

Two Category 5 hurricanes, named Irma and María, had just hit the island a few weeks earlier, on the 6th and 20th of September, respectively. Category 5 is the strongest level of intensity for a hurricane in the Saffir-Simpson Scale, meaning that the island endured sustained winds of over 252 km/h, with gusts above 300 Km/h. The strength of Irma had no precedent in its intensity. It hit and caused death and destruction never before seen in many of the Lesser Antilles – Barbuda and St. Marteen were flattened, among many others – as well as causing more death and significant destruction in Haiti and Cuba. In Puerto Rico, about a third of our municipalities in the north east are hit very hard. Irma ripped through the island-municipality of Culebra, one of our priceless environmental and touristic patrimonies. Irma causes major critical damages, particularly to the electricity grid of our main island. Already, the government was over-extended to address these damages. Then, not a week passed after Irma and another storm is identified, now leaving the hurricane formation area of the Cape Verde Islands in the eastern Atlantic, off the west coast of Africa. As it is tradition, the World Meteorological Organisation gives names to storms. They called the hurricane ‘María’.

Was that an omen? A harbinger? Well, not unlike many of the islands of the Caribbean, Puerto Rico’s pre-Columbian history is rooted in its Taíno, and to a significant extent, the much broader ‘Carib’ civilisations. In fact, for instance, the word ‘hurricane’ is drawn from the god of chaos and disorder *Juracán*, for which the Atlantic hemisphere’s meteorological phenomenon is named after. Along with the legacy of the Taíno—which was violently, and deliberately almost-erased from the outset within a few decades of the beginning of the Spanish-Catholic colonisation—Puerto Rico came to ‘inherit’ an intersected culture along with African beliefs that come as a result of the island being used as a key port of entry to the horror of the slave-trade, for over three-hundred years thereafter. That unspeakable practice spread fast and seamlessly



(Fig. 7) Damages by hurricanes Irma and María, Sept. 2017, source: Bloomberg



(Fig.8) van Winghe, Joos, and De Bry, Jean Théodore, De Bry, Jean Théodore, in: Casas, Bartolomé de las, *Illustrations de Narratio regionum Indicarum per Hispanos quosdam devastatarum*, (A very Brief Account of the Destruction of the Indies) Frankfurt am Main, 1598, engravings (by burin on copper), 14,5 x 18cm, source: Bibliothèque nationale de France.

in the mid-late 1500's as a viral trend of 'commerce' adopted and mercilessly expanded by Portugal, England, France, Holland, Belgium, Germany, Denmark, and Sweden, among several other states, as an enterprise that built the core of European wealth, while laying the most unimaginable misery through the Americas and Africa, haunting Asia and Oceania thereafter¹²

That so-called 'discovery' left the island, and the region, not just with a trauma that is still being processed, but with a complex biological and spiritual make-up that is composed of an overlay of Roman Catholic and Christian evangelical beliefs set upon and above, almost literally, indigenous and African traditions. In no small measure, the unspeakable violence of erasure and of slavery rooted in the agro-colonisation of the 'new world' forced, among other cultural dimensions, the creation of syncretic Afro-Caribbean religions and practices. These syncretic practices, largely based on natural-medicinal divinities and rituals, evolved as a way to conceal the real spiritual practices of those who had been abducted. They had to be hidden behind Catholic iconography and rituals in order to deceive the missionaries and slave-masters into believing that they were accepting, and thus being transubstantiated into Catholic converts, all to avoid the heinous torture and even death that would otherwise ensue. Most presciently, considering those values, the iconographic prominence of the figure of the 'Virgin Mary'—associated in no small measure to the various syncretic entities, divinities, and life-forces of nature—plays a potent role along the subdued but revered matrilineal traces that operate at all levels of Caribbean society. Therefore, after many tropical storms and hurricanes through the centuries, always coming in intervals of years, if not decades apart from each other, and named with banal and inconsequential western names assigned in random order by a predetermined list, to have two devastating hurricanes back to back, the latter with the name 'María,' immediately causes concern and premonition.

The premonition was warranted. In the early hours of September 20, María was just south of the southeast coast moving terribly slowly north. Unlike Irma, which made landfall as a Category 5 as well, María's eye was not set to skim past the north-east coast. Instead, it was set to cross diagonally northeast right through the very middle of the island, from coast to coast, slowly. For over twelve hours Puerto Rico sustained winds of 275km/hr, with gusts that were far stronger. The damage was truly infrastructural, some would say of 'biblical' scale. Most thankfully,

12 See Rey, M. del & Canales Torres, C. (2014) *Esclavos: comercio humano en el Atlántico*, Editorial EDAF Madrid

my mother, father, sister and brother-in-law, whom live in San Juan on the mid-north coast, and my extended family whom live in Ponce on the southwest, were spared bodily harm, but endured damages to our homes from both hurricanes. They expressed that it was the longest, loudest, most nerve-wracking 12 hours of their lives. They described it to be like having an overheated, about-to-explode, jet engine in your living room, roaring for far too long. And they had it easy. Both hurricanes left hundreds of thousands deeply affected, especially those in the less privileged sectors of the island. An estimated 2975 persons were killed, suicide rates in the ensuing year went up over 30%, a massive exodus of people followed, the flora and fauna were decimated beyond the time-scale of evolutionary adaptation, and the islands electrical grid was totally destroyed, leaving the capital of San Juan without electricity for three months, and up to 70% of island without power for over six months. The damage, just in Puerto Rico, was estimated to be of 75 billion Euros. Thousands were let go of their jobs. The long-term damage to the natural ecosystems and to the economy are still being assessed. There is one more detail. Two years before these two unprecedented storms, in 2015, Puerto Rico was attempting to declare a national bankruptcy due to a national debt that had reached 60 billion Euros. I say 'trying' because, unlike Iceland or Greece or Argentina, Puerto Rico, as a colony of the United States since 1898, is thus without geopolitical or democratic sovereignty. If you are doubting my use of the word 'colony' to describe Puerto Rico, let me just say that, instead of creating a fair process for economic restructuration of debt, the President of the United States, Barack Obama, unilaterally enforced an 'oversight committee', literally a *Junta*, of five *un-elected* 'officials' (headed by a Russian bankruptcy expert who had just managed the Ukrainian financial crisis) to have full power and oversight over the people of Puerto Rico, including over our elected governor and parliament. To add insult to injury, the current President of the USA (whose name I will not even dignify) is holding up aid for ransom, until the island commits to austerity measures that suit his politics; basically, of passing the costs of the economic downturn created by the speculative market ideology down to the middle and lower classes.

The situation is of course completely disproportionate. Global Warming is no longer a theoretical metaphor, but an embodied one... it is a total *crisis of scale*¹³. In other words, Puerto Rico, a small island of about the size of metropolitan London with a decreasing population of about three million, now carries an inconceivable debt of about 135

13 See Kepes, György (1961) *The new landscape in art and science*. Chicago: Theobald. p.369

billion Euros. This crashing confluence of Puerto Rico becoming the latest target of global finance speculation, along with the unprecedented cataclysm of two Category 5 hurricanes within two weeks, prompted me to title a research report -

Slow Motion Nuclear Explosion: the superdecompression of colonial memory in Puerto Rico, and beyond (uploaded to Medium.com on November 17, 2017).

As part of my PhD research, the report was a preface to proposing that the twin hurricanes Irma and María were obvious manifestations of the full complex of economic and environmental toxicity that we charitably refer to as Global Warming. I argue that the hurricanes are an *index* that point to a coming large-scale 'super-decompression' of our superrepressed colonial memory, one that has been violently suppressing the colonial violence of western consumer culture, in this case, upon the Puerto Rican psyche as well as that of the Caribbean. The 'nuclear explosion' that I describe is not just about the visual destruction and haptic sensation of radiation that the two hurricanes left behind. I am also referring to the slow and viral explosion that so many around the world are facing in lieu of Global Warming... about that *radiation of contradiction* that the so-called 'free market' is distributing as its chief instrument, as a 'radicalization of climate change' to push-forth Global Warming as the most insidious instrument for the bizarre and incongruent form of global economic 'growth.'

Allow me to say that again. It is clear that a very small, but powerful group of industrials are foreseeing global warning as a generator of profit. Ask yourself - *Why does the USA want to buy Greenland?* It is the schizophrenic double-bind in full force.

We can only assume that in that bind, *at best*, living in the future will either require secure, gated 'greenhouse' colonies for the wealthy (as already being planned by the best and brightest architects and developers)¹⁴, or as a planned evacuations for billionaires to settle in 'greenhouses' in a colonised Mars (as already planned by Elon Musk)¹⁵, all as the projected framework for 'living' in the new business model for future 'growth' (see Fig.9).

14 See "This Dutch Town Will Grow Its Own Food, Live Off-Grid, And Handle Its Own Waste" <https://www.sciencealert.com/this-dutch-town-will-grow-its-own-food-live-off-grid-and-handle-its-own-waste>

15 See "How tech's richest plan to save themselves after the apocalypse", by Douglas Rushkoff for Medium/Guardian, Tue 24 Jul 2018 <https://www.theguardian.com/technology/2018/jul/23/tech-industry-wealth-futurism-transhumanism-singularity>



(Fig. 9) Montage, architectural renderings of future greenhoused colonies in Netherlands and Mars.

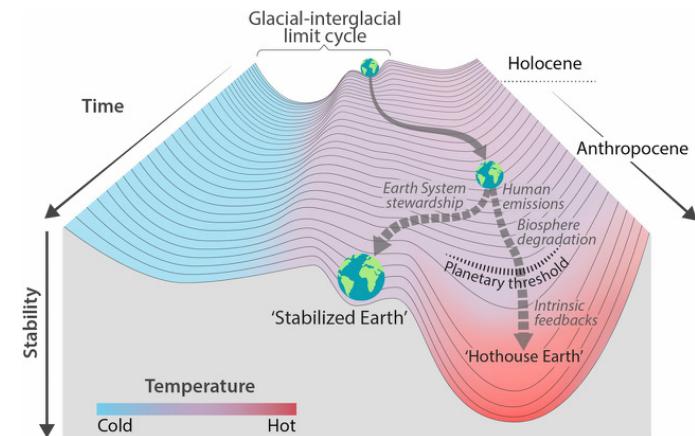
But, I also refer to the metaphor of 'nuclear explosion' as associative signifier for the far-reaching impact this is having upon disparate geographic locations around the planet. 'Nuclear' in that the fragmented, remote distribution of these events, even in the age of the internet, are incongruently being projected as isolated and unrelated. There are very recent efforts to begin to publicly address the 'chain reaction', or "*potential tipping cascades*"¹⁶ that this destabilising explosion may represent. Ironically, but not surprisingly, its terminology is now going from the more ambiguous "good and bad" 'greenhouse effect,' to a state of emergency of the '*hothouse*,' where within the next 12 years, the greenhouse effect becomes its earlier namesake, the

16 See Will Steffen, Johan Rockström, Katherine Richardson, et al (2018) "Trajectories of the Earth System in the Anthropocene"

hothouse, or more specifically ceasing to be ‘Spaceship Earth,’ (see Fig.4) only to become “*Hothouse Earth*” (see Fig.9).¹⁷

Notwithstanding these ironic but necessary efforts, the disjunction and isolation—say, the need to dissociate ‘reality’ from the network of real events—is still aggressively and incongruently pursued by those minoritarian powerful interests, proving to be devastatingly effective fragmenting of the otherwise obvious and steadfast causation behind Global Warming; i.e. the violent trauma that propagates the dissociative colonial impulse that still drives the market economy... even at the peril of any worthwhile quality of life, for anyone. Puerto Rico, and the Caribbean, among others (i.e. see Mozambique’s recent hurricanes) seem to be already a scale-model, if spectres from the future coming to the present to speak of that toxic, oppressive, colonial contradiction now being called Hothouse Earth.

The act of forgetting—as selective, oppressive, suppressive amnesia—is where I suspect we find the core operational directive that colonial (and neo-colonial) enterprise relies upon. It is that human sense of self-preservation, to protect oneself from the pain of trauma, that is entwined to memory. Finding manners in which to formally contend-with and depart-from that type of unprocessed, selective amnesia will hereon become one of the core threads of the PhD here before you. But to do so, I feel it is what requires me to then hold and revise the metaphors of ‘greenhouse’ as facilitators to that type of dissociation and depersonalisation, and its direct complicity as chief *mnemotechnology* to Global Warming.



(Fig.10) Stability landscape showing the pathway of the Earth System out of the Holocene and thus, out of the glacial-interglacial limit cycle to its present position in the hotter Anthropocene. The fork in the road in Fig. 10 is shown here as the two divergent pathways of the Earth System in the future (broken arrows). Currently, the Earth System is on a Hothouse Earth pathway driven by human emissions of greenhouse gases and biosphere degradation toward a planetary threshold at 2 °C (horizontal broken line at 2 °C), beyond which the system follows an essentially irreversible pathway driven by intrinsic biogeophysical feedbacks. The other pathway leads to Stabilized Earth, a pathway of Earth System stewardship guided by human-created feedbacks to a quasistable, human-maintained basin of attraction. “Stability” (vertical axis) is defined here as the inverse of the potential energy of the system. Systems in a highly stable state (deep valley) have low potential energy, and considerable energy is required to move them out of this stable state. Systems in an unstable state (top of a hill) have high potential energy, and they require only a little additional energy to push them off the hill and down toward a valley of lower potential energy.



(Fig.11) west profile of installation process of Anarquivo Negantrópico / Neganthropoc Archive, August 2019. The ‘Anarchive’ is primarily a temperate medicinal garden with a water filtering system and a solar-regulated, paramodular greenhouse. Together they are an organological public space, say a smaple of micro-geoengineering.

¹⁷ See Oct. 6, 2018 IPCC report “GLOBAL WARMING OF 1.5 °C: special report on the impacts of Global Warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty,” by Myles Allen (UK), Mustafa Babiker (Sudan), Yang Chen (China), et al.

**Soil's Metabolic Rift:
Metabolizing Hope,
Interrupting the Medium**

Huying Ng

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This text was first written for HKW's Technosphere magazine, *Metabolic Systems*.

Metabolic rifts create unintended effects, both social and ecological.¹ The disruption of the nutrient cycling process, as soils are transferred, food is transported, and industrial fertilisers accumulate and leach into land and ocean ecosystems, has led to severe species loss and a narrowing genetic pool of cultivars. But metabolic rifts also involve emotional rifts, which have their own unintended effects and reactionary affects: alienation, grudges, wars, and fundamentalisms. As we begin to observe how Earth's metabolic rhythms are made to converge with anthropocentric needs, and how we cultivate our emotional attachments around monuments to metabolic rifts—the shopping mall, cities built on reclaimed shores, mega-dams, nuclear energy, and perhaps the most compelling rift: neocolonial space expeditions—, we begin to perceive hints of a shared synchrony between ourselves and the planet. We—us, the multiple beings that compose the planet, and the planet itself—share the same bodily arrhythmia. Yet the recursive loops of a kidney clearing toxins from the body, of a mining operation dumping contaminants into a river upstream from a village, of a surgeon removing cancerous growth during an invasive operation, and of legislative bodies arbitrating between the health of corporations and that of individuals are all feedback functions that move at different paces. Clearly, our bodies bear the traces of multiple temporal rhythms. And, we might also say, our bodies are repositories of distributed risk.

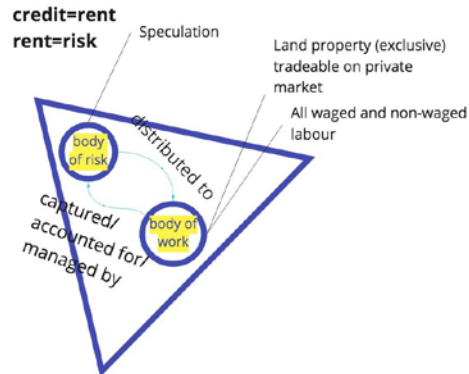
The metabolic rifts of material society are strung tightly to emotional rifts. By attending to emotional culture, understanding the metabolism of affect and emotion, we may begin to upset the pyramid of risks and its associated affects. That is, we might start to reshape the implicit relations and value orientations that we bring to bodies—all bodies—around us and step into a relationality that observes scars and transmits healing.

1 I use John Bellamy Foster's (1999) concept of the metabolic rift, which is an extension of Karl Marx's concept of metabolic crises. The metabolic rift describes a break in the relationship between nature and society. It relates to nutrient depletion in the countryside, water and street pollution in the cities, but also to the alienation of people from nature. It describes a rift in the flow of materials and energy, the form of which is shaped by social relations. As such the metabolic rift includes the effects of capital-urbanization, the expansion of global commodity chains, and processes of migration—on the mental, social, and ecological health of people and the earth. See John Bellamy Foster, "Marx's Theory of Metabolic Rift : Classical Foundations for Environmental Sociology." *American Journal of Sociology* 105 (2): 366-405 (1999), doi:10.1086/210315.

Risking with abundance

Sitting on the financial trading heart of the Asia-Pacific, Singapore beats fast to keep up with the lifelines it holds together: derivative portfolios, boasting high diversification, multiple risk profiles, catered to the needs of client time and specialization. This body of risk stays afloat with a body of work: human worker ants scurry to feed the queen, and scurry to feed themselves. An entire system is devoted to keeping workers marginally sane and healthy, in order to enable a logistics that sates the desire of the derivative.

Current system of property and rent

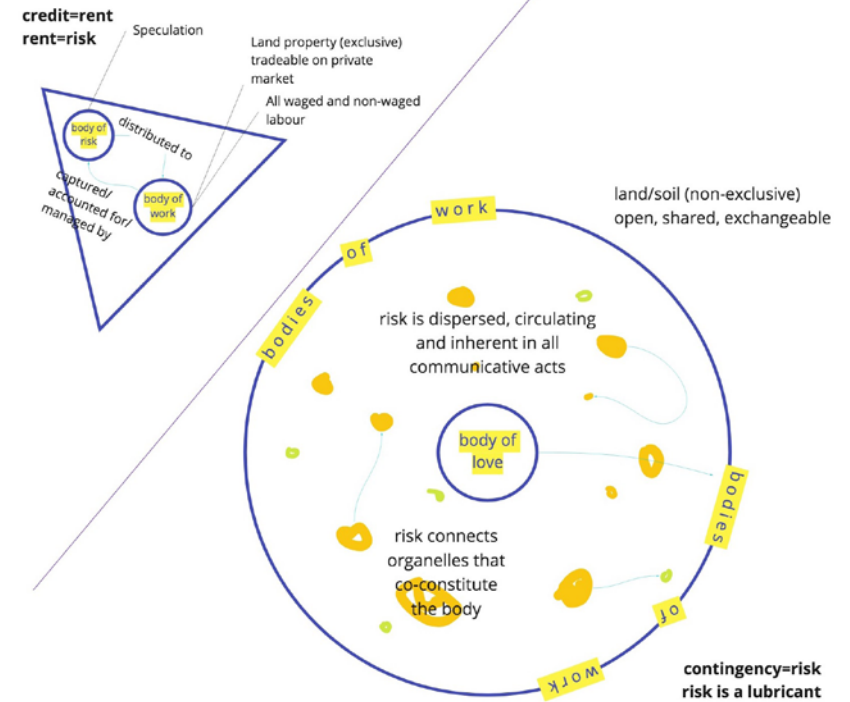


Just like those of us bound in the modern social contract—of working for degenerative capital—the global body of work is falling ill in order to keep afloat the body of risk. To expand the body of risk, global logistics and information networks have spread, transforming and devaluing the body of work, obscuring it from its genealogical lineage. Soils have been shifted, microclimates altered, nickel and zinc and silver displaced for the cloud, humans and animals forced to seek refuge in new homes. Nutrient density in the crops we breed is diminishing as agri-food corporations stake their empire on profit maximisation, drawing mineral and organic value straight from the skin of the earth into closed, proprietary chains and loops.

Instead of replicating pyramidal shapes of risk and work, risking with abundance asks us to enmesh ourselves and one another with an encircling: a different form of loving. It asks for a transforming body of work—a transforming substrate. Let's begin with the substrate of the food system.

Two hypothetical models

Current system of property and rent

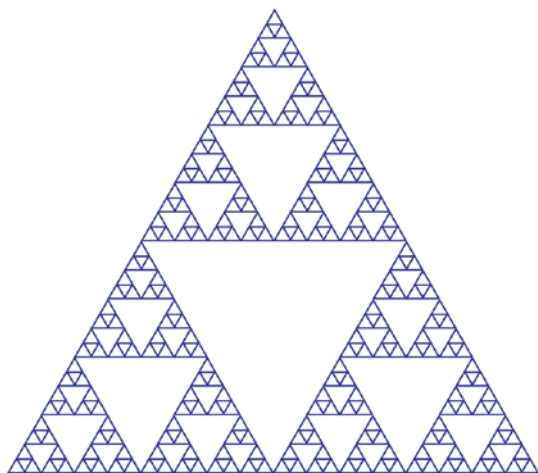


Alternative system of body and contingency

Caption: Two hypothetical models of risk and work, which will be explored at length. Image credit: author.

I. EMOTIONAL CULTURE IN A FOOD SYSTEM: A SOCIOTECHNICAL SYSTEM PAR EXCELLENCE

The current food system works to keep its top going. It is not dissimilar to other pyramidal systems of anthropocentric extraction and production. For example, as big data and AI researchers Kate Crawford and Vladan Joler have shown in their mapping of the rare earth minerals that support our technoconsumption today, the top 1 percent of users feed off many undervalued forms of work, from human labor, to plants making food from sunlight, to the geological processes that have shaped and compressed matter into mineral.² The pyramid is a useful geometric shape with which to think about this system: a system shaped by accumulated damages and risks, fueling accumulated resources and wealth—based on a cyclic flow of (the product of) work, transformed into resource, transformed into product, transformed into resource ... a recursion of broken likenesses,³ ending sharply at a singular point the size of a needle's tip.



Sierpinski triangle of Sierpinski fractal; image credit: anatomyof.ai

² Kate Crawford and Vladan Joler, "Anatomy of an AI System," 2018 [online] (<https://anatomyof.ai/>)

³ Here I am recalling cultural theorist Lauren Berlant's phrase, "the convergence of broken intimate likenesses, a prism," whereby she describes how a film works with aesthetic representation to reflect the infrastructural rhythm of our time: the unbearability of socially necessary proximity and the need to stay in sync. Lauren Berlant, "The Commons: Infrastructures for Troubling Times*," *Environment and Planning D: Society and Space*, vol. 34, no. 3 (2016), p. 412, doi:10.1177/0263775816645989.

Where total energy in a system stays constant, our current technosphere shapes the human-accessible planet to take on damages and costs to current and future health in order to keep the whole economic system going. Because the planet we have to live off is, after all, only as large or as generous as our abilities to access it are finite, we have shaped for ourselves a very risky system that most of us cannot afford to fail at—in fact, only the ones at the top and the bottom can afford risk. When someone such as the crop scientist Sarah Taber, outraged at the hypocrisy of the ugly food movement, pulls the veil off this risk-laden structure and confronts the bourgeois class with its own ugly underside, the cognitive dissonance can elicit anger, an emotion of defense.

Reorienting from a value-depleting sociotechnical system to a regenerative one is affectively tough—we're stuck on our habits and industry-supported search for external validation. Reorienting means recognizing how current systems enforce a value-depleting logic that consistently devalues laboring bodies at work, in order to expand the body of risk distributed back to those laboring bodies. Most laboring bodies in capitalism today—an austere, policy-ridden, regulation-heavy, but corporation-driven form of capitalism—accept what enjoyments come their way, accommodating the risks we collectively take to keep our economic engines running. For bodies used to maintaining life against the promise of increased suffocation offered by our current system, reorienting to a better system is not just a logistical issue but a deeply emotional one. Such a system should rebuild trust in connectivity, working to nourish the grain of trust that has been systematically, generationally left to wither.

Like metabolic rifts that detach a chemical or geological cycle from its genealogically coupled cycles, a rift in emotions is likewise a separation: a cut, a detaching incision that divides or bisects, a fragmentation. The bloody wars of India and Pakistan, Israel and Palestine, and the United States in the Middle East, as well as the long shadows of Stalinist and Maoist communism across the world, show us how emotional rifts have a structure of intergenerational inheritance, passed down through unseen, invisible, unintentional lifestyles, reactions, and utterances. These form our social metabolisms with(in) the world.

II. LEARNING FROM THE PACE OF SOIL: GROWING EMOTIONAL CULTURE

Changing the substrate of our cultures' emotions—from reactionary to responsive, unaware to intentional—takes place faster than a stone's pace, but slower than a misdirected turn of phrase. It's akin to the pace of

growing living soil⁴. I am talking about a densely-textured soil, generously pocketed with air and protozoa, filled with necromass and biomass.

Soil takes anywhere between three weeks to three months to grow. Making soil is not like making hay. Soil grows through an additive process: addition of biomass, increase of necromass, exponential expansion of microbial activity in the soil. Hay is dried matter, mostly carbon. Soil is variously rich in nitrogen, carbon, phosphates, nitrates, and the nematodes, fungi, and bacteria that fix these chemicals in the soil, keeping them in the soil structure so they don't leach away.

Growing soil takes care. Cultivation is an art, and a fulfilling one. In giving life, it reciprocates and gives life. A lesser-known fact: despite the heavy interest of the agricultural industry in hydroponic systems in Singapore at the moment, it is precisely these systems' independence from humans that makes them a setback for food and sustainability educators. In order to teach the ability to care, to cultivate, to be with one another, interdependence is important. Interdependence is life giving, enabling, as it does, the ongoing exchange of gifts. Knowing how to be interdependent takes maturation and cultivation—much like soil, less like hay.

Mediated through the substrate of a gift-less, culture-less hay, our emotional rifts today run haywire, with epic collateral effects. Pain resounds and amplifies through overdetermined, yet structureless, space, colliding with impact and reverberating through the vacuum of silence. Not slowed down but shifted into a different frequency, a sharper pitch, a longer wavelength, a greater amplitude of pain.

III. GROWTH MEDIA AND STATE MODELS: POWER, GOVERNANCE, AND PROTOCOLS

Technology and social practice rarely receive attention as partnered entities, though the study of sociotechnical systems, as well as science and technology studies more broadly, has more recently emphasized their mutuality.

But technological objects alter as they enter a growth medium, where they begin to dialogue with forms and operations of power, mediated in the diverse substrates of the world. These substrates are neither neutral nor truly capable of absorbing the ideals and principles

⁴ See Maria Puig de la Bellacasa, "Soil Times: The Pace of Ecological Care," in *Matters of Care: Speculative Ethics in More Than Human Worlds*. Minneapolis: University of Minnesota Press, 2017, pp. 169–215; and Maria Puig de la Bellacasa, "Making Time for Soil: Technoscientific Futurity and the Pace of Care," *Social Studies of Science*, vol. 45, no. 5 (2015), pp. 691–716, doi:10.1177/0306312715599851.



Resultant formations

Reorienting without (a) practice



Emergence

So here we are as humanity. Wielding new technological, policy and research tools for generative emergence, yet wading through an emotional substrate of haywire judgments, reactions and resultant formations. Our orientations in this field of emotional rifts do not enable us to ground our tools. We are not effective mediums for their message.

Sara Ahmed's use of the term, "orientations", makes me mindful of our emotional inheritances, judgments, and bodily responses.^[a] Orientations hold capabilities that mirror the landscapes we have passed through, and are passing through: they have a spatial dimension that Mimi Sheller calls *ambage*,^[b] that enables our movement through social and ecological space. The spread of emotions, as tacit, embodied knowledge, is permeated by the contingency of these orientations' fleeting interactions, as a collective orientation influences the direction and form of the spread of various emotions.

When reorientations occur, they enable a new range of these spatial capabilities. They are influenced by the scale of agency that the narrative environment creates,^[c] and in that sense, they are very anthropogenic, but also very un-human. To really reorientate, we need to combine how we create things with an entwining daily practice of using them well.

a. Sara Ahmed, *Queer Phenomenology: Orientations, Objects, Others*. Durham, NC: Duke University Press, 2006.
b. Mimi Sheller, "Mobile Publics: Beyond the Network Perspective," *Environment and Planning D: Society and Space*, vol. 22, no. 1 (2004), pp. 39–52, doi:10.1068/d324.
c. See Berlant's elucidation of the narrative environment in changing times, in "The Commons: Infrastructures for Troubling Times"

that the objects seek to introduce. Coming on the tailwinds of global insurrectionary excitement in the early 2010s, we need to acknowledge that speculative futures remain interrupted by the sociopolitical order that mediates their growth, and also that a larger crowd of users does not mean more intelligent decisions, but only that a more complex game can be played.

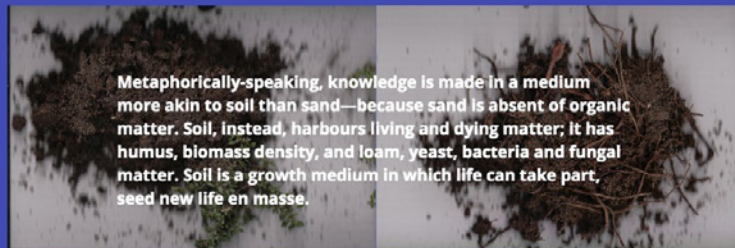
First, protocols. Scripts or systems enforce modes of behavior that become commonsensical, that create our mental models of the world. As the neurosciences expand our scientific understanding of the human mind, the capacity for capital to bring cognitive formatting into its portfolio—making the design of the mind a product, a service, and an account—also expands. Protocols need not be intentional in themselves, but they provide the backdrop against which all agentic actions occur, and thus *how* all agents can act. And for better or worse, they "vastly

Growth media I: Material matter

Knowledge is produced in a substrate of living, reactive biochemical matter—that is, us and the billions of other organisms we share this earth with.

There is nowhere this is made clearer than in the creation of light-sensitive photographic techniques, or as artist and curator Wietske Maas more rightly puts it,[b] the development of “self-growing images”:

The chromatogram is thus an example of exogenous or nonhuman aesthetics, for it is light itself that “paints” the chromatogram, which could technically continue to grow, provided its “chemical metabolism” keeps on reacting with sunlight. This is a different regime of visibility, or rather, of photogenesis, as here light is not just a stream of waves to be passively refracted and recorded but an active and autonomous medium of image-making. It is a medium in which organic substances become an aperture of their simultaneous dependence upon and defense against the sun (p. 315).



Metaphorically-speaking, knowledge is made in a medium more akin to soil than sand—because sand is absent of organic matter. Soil, instead, harbours living and dying matter; it has humus, biomass density, and loam, yeast, bacteria and fungal matter. Soil is a growth medium in which life can take part, seed new life en masse.

Soil from ground, and sidewalk planter, Yogyakarta, Indonesia. Author's own.

So we might say that knowledge production has a metabolic cycle: where the conditions that produce the interacting frontlines of dominance and resistance turn some things to history and some to dust. We forget this. “Knowledge”, inasmuch as it refers to codified knowledge, begins in colonial space—the moment of the inscription, the act of photographing, the hidden step of darkroom processing. In the movement of the photographed image, there is the projection of wisdom onto liveless matter. And then as Sophia Roosth puts it,[a] we forget that this projection is merely a “metaphor of the metaphor of the word”.



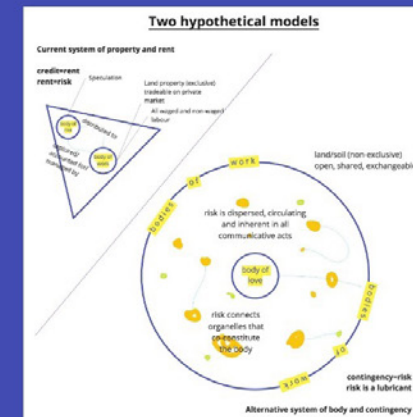
On-farm mobile darkroom set-up, Chiang Mai, Thailand

b. Wietske Maas

c. Robin Wall Kimmerer

Growth media II: From corrupt images to careful substrates

If knowledge starts in the modern-colonial image of a map, what is becoming clear, Maas shows us, is that these images need to synchronise with their own metabolic cycles. That is, our sight has become corrupt as images have been shorn of their metabolic cycle, and we can refashion the tools we use to create knowledge systems, to let more self-growing images form. To slow down the production of speculative risk which is decoupled from the lifecycle of natural bodies, and to speed up, technologically, our expanded field of information; to build a commons sustained by a circle—of bodies of work, at work on the earthly body of love.



As with the Sierpinski triangle, we can unbend the triangle and loosen its sharp edges. Add more sides till we become a circle. Open the circle; let its energy be channeled towards growing our social practices for emergence and recursion. Learning to see emergence requires attentiveness, in allowing ourselves to be within the circle.

Robin Wall Kimmerer, a moss scientist, has sight that crosses scales. “[A]t the middle scale, that of the unaided eye, our senses seem to be strangely dulled. With sophisticated technology, we strive to see what is beyond us, but are often blind to the myriad sparkling facets that lie so close at hand. ... our acuity at this middle scale seems diminished, not by any failing of the eyes, but by the willingness of the mind.... Attentiveness alone can rival the most powerful lens”.[c]

True seeing is more elusive than mere sight. As Kimmerer notes, something swims into sensible perception only when visual patterns become familiar and repeated. Then, for the first time, we recognize something. If for her, loving moss demands moss-scaled patience, then earthly loving demands attention at the metabolic pace of soil. Loving means recognizing we are already in debt, indebted; we are already liabilities dependent on our corrupted eyes.

a. Sophia Roosth, “Cybernetic Life” (lecture, 1948 Unbound, Haus der Kulturen der Welt, Berlin, November 30, 2017). Available online at <https://soundcloud.com/nkow/switches-cybernetic-life-roosth>.

b. Maas, “The Corruption of the Eye: On Photogenesis and Self-Growing Images,” in Julieta Aranda, Brian Kuan Wood, and Anton Vidokle (eds.), *Supercommunity: Dialogical Togetherness beyond Contemporary Art*. London: Verso Books, 2017, pp. 311–6.
c. Kimmerer, “Learning to See,” in *Gathering Moss: A Natural and Cultural History of Mosses*. Corvallis: Oregon State University Press, 2003, p. 8.

increase the number of actors that can interact,” as network theorist Felix Stalder writes in “The Crisis of Epistemology and New Institutions of Learning.”⁵

Second, institutions. People may not intentionally seek to harm or hurt, but the institutions they submit their labor to hold massive institutional power to relay, block, and enable communications, advertising, and the transfer of user data and cognitive formatting. These institutions may consume planetary and socioemotional resources, leaving at best physical and mental traces for individuals to use, for consumption or extra-temporal self-care⁶. At worst, they make people their labor force for the “public good”—such as a national ideology—with little payoff for workers except in base material needs.

IV. WORK, LOVE, RISK

So, then, to perform an act of love is to work within risk. To build, by facing our interdependence, clearer eyes, sharper sight, and denser, loamier growth mediums.

We are, after all, strange creatures to care about the Earth. We who, reading this, are statistically less likely to be a person of color or Indigenous, and less likely to be socioeconomically unstable, living in precarity, or poor. We who choose modernity without a care-full look behind, who have little to lose in a dying world, having terminated our roots in the Earth along with our identification with it. We might speak English as a first language, so that our inheritances and injuries are obscured from us. Or, having found our urban spaces and mental reference points deleted on the policy map, as scaffolding goes up to obscure and protect the site of reconstruction, we curse as our inner compasses are thrown off for a week, but oblige the passage of work and its disciplined alignment.

We’ve wrapped our treasures and fled the storm, hiding our eyes as biblical wrath takes care of the fire, the pillars of white sand. And then we try to talk about ecological grief among Indigenous folks, but do not find the words to describe our own suffering.

5 Felix Stalder, “The Crisis of Epistemology and New Institutions of Learning,” in *The New Alphabet: Opening Days*, conference book. Berlin: Haus der Kulturen der Welt, 2019.

6 One example is what I’m starting to think of as the OOTD (outfit of the day)-health-food-body-fitness nexus, which layers organic and raw foods, Instagram, meal prep, psychological discipline, and body fitness into one package. A quick-moving package for quick-moving products.



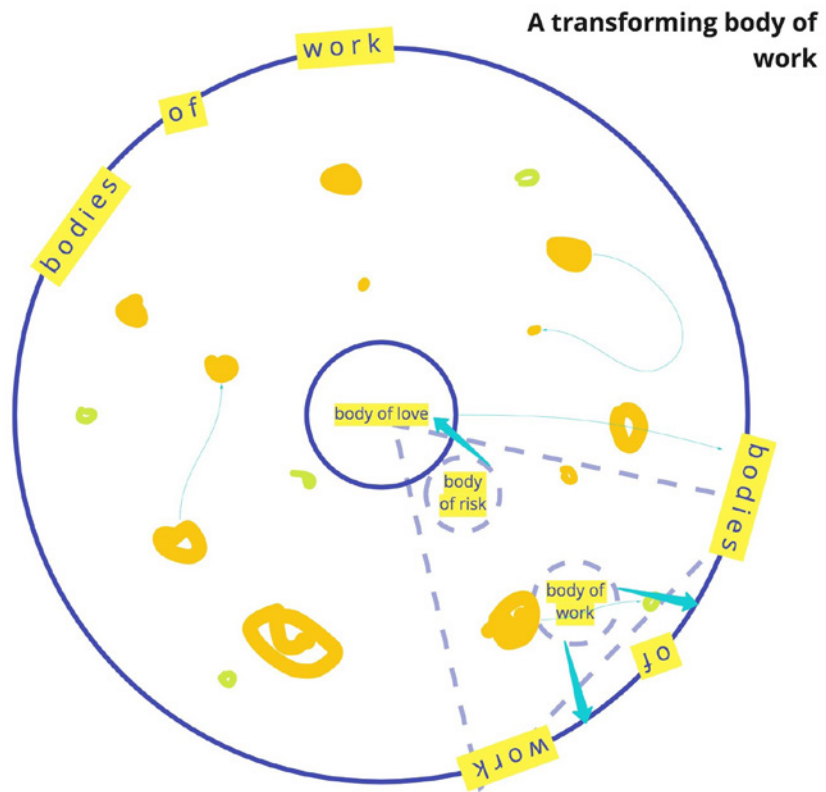
Chromatograms made with silver nitrate solution, alkaline base, and soil from Thailand. Author's own.

V. SOIL AS A BODY OF WORK, METABOLIZING THE BODY OF RISK

With the inscription of biblical wrath on the Earth, soil has continued to incur the risk that our loving forces on the world. Inscribed with our love and corrupt vision, the Earth gathers the remnants of our loving’s metabolized products. Can we learn to love differently—openly, rather than guardedly?

Soil is a single organ of the Earth, albeit fragmented as colonized landmass, national resource, a body treated with agro-extractivist colonizing biochemicals. Yet we are already enveloped within the circle of the soil, and we can re-cycle with it. The circle and its metabolic multiplicity is abundantly open to us to share. To enter into community with the soil body, to recognize its astonishing 75,000 species of microorganisms in each micro-biodiverse teaspoon,⁷ is to reenter the circle, to revisit the sanctified materiality of the *tabula rasa*—the blank paper, the white cube, the petri dish, the blueprint—and bring it back into the circle, reinscribe it with spiraling growth ...

7 Elaine Ingham, “Building Soil for Healthy Plants by Soil Scientist Elaine Ingham,” YouTube video, 1:14:49, posted by Diego Footer, May 11, 2016 (<https://www.youtube.com/watch?v=xzthQyMaQaQ&t=3339s>).



Caption: A transforming body of work. Image credit: Author.

"The names we use for rocks and other beings depends on our perspective, whether we are speaking from the inside or the outside of the circle. The name on our lips reveals the knowledge we have of each other, hence the sweet secret names we have for the ones we love. The names we give ourselves are a powerful form of self-determination, of declaring ourselves sovereign territory. Outside the circle, scientific names for mosses may suffice, but within the circle, what do they call themselves?"

— Robin Wall Kimmerer

A Village Plan

INLAND

INLAND is an arts collective, dedicated to agricultural, social and cultural production, and a collaborative agency. It was started in 2009 by Fernando Garcia Dory as a project about an organization that engages territories, culture, and social change. During its first stage (2010-2013) and taking Spain as initial case study, INLAND comprised an international conference, artistic production with 22 artists in residence in the same number of villages across the country, and nationwide exhibitions and presentations.

This was followed by a period of reflection and evaluation, launching study groups on art & ecology, and series of publications. Today INLAND functions as a collective and works as a para-institution to open space for land-based collaborations, economies and communities-of-practice as a substrate for post-Contemporary Art cultural forms. Appearing in different forms in different countries, whilst dissolving individual agency in the collective, INLAND publishes books, produces shows, and makes cheese. It also advises as a consultant for the European Union Commission on the use of art for rural development policies while facilitating a shepherd and nomadic peoples movements, and is recovering an abandoned village in an undisclosed location for collective artistic and agricultural production. It was presented at Istanbul Biennial (2015), and at Casco Art Projects in The Netherlands, PAV Torino in Italy and the Maebashi Museum of Japan. In 2017 it has been working at Contemporary Arts Glasgow, MALBA, Matadero Madrid, Museo de Arte Moderno de Medellin, and developing field actions in Italy (TRANSART Festival Bolzano and Puglia) and at the Jeju Biennial, South Korea.

Recently INLAND has been awarded the Council of Forms, Paris and the Carasso Foundation awards to finalise New Curriculum, a project devoted to training the artists and rural agents of the future. In 2019 worked with Serpentine London, Pompidou Paris, SAVVY Contemporary, Cittadelarte Milan and Casa do Povo, Sao Paulo.

It would be a form of collectivity, dedicated to agricultural, social and cultural production, and a collaborative agency. An artists' village, in between a social movement, a start-up, a cult – para-institutional forms to counterbalance the arts field's structure.

Maintained by hands that operate in between design, crafts, art, care and social change.

It would confront various problems of a system that is collapsing at its environmental, cultural and financial levels – affecting both the planet and the individual- by formulating critical tools and applying them through experimental practice.

It would build on the premise that the rural offers a physical and cultural space for the generation of diverse ways of life that differ from the hegemonic model.

These other livelihoods are aware of their partial insertion in all established networks of exchange and aim to generate enough creative mass to question those power dynamics, as well as the current relationship between centres and peripheries.

A village based on a sort of three words manifesto, art-agriculture-territory.

That speaks from the silenced other realities resisting erasure.

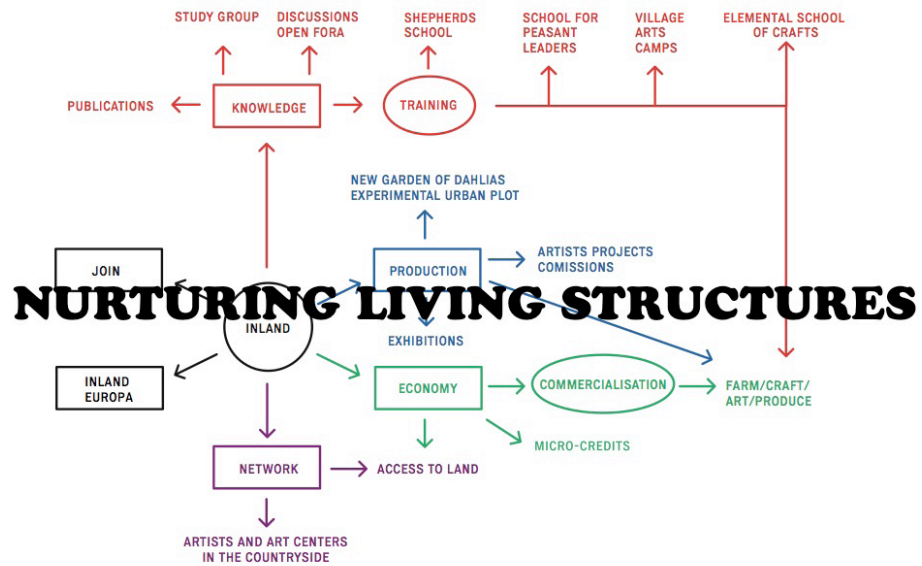
That proposes collective encouragement for the reclamation of the means of livelihood.

As a cultural artefact it uses all representational tools at hand to expand – beyond the contexts it intervenes- what is produced in the instant and immediacy of the everyday.

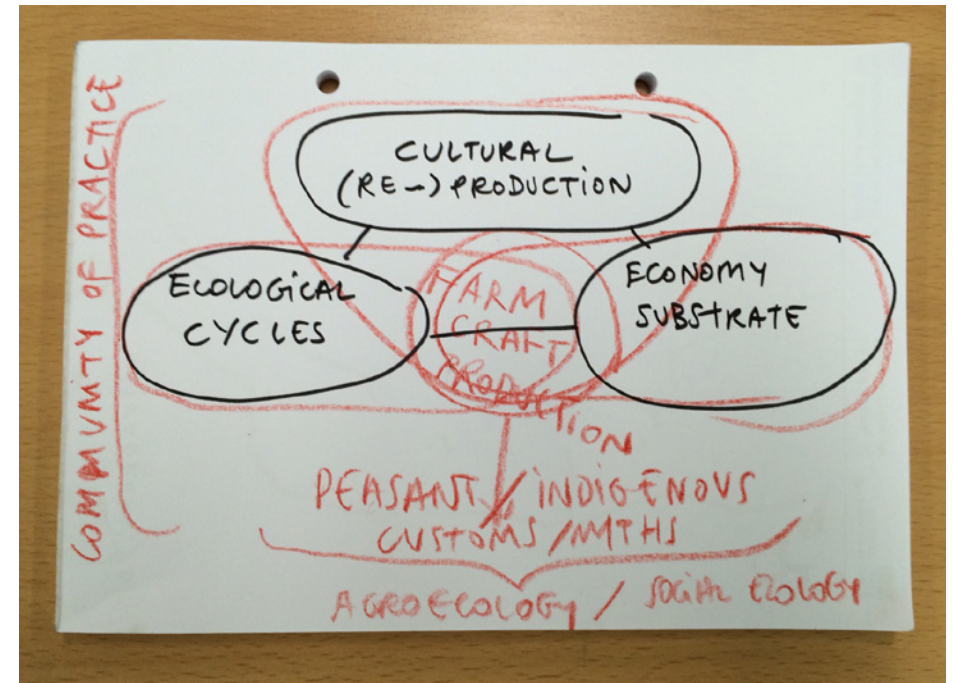
It is in constant contradiction between the tactics of camouflage adopted by its antagonistic work – which mimics conventional art forms and institutionalized habits – and the open exposure of its dissent and the alternatives which it promises and tests.

As a para-institution, it would work together, against and beyond existing institutions. It is structured around different axis and lines of work – from training to commercialization- which feedback on each other and become a self-sustained model that adapts and replicates.

Its value lies in the applicability of its method. It promotes cells in specific rural locations -some of which remain undisclosed – whilst operating at a supranational level, setting up agencies in different countries to affect agrarian and cultural policy frameworks in Europe.



Inland diagram



WAM (World Agricultural Museum)

Asunción Molinos Gordo

ASUNCIÓN MOLINOS GORDO (1979 Aranda de Duero, Burgos, Spain) obtained her B.F.A. from the Universidad Complutense de Madrid in 2003. In 2006, she received a Master in Contemporary Art Theory and Practice from the same University and she is currently studying Social and Cultural Anthropology through the National University (UNED). Her work has been shown in Spain, UK and Egypt at venues including La Casa Encendida, Museo Patio Herreriano, CAB, La Fábrica, The Townhouse Gallery and ARNOLFINI Art Centre.

Molinos' work focus on food and agriculture socio-cultural implications; she employs photography, video, installation and other media to explore the rural sphere and issues of peasantry from a transnational approach. She currently lives and works between Cairo, Egypt and her hometown of 80 inhabitants, Guzmán, Burgos, Spain. In her own words "My practice is centred around the social and cultural changes that are taking place nowadays within the rural context, always looking at what we are leaving behind in the rush of progress".

WAM (World Agricultural Museum) is a site-specific work that uses the historical trope of the cabinet of curiosities to explore the introduction of biotechnology in farming.

This 200 square-meter art installation recreates the atmosphere and the colonial aesthetics of the old Agricultural Museum of Cairo, to present the contemporary discourses on genetically modified crops and their various derivatives, coupled with the implementation of intellectual property policies on seeds, international trade agreements and their connection with food insecurity.

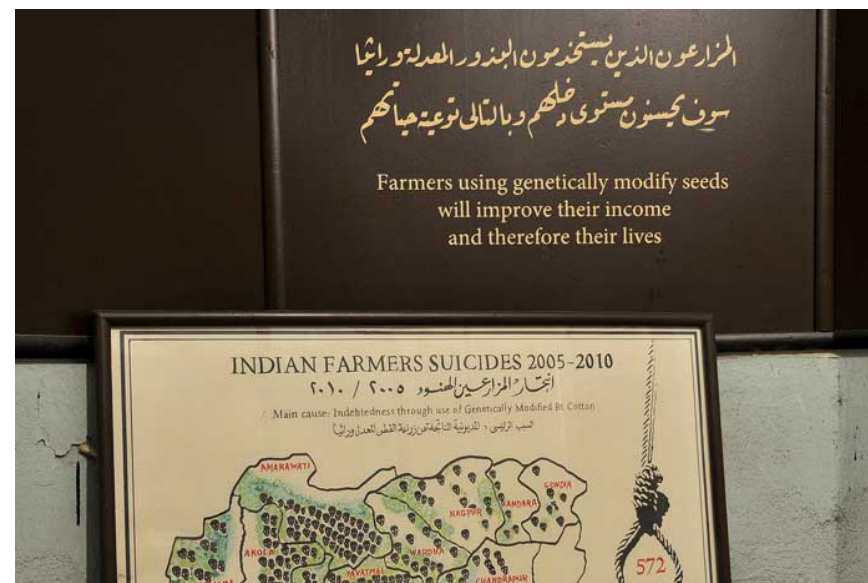
The data used to build this narrative is antagonistic, and often contradicts each another. Some emanate from the official scientific discourse, some from peasant organizations; others are a blend of fantasy and propaganda, as well as information generated by supra-governmental institutions such as the FAO.

The material is presented in a way, in which it is difficult to differentiate fact from fiction. The objects are presented in deliberate disorder, but they are following a very clear hierarchy: the mainstream propaganda pro-GMO backed by multinationals and governments occupy prime locations, while the data provided by independent researchers and farmers associations lays on the floor against the walls.

The museum displays hierarchy refers to the unscrupulous and disingenuous ways in which information is orchestrated to seduce the bulk of the citizens, prioritizing data but also concealing it.

On the walls we can see the contours of graphics that have been removed long ago, plenty of empty frames and closed doors bearing signs suggesting what lies behind and remains inaccessible. WAM is a temporary space illusion, a sort of museum of the future, where the "truths" of our present reveal their potential obsolescence and the dogmas of our contemporary "agricultural progress", covered in dust, seem less gullible. The artist puts forward the museum as a theatre stage. In an attempt to bricolage the incomplete scenario that reveals the inconsistencies in the hegemonic narrative on food crisis today, the artist plays with the naïve and the absurd to stress the ambiguous status quo in the agricultural sector.

The project is conceived as a touring exhibition. It was first assembled in an old apartment located in Downtown Cairo and extended along five of its rooms, was hosted by the Townhouse Gallery and funded by the Spanish Embassy in Cairo and Beca de Movilidad Matadero-Madrid.



**Dreams, the Jurisdiction
of the Mouth, and
Non-conclusions on Hunger**

Yemisi Aribisala

YEMISI ARIBISALA is a Nigerian born author and artist living in London. She is best known for her thematic use of food to explore Nigerian stories. Her first book, *Longthroat Memoirs: Soups Sex & Nigerian Tastebuds* uses Nigerian food as a literary substrate to think about Nigeria's culture and society. Her second book-*Wait! I'm Bringing a Bird Out of My Pocket*, will be published by Chimurenga, Cape Town. She is currently studying, thinking about and making images for a project on homelessness and women.

Dreams, the Jurisdiction of the Mouth, and Non-conclusions on Hunger was first published here.

Are the fundamental terrains of food and eating not those we overlook? Without any doubt, eating is the most glorious, guilt-free source of pleasure that human beings have. Whatever contrary information we are bombarded with from the media or in our physical-space, we can afford to believe the truth – that we should sit and be reverential/sentimental over the muscle of good food in our short lives. I say grace over food because I am without fail, moved by the sight of a beautiful plate of food. Because I understand the creative sweat, the prior anxieties of thinking about and sourcing food. Because I can cast my mind back to a place in my life and in beloved-other's lives where scarcity and hunger was more than a terrifying phantom hanging about the room. The sight of something sprouting out of the ground moves me, this impossible miracle of soil and water and sun and seeds producing food. I am moved by the sight of steam rising over morsels on a plate, aromas warming and calming the senses, people sitting around a table mellowed by the goodwill of the gift of nourishment...I linger over farmer's market stalls because I am in awe of people who spend their lives putting seed in the ground in hope. What is there not to be sentimental about? Yet here I am at the risk of falling into that bottomless pit of overthinking, that I promise to avoid and really can't. I said I would not worry over calories, bodies shaped by butter and starch, fundamental veganism, how much water is used to grow one avocado... all the joyless tracts of thinking on food that I can do little about... So should I be allowed to present other possible fundamentalisms and demand that they be addressed?

Like what do dreams on food mean, if they mean anything at all? Whose jurisdiction is the mouth, totally ours or partitioned between us and the experts? What is hunger and how do we satisfy it? One of my favourite stories in the Christian bible is about food - About disciples of a crucified messiah walking a road called Emmaus, despondent that their hopes in this man who said he was the savior of the world had horribly perished along with him. They had followed him, believed every word he spoke and then the worst had happened –among jeering and spitting and flogging, this so called messiah was strung up and killed. As they walked and talked, attempting to iron out the painful kinks in the cloth they'd worn for years, a strange man joined them and asked what they are talking about. After going a little way with them and conversing, he invites them to a meal, and they find themselves sitting at a table. He takes a piece of bread, says grace over it, breaks it and the fabric of reality tears violently in two. There he is, the very person who they were mourning. Breaking bread removed the onion skins from their eyes and instantaneously they recognised him- the crucified messiah. The features of his face fell into place over a morsel of bread. There at



that point of the story where all of our heartbreaks and powerlessness over death are set out on the table one piece of bread snaps the puzzle close... This is in fact the miracle of food and eating and sharing a meal. My eyes fill and my heart is full of nourishments I can't put into words whenever I reach this part of the story.

Dreams of food have haunted me all of my life. In powerful parables, growing out of the ground and becoming edible fare without the constraints of time- Juicy watermelons appear on hedges and they open to reveal small snakes instead of the anticipated red flesh: Lemon cookies bake in the oven for someone who pretends she likes me, and accepts me- a matriarchal figure who throws a lit match at a cylinder of cooking gas: I feed Obama ripe avocados- his lips part willingly to accept the spooned green insides of the fruit: In dreams the movement of teeth is rumination; broken teeth show a lack of confidence or lack of sophisticated thinking... Avocados are rich fatty foods exactly as in real life. Soil is wealth, and the human body is an extension of it- walking, breathing freehold-a landscape for germinating evidence- dreams brazenly, confidently shun our interference. Dreams are nightly insistence we listen, we observe. Food dreams are resilient warnings to think of what we are thinking (eating). Mindfulness is a paltry word for what is demanded of us. One should never accept the gift of peppers in dreams, nor eat Okro soup, whoever cooks it, nor be lured into the bed of a good looking strange man... obvious really.

Sometimes avocados in dreams stand for scrotal sacs and the life in them. The puckered bags and the green colour speak of fertility. We are warned that dreams generally are the idiot cousins of right thinking. They are superfluities we dare not trust in; chairs with three legs. So, a nonsensical food-dream about putting avocados in Obama's mouth, the cynics say, is probably brought about by eating junk the night before. The dream is probably a leftover crumb from an infatuation with a powerful, charismatic, good-looking man. No it isn't about a job promotion, an opening (of the mouth) where you get to deal with people in high positions (on par with congenial ex-presidents)? Where you have access to their otherwise private orifice (minds) and you get to feed them nutritious fare (profound ideas)? It might be a necessary caution not to tell Michelle Obama your dream so as to prevent her from becoming... In my experience, dreams are rich mines where we lay down wearily to sleep and wake up to powerful truths. Have you ever had an idea so unique only the vehicle of a dream could have deposited it? Have you met the love of your life after seeing him in a dream? Sometimes dreams do fool us and play games with us but that is proof of their sophistication and our not so innocuous cynicism. Dreams often fail for lack of inspired interpreters...



By the way my name is Yemisi Aribisala. I am a Nigerian and a writer. I have written about Food, Nigerian food and Nigerian culture for close to ten years. I wrote a book about Nigerian food called *Longthroat* Memoirs, Soups, Sex and Nigerian tastebuds. I wrote my book thus... Foolish questions, same kinds of answers. I am always asking foolish questions. I believe in dreams. I dream almost every night. Something else that scientists say is impossible. In dream, food are potent symbols that nourish our waking lives. A clove of garlic stands for health, three cloves for the confirmation of good health. Bread and meat-broth stand for words of God that we hunger for whether awake and asleep. Oil stands for spirit, stew for contention, watermelons for fruitfulness and multiplication- in the case of my dream of watermelons, a multiplication of snakes that are deceptions, lies or long tales. In March 2015, I went to a Hunger Conference in Stuttgart and sat through days of meetings broken up with interludes of the most fantastic feasting. Many informative exposes by leading experts in global hunger and food yields and projections on where the new bread baskets of continents are and the long term effects of GMO, and child nutrition...e.t.c were read out and illustrated by experts. One of the most naïve questions I asked when I got to that Conference and after listening for so many hours my ears burned: How does the body take the totality of all of this information, the magnitude and profoundness and height and depth and length and intelligence of all of it, all the words and brilliance... translate it to one, two, three morsels of food that is willingly put in the mouth. Because at the end of the day that is the end- eating. This is the question that most interests me... I can sit day in day out and soak in bags of information but what do I do with it all?

As if admitting my own childish naiveté and predisposition for fantasizing and overthinking... ahead of that conference I had written an article called the Science of Mother hunger and I can summarize it thus- Every observation and memorial to dead 'African children', every genetic vulnerability, every intelligent thought, instinct, cultural preference and stereotype, every idea on bio diversity and Ethiopian food insecurity and bio-fortification must at the end of the day be entrusted to one morsel of food that I put in my mouth. One piece of bread, one thread of beef hanging at the end of my fork. As usual, I landed on that familiar planet of foolish questions.

A colleague at the conference called Sebastian Schellhaas pointed out to me that I must be careful with my understanding of the jurisdiction of this mouth and this gut because if I am not careful, my instincts will deceive me and I will be misled down the path of hunger from which I am attempting to extricate myself. He was saying that I must trust experts to

determine what I eat. That I must allow for the complications of endless discourses of academia and technical perambulations. That these experts who use words like "African hunger" or "Hunger in Africa" are to be revered and given precedence over my own thinking .

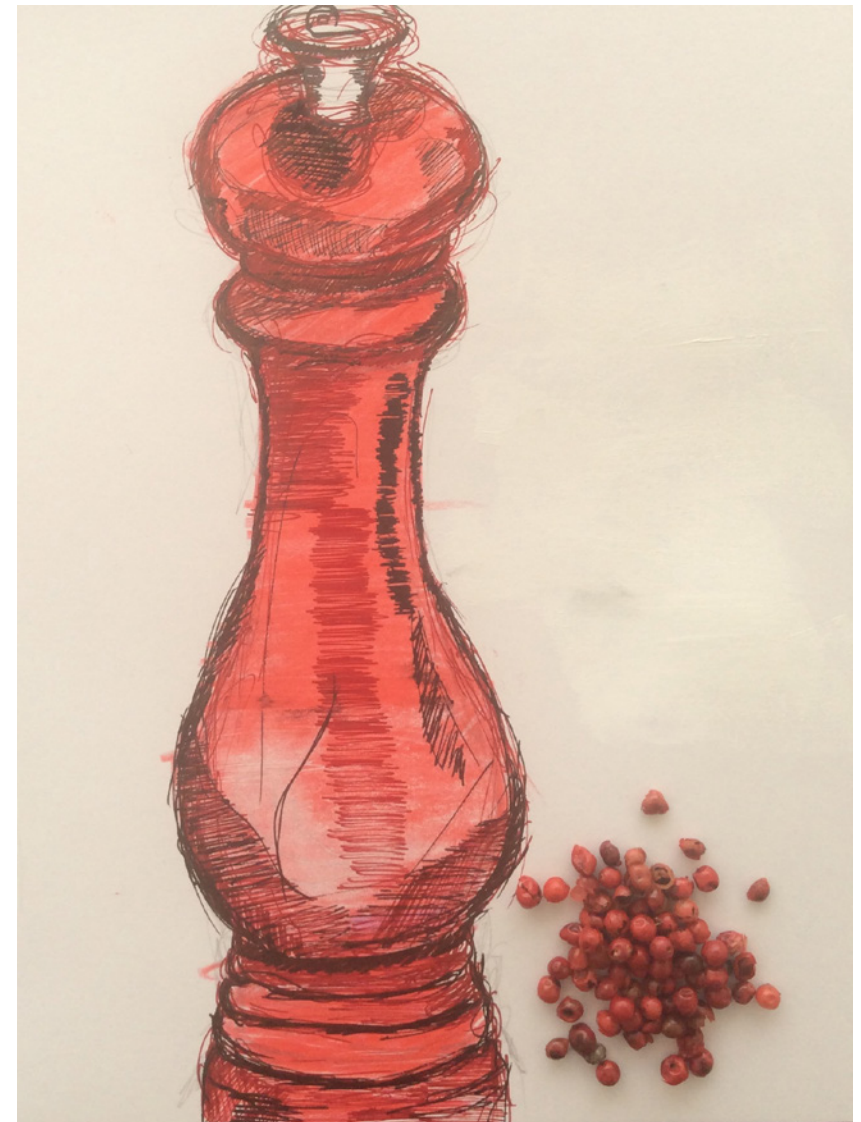
I responded that I must trust my instincts when feeding myself and my children and must give them the same ranking as science, and I must somehow decide on and between all the information that I am receiving on how to nourish my body, above all external interests. I conceded with Sebastian that he is right about not getting carried away, and at the very least, listening to the experts, discerning what they say... yet I must take all the information that I have heard and seen and experienced and sought out and still reduce it to the morsel and this is still my jurisdiction and my expertise.

I must still at the end of the day be entrusted with the jurisdiction of my own mouth and my decisions over my gut still rule. To effectively satisfy my hunger I must write my own history, tie together all the different categories of my historical and present hunger, harness my instincts and dreams and create a portfolio. I must understand intricately the territory that is called my gut which orthodox medicine snubs, pretends not to snub, sometimes acknowledges in sluggish advancements and allowances called functional medicine. I must trust myself because the scientific community cannot come and live in my house and apply my acquired knowledge. And I must secure that jurisdiction with storytelling in order not to forget. In any case my sense of direction is so bad in real life, I must construct interesting colourful stories so as not to get lost on my own street. There is far more at stake in my estimation than the ambiguities and cold embraces of science or the facts about physical food. Individual histories are important- This is why I took a family history to the Congress in Stuttgart. I said at my presentation: Now you have met me and you have met one Nigerian individual and she has cooked one Nigerian dish and she sat down with you and tried to introduce her family to you and what informs their eating, and how they deal with hunger. You have put a face to someone that comes from Nigeria and you have met her mouth... this is something that happens rarely. It is a rare perspective. This underscores the importance of stories: Lagos, Nigeria is like many other cities in the world. There are poor people, there are rich people and there are hungry and full people. There is a counterpoint of very affluent existence there. Yet among the rich and the full there is hunger, and people might regard it as a very small fish in a very big river but it is happening every day that people are full of food but their bodies, minds, souls are hungry. This is important because there has also been acknowledged -a disconnect

between agriculture and nutrition and commercialization of nutrition and eating.

In all the dimensions that count, you can't disconnect agriculture and nutrition. You cannot disconnect the mind from the body. You cannot discount dreams, nor instincts from eating. Nor culture from the feeling of fullness. You can't count 800 million people, so there is nothing like African hunger, or Nigerian hunger. It can even be argued that there is nowhere in reality called Africa – this place of bright coloured cloth, hot sun and black people where you can take a plane to. Nobody goes to Africa. You go to Nigeria, or Lagos, or Ghana, or Cape Verde. You can't see all of us, who we are, where we are, what we all eat, just by googling us up, or reading statistics. Therefore Africa is too big a continent to apply a word like hunger to. There are only at the end of the day, people, human beings, mouths, guts, stories.

Food and Culture and the amalgamation of the two is important because food is one of those pure love affairs, the perfect lens through which you might see the Nigerian for himself. Not as some hungry hapless person who needs the help of a well fed Western world counterpart but as an individual with a strong beautiful cultural identity. We have fed ourselves for hundreds of years before hunger conferences in European countries thought of us...enough said. Because of our colonial history, our storytelling and our presentation of those stories to the rest of the world has arrived ate. And so many of our stories are not being told and read outside Nigeria. "The world has not met Nigerian food yet." This is the first sentence in my book. It was true till about three years ago.



This reader was published by The Institute for Endotic Research after the exhibition 'Soil Is An Inscribed Body: On Sovereignty, Agropoetics and Struggles for Liberation' held at S A V V Y Contemporary from the 30th of August till the 6th of October 2019.

READER CREDITS

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Co-edited by Onur Çimen and Cleo Wächter.
Graphic Design by Cleo Wächter.

Depicted on the cover and back: Binta Diaw, *Chorus of Soil*, 2019 (detail)
Photocredit: Raisa Galofre

The editors would like to thank all the contributors to the reader,
the S A V V Y team and The Institute for Endotic Research.

The cover is printed on 'light grey' Folia paper with the Risograph printer of ON/OFF. Pages are printed Steinbeis 100% recycled paper with the laser printer of F101 Architekten. Bound by Trigger Copy. Typefaces used are *Dia* by Schick Toika, *Folio* and *Courier new*.

The production of this reader was gratefully supported by S A V V Y Contemporary.

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ISBN: 978-3-9819512-6-4

The Institute for Endotic Research Press
Donaustrasse 84
12043 Berlin
Germany

2020



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Binta Diaw, Chorus of Soil, 2019 (detail)