Zbornik

THE PUBLIC, THE PRIVATE AND THE COMMONS: CHALLENGES OF A JUST GREEN TRANSITION

Proceedings from the Summer School of Political Ecology 2024

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Ljubljana, 2024

NASLOV: The Public, the Private and the Commons: Challenges of a Just Green Transition

UREDNIKI ZBORNIKA: dr. Andrej A. Lukšič, Sultana Jovanovska, Boštjan Remic
RECENZENTI: Andrej Kurnik, Cirila Toplak, Žiga Vodovnik

ZALOŽNIKI: Inštitut Časopis za kritiko znanosti, za založnika: Dali Regent,
Inštitut za ekologijo, za založnika: Andrej Lukšič;
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Introduction

Hearing daily about climate change and the measures taken by the public authorities to mitigate or even adapt social life to its effects, we may rightly perceive ourselves as mere observers, on whom the public discourse imposes unavoidable obligations, scientifically and professionally backed by arguments, where everyone is expected to contribute to climate change mitigation and adaptation, and to minimize the damage inflicted on nature. This individualized appeal seeks to influence habits and lifestyles for the benefit and well-being of both individuals and global society as a whole.

This appeal targets individuals as consumers, as purchasers of goods and services to meet various daily needs. It addresses us as rational individuals who know how to make informed choices about what is offered on the market and to abandon consumption habits that are no longer acceptable in terms of reducing our environmental impact and living a more sustainable lifestyle.

But what about our feelings of hurt, insecurity, fear of the future, sadness, anger, apathy, and ultimately our sense of helplessness and fatalistic resignation? How should individuals cope with these »by-products« of individualized rationally based appeals? Should they seek help from psychotherapists, psychiatrists and other professionals who care for our mental well-being? And, last but not least, how should we understand those individuals who courageously join environmental movements, local initiatives, conservation groups and environmental NGOs, taking matters into their own hands and consciously rebelling in the face of threats, intimidation, and death in the face of expected or changed living conditions?

To oppose measures taken by public authorities to mitigate natural/environmental damage and climate change, and to adapt social life to new environmental conditions, is nothing more than that, that these rebels are opposed to the rationally based imple-

mentation of the measures. As such, these rebels are perceived as irrational—deniers of scientific knowledge, rebellious souls without a cause, or uneducated individuals who need to be provided with the relevant information.

In more democratically organized societies, these individuals are, at best, invited to debates where, through negotiation and bargaining, they are expected to accept public-private proposals with certain concessions, based on the strength of argument and rational reflection. In more authoritarian societies, public authorities regulate resistance through direct police or military force, threats, legal sanctions or other forms of pressure and compliance, using arguments of power disguised as »rational deliberation«.

A particular problem for public authorities arises when actors resist the further implementation of public policies or measures after experiencing unexpected and undesirable effects in their living environment, when their (local-regional-global) living conditions have changed. These resisters reasonably perceive the policies and actions of the public authorities and their effects, although based on expert reasoning, when they realize that the actions are objectively forcing them to abandon their habits and ways of life. The natural conditions of their culture of living are being abolished, or, because they are untenable, they are forced to seek a new habitat, to relocate, to migrate as individuals, families or groups in order to at least preserve their bare life. They resist because the natural conditions of their existence have changed and are changing to such an extent that their communities will sooner or later disappear; their languages, their cultures and their ways of being — all nested in the natural environment or in their living space—are vanishing. It is an interplay of nature and culture on a limited piece of the Earth, and it is all slowly and steadily disappearing. It is not enough to speak only of preserving biodiversity; we must also address the preservation of cultural diversity.

How should we understand such »irrational« conflicts that arise repeatedly during the process of desired green social transitions, whether in the developed Western societies of the capitalist centre or in the semi-peripheral or peripheral societies of the global

South? How should we understand a composition in which public authorities, as benevolent generators of transitions, are the ones who, by adopting and implementing various policies and measures derived from them—usually scientifically justified—intervene in the social order and in the order of everyday life of individuals, social groups and classes, aiming to preserve the natural order and the necessary conditions of existence, yet at the same time repeatedly generating (unintentional) untenable situations in which courageous actors—individuals, movements, local initiatives, civil society associations—are born to oppose and resist the implementation of the green transition? Consequently, the public authorities, acting in good faith, produce conflicts with civil society actors who disagree with, resist and fight to preserve the »[old] order«, the status quo. Their life-and-death struggle is particularly inflamed when they realize that the natural conditions of their traditional way of life are changing before their eyes. They resist policies which, under the banner of preserving and conserving the natural living conditions, radically and traumatically alter those very natural conditions, and they discover first-hand that environmentally-oriented policies have done more harm to their living conditions and their community than the direct environmental practices themselves or the altered natural processes which public authorities seek to limit, prohibit or accommodate through policy measures or normative acts.

These new green transition paradoxes bring back to the forefront the question of how the systemic way of creating and implementing public policies and their measures are designed: to what extent the system is open to different actors and to what extent it is closed. Which ideas, interests, perceptions, and social imaginaries can enter into the creation of environmental policies, and what is excluded from the communication and decision-making system, out of the system's collective reflection?

Thus, the substantive issues of environmental policies—around which individuals, movements, initiatives and social groups, as well as various environmental experts focus their attention and wage public and political battles—must be translated into systemic

issues of environmental polity. Environmental problems become issues of political power and of the existing system of democracy. They are re-politicised and no longer viewed merely as scientific--technical and administrative issues, but as real political questions that challenge the substance of the system.

To take the point further: the environmental issues at stake cannot be resolved within the existing liberal-democratic order (this is also true of the various authoritarian or semi-authoritarian orders that some prominent environmentalists have been calling for since the 1970s), because what is repeatedly missing is the very foundation required when imagining a new social order—a universal ethical imperative, a generated and systemically supported sensitivity for all living beings.

Today, democracy is generally understood by most people as parliamentary democracy, as a parliamentary ideology by which environmental policies are made. However, people are increasingly rejecting this form of policy-making due to its undesirable social and environmental effects. It is as if they are rejecting democracy itself, instead seeking a strong, authoritarian hand capable of dealing with the accumulated and multifaceted environmental problems quickly and efficiently.

At the same time, more and more people want a voice. They want to debate, to participate in the further development of their communities, to be heard, to be involved in the communication and decision-making processes. They want more inclusive democracy. In today's democratic form, people are increasingly taking the floor unannounced and launching new social movements.

These movements represent the democratic affirmation of the principle of equality, which is of paramount importance for the development of democracy (as argued by Ranciere, Badiou, Swyngedouw). The principle of equality asserts that people are a priori equal, and that their empirical differences—though easily demonstrable and obvious—are not, and cannot be, decisive. This principle repeatedly challenges the established democratic system (today the liberal-democratic order) for its normative charge. Under the banner of greater equality, this system was established at a

certain point in history on the basis of the relationship of political power between political actors, as a democratic system of communication and decision-making, which was normatively protected by the constitution. However, the project of equality, set in motion at a specific historical moment, remains incomplete; it awaits, as it has many times before, further modification or perhaps a more radical transformation.

This awakened group of people is increasingly aware that the democratisation of existing democracy will not occur without political struggle. They organise themselves as movements, initiatives, civil society associations, advocacy groups, networks, social lobbyists, and opinion-makers. The powerless within a liberal-democratic system demand systemic changes that will amplify their power and influence over political decisions. They demand that their systemic powerlessness be transformed into systemic power, into a more democratically ordered society that is sensitive towards all living beings.

Equality among people is not self-evident, and the principle of equality even less so; it cannot simply be seen or perceived through the senses, but it can be conceptualised. Achieveing this requires a collective mental effort—a construction, a design, which is not a simple matter. Philosophers argue that the collective equality of human beings is something that exists and is empirically confirmed time and again through human behaviour and action. This recurring demonstration of the principle's validity, meaningfulness, and relevance to people's everyday lives (as discussed by Rutar) suggests that it is worth elevating to an ethical principle.

This forms the basis for a new concept of democracy, one that relies on the functioning of a new political subject that takes social and political power relations personally and that constantly resists hierarchical and patriarchal relations between people. It emphasises collective, common action, where people and associative networks insist on the principle of equality and demand the creation of a new democratic system.

The new concept of democracy requires the re-institutionalisation and transformation of communication and decision-making

processes. The purpose of re-institutionalisation and the introduction of deliberative principles into our interactions is to involve an increasing number of people in decision-making processes, especially in those processes that will have a significant impact—directly or indirectly—on their daily lives, including the natural living conditions of all living beings.

Such decisions aim to reduce the suffering of the growing majority for the benefit of the well-being of the shrinking minority. In this way, a sensitive way of life and a sensitive society are fostered and reproduced in everyday life through the engagement of an ever-growing number of people who stake their claim to the principle of equality, both at the systemic and communicative levels, to the point where the recomposition of the social and political relations of power will necessitate changes in the fundamental social relations themselves.

The lecturers who participated in the International Summer School of Political Ecology 2024 address these issues in their contributions published in these proceedings. Some of the texts included here have already been published in other publications and scientific journals and are reproduced here with the permission of the authors and publishers.

The following proceedings are structured into two sections. In the first part, **Gareth Dale** writes about the stalling and reversing of some of the socioeconomic trends and their environmental impacts, and explores what this means for the future of humanity. Dale, discussing the concept of great acceleration, responds to Dorling's slowdown thesis, arguing that the standout feature of the coming era will be a matter of instability, not pace; namely that the structural processes that shape world economy and world ecology are becoming increasingly unstable, **James Meadway** challenges conventional views on how climate change and nature crises operate, arguing that the analysis we need is that of a capitalist society plagued by shocks and instability—resulting in shortages, stagnation, and declining living standards—because it cannot deal with the climate and nature crisis in a way that works for people, **Maura Benegiamo** shows the limits and the speculative nature of

the promises of the green/digital transition in the agricultural sector, which she argues fails to respond to emergencies and instead accelerates the destruction of the socio-ecological foundations on which societies are based, **Kai Heron** discusses the two distinctly opposing perspectives in ecosocialist debates: degrowth and left ecomodernism. He outlines the differences between them and responds to the arguments of the proponents of a left ecomodernism, **Vishwas Satgar** argues that insights into democratic ecosocialist strategy and the climate justice project in South Africa can serve as an example of how to respond to the larger ecofascist conjuncture. He contends that the South African climate justice movement presents a model for popular revolt against ecofascist projects and presents the challenges it faces.

In the second part, **Mariano Féliz** examines the global energy transition and the resulting new dependencies in Argentina, arguing that they are deeply intertwined with the dynamics of capitalist expansion, exploitation, and domination. He asserts that the reconfiguration of dependency relationships within the country reflect social and environmental injustices perpetrated by the pursuit of profit at the expense of people and nature, **Chris Vrettos** calls for dismantling the false dilemma that pits »climate« against »people«, advocating for a global Green Deal with practical, community-rooted solutions that leave no one behind, and solutions such as energy communities that offer a practical articulation of the post-growth vision by prioritising social and environmental outcomes over profit, **Lavinia Steinfort** explores how feminist energy transition can reshape our approach to climate justice by raising questions of ownership and control. She argues that in order to meet peoples' energy needs, whilst tackling the climate crisis, we must envision systematic alternatives such as public ownership and energy democracy, **Melissa García-Lamarca** conceptualizes the commons and the common and explores how the emancipatory urban political activities, specifically acts of being-in-common, relate to making urban commons, by taking the example of the urban struggles over housing in Spain. She also reflects on the question of the potential of acts-of-being-in-common in building

emancipatory urban commons, Finally, **Giustina Selvelli** discusses the interrelationship of nature and language, arguing that environmental destruction affects not only the physical environment of vulnerable minority communities, but also their intangible heritage. This destruction causes not only pollution but also forced displacement, urbanization, and language loss.

Andrej Lukšič , Sultana Jovanovska

Part I

Gareth Dale[1]

The Great Acceleration: Is It Ending and What Comes Next?[2]

The great acceleration - in GDP, population, cities, travel, deforestation, pollution - is on some metrics stuttering. What does this mean for a just transition?

The great acceleration, a concept spotlighting humanity's impact on its natural environment, was coined twenty years ago.

A research group studying socioeconomic trends and their environmental impacts noticed explosive upticks, from around 1950, across multiple datasets: the growth of foreign investment, GDP, greenhouse gas emissions, population, cities, roads, dams, travel and tourism, the consumption of energy, water, paper, cars, and fish, deforestation rates, and many more.

Their term for this surge of people and money and concrete consciously echoed Karl Polanyi's The Great Transformation. However, Polanyi's book provides a causal explanation of socioeconomic change, while theirs is descriptive. It registers that human activities are generating large-scale changes in Earth-system processes, and at a quicker pace.

The trends in the graphs, it has always been evident, will not accelerate in tandem for ever. But where are they headed now?

The initial formulation was based on data from 1950-2000, and most indices, including GDP growth, transport, and primary energy use, continued upward into the 2000s and beyond.

1 Gareth Dale is reader in political economy at Brunel University. He researches economic growth and degrowth, climate politics, and technology fetishism.

2 This article has been originally published in the Ecologist. Available on: https://theecologist.org/2023/jun/30/great-acceleration-it-ending-and-what-comes-next

The original research group did, however, note some modulations. The expansion of domesticated land slowed somewhat, as did fertiliser use in rich countries.

Falling fertility rates foreshadowed the end of population growth: the number of humans will peak this century, perhaps twenty years from now, before heading south.

Then in 2016 the book entitled The Great Acceleration reported that although some trends are speeding up, others, including stratospheric ozone loss and marine fish capture, had begun to decelerate.

"The great acceleration will not last long," it concluded. "There are not enough big rivers left to dam" — or oil to burn, groundwater to pump, forests to fell, fish to catch.

Benign slowdown?

With much greater emphasis, the end of the acceleration was announced in 2020 by the geographer Danny Dorling. He stirred in a dash of ruddy optimism: the slowing to a stroll will bring benefit to the planet, the economy and our lives.

His book, Slowdown, charts the deceleration along a dazzling spread of data lines, including "the debts we take on; the number of books we buy; and, most important of all, the number of children we have."

In this essay I review the data. I'm persuaded that the great acceleration is running out of some of its fuel, but not by Dorling's counter-thesis that 'slowdown' lies ahead.

I look instead at other concepts and metaphors: the 'systemic chaos' of world-systems theory and the 'great derangement' of the novelist Amitav Ghosh.

The first of these views our conjuncture through dynamics of global power: 'hegemonic cycles.' The second captures relationships between the era-defining processes of environmental collapse, global disorder and cultural irrationalism.

Future stability?

Economics, alongside demography, is at the heart of Dorling's slowdown thesis. The heyday of the great acceleration was the GDP gallop of 1950-73, the 'trente glorieuses.' Since then, growth has slowed to a trot, and it would be rash to predict any return to boomtime.

The slowdown has consequences for capitalism, says Dorling. It is mutating into something different, a new social order without capitalism's rampant consumerism.

In most parts of the world, income inequality is falling, and in some parts, "capitalism is being pushed out by governments that employ the rule of law to better the behaviour of the rich."

Capitalism is becoming "less brutal" — and probably less violent too. The global wealth disparity is diminishing, as growth in the rich world slows faster than in the poor, and many vehicles of mass suffering and death — wars, epidemics, starvation and famine — are arriving less frequently than ever before.

Slowdown, says Dorling, will bring stability, and fewer epidemics. Even the threat of nuclear war is receding, thanks to a "slowdown" of nuclear weapons - the "huge global decommissioning" that the nuclear states have begun. In short, "we are heading toward a more just and stable future."

Pollution and pestilence

Dorling's forecast is seductive. But how robust is it? Some of its central planks look shaky. Greenhouse gas emissions, for one thing, are accelerating, and, at least by some measures, material throughput is increasing too.

As to equality, the last ten years have shown no narrowing at all of the West vs Rest gap (at least if we exclude China). When measured by "absolute Gini," the gap is widening and this, in the form of food insecurity, has set the stage for famines to return. Famine, ultimately, is rooted in income inequality.

In addition, we need to talk about Covid. Dorling's sanguine prediction on epidemics was at the printers just as a mysterious virus was finding its way to a Wuhan wet market.

Even pre-Covid, it was known that new parasites and pathogens, including from zoonotic leaps, have been on the rise, facilitated by habitat destruction, industrial livestock agriculture and climate change.

Bridges burning

In Slowdown, Dorling presents rising emissions as the major exception to the trend of benign deceleration. But even here his prognosis is too rosy.

It would be "probably incorrect" to suggest that "the near future will be very different to the recent past," he reasons, because socioeconomic change is generally slowing.

What this fails to grasp is the threat posed by non-linear change. After briefly conceding that climate feedback loops may "come into play in future," there comes a shrug: "linearity has been the case, so far, for my entire lifetime."

This is staggeringly blasé. It's a car passenger heading toward the precipice who looks in the rear-view mirror to reassure us we're still on the road.

In fact, climate change and its effects are generally accelerating. Large-scale climate feedbacks are, pace Dorling, absolutely "in play" and they dramatically amplify the risks of irreversible Earth-system change, even if there remain uncertainties as to when they'll propel which earth systems past tipping points.

The best estimate is that crossing dangerous tipping points comes with "significant probability" at today's warming level and "high probability" at warming above 2°C, a temperature rise that is highly likely to be exceeded. The longer that business-as-usual carries on, the greater the risk of tipping points being tripped.

Rather than looking backwards to the recent past, the benign Holocene, to find reassurance that the planet is keeping calm and carrying on, we should register with trepidation that not only have we exited the Holocene but many of Earth's biogeochemical processes are, thanks to human interventions, deteriorating at breakneck speed and along multiple dimensions, propelling changes that risk precipitating cascading chaos (nonlinear leaps, flocks of 'black swans', etc).

Nature, as Ghosh reminds us, "does jump." Climate breakdown is warping the relationship between ecological and social time. It's burning the bridges that connect us to the past — for Earth systems will decreasingly resemble those in which human civilisation developed hitherto — and to the futures that we used to imagine.

The great derangement

The case that the great acceleration is approaching its use-by date is compelling, but Dorling's alternative, slowdown, is no improvement. The standout feature of the coming era will be a matter of instability, not pace.

We are seeing an intertwining of dynamics in three registers — Earth systems, global economy, and world order — that, separately and in combination, generate turbulence. What term best captures this? Among the contenders are Ghosh's "The Great Derangement" and the "systemic chaos" of world-systems theory.

Ghosh deploys his term allusively to refer to the essence and telos of capitalist modernity. Our age, "which so congratulates itself on its self-awareness, [may well] come to be known as the time of the Great Derangement."

He portrays a global society hammered out on anvils of capitalism and empire: perversely irrational despite its rationalist swagger, totalising despite pluralist commitments, individualistic and toxic to community life, savage toward the racialised poor, and recklessly instrumental toward the natural realm and the human future.

These last are Ghosh's focus. He recognises that Earth-systems blowback from capitalist industrialisation is increasingly dominating the human condition. Treating it as an exception to the dominant trends, as Dorling does, is inadequate.

Hegemonic unravelling

The other option is "systemic chaos," where 'chaos' denotes not random happenings but volatility. It initially referred to the unravelling of established rules and practices during phases of hegemonic transition.

Coined by Janet Abu-Lughod (who in Before European Hegemony takes inspiration from chaos theory to suggest that nonlinear dynamics loom large in world-systemic transitions), the idea was later given wings by Giovanni Arrighi and Beverly Silver.

In their schema, hegemonic successions over the last five centuries follow a pattern. The major hegemons they focus on — United Provinces, United Kingdom, and United States — have been similar in many core features (and some minor ones too, including even the colours of the national flag).

Each of them gained a competitive edge in productive industry (respectively, woodworking and shipbuilding, steam and manufacturing, electricity and the assembly line). These brought commercial success, which fed geopolitical heft and financial ascendancy (Amsterdam, London, New York).

Each rising hegemon presided over a transformation of capital and power, including the expansion of an international market economy.

Each one benefited from liberal rules (freedom of the seas, free trade, free capital flows) and its intellectuals presented economic liberalism as in the universal interest (Hugo Grotius, Adam Smith, Milton Friedman).

Each one presided over relative stability during its era of productive pre-eminence and territorial expansion, followed by an "autumn" phase of the cycle, featuring overaccumulation crises and financial expansion.

At this point their paramountcy faltered and challengers arose, signalling the exhaustion of the structures that had underwritten success. The final acts were marked by turbulence, systemic chaos, and eventually world war.

The wars of hegemonic transition—1688-1713 of the Dutch--Anglo alliance against France, and the 1914-45 wars that pitted an Anglo-US-Russian alliance against Germany/Japan—exhausted the old powers.

Equally, they functioned as launchpads for emergent hegemons, Britain and the US respectively, which forged the next international settlement.

The great postwar boom is partly explicable against this backdrop. The previous hegemonic cycle had ended in the Great Depression and world war which, by destroying capital and ushering in a new hegemonic settlement ('Bretton Woods' is the shorthand), and via the Cold War permanent arms economy, laid the ground for rapid capital accumulation.

The subsequent half century by contrast, 1973-2023, has been an "autumnal" phase of financialisation. It has seen banking crises and bubble economies galore — indeed most of the big financial bubbles in world history have occurred since the 1970s.

Our era, with its faltering hegemon and geopolitical "impasse," fits the pattern of previous hegemonic successions, portending further volatility.

World-ecological cycles

Within the just-described world-systemic power cycles, each successive hegemon has been grounded in a larger territory, of both the core nation and its zones of domination.

Each organised increasingly globalised circuits of capital, at an increasing scale of production and pace of circulation, and with violent ecological consequences.

These latter were not a preoccupation of Arrighi and Silver, but the environmental historian Jason W Moore developed the case. His studies show how the organisational revolutions at the heart of the hegemonic cycle pivoted not only on the command over labour but over natural resources too.

Applying the concept of metabolic rift, Moore proposes that capitalism, unable to sustain itself as a closed system in which nutrients are recycled, must exist as "a flow system, requiring ever greater external inputs to survive."

Each hegemonic phase is also a "cycle of agro-ecological transformation," in which new methods are devised to appropriate external inputs: a new "world ecology."

As the metabolic rift deepens, capital pushes its ecological contradictions to progressively wider spheres, displacing them

onto sacrifice zones in the Global South, or via technological innovations, or onto future generations.

The Dutch, British, and American hegemonies each oversaw new rounds of agricultural and agroindustrial expansion, fuelling the accumulation process with cheap food, cheap labour, cheap energy, and cheap resources.

Thus, Dutch hegemony "emerged through a world-ecological revolution that stretched from Canada to the spice islands of Southeast Asia; British hegemony, through the coal/steam power and plantation revolutions; American hegemony, through oil frontiers and the industrialization of agriculture."

During the "three great hegemonic eras," a particular hydrocarbon — timber, coal, and oil, respectively — was "freely appropriated, with relatively minimal capital outlay."

Each hegemony joined "productivity and plunder" in a process that brought vast new supplies of natural resources into play, in the course of the global expansion of circuits of capital and a concomitant escalation of habitat destruction and pollution.

Running out of road

What are the implications of the world-systems case? Arrighi and friends, in my view, overstate the neatness of hegemonic-cyclical patterns, and the extent of US decline, as well as the degree to which Washington imposes stability — as opposed to wilfully causing havoc.

Nonetheless, the concept of systemic chaos is useful and suggestive, and so too is the idea that the hegemonic cycle is running out of road.

In their model, the geographical scope of each hegemon exceeds the last. If this dynamic continues, Arrighi reasons, a 'realist' trajectory of systemic chaos and conflict could lead to a reassertion of US power or to its supersession by China or an East Asian federation.

Alternatively, he imagines a cooperative and liberal next step, pivoting on the dense fabric of rules and institutions that make

today's world order quite unlike the earlier hegemonic transitions, with global challenges managed in a more trusting, cooperative and rational way.

Further, the destructive forces in play nowadays are incomparably greater, rendering the prospect of old-style transition via world war an apocalyptic prospect.

What of the other great destructive force, environmental despoliation?

In Moore's account, the crisis of US hegemony coincides with crises of world agriculture and "world ecology." The shovelling of cheap nature into the economic furnace is not functioning as it once did.

From the mid-nineteenth century, he notes, real food prices trended downward until they bottomed out in 1987-2000. Since then they have steadily risen.

This is for multiple reasons, one of which is the re-purposing of land toward goals of energy security and climate change mitigation.

Of US cornfields, nearly half are dedicated to ethanol production, as is much of Brazil's sugar crop, and oilseed in the EU. In turn, rising food prices are contributing to the return of generalised inflation. When food prices are hiked, other businesses tend to follow.

Hypothetically, the food crisis could be mitigated through a dietary switch, with arable farming replacing livestock. Alternatively, capitalism's dialectic of plunder and productivity could potentially revive, with discoveries of fundamentally new sources of "cheap food" and "cheap nature."

To Moore, this is implausible, in view of the sheer scale of ecological exhaustion. Ultimately, the road we're running out of is nature. "Today," he forecast ten years ago, we are seeing "the end of Cheap Nature as a civilizational strategy." Beyond the mid-2030s, "it is difficult to see how capitalist agriculture can survive."

This prediction is too telescoped and too absolute, yet the basis for a rapid collapse of some agricultural regions or particular crops clearly exists, at the join between accelerating climate chaos and industrial monocrop agriculture—given its high vulnerability to environmental fluctuation.

Volatility of food supply and price, moreover, are exacerbated by powerful market players. As Rupert Russell describes in Price Wars, "chaotic markets are creating a chaotic world."

A small price disturbance in one region causes havoc in another. Commodities speculation, notably, amplifies the impact of climate shocks on food price fluctuations.

Food insecurity, in turn, influences war and peace—most visibly right now in the Sahel where desertification has exacerbated poverty and despair, sowing dragon's teeth.

Price volatility, meanwhile, enriches asset-holders, including commodities traders and hedge fund speculators, widening the global wealth chasm with its concomitant social tensions and instability.

The other road that is disappearing is "cheap energy," at least in fossil fuels. During the 1950-73 long boom, the energy from one barrel of oil would fuel the locating, extracting and processing of thirty more.

That ratio has fallen to around 1:6 and is predicted to collapse by mid-century—possibly as low as 1:1.5. Similarly for gas. In 1990 under two percent of its energy was required to produce each therm; by 2020 that figure had more than trebled, and is forecast to hit 25 per cent by around 2040.

This trend has not, in itself, reduced fossil fuel use or greenhouse gas emissions, let alone relaxing pressure on the natural realm. Rather, it has injected a restless mania into the hunt for fossil fuels, manifest in wildernesses gouged up for tar sands, shale gas fracking with its multitudinous methane leaks, and ocean drilling with its ecocidal spills.

In 1989, an internal report conducted by Shell — kept hidden of course — warned that if CO_2 emissions continued to increase, by the middle of the twenty-first century "civilization could prove a fragile thing."

Only last week the same company, as if to test its 1989 forecast, binned its earlier intention of reducing oil output and announced that it would ramp up gas production. This year's global oil combustion is poised to smash all previous records.

Unlike with cheap food, however, there is an obvious, investment-driven route back to cheap energy, via the renewables revolution. What form is the green energy transition taking, when seen through the lens of hegemonic cycles?

Green shifts?

The transition seems to be making rapid progress along both tracks, liberal and realist. That is to say, international organisations, NGOs and the corporate sector are pushing the net zero agenda, while Washington and Beijing are competing for leadership in post-carbon technologies such as batteries.

The appearance is not a fabrication. Clearly, a global energy/transportation shift towards renewables/EVs is underway, and powerful actors are making noise.

UN Secretary-General António Guterres, most notably, has warned that the damage from global heating is "making our planet uninhabitable" such that urgent decarbonisation of the world economy is required.

Yet the alarms are largely ignored. Admittedly, renewables are becoming cheaper, and sales of petrol-powered cars have probably peaked, but the benefits are negated by the expansion of 'brown' energy. It's not unlike pulling the handbrake while one foot is hard on the gas.

Much will hang on the decarbonisation agenda, but in its mainstream 'green growth' guise it demands colossal investment programmes that are harder to fund in our low-growth era.

Governments attempt to square the circle by promoting green and 'brown' growth, but they are failing to take measures to seriously reduce consumption of energy and materials.

In the US, energy use is not declining but remains constant at around 26,000 terrawatt hours (TWh) annually, while in China it has quadrupled from 12,000 TWh in 2000 to around 48,000 today.

The consensus view, that a transition to a greener economy is in train, is largely false — and to the extent that it is realised, it risks hitting buffers of non-renewable minerals and land availability, not to mention neocolonial resource grabs.

And wherever decarbonisation initiatives are perceived as insufficiently growth-friendly, political forces mobilise to deprioritise and delay.

Such has long been the agenda of the hydrocarbon industries (oil, auto, aviation), but it melds nowadays with reactionary forces crying for 'order' in face of the world-systemic unravelling.

If an alien visited our planet how puzzled might they be. The Secretary-General of the most prominent human institution cautions that if business-as-usual continues we'll wipe out one million species including perhaps ourselves… and yet no significant measures are taken.

This formulation may be bald but it is hard to read the data otherwise. Since the first IPCC Assessment Report, the UN has overseen numerous annual meetings, during which time carbon dioxide emissions accelerated.

Indeed, over half of humanity's total carbon transfer from lithosphere to atmosphere has occurred since the IPCC's first report in 1990. Decarbonisation reforms may be in view, or even in train, but the metric that charts their climatological significance is the atmospheric concentration of GHGs—and it is rising faster than ever.

Squaring a vicious circle

Climate change is thought of as a 'wicked problem,' and rightly so — but for reasons other than those normally cited.

Centre stage should be its relationship to capitalist states and hegemons. They preside over the global system that murdered the Holocene, a uniquely stable phase in the Earth's climate history, a paradisiacal era that sustained human civilisation for eleven millennia and will never be regained.

By that yardstick, which seems reasonable, they are genocidal failures — and yet they are widely looked to as the only forces capable of ensuring economic decarbonisation.

This 'wickedness' is dissected by Ilias Alami, Jack Copley and Alexis Moraitis in a recent article in the journal Geoforum. They begin from a standard Marxist analysis: capitalist states are

structurally geared to maximising national economic competitiveness, seeking to generate revenues for their various agendas (decarbonisation included) while maintaining a steeply hierarchical social order.

As climate chaos intensifies, they argue, the liberal character of capitalist states is subjected to increasing strain.

On one hand, pressure grows to reduce greenhouse gas emissions and to help affected communities to adapt; on the other, governments develop authoritarian responses to 'shut out' the effects of climate chaos — above all through border militarisation, on which the rich countries spend more than on climate change mitigation. This contradiction is set to intensify in the coming decades.

Sandcastles in the air

At the outset of this essay I mentioned Karl Polanyi. His subject was a world governed by market forces. They had come to "rule everything, but nobody ruled them."

He became convinced that the various elements of the polycrisis that his generation was facing — two world wars, fascism, the Great Depression — were not discrete but constituted a single catastrophic field with a common root: the "utopian" liberal crusade to construct a self-regulating market system.

That system, he maintained in his magnum opus of 1944, had collapsed and a "great transformation" was being ushered in, thanks to a worldwide corporatist/statist turn that would open space for slower-paced and, he hoped, socialist systems.

Hardly had the ink dried, however, than the delegates convened at Bretton Woods. Uncle Sam climbed into the cockpit and very soon the great acceleration was at full throttle.

Polanyi's social-democratic determinism, his 'optimism of the intellect,' comes to mind when I read the final lines of Dorling's Slowdown, wrapping up a concluding chapter from which the environmental crisis — the exception to the slowdown thesis — is excluded.

"What do you hope for?," the author asks us, in a future society after "rampant capitalism" has given way to an alternative system that, in its leisurely pace and stability, is being presaged currently by Japan. He foresees himself "building sandcastles on a beach."

Compare our sunlounging geographer to the swirling sandscapes of The Great Derangement. Ghosh's eye for tides and sands and how they shift is without compare. (The cover image provides a hint.) In one passage about events in 2007 he describes a mangrove forest in Papua New Guinea.

"The barrier beaches were breached, cutting innumerable channels through to the lakes. Sand poured through them. Tidal surges tore across the villages, leaving behind a spectacle of severed trunks of coconut palms and dead shoreline trees, drifting canoes, trenches, and gullies. Entire villages had to be evacuated."

The shredding of civilisation begins in the periphery where safety nets are weak, but it will not spare the core. All human life, he writes, is "enframed in a pattern of history that seems to leave us nowhere to turn but toward our self-annihilation."

The portrayal is sombre but sober. The structural processes that shape world economy and world ecology are becoming neither gentler nor slower; the relations of hegemonic contestation and capital accumulation that define them are increasingly unstable.

To register this is not to sink into 'pessimism of the will.' The logic, rather, is activist, and the required policies are simple to see and to campaign for.

And it is anti-capitalist: the system of chaotic markets must be replaced by democratic planning, that of competing states and hegemons by cooperation, and social hierarchy by solidarity and equality.

Mainstream pundits see that prognosis as unrealistic and they're right. Yet it is the most coherent and least fanciful of the options at this 'wicked' juncture in which all prescriptions are necessarily unrealistic.

The moderate's insanity is the pretence that temporising can be an option in a scenario where time can only be lost by deferring action.

For conservatives it's the delusion that climate chaos, if you cover your eyes, is not there. For liberals it's their support for the market system and imperialist institutions, the neo-colonial hierarchy and capital accumulation, that are generating the social toxins and environmental catastrophes from which recuperation is so pressingly required.

James Meadway[1]

It's After the End of the World: Don't You Know That Yet?

I'm speaking here two days before the UK general election that is widely expected to remove a uniquely detested Conservative government from office and replace it with a Labour Party that has mobilised little real enthusiasm. The election campaign there has been notable mostly for its inanity – an extraordinary fixation on polling and forecasting has helped squeezed out much real discussion of policy, and of direction for the country. Major issues, from planned spending cuts to climate change to wars in Gaza and Ukraine have barely featured.

By some distance, then, the single most important day of the campaign – the one that will do the most to define political questions for the next five years – was the 22 May, the day Prime Minister Rishi Sunak chose to announce it was happening.

That morning, after three years of soaring costs, the UK's Office for National Statistics announced that the country's official inflation rate had fallen back to 2.3% - within touching distance of the official 2% target, creating the occasion for official hosannas. Inflation is "back to normal", claimed Prime Minister Rishi Sunak in a morning statement. "Brighter days are ahead" – so bright, it seemed, that by the evening he was moved to call a general election for July 4th.

At the very moment Sunak was proclaiming the broad, sunlit uplands, his deputy, Oliver Dowden, was promoting a radically different message, launching the official "Prepare" website. House-

[1] James Meadway is an an economist and host of the weekly Macrodose podcast.

holds (warned the government) should ensure their preparedness for "emergencies" including cyberattacks and a further pandemic by stocking up on tinned food and medicines. Three litres of bottled water might be needed per person, per day – ten bottled litres on hand in a household was the government-recommended minimum, lest water supplies be cut off "for a few days". Droughts, wildfires, heatwaves and cold snaps were amongst the disruptive emergencies the population needed to prepare themselves for.

The contrast between an official economic narrative that "normality" could be restored, and the growing awareness that the world was beset by more frequent, and frequently worsening shocks and disruptions could not have been made more on the nose. The same pattern repeats across the globe: a growing acceptance of the risks and dangers inherent in our unstable world combined with an inability to see them as *economic* problems of a new type. The next five years – and quite likely beyond – are going to dominated by this grim dialectic of desperate attempts to maintain the appearance of normality and stability, placed continually in tensions with the open-ended chaos of life in the Anthropocene. Climate change and the nature crisis are already here – we are "after the end of the world", as Sun Ra put it.

But life carries on.

Far from *This Changing Everything*, as Naomi Klein's best-selling climate book suggested, and still further from the apocalyptic fantasy peddled by *Don't Look Up*, climate change and the nature crisis more generally are creating a world that is depressingly familiar in many ways. We need to stop thinking about

climate change, notably in the developed world, as something big and distant – melting Arctic icesheets, or disappearing polar bears – and as something far more mundane – the process by which everything becomes harder, worse, more expensive. Cory Doctorow has usefully coined the term "enshittification", referring to the way the internet has steadily become worse and less functional over time. What climate change and the nature crises represent is the enshittification of *everything*.

This is a direct challenge to conventional radical thinking, which likes to polarise between what Rosa Luxemburg defined as "socialism or barbarism". She had some confidence that the choice could at least be made, right until she was murdered by an armed gang of the radical right, acting under Social-Democratic government orders. In today's less heroic and more cynical times, we don't even think there is a choice: "it is easier to imagine the end of the world than it is to imagine the end of capitalism", as cultural critic Frederic Jameson is alleged to have said.

But the reality we are confronted with is one where it is not "easier to imagine the end of the world than the end of capitalism". In fact, it has become significantly easier to imagine the end of capitalism than for us to try and imagine the world *not* ending, despite climate change, despite everything. Climate politics is drawn back, again and again, to claims of a future cataclysm, intended as a spur to action today, whether ten years to save the planet,[2] or two years as per the Extinction Rebellion (XR) target.[3] The hard deadline of apocalypse is a recurring motif in environmental politics

Now, a world-ending cataclysm is certainly possible as a result of climate change, but the world we live in and will most likely will carry on living in is something more like a grim slide downwards than a sudden halt. The world will continue, and so will capitalism.

2 Gaby Hinsliff, "Ten years to save the planet from mankind", *Guardian*, 29 October 2006

3 "Every party of society must act now to reduce carbon emissions to net zero by 2025…" Extinction Rebellion, "Our Demands", accessed 25 June 2022. At: https://extinctionrebellion.uk/the-truth/demands/

The frame of analysis we need remains that of a capitalist society, but one that is now beset by terrible shocks and instability. The arrival of the Anthropocene shifts the foundations of human society, but does not, by itself, reshape that society in any fundamental sense: the core dynamic of capitalism, established since (let's say) the 1500s, but massively reinforced in the last two hundred years, remains the same: the competitively determined drive towards the relentless accumulation of capital via, as Jason Moore and Raj Patel argue, the production of "cheap things": fundamentally, those things being nature and our labour power (which is itself a subset of nature).

This is core insight for understanding how the world economy is today being reshaped: the emerging global economic order can be summarised quickly: we have moved from a world of falling costs to one of rising costs. The capacity of the planet's natural systems to absorb costs on behalf of humanity – whether soaking up greenhouse gases, or providing consistent new sources for raw materials – has been exhausted. We are living now through the period of blowback, of the great reversion of the last two centuries industrial capitalism – and further, into the centuries of colonial plunder that provided the basis for the development of a global market that achieved its apogee in the decade before 2008. "Enshittification" occurs when the drive to create *cheap* runs into rising real *costs*.

Essentials shortages

It is costs and shortages in critical, essential systems that are the guarantee of rising costs in the rest of the system. These are the systems that exhibit what economists might call a "double inelasticity": inelastic in supply, and inelastic in demand. Or, in other words, those systems whose products are very hard to avoid consuming, being determined primarily by the hard biological facts of our existence, and so for which our demand is a given; and, on the other side, whose supply is constrained by other material facts. Water, food, energy, and, in today's world, data all have this feature – or, in the case of data, are rapidly approaching this point, an issue I'll return to.

What this means that whilst it may be possible to avoid the rising cost of, say, a cinema ticket, choosing instead to watch TV or read a book, it is not possible to avoid the rising cost of food in the same way. At some point you will have to eat something. Shortages of water are a fundamental barrier in the same way – you need water to survive, quite a lot of it, as the British government has reminded us. Our entire civilisation requires energy to function. And, increasingly, our capacity to act as human beings in modern society depends on our access to digital services that are themselves now subject to the same logic of rising costs and shortages. The latter are not, as yet, appearing through the price system – rather, they tend towards a political question of regulation, as the protests, from Ireland[4] to Chile,[5] against the pandemic-like spread of data centres suggests.

Put in the terms that capital would recognise, the payments necessary to secure the application of labour power are rising: you have to pay people more to get them to work. And, again from the point of view of capital, the costs of *reproducing* that labour power are also rising. An older, sicker population is confronted by the rising costs of housing across the world.[6]

And note, also, that this isn't a typical degrowth argument, which (to use a venerable, if crude, distinction) is about making a "normative" claim about the necessity of reducing GDP growth. This is a "positive" claim about the fact that GDP growth will be falling away. In fact we are starting to generate firm estimates for the scope of the impact here – Nature published an excellent piece of research, back in March this year, from the Postdam Institute for Climate Impact Research that suggested the impacts of climate change, over the next 25 or so years, would amount to

4 Peter Judge, "Protests continue, as €450m Ennis data center is approved under Ireland's new policy", *Data Center Dynamics*, 10 August 2022. https://www.datacenterdynamics.com/en/news/protests-continue-as-450m-ennis-data-center-is-approved-under-irelands-new-policy/

5 Paris Marx, "How to stop a data centre", Disconnect, 6 February 2024. https://disconnect.blog/how-to-stop-a-data-center/

6 Vicky Spratt, "Housing costs are out of control in all wealthy countries, here's why", *The I*, 10 September 2024. https://inews.co.uk/news/housing-costs-out-of-control-wealthy-countries-3270404?srsltid=AfmBOoqt2WEVxBA48PmnX48CKeUpUB581lyv3MMAtemLosNP4G5Da_KS

the equivalent of a loss almost 20% of global GDP – an extraordinarily large opportunity cost. It is this *objective* appearance of falling growth and rising costs, rather than any *subjective* claims about its desirability that really ought to concern us. The debate over degrowth, in this sense, is wasted – we can think we should go for degrowth, or not; it really doesn't matter, we're going to get something very like enforced degrowth anyway.

The new economy emerges

Think of it as the switch from the old to the new economy. The old economy, the one we all grew up in, was one of growth, falling costs, and consumer abundance. The new economy, the one we are moving into, is one of low to zero growth, rising costs, worsening shortages in essentials. When Rishi Sunak said falling inflation meant we were "back to normal", he was looking only at the old economy. When his government told us to prepare for future emergencies by stockpiling food, they were talking about the new economy. The critical point here is that, over time, because it is emerging as the result of rising costs in unavoidable essentials, *the new economy of crises and shortages will come to dominate the old*.

GDP does not capture the shift: agriculture, in most developed countries, hovers around 1-2% of GDP, and a similar level of employment. Yet if agricultural production begins to fail, the entire economy – human society itself – is placed in danger. The same goes for energy, water and, it is now necessary to argue, the digital realm. GDP is an *old* economy measure of economic importance. Its slide into irrelevance will be accelerated by the rise of the new economy.

It's here that I take issue with fashionable characterisations of what we are entering as "technofeudalism": first because I think this ignores the essential character of the shortage economy – the material basis of the new economy enforces *scarcity*, not abundance, and it is *scarcity* that is the driver of those soaring concentrations of wealth; second because it ignores the essentially capitalist and competitively-determined character of the

emergence of this shortage economy – it is not the walls of Elon Musk's stomach that determine the system's dynamic,[7] but the grinding competition between units of capital of which Musk is only an excessively-rewarded functionary; third, because if you want an historic comparison, you should be looking at the period of early industrial capitalism – when the industrial economy was growing rapidly, but was small and constrained by the far larger agricultural economy that, crucially, would not decisively break through its own productivity and supply constraints in the core of the capitalist system until the mid-nineteenth century or so.

Technological cul de sacs: data

This is not how the new economy is usually characterised. We are regularly, insistently told that the characteristic technology of our era, data technologies, is on the cusp of the most radical transformation in not only society – clearly this has happened – but of the prospects for the future economy, leading to a rise in growth. The extraordinary valuations of companies closely associated with the latest round of

More generally, technological innovation is typically the get--out clause used against any forecasts of slowing future growth: that capitalism has provided innovations in the past and, given a sufficiently large amount of capital available to invest, is likely to discover wonderful new inventions that break through the rise in costs, and open new avenues for sales and accumulation.

But there is a kind of optical illusion associated with the data economy in which what are, objectively, really impressive technological feats like the possibility of having something that feels like a natural language conversation with a computer blinds us to the hard economic facts grinding away behind them.

Take the estimates for catastrophic job losses from automation – the Oxford Martin school estimates, for example, from Carl Frey and Michael Benedict, that forecast almost half of all

7 Marx: "the limits to the exploitation of the feudal serf were determined by the walls of the stomach of the feudal lord."

jobs in the US and other developed economies would be at risk of automation over the next 20 years.[8] But those estimates were produced in 2013 – we're over halfway through the forecast period and, as everyone knows, we live in economies that are beset, if anything, by chronic labour shortages, rather than surpluses.[9]

Or start to examine the actual evidence for striking productivity gains from AI in different sectors of the economy. ING Barings, the Dutch bank, produced a recent report on the macroeconomic impact of AI, and you can almost sense their disappointment in finding, after providing careful estimates for productivity changes in a number of advanced economies that "Despite the increasing adoption of AI and other technological advancements over the last decade, productivity growth in many developed economies has been relatively slow in recent years." Further, "at a macro level, we think…AI productivity gains, while significant, may not be quite so spectacular".[10] The fundamental problem is that some gains from Big Data and AI techniques for specific tasks in specific companies and specific sectors get drowned out the lack of significant changes appearing across the rest of the economy.

Yet there is no doubt that the suite of technologies and infrastructure grouped around the use and processing of data are now *essential* in some fundamental way. There are more people globally with some access to the internet (5.35bn)[11] than there are with access to home sanitation (4.65bn).[12] The scale of this mass data infrastructure, and the relative speed with which it has been as-

8 https://www.oxfordmartin.ox.ac.uk/news/201309futureofemployment

9 McKinsey Global Institute, "Help wanted: Charting the challenge of tight labor markets in advanced economies", 26 June 2024. https://www.mckinsey.com/mgi/our-research/help-wanted-charting-the-challenge-of-tight-labor-markets-in-advanced-economies

10 ING, "AI productivity gains may be smaller than you're expecting", 12 April 2024. https://think.ing.com/articles/macro-level-productivity-gains-ai-coming-artificial-intelligence-the-effect-smaller/

11 Lexie Pelchen, "Internet usage statistics in 2024", *Forbes*, 1 March 2024. https://www.forbes.com/home-improvement/internet/internet-statistics/

12 WHO/UNICEF, "Progress on household drinking water, sanitation and hygiene: Five years into the SDGs, 2000-2025", Geneva, 2021. https://washdata.org/sites/default/files/2021-07/jmp-2021-wash-households.pdf

sembled, is breathtaking. Global internet traffic has grown from 156Gb transferred every second in 2002, to 150,000Gb a second in 2022[13] - a roughly ten thousand times growth. That data, in turn, requires storing and processing, driving demand for data centres. Sophisticated analytical techniques were developed, particularly with the explosive growth of social media from the mid-2000s, to process that data. Typically, this was steered towards providing more efficient means to target advertising, with the products of the digital economy – easier social connections, quicker ways to share photographs, instant messaging and so on – a by-product intended to lure consumers deeper into the machine, where they would then generate additional data. Each individual user was almost worthless, but if those individuals were taken, aggregated, and processed, new and valuable information about society could be generated.

Machine Learning today, the dominant technology in what we call "Artificial Intelligence", is an extension of this process: take vast amounts of data, look for correlations within it that no human could ever find, generate outcomes from those correlations that can appear – to human eyes – almost magical: new sentences that seem to have been written by a human being, or fantastical, completely fake photographs. The growth in data use by Machine Learning has been exponential, from early models using around 94 million parameters like 2018's "ELMo", to 175 billion in 2022's breakthrough ChatGPT-3.

However, because the underlying efficiency of the hardware used to run this software was not improving, the processing and analysis of this data began to use more and more energy and raw resources. AI has added rocket boosters to this problem. Training ChatGPT-3 is estimated to have generated 502 billion tonnes of CO_2 emissions through its electricity use, for example,[14] whilst forecasts for future improvements in ML models, assuming the

13 World Bank, "Crossing borders", *World Development Report 2021*, World Bank Group, Washington D.C.

14 Patterson, D., Gonzalez, J., Le, Q., Liang, C., Munguia, L.-m., Rothchild, D., So, D., Texier, M., And Dean, J. "Carbon emissions and large neural network training". arXiv preprint arXiv:2104.10350, 2021

same basic technologies are used, suggest larger and larger resource costs for increasingly marginal improvements.[15]

Once the machine is trained, it has to be used, and here the costs are smaller, but become very significant in the aggregate. The International Energy Agency, for example, estimate that the energy costs of an AI-enabled search are ten times greater than a conventional internet search.[16] And the resource use extends into other materials: water consumption at Google's data centres has increased more than 60 percent in the last four years, for example, with data centre expansion provoking protests in Chile, Mexico and Ireland.[17] A single hyperscale data centre typically uses the same amount of water as 40,000 people. Microsoft *alone* is currently opening a new data centre, somewhere in the world, every three days.[18]

This means the data industry, which includes current AI technologies, is extractive. This extraction comes in two dimensions – first, that it requires incredible real-world resources to function, from the huge numbers of semiconductors to the energy and water demands of the data centres – and second, in the processing of human data to produce results humans will appreciate.

The resource costs are growing, and the weightier the resource burden of the data industry becomes, the more they are exposed to the increasingly chaotic environment. The production of the semiconductors that the AI software run upon is exceptionally dependent on incredible volumes of purified water to maintain the spotlessly clean fabrication labs where the silicon chips are produced. A typical fabrication plant could need 5 to 10

15 For example, taking the ImageNet facial recognition system to 90% to 95% accuracy has a hypothetical forecast cost of 10,000 megatonnes of carbon dioxide emissions, thanks to the exponential growth of its energy requirements. This level of accuracy is highly unlikely to be ever achieved in reality with existing models as a result. Neil C. Thompson, et al., "The computational limits of Deep Learning", arXiv preprint arXiv:2007.05558v2, 2022

16 International Energy Agency, *Electricity 2024*, IEA: Paris, January 2024.

17 Abdallah Taha, Alfred Olufemi, "Data centres 'straining water resources' as AI swells", *SciDevNet*, 15 November 2023.

18 Myles McCormick, Jamie Smyth, Amanda Chu, "AI revolution will be boon for natural gas, say fossil fuel bosses", *Financial Times*, 1 April 2024.

million litres of water a day, equivalent to the daily consumption of 300,000 developed world households. Current semiconductor production is located in regions of existing water stress, so (for example) coastal Jiangsu, where 60% of China's semiconductor production takes place, is claimed to be the world's single most exposed region to the effects of climate change. TSMC's main plant in Taiwan was forced into reduced operations as a result of drought in 2021.

The critical point here is that data has to be thought of as a fundamentally *extractive* industry. This occurs in two dimensions: the first and most obvious is the sheer physical weight of the technology itself, from energy consumption to water use to copper wiring. The second, more obscurely but increasingly clear, is in its extractive operations against human society – mining our capacity to generate content, most notably including social relations, for its own products.

But because the data industry is fundamentally extractive, it also means it will hit limits, and suffer from the same kind of economics as other extractive industries: it becomes harder and more costly to produce the output as the cheap, easy, high-quality seams of the raw material are used up. But for the data industry, these raw resources are not all directly physical in the way we usually think of. Human society is an immense source of potential data: about our locations in time and space; our personal relationships; our physical health; our sexual preferences; our psychological state. But this is not limitless: the real limit is the amount of sufficiently high-quality human-generated data, rather than the amount of readily available oil or high quality farmland. And now AI might *already* be hitting the limits of data availability, as soon as 2026.[19] The current data industry solution to this limit is no solution at all, since it requires feeding AI generated content back into the AI machine, a process Cory Doctorow has described as "coprophagic AI": as data fed into the machine gets worse, it produces worse results, which are then having to be

19 Deepa Seetharaman, "For data-guzzling AI companies, the internet is too small", *Wall Street Journal*, 1 April 2024.

fed back into the machine. A recent paper in Nature , and called this "model collapse": as more and more AI-generated data is fed into the AI machine, its outputs become more and more useless.

Alternatively, ways can be found to dig further and deeper into humanity – asking users for the kind of unlimited access to their data Microsoft's "Rewind" function demands, for instance, or perhaps dragging those fresh new eyeballs in the less developed world into the digital economy.

David Ricardo as model

Stepping back from the specifics, what we can see with the data economy is only a version of a problem economic theory has tended to disguise over the last two hundred years or so of modern economic growth. The first is a tendency to wildly overstate the real contribution of new knowledge to economic growth itself, highlighted in a brilliant, entirely mainstream 2022 paper by Thomas Phillippon,[20] which demonstrates (to my reading, pretty conclusively) that estimates of the past contribution of new technology and knowledge to economic growth had been overstated – and that, therefore, models suggesting exponential growth into the future on the basis of new knowledge would be wildly far of the mark. Economic growth as we have known it has not depended so much on new knowledge, as on the mobilisation of resources: labour, capital and energy. There will be no "fully automated luxury communism".

Second, and directly related, is a point raised in ecological economics, and here I thinking particularly of the work of Amon Rezai, Gregor Semenieniuk, Duncan Foley and others, in demonstrating that productivity gains under capitalism have tended to have a hard limit in the growth of energy productivity – in other words, however much labour productivity may eventually grow, it will be pulled back towards the rate of growth in the improvement in energy efficiency over time.

20 Thomas Phillippon, "Additive Growth", National Bureau of Economic Research, Working Paper 29950, April 2022.

The more the essentials dominate economic activity, the lower overall growth is likely to be. This is an inversion of the historic pattern of capitalist development, in which the leading sectors of the economy at any point in time tend to determine the overall rate of growth. Strictly, it is a reversion to an older form of capitalist growth – the kind analysed early nineteenth century economist David Ricardo, in which rapid growth in industrialising sectors of the economy was constrained by falling productivity in the fundamental sector of agriculture.

The core dynamic of capitalism

To spell out the whole dynamic: capitalism has grown, over many centuries, by driving down costs and expanding markets. That meant reducing the costs of inputs to production, whilst simultaneously trying to secure rising demand. Labour was the hinge of the operation: on one side, every firm had an incentive to keep labour costs low; on the other, the more people in work, and better paid, the bigger the potential market for whatever might eventually get sold.

This balancing act was eventually managed on a world scale over the 2000s, with the Global North paying higher wages for services, which employed most people, and lower prices for manufactured good increasingly produced in East Asia. The financial system enabled one part of this, providing consumer credit that could guarantee sustained consumption during the boom years of the 1990s and 2000s, whilst the incredible expansion of the world's labour force, notably in China, provided the other half. Underwriting it all was the continual reduction in costs of production. If societies became increasingly unequal, and dominated by a narrow selection of major corporations, this was arguably a relatively small price to pay.

Part of the economy still functions in this old, cost-reducing, growth-producing way. China is moving to lead the world in electric vehicle production, with years of investment and government support delivering high quality vehicles at a price far

below the US equivalents. The US government, in a panic, has retaliated with punitive tariffs on Chinese EV imports, extending the trade and tariff dispute between the two countries. But the underlying problem, at least for Chinese manufacturers, is the relative weakness of US and developed world wage growth, increasingly squeezed by rising costs of essentials. Inside China, years of deliberate wage suppression and forced savings delivered the other half of globalisation – cheap goods for the richer world – but now leaves the country attempting a domestic transition just as ecological costs begin to rise.

For lower income countries, further removed from the global division of labour, the challenge of future development looks even worse. India and sub-Saharan Africa will be at the mercy of rising average temperatures, likely beyond the point where work is even possible. For example, almost half of India's projected population at a risk of severe climate hazard before 2050.[21] In the standard IPCC "business as usual" scenario, "India could become one of the first places in the world to experience heat waves that cross the survivability limit for a healthy human being resting in the shade, and this could occur as early as next decade."[22] This would directly impact the capacity of those affected to work. Arriving on top of a legacy of colonialism, underdevelopment and poor infrastructure, the likelihood of India reaching the level of wide-scale economic integration achieved by its neighbour to the north is progressively diminished by worsening climate change.

Integrating the still-growing populations of the Global South into the global division of labour, as China managed on a world-historic scale, will become increasingly difficult and costly because of rising average temperatures and worsening extreme

21 Harry Bocott, et al., "Protecting people from a changing climate: the case for resilience", 8 November 2021, McKinsey Global Institute, New York. https://www.mckinsey.com/capabilities/sustainability/our-insights/protecting-people-from-a-changing-climate-the-case-for-resilience

22 Jonathan Woetzel, Dickon Pinner, Hamid Samandari, Rajat Gupta, Hauke Engel, Mekala Krishnan, and Carter Powis, "Will India get too hot to work?", 25 November 2020, McKinsey Global Institute, New York. https://www.mckinsey.com/capabilities/sustainability/our-insights/will-india-get-too-hot-to-work#/

weather events. The gap between urbanisation and productivity could worsen sharply – a planet of overheated slums.[23] Labour costs, like raw material costs, will rise further.

These rising costs to capital are the pure costs of employing labour at all – payments made to labour to secure its services that disappear into the costs of essentials and, increasingly, for its own care. The aging society is a cliché, inspiring panic in the developed world, especially, for decades now, and joined more recently by an equivalent panic in China. The rising costs associated with aging are the problem, but there has been, since covid, a sharp rise in illnesses across the world: Nature has published estimates suggesting at least 65m Long Covid sufferers worldwide which, to use a specific example of economic impacts, the European Commission estimates translates into an ongoing loss of 1.2m workers across the EU. But there have been dramatic increases in at least 13 other diseases since covid, including measles, whooping cough, cholera, malaria and dengue fever. Some of these surges have been extraordinary: Argentina had 3,000 reported cases of dengue fever in 2019, but over 488,000 in 2022. A combination of declining vaccine uptake, reduced immunity during social distancing and – crucially – climate change opening up new ecological niches appears to be to blame.[24] Here, covid represented a rapid movement along the demographic curve – the world is still aging, as the models expect, but it has become much sicker than it was. Climate change has further accelerated this demographic transition.

The end of Keynesianism

These are not the labour costs of old, when rising wages and salaries might reasonably have translated into bigger markets for consumer products. This defined the old, Keynesian (or perhaps better, Kaleckian) settlement – the great win:win of capitalism in

23 Mike Davies, *Planet of Slums*, London: Verso, 2006.

24 Jinshan Hong, Bhuma Shrivastava, "Yes, everyone really is sick a lot more often after covid", *Bloomberg*, 14 June 2024. https://www.bloomberg.com/news/features/2024-06-14/why-is-everyone-getting-sick-behind-the-global-rise-in-rsv-flu-measles

which better paid workers provided a bigger market for the sales of all capitalists, overcoming the "crisis of realisation" that, as Marx identified, was otherwise built-in to a system based on the competitively-determined exploitation of labour power.

These higher costs for labour do not, as in the recent past, mean higher real disposable incomes for workers and therefore bigger markets for sales – except, of course, for those able to dominate the production and sale of the essentials. But there are limits to the number of luxury yachts even the most corpulent of agribusiness oligarchs can purchase. The result is permanent, worsening downwards pressure on demand, reinