

Utopias as a design-thinking key for counter-hegemonic ecological transitions

Camilo Vladimir de Lima Amaral

Affiliation: POLITO/UFG

Email: camilo.delima@polito.it

Antonio di Campli

Affiliation: POLITO

Elisa Verri

Affiliation: POLITO

Rishabh Srivastava

Affiliation: POLITO

Abstract (up to 125 words)

Present times are marked by structural crises and social alternatives appear increasingly implausible. Planetary urbanisation intertwines global society and ecosystems amidst social, ecological and rational crises accounting for unprecedented challenges. Discourses shift from reform versus revolution to ecological transition and resilience approaches within a scenario of turmoil. A workshop taking place in Goias City, Brazil, employed 'utopias' as lens and delved into counter-hegemonic urban ecological relationships. Concepts, such as Neoliberal contradictions, Decolonial approaches, Coexistence, Ethics of Care, Mobility of frontiers and Co-poiesis of Nature were assessed and led to three dialectical utopias — Queer planet, Matriarchal Society and Afrofuturism. Design thinking was used to envision alternative futures by integrating these concepts to utopian experiments addressing contemporary contradictions and societal trends.

Keywords: ecological transition; utopian imagination; design-thinking.

1. Introduction

We are witnessing times of structural crises when no alternatives to the current system seem reasonable. On the one hand, planetary urbanisation connects global society and earth ecosystems in a series of crises. This is an unprecedented social crisis that opens room for rising social inequalities. Yet, lack of confidence in political institutions tears apart old compromises. There is an ecological crisis experienced as we enter the *capitalocene*, which threatens us with climate change, mass extinction and environmental disasters. On the other hand, there is a rationality crisis that cannot acknowledge non-instrumental ways of thinking. At the same time, fake news, robots, and artificial intelligence threats undermine science as the way to structure society.

Besides this context of great changes and social unrest, environmental changes are inevitable, society fails to produce viable alternatives and to implement new approaches to social changes. In any case, changes will happen due to collapse or adaptation. The old polemics between reform or revolution, meaning light social adjustments or complete social transformation, are now dominated by the ecological transition theory, which highlights circular economy, energy efficiency and sustainable practices towards a new social-natural contract. However, we still lack viable images for future changes. The main theories available in environmental thinking, such as Resilience, Nature Based Solutions, Ecosystem Services, among others, deal with how

to best adapt to unknown eminent changes. Nonetheless, they are stuck in the pragmatic reform paradigm and in an apolitical approach. Accordingly, the only question is whether the environmental collapse will be handled, overcome or creatively explored. Are there ways to overcome the reform-revolution paradox?

The aim of the present article was to explore an action research carried out during a one-week workshop in Goiás City - Brazil. 'Utopias' were used as keys to read counter-hegemonic urban ecological relationships capable of providing possible images of alternative futures. We developed six main approaches to the contemporary condition to explore other ways out of this paradox, namely: Neoliberal contradictions, Postcolonial approaches, Coexistence, Ethics of Care, Mobility of frontiers and the Co-poiesis of Nature, as well as developed three dialectical utopias: Queer planet, Matriarchal Society and Afrofuturism. That was done to rearticulate new possibilities in a world filled with blind fields.

2. Goiás City and the urban nature paradoxes



Image 01: Goiás City and Vermelho River

Goiás City was founded in 1727 as an 'arraial' (village) and thrived on gold mining along its riverbanks in the first years of its existence. The city developed far from the river due to hazardous conditions and slave labour. It became the capital of 'Capitania de Goiás' in 1748 and witnessed urban expansion and the construction of key infrastructure. Nature was viewed as both menacing and divine in the colonial era. On the one hand, wild landscape was denied and the city was an 'anthropized' space with no greenery. On the other hand, orchards and gardens were carefully controlled in private backyards.

Gold production declined from the 1780s onwards. Brazil proclaimed its independence right after that, in 1822. A series of governmental policies aimed at establishing a new order for the new Brazilian empire were implemented in the 19th century, and social attitudes towards nature shifted. These interventions led to modern labour practices and introduced green spaces as leisure places. Although the city shifted from gold to livestock farming, its space remained unchanged for one century, but an idyllic nature meant for pleasure and bucolic landscaping became accepted in urban spaces.

In 1869, a new road to the Central Market changed the city's river connection. Before that, a line of backyards would be the transitional space between the city and the river. Nowadays, the urban space is wide opened to the river. However, the road remained mostly empty, with few modern buildings by it. Later on, in 1999, the Environmental Film Festival was launched and, in 2001, the city and mountain ranges were designated as UNESCO Heritage Sites. This title highlighted the river's ecological significance. Contemporary environmental concerns have reshaped perceptions about urban nature and residents have adopted new practices and attitudes towards them. The river has become a central point in the city and it attracts new businesses and stands out as one of its main images.

Thus, we are dealing with a very peculiar situation: the same city and the same nature took different social performances. Although the environment was the same, it was differently perceived; it had different values and propelled different interactions. At first, the Natural elements were seen as dangerous, diabolic and as something to be explored, but also as God's gifts. Now, they are objects that could be manipulated to generate idyllic delights for free subjects and as complex ecosystems to be preserved, beyond human interests. This is one phenomenon among many phenomena we might call 'metamorphosis of nature'. However, it does not simply mean that our interpretations change. Nature assumed a political role because it reinforced subjectivities and structured habits.

Here an external example might help understanding this paradox. Hilary Angelo (2021) presented the German River Ruhr case, exploring the interconnections among concepts of nature, space production and political subjectivities. In the Industrial Revolution, the Essen region became a network of cities structured around the river as source of energy and natural resources. On the one hand, nature became an instrumental object explored to its limits. The dominant logic was human centred and it maximised investments and outputs without taking the ecosystem into consideration. On the other hand, a series of Garden Cities were built for the working class; they were refuges from industrial spaces' contradictions. These idyllic places, nonetheless, had specific rules for the use of nature creating healthy habitats for workers.

The impact on nature was paradoxical, since nature was seen both as an economic externality and as a controlled good used for individual delight in backyards. This was a one-directional double objectification of nature. On the one hand, in concrete terms, it meant a maximum exploitation of both things and humans, without any regard to environmental logic. On the other hand, in abstract terms, it became an utopian ideal to impose a social life on workers and to normalise modern social behaviours. Although the spirit of the time is the same, it does encompass contradictory feelings towards nature, both disregarded and valued. These paradoxes underline different instrumental subjectivity towards nature.

According to Hilary Angelo (2021), the global order changed in the postwar period and the region faced a deindustrialisation process. Production moved to global peripheries and factories were abandoned; this process was followed by economic decay and unemployment. New

paradoxes emerged. On the one hand, local communities started to organise themselves based on community initiatives and informal work. Backyards in old Garden Cities underwent a radical metamorphosis and, from places of bourgeois delight, they became places of rural production. Chickens, pigs, and vegetable gardens dominate the landscape. On the other hand, urban planning evolved and became a comprehensive tool. This region was then viewed as an integrated system of social, economic and natural spaces. Propositions aimed at controlling development, protecting nature and to keep Garden Cities as heritage.

Comprehensive knowledge clashed with community reality. In addition, another conflict emerged between the abstract view of Garden Cities as heritage landscape and the living reality of people who (re)appropriate gardens as community-based alternatives for economic survival. Nature became a field of multiple dimensions, a palimpsest and not simply a fixed stage where different actors play free roles upon. Actually, nature became a plastic field changing from the inside out, a field of possibilities engraved through different times, upon which history, culture, and knowledge can act upon to reveal new potentials.

Yet, according to Hilary Angelo (2021), when we moved towards the neoliberal context, nature once more changed its roles. The new configuration of global markets made the cities' image key elements for attracting investments in an international network of competition. Thus, abandoned factories became parks and nature started occupying old industrial ruins to create new bucolic scenarios. Punctual interventions aimed to create landmarks with global identity. The shift from comprehensive planning to strategic planning saw a new mix of spectacle and 'Disneyfication' of leisure and tourism, and nature became a commodity for marketing. The financialisation of spatial production meant that regions had to build brands to attract the global capital. Flexible work features, communication and transport technologies gave the regions a new potential to expand to vast territories and to get connected through new infrastructures.

Traits of this green gentrification also appeared in Goiás City. As access to nature turns from right to commodity, a new dilemma exacerbates social inequalities. This phenomenon not only commodifies green spaces but also perpetuates disparities by deepening the division between socio-economic classes. This phenomenon overstates existing inequalities in Goiás City, displacing local inhabitants from the city centre to its peripheries by pricing out marginalised communities. Consequently, we are transitioning from the right to nature to market-driven privileges. New residents moving in further raised real estate values and the proliferation of second-hand homes emptied the city centre. This displacement involves environmental injustice matters, since it does not only deprive communities from access to new green spaces but also disrupt their social networks and community ties.

According to Matthew Gandy (2022), we need new approaches to deal with these urban roles of nature. Positivist approaches based on absolute universals cannot handle their social metamorphoses and roles. *Neovitalists* are non-humanist, although they are always trapped in pseudo-ecocentric approaches. Object-oriented ontologies are both neo-romantic and animist. Relational ontologies take one step further, but they might submit to relativism. Arguably, we should go beyond modernism contestation and move away from language-oriented post-structuralism, which is lost in endless semiotic hermeneutics, and we should head towards a post-positivist evidence-based creative (poetic) materialism.

Matthew Gandy (2022) sees Eyal Weizman's forensic architecture theory as a way to 'give voice to things that nature gave no Voice' to. We could see Earth itself as a global scale 'crime scene' by advancing Bruno Latour's (2004) role of scientists as political representatives of

nature in a new politics that includes non-humans. This process means going beyond human sensorium and social spectacles. The environment can be seen as a recording device engraved with social history, although it is messed in entangled traces. This approach to the environment as material traces shifts the focus on individual humans as subjects of knowledge to men as aesthetic observers. This perspective changes the causality issue as the environment becomes an indirect, distributed and extended field of casualties that are spread over space and time.

Arguably, this neonature filled with urbanised reminiscences pictures a multilayered matter. It depicts both symbolic and spectral distances, whose past and future manifest themselves here and now. If the way we see nature has political consequences and frames how people interact with themselves and with the environment, the construction of a new aesthetics focused on nature will play the role of building new social-environmental arrangements. In order to do so, we need to understand the transitions we want, how they change our understanding of nature and what kind of images they may project to the future.

3. Approaching context and desires, and the nature of co-poiesis

We developed a series of lectures to approach the specific context of Goiás City and its relationship with nature. The topics were addressed in flipped classroom assignments, which counted on six main concepts to observe the current contradictions between cities and nature, namely: Neoliberal Contradictions, Decolonial Approaches, Coexistence, Ethics of Care, Mobility of Frontiers and the Co-poiesis of Nature.

Interactions among these concepts aimed at elaborating a critical cartography of the observed web of conflicts. Neoliberal Contradictions highlight tensions inherent to the context. Decolonial approaches are both lens and procedure to challenge dominant narratives and power structures. Mobility of Frontiers establishes physical and conceptual borders' fluidity and dynamism. These mobile borders shape human interactions with both society and the environment. Coexistence as an axiom aims at overcoming the traditional gap between human and non-human entities by fostering the need of thinking about the global integrated dependence among them. Ethics of Care foregrounds the direction nurturing empathy and responsibility that, in their turn, should guide all actions. Finally, the Co-poiesis of Nature underscores the interconnectedness and co-creative dynamics of social and environmental systems. Together, these concepts plot a 'critical' cartography, an ecology of knowledge, which is featured by integration, interaction and conflict.

The aim of this cartography is to challenge conventional understandings of power, knowledge and nature. It provides an alternative framework for envisioning and navigating our relationship with the environment. This critical cartography invites us to engage in complexity, to embrace diversity and to confront the systemic injustices and inequalities shaping our societies and the environment.

3.1. Neoliberal Contradictions

Although the neoliberal contradictions exceed the scope of the current article, they help better understand the current moment and better see nature as a field of possibilities and conflicts. We aimed at unveiling the contradictions and at tracing counter-hegemonic sensibilities by drawing on critical theory approaches (David Harvey, ; Henri Lefebvre, ; Michel Foucault, ; Jason Moore, ; among others) and decolonial thoughts (Arturo Escobar, ; Frantz Fanon, 1961; Achille

Mbembe, ; Donna Haraway, 1988; Glissant, 1990; Mignolo, 2007; Enrique Dussel; among others).

Contemporary spatial production derives from a series of entailed processes linked to sensibilities and concepts that, in their turn, result in concrete practices and spatial devices. The idea was to get a grip on the hegemonic cultural logic - such as the instrumental logics, the parasitic exploitation of nature, the commodification and objectification of both nature and subjects, the financialization, consumerism, individualism and spectacle - only as strategy to imagine counter-hegemonic configurations.

According to Williams (1973), in Gramscian terms, hegemony is the dominant culture in action at a given society. It is rooted in 'common' sense, rather than in something singular. This prevailing way of thinking is experienced and embodied in daily life; moreover, it influences people's expectations and perceptions of reality. The hegemonic thinking reinforces the perspectives of dominant classes, institutions, and individuals, as well as continuously adapts to the social frameworks. According to Williams (1973), culture is a continuous of residual (traces of past events) and emergent cultures, which may either get integrated to the hegemonic culture or remain excluded from it. Consequently, new cultural elements can show regressive and progressive tendencies. Moreover, the term 'alternative' simply highlights 'differences' and it can be embodied as hegemony by the cultural discourse. Williams conceives 'counter-hegemony' as critical cultural practice aimed at being oppositional to the dominant culture.

Lefebvre (1976) argued that capitalism has managed to avoid crises by reproducing the social relationships of production. This reproduction is achieved by both destroying traditional spaces and reproducing the instrumental logics into new spaces. Several authors, among them, Marx (1996), Adorno and Horkheimer (1996), and Lukács (1971), have discussed this instrumental logic. According to Lukács, this way of thinking builds 'facts' and forms a pragmatic discourse about truth. It operates by asserting the *status quo* and the existing objects as natural absolutes. It demands overlooking social processes and the historicity of social relationships, turning what 'exists' into unconditional mythologies (Lukács, 1971). Thus, even those who want to protect the environment reproduce the parasitic exploitation of nature. If we understand nature as an external object, we can only act on it in terms of distant protection or exploitation.

The second key contraction of the neoliberal condition is a simulacra condition. Jean Baudrillard (1994) famously advocated that we live in a hyper-real world where reality is nothing but simulations. We only create new false representations of reality when we try to unveil the mask of ideology that hides reality. Although this approach leads to a sort of contradiction in terms (since any theory of reality is nothing but simulation), it also allows critically approaching the construction of reality. Although authors like Jacques Ranciere (2005) and Henri Lefebvre (1967) developed the idea of nature as socially created (poiesis), a critical approach can also enable seeing that it is at the same time a simulacrum (hiding its artifices) and a creative force developing new potentials to reality. Thus, we nowadays live in a world of fake news and spectacles that outspread instrumental views of nature and, simultaneously, financialisation and individualism are fantasies that have concrete and direct impact on the production of new social inequalities. Arguably, we should explore further the creative alternatives to this condition.

3.2. Decolonial approaches

Decolonial approaches provide a more nuanced framework to assess the intricate cross-sections of human society and the environment. These approaches provide a unique perspective that unveils contradictions, vested interests and power dynamics underlying the environmental discourse. Spatial concepts shape distinct realities that are tailored to specific contexts. However, new concepts can emerge from encounters between different knowledge systems and preserve the diversity of perspectives. For that, it should emerge from the 'here and now' of encounters and collisions between knowledge paradigms to preserve differences between subjects. These encounters highlight the lack of universal agreement and emphasise the need of acknowledging and managing divergent epistemic practices. Negotiating agreements amidst conflicting visions and paradigms does not rule out collective differences, but rather brings them to light.

The decolonial project represents a realm of divergence where disagreements remain. Entities do not want to relinquish what they deem crucial in conflicts over shared objects or interests. Spatial knowledge within the decolonial project embodies this divergence and acknowledges that common objects like rivers or mountains are inevitably influenced by several interests, perspectives and desires in contexts where multiple collectives and spatial production practices converge. The integration between knowledge practices and entities should maintain the dimensions of excess, misunderstanding and divergence.

The concept of 'Dark Ecology' in this realm, as articulated by Timothy Morton (2016), delves into the obscured and often unsettling aspects of ecological discourse, emphasising uncertainty, ambiguity and the unforeseen consequences of human actions. This is particularly important because it acknowledges that our knowledge is always imperfect, and the blind fields of our current epistemologies might lead to new social-environmental alternatives. Accordingly, the exchange of different scientific and traditional knowledge types gains a new and reinforced role. Morton's concept challenges traditional notions of nature as something separated from humanity. It rather highlights the entanglements and complexities inherent to ecological systems. Dark Ecology underscores the urgency of acknowledging and addressing the planet's ecological crises. These decolonial analyses can allow insights in the complexity of environmental issues and the dynamics of power at play by focusing on the unknown elements within our approaches to ecology (i.e. dark ecologies).

Mary Douglas (1992) outlined several 'nature myths,' including the 'myth of capricious nature', the 'myth of strong nature' and the 'myth of fragile nature'. The fragile nature is encompassed by spatial policies that rely on technical-scientific methods to manage interactions between society and the environment. Ecopolitics, like all forms of politics, is linked to entitlement, obligation, enforcement of rights, and decision-making authority issues. In a world characterised by both diverse spatial landscapes and significant social disparities, decisions and actions have disparate impacts on different people and places. Decolonial thinking does not focus on the decolonization of colonialism; it rather focuses on addressing the enduring condition of coloniality. Coloniality is not colonialism, it is the 'dark side' of modernity.

A whole variety of new endeavours have emerged in recent years, notably in the Ecuadorian Amazon, and they have deeply influenced the environmentalist discourse. These initiatives include agro-forestry projects, efforts to revive degraded forests, sustainable harvesting and sales of forest products, as well as adopting innovative forest management techniques. Simultaneously, there has been the trend to implement ecotourism policies and attempts to register indigenous territories. These actions have led to the creation of tourism zones with clearly defined boundaries. Tourism has been increasingly viewed as a means of economic

opportunity for indigenous communities since the 1990s. It fosters the hospitality industry and traditional crafts' growth. However, these shifts have resulted in different outcomes: some clans prospered from their engagement in such activities, whereas others have experienced impoverishment or displacement to remote jungle areas.

If one thinks of decoloniality in terms of existence and space, it means imagining it as an archipelago of enunciation points, as a constellation of micropolitics, and as experimental arenas shaped by subjective positions and cultural dispositions. Decolonization entails acknowledging that reality can be kaleidoscopic, fragmented and inherently ambiguous by defying simplistic representations through fixed cartographic projections. It transcends mere perspectivism to focus on points of action and enunciation places. Hence, the decolonial project is inherently linked to the sense of coexistence.

3.3. Coexistence and dependence

Peter Sloterdijk's (2011) concept of Coexistence provides a fresh perspective on the intricate web of relationships defining our contemporary society. It explores the dynamics of living together by highlighting the cohabitation and interdependence of several entities within shared spaces. This framework not only makes the understanding of diversity and the complex relations inherent to modern society easier, but also acknowledges the deep interconnections between human and non-human processes. We should think in terms of "terrestrials" rather than of oppositions, such as human/non-human and artificial/natural, to propose a new theory of inter-dependencies between society and nature, and to emphasise our embeddedness within broader global processes.

Dependency is an ethical issue, and a fact. We depend on Earth's habitable conditions, and the assumption that we could free ourselves from this reliance is a simple matter of fantasy. According to Peter Sloterdijk (2011), modern knowledge paradigms draw identifiable and manageable segments of the world within socio-spatial configurations. Social and ecological interdependencies in modernity have been overcome by isolated entities or 'spheres of independence' that are often seen through binary lenses. However, by taking Earth's overflowing of life into consideration, it is possible stating that this vitality stems from interconnected relationships among entities, subjects and ecologies. The shift from independence to the establishment of interdependent spheres within project practices means we need to attempt a transgression of current modes of imagination.

The idea of dependency in the social studies field has been commonly used to analyse non-Western societies as means to highlight a model of the subject who opposes the Western liberal idea of supposedly autonomous individuals. The concept of dependency has recently become a central topic in anthropological theory. The work by Ferguson (2013; 2015) has disclosed the contrast between specific European desire for autonomous freedom and alternative concepts that define systems of dependency as the very basis of being.

Dependence is not about living in harmony, in empathy with natural agents. One should acknowledge the dependence on various agents, without seeking universal agreement by avoiding the misconception, according to which, living in empathy and harmony with all things is feasible. According to Latour (2017, pp. 290-29), modern humans saw themselves as continuously emancipated from past constraints. As an alternative, one should not aim at reduction or harmony, but at expanding the list of involved agents and the interests in them. Thus, we should think about all terrestrials in general, exploring their limits together.

The concept of DELINKING aims at generating a series of disjunctive synthesis, as argued by Viveiros de Castro and Roy Wagner (2017). Accordingly, divergence and distance are their causal factors, rather than similarity or identity. Coexistence and interconnection entail separation and differentiation, rather than mere blending and fluidity. The objective is to delineate contact zones between various ecological forms of spatial production within a 'pluriverse' framework and to explore the potential of 'multi-situated' and networked life practices. Therefore, coexistence is not synonymous with harmony. It resembles language in its requirement for noise, messiness, fuzziness, granularity, vagueness, and slipperiness, so meanings can emerge. Similarly, the space of coexistence between differences must be closely articulated in itself, as well as present abundant fuzzy situations and mediating devices. Thus, by envisioning the unfamiliar coexistence we need a new concept of thresholds and blurred spaces.

3.4. Mobility of frontiers

Gilbert Simondon's (2013) concept of frontiers is linked to the differentiation process within complex systems. According to him, frontiers are not merely static divisions but dynamic interaction and transformation zones where entities undergo becoming and differentiation processes. Simondon views frontiers as tension, exchange and integration sites; thus, they are not fixed delimitations, but fluid interfaces of ongoing evolution and adaptation. Simondon's concepts emphasise the interconnectedness between adjacent domains, and it highlights the continuous information, energy and matter flow, which is a key element in the shaping and the emergence of new structures.

The Mobility of Frontiers concept (Hissa, 2002) expands Simondon's concepts by highlighting the interconnectedness between human society and its environments, since it suggests that frontiers are not only shaped by physical geography but by cultural factors, as well. Simondon's concepts tend to focus more on the material aspects of borders, often neglecting their historical and cultural construction. Hissa's framework points out that frontiers are historically constructed by our epistemology and aesthetics. This profile builds a non-binary framework that acknowledges the complexity of the society/ecology dialectics. Cássio Hissa's (2002) fluid interaction zones acknowledge a continuous historical movement and negotiation through the borders, and it challenges the traditional sense of fixed territorial divisions.

Similarly, Descola (2013) empirically and conceptually questions the dichotomy between nature and culture. This division is rooted in modern thinking and works as an ideological construct employed by Western societies to categorise and dominate other cultures and non-humans. Descola asserts that many cultures do not adopt the distinction between human (deemed superior) and non-human (seen as exploitable). In addition, chemist James Lovelock and sociologist Bruno Latour have similarly questioned the sense of an Earth system by arguing that the biosphere is a delicate mix of many conflicting complexities. Latour (2017: 87) describes Earth as an 'anti-system' composed of agents that resist unification into a single cohesive entity.

Decolonial thinking operates from the epistemic frontiers of modern thinking by questioning Eurocentric or Western spatial planning and design forms. Accordingly, the concept of Border Thinking (Anzaldúa, 1987) becomes relevant, mainly when it comes to design practices. Border thinking (Mignolo, 2007) is understood as situations where subjects, collectives and social groups living on the margins produce knowledge to be transferred from one place to another,

which is seen as a way of escaping modernist binary thinking. Therefore, decolonising the project means looking for where "frontier thinking" can question hegemonic knowledge and paradigms departing from externalisation paradigms. Anzaldúa (1987) investigated the contradictions and material conditions of life "on the borders and the margins", and revealed the joy that can be derived from so much suffering: the sensation of being part of something alive, the change of identity that awakens areas of otherwise dormant awareness, which is never felt at ease, but nevertheless at home.

3.5. Ethics of Care

The Ethics of Care allows refraining from individualistic approaches and acknowledging the role of others, both human and non-human, in fostering a caring society aware of diversity and collective risks. Interdependence and relationality are rooted in empathy, and this ethical framework prioritises subjects' well-being within their social and environmental contexts. This perspective emphasises nurturing relationships, mutual support, and responsiveness to others' needs by challenging traditional moral theories centred on abstract principles or rights. However, the Ethics of Care underscores the importance of context, emotions, and concrete actions in ethical decision-making. It advocates for an inclusive and compassionate approach to address social injustice and ecological challenges.

Sociologist Donna Haraway suggests that all knowledge and research are "situated" (Haraway 1988). This understanding encompasses not only the cultural context of research but also what Shawn Wilson refers to as the axiology of researchers, which encompasses morals, values, and ethics. These factors play crucial roles in shaping research processes and in influencing the selection of research questions, methodologies, design strategies, and dissemination modes.

However, when urban discourse (research/design) is influenced by issues, such as feminism, black studies, subaltern studies, queer thought, decolonial theories, body, and indigenous thoughts, it faces the challenge of establishing new legitimacy and authority for a given project. This process leads to questioning the Western project, design, research, and teaching practices. Contrary to the traditional goal of rationally organising the environment, this line of thinking views urban projects as more akin to chemistry - a discipline focused on studying changes, modifications, decompositions, and transformations.

3.6. Co-poiesis of Nature

In a seminal essay, Arturo Escobar (1996) clarified the social construction of our concepts of nature. He emphasised how these perspectives, which are featured by the political aesthetics and social enactments of nature, can actively reshape both society and the natural world. Bruno Latour (2004) has reinforced this theoretical understanding by acknowledging the hybrid nature of objects and relationships and by bridging the gap between the natural and the artificial.

The co-poiesis approach develops Maturana's concept of auto-poiesis to acknowledge how nature is produced in a political aesthetic. Copoiesis emphasises a collaborative and dynamic process of co-creation between human and non-human entities. It involves the mutual shaping and transformation of agents within a complex system, by emphasising interconnectedness and interdependence. Copoiesis highlights the active role of both human and non-human elements in shaping the environment, by fostering a deeper understanding of reciprocal relationships and emergent properties within ecosystems.

According to Lefebvre (1967), poiesis refers to an idea's ability to shape reality. Unlike praxis, which belongs to practical experiences; and mimesis, which deals with ideal representations in the mind, poiesis involves the generation of tangible experiences through conceptual frameworks. This understanding emphasises how ideas can actively change reality by focusing on the underlying principles, processes, and decisions involved in creating truth or reality. Lefebvre argues that the driving force behind changes in reality lies in building new possibilities. He compares this process to that of a seed, whose potential to become a tree transcends its current state; this process illustrates the significance of its virtual reality - the possibility of transformation. He argues that every epistemology has 'virtualities' and 'blind fields' (Lefebvre, 2003b, pp. 23-44) and, furthermore, he (1967, 375-377) advocates that poiesis creates a new reality by operating in residual fields that were left untouched by previous epistemologies.

The aforementioned process implies exploring unique capabilities of each epistemology, whereas certain aspects of reality might remain undiscovered. These unexplored aspects represent potential actions that have not been articulated, so far, although they work as the boundaries for any form of reasoning. From this perspective, poiesis reveals the hidden and obscure parts of reality, thereby reshaping it. Consequently, epistemology's limitations catalyse the rise of potential new realities. Arguably, the role of design-thinking can be conceived as exploring the gap between blind-fields and virtualities – i.e. to both visualise reality anew and to conceive future solutions. The next section uses the concepts discussed, so far, to recombine environment and subject, what resulted in three dialectical utopian experiments (Queer planet; Matriarchal Society; Afrofuturism) aimed at exploring current contradictions and at formulating new imaginaries of what could be the alternatives to current social trends.

4. Reimagining futures

The classic study by Ernst Bloch (1986) argues that utopia is fundamental because it is a 'principle of hope': once one understands that the reality of 'things' is not as natural as it seems, then hope can create a different reality for things. In his book 'Spaces of Hope', David Harvey (2001) advocated for the concept of dialectical utopias, which avoids the simple 'imagination' of alternative worlds. This perspective would be conceived as counter-utopia, as a device negatively related to reality that allows imagining future alternatives rooted in concrete reality.

Similarly, in his book, 'The Right to the City', Henri Lefebvre (2000) proposes an experimental utopia developed in an intellectual operation called by him 'transduction': the theoretical production of possible objects taken as references, as strategy designed to transform society - 'urban revolution' was his most famous 'possible object'. Accordingly, the aforementioned workshop aimed at investigating the role of design and architecture in developing immanent possibilities and social-environmental alternatives. It explored design-thinking methods to visualise the hidden aspects of urban nature through cartographies, critical representation, diagrammatic interpretation and photographic *dérives*, as well as to envision new possible futures through a transductive utopian imagination.

This Utopia emerges from perception and imagination convergence, according to which, the lens of present reality meets the canvas of an idealised reconfiguration. This convergence transcends the mere spatial and social revolutions, and delves into the depths of societal vulnerabilities, while aspiring towards collective improvement. Inspired by writers, such as Octavia Butler, and by the contemporary Solarpunk movement, utopias represent our right to

collective existence to envision worlds where flaws are acknowledged, vulnerabilities are embraced and community engagement thrives.

These utopias focus on the dialectical nature of relationships. Conflict is not an obstacle, but a catalyst for collective imagination to flourish by steering society towards community engagement and transformative action. Indigenous writer Ailton Krenak (2019) advocates that 'postponing the end of the world' is urgent. We need to rethink our relationship with the environment and embrace the most diverse ways of living. Integrating traditional practices and worldviews to modern solutions is imperative to navigate the socio-ecological goal of surviving the impending catastrophe.

However, the journey towards utopia is fraught with challenges, mainly because of entrenched capitalist paradigms and the ecological crises. Despite advances in quality of life, the continuous-growth narrative perpetuated by capitalist systems masks existential threats and perpetuates dystopian imaginaries. Yet, it is within the cracks of this dystopian reality that literature and fiction illuminate pathways to utopian futures by providing resilience, adaptation and societal transformation narratives.

One of the Workshop activities aimed at conceptualising and imagining utopias to explore the relationship between humans and non-humans in urban environments based on the fiction's ability to incorporate utopianism into crooked realities. Participants were divided into three groups and asked to apply the main concepts of design-thinking methods. They used the brainstorming technique to unravel the intricate intersections between human societies and the environment by exploring the contradictions, power dynamics and spatial concepts shaping distinct realities.

Results showed the need of converting concepts into imaginaries, which had to be represented in textual narratives and collages of three utopias, namely: Queer Planet, Afrofuturism and Matriarchal Society. Each group provided a free mix of theoretical concepts into immanent worlds by addressing complex socio-ecological challenges through playful explorations. These utopias made participants engage in critical reflections on the pressing issues of our times rather than just envisioning alternative futures.

4.1. Queer planet

The Queer Planet prioritises individuals' well-being within their intricate social and environmental contexts by embodying the ethics of care. This perspective nurtures symbiotic relationships and reciprocal support networks anchored in empathy and relational elements by transcending conventional moral frameworks entrenched in abstract principles. The Queer Planet utopia sought an inclusive and compassionate *ethos* aimed at addressing prevalent social inequities and ecological imperatives by embracing innate diversity and collective vulnerabilities inherent to the human condition.

The Queer Planet boldly challenges the entrenched senses of fixed territorial demarcations by embracing the dynamic concept of mobility of frontiers. It sets the concept of frontiers as fluid and permeable zones of interaction and transformation, where new configurations emerge from both conflict reconciliation and the fusion of diverse elements. This utopia propels co-evolutionary dynamics between human society and its surrounding environments by stressing the multifaceted historical, cultural and epistemological dimensions disclosing the different perspectives of the world.

The profound concept of co-poiesis of nature lies on the very core of the Queer Planet where the collaborative and dynamic interplay between human and non-human entities holds paramount significance. The active agency of human and non-human elements in shaping the environment is duly acknowledged by fostering reciprocal relationships and engendering emergent properties within ecosystems. The Queer Planet decisively challenges the rigid nature versus culture and human versus nonhuman dichotomies by presenting a visionary portrayal of reality as intricate and interconnected tapestry of life, which is rich in complexity and interdependence.

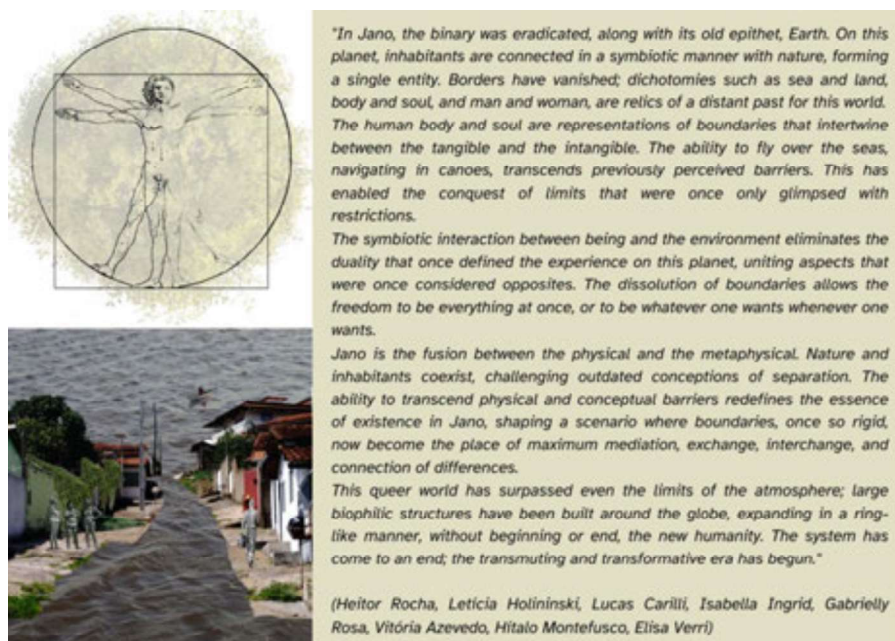


Image 02: Queer Planet Utopia

4.2. Matriarchal Society

The Matriarchal Society utopia embodies the *ethos* of care as a fundamental principle. Individuals' well-being in their intricate social and environmental contexts takes precedence. Nurturing relationships and mutual support networks are not only encouraged but intricately woven into the societal fabric. This paradigm challenges traditional hierarchical structures by advocating for empathetic and relational modes of governance that prioritise collective well-being over individual gains. Care, in this utopian construct, transcends the mere virtue of becoming a guiding principle capable of shaping every aspect of social interaction and decision-making

Acknowledging coexistence and dependence is in the centre of the Matriarchal Society utopia. These elements underscore the interconnectedness between humans and the environment, as well as among different human communities. Mutual respect and reciprocity work as fundamental values of this coexistence by guiding relationships. Individuals acknowledge their

strong dependence on the natural world and strive to live in symbiotic relationships that sustain both human society and the ecosystem. Humans coexist with non-humans as stewards, rather than as dominators in this utopia; they nurture biodiversity and ecological resilience through reciprocal interactions.

The Matriarchal Society embraces the concept of co-poiesis of nature by engaging in the collaborative and dynamic process of seeding, rather than in that of creating. Humans actively participate in the environment in this utopia by acknowledging their role as caretakers, rather than as exploiters. They contribute to the flourishing of ecosystems by fostering biodiversity through these reciprocal relationships. This approach transcends traditional nature/culture dichotomies by fostering the sense of interconnectedness for all living beings in the intricate web of life.

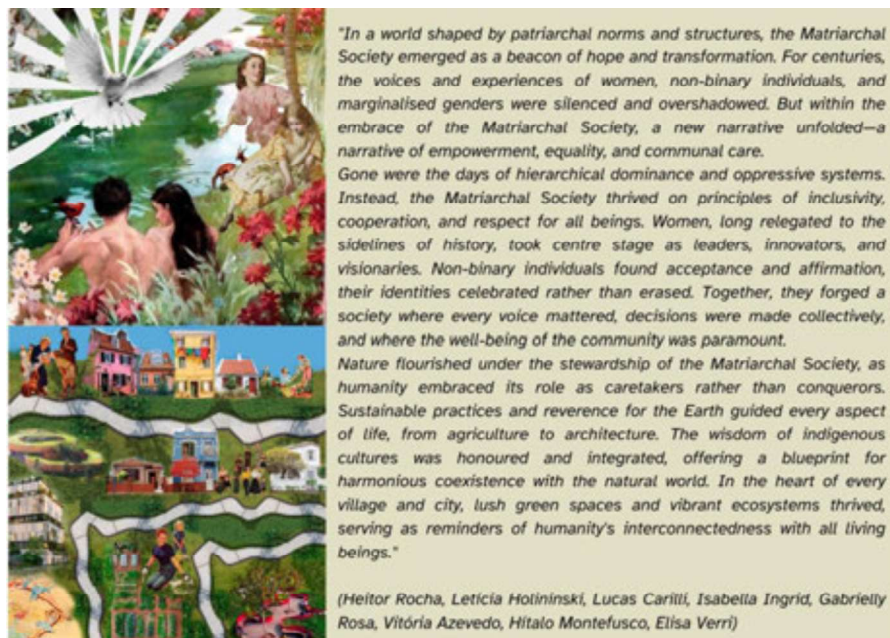


Image 03: Matriarchal Society Utopia

4.3. Afrofuturism

The Afrofuturism utopia emphasises the struggles and complexities of concrete life. Thus, the **decolonial approach** provides the lens through which to scrutinise the dynamics of power and knowledge. Afrofuturism challenges dominant narratives and Eurocentric standards by fostering spaces for marginalised voices to express themselves. Encounters between diverse knowledge systems unveil contradictions and power dynamics by highlighting the need of managing divergent epistemic practices in this utopian vision. Afrofuturism disrupts colonial legacies and preserves the most diverse perspectives by envisioning a world where alternative futures can flourish by embracing African diasporic perspectives.

Peter Sloterdijk's concept of coexistence echoes the intricate web of relationships defining society through the Afrofuturism utopia. His narrative depicts a world where entities cohabit and are dependent on one another. The Earth itself becomes a central character embodying both dependence and agency. Afrofuturism rejects the fantasies of emancipating from this interdependence and embracing the vision of interconnectedness and mutual reliance. It challenges binary divisions and presents an alternative to simplistic narratives on harmony through cohesive sets of functions and movements.

The Afrofuturism utopia also lies on the concept of co-poiesis of nature, which emphasises the collaborative and dynamic process of co-creation between human and non-human entities. Thus, nature is not a passive element, it is dialectically shaped by human actions and cultural dispositions. Afrofuturism fosters reciprocal relationships and emergent properties within ecosystems. Based on Arturo Escobar's sense of social construction of nature, Afrofuturism actively reshapes society and the natural world by providing a visionary portrayal of the environment as contextualised reality.

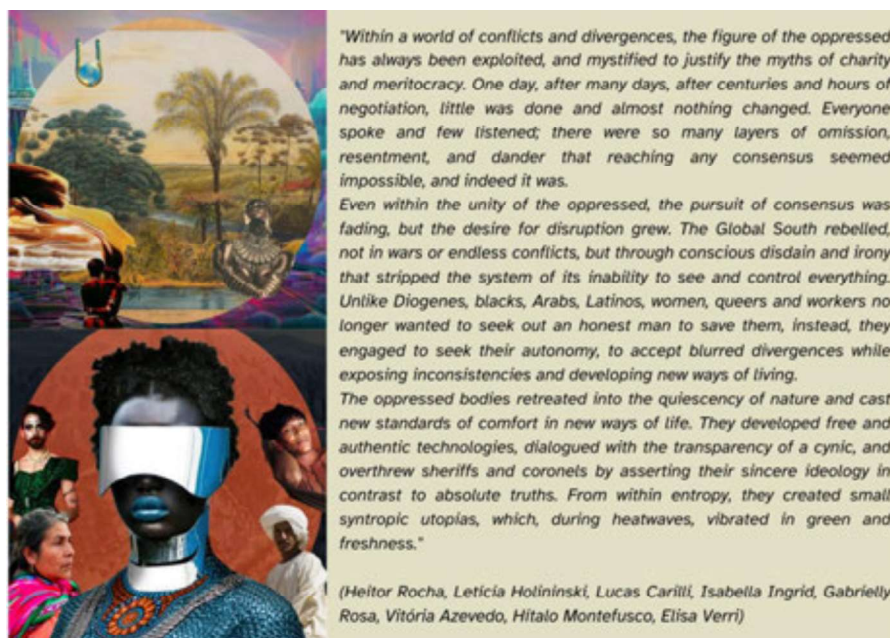


Image 04: Afrofuturism Utopia
4.4. Discussion: Theorising Experience

Arguably, effective counter-hegemonic ecological transitions cannot be defined without developing innovative ways of knowledge production capable of engaging actors, entities, collectives with experience of struggle. As Santos clearly states, an "epistemological shift" (de Sousa Santos, 2018) is needed to reinterpret the world through dialogue between producers of different types of knowledge.

The fuzzy concepts of 'co-creation' and 'co-production' are increasingly present in our disciplinary lexicon (Voorberg et al., 2015). One of the main aims of our approach is to

reconceive Co-Creation as a method of collaborative knowledge production by seeking to develop 'dense narratives' to enhance our understanding of spatial justice and social inclusion. This production is linked to Chantal Mouffe's (2007, 2013) notion of "agonism", in which agonistic actions and projects have the potential to open "cracks in the system" and allow for the establishment of forms of relationships different from those to which we are accustomed" (Mouffe, 2013: 97). Our hypothesis is that through the adoption of different points of view and 'ways of knowing', an agonistic understanding can be developed that has the potential to think about and configure more socially inclusive spaces and environments.

Therefore, a key innovation in our approach requires the active engagement of all participants, both academic researchers and members of local communities, in a practice of knowledge production that challenges the hierarchy between researcher and 'researched', as well as the rigid binaries between established knowledge/popular knowledge. This is not to deny that there may be power asymmetries deeply rooted in Brazilian society, which it is, of course, necessary to acknowledge. Although Co-Creation is underpinned by notions of equality and inclusion, its practice inevitably takes place in an arena of diverse and sometimes conflicting interests.

A further issue for the co-creation of an ecology of knowledge is the need for all participants to consider the positionality, as well as the reflexivity, knowledge production and power relations that are inherent in research processes. If successfully executed, this approach to co-creation recognises the tensions and power relations that are likely to exist between participants and can create an environment of mutual trust. These experiences illuminated the importance of having awareness of both the links and possible conflicts between socially engaged collaborative practice and project action, and the potential tensions between the many ways of producing knowledge.

We therefore argue, in line with Chantal Mouffe, that the ultimate goal is to promote "agonistic spaces", i.e. public spaces in which "conflicting points of view confront each other without any possibility of final reconciliation" (Mouffe, 2013: 92). In 'agonistic spaces' the different perspectives of actors are brought to the fore and contested, not with the aim of an 'antagonistic clash between enemies' but rather an 'agonistic encounter', a struggle between adversaries, in respectful conflict with each other (Landau, 2019: 16).

Design and politics are two inextricably interconnected domains. Design practices participate in the constitution and maintenance of a given symbolic order or its questioning, and thus can play a critical role by fostering agonistic public spaces in which to launch counter-hegemonic struggles against neoliberal hegemony. It is necessary to make visible what the dominant consensus tends to obscure and erase, in giving voice to all those who are silenced within the framework of the existing hegemony so as to disarticulate the framework in which the dominant identification process takes place (Mouffe, 2013: 93).

The agonistic approach to place-making is thus an innovative way of addressing conflicts around the relationship between dwelling and nature, between territory and practices, by involving residents and local actors in activities foregrounding alternative representations of places, communities, collectives. Thus, we argue that these agonistic and disruptive place-making practices can be important components of action and change in the relationship between city and nature, as they generate a deeper understanding of different perspectives on space, ecologies, and ultimately social justice. In short, the endeavour aimed to produce new ways of political thinking and practice.

5. Final considerations

Current systems appear inadequate, in a world grappling with interconnected challenges and structural crises. Planetary urbanisation intertwines societal, ecological and rationality crises that escalate social inequalities and the ecological *Capitalocene*. In this context, the present article reported an action research carried out in Goiás City, Brazil, which delved into the concrete aspects of these crises by employing utopias as lenses to explore counter-hegemonic urban ecological alternatives. Based on the six herein addressed concepts, we strived to forge pathways towards alternative futures in a landscape fraught with uncertainty.

This co-poietic hiper-nature is intertwined with urbanised reminiscences, besides being a complex tapestry embodying both a field of symbolism and spectral presences, and a field of obscure possibilities and political intentions engraved in different times. Thus, shaping perceptions of nature holds political significance, since it influences societal interactions with the environment. Embracing a new aesthetic towards nature is pivotal for fostering new social-environmental frameworks that require understanding the desired transitions and their implications to our relationship with the environment.

Here, the key element is the experimentation provided by these utopian exercises. By revisiting the question of experimentation through the lens of an operational field defined by the six key concepts, an ecology of knowledge was created in an agonistic dimension, as conceptualised by Chantal Mouffe (2013). This approach discussed in Goiás City did not seek immediate and universal solutions for managing the river and its nature, but it rather aimed at revealing the conflicting nature arising from diverse desires and imaginaries projected onto these elements.

This imaginary interweaving sought to establish non-extractive utopian images by delving into methodologies such as the sociology of absences and emergencies, the ecology of knowledge, and the craftsmanship of practices. The perspective it aimed at creating heads towards the decolonization of environmental thinking and towards the prioritisation of cognitive justice. This process regards adopting an epistemological transition towards solidarity to those seeking to change the terms with which we have traditionally known the world.

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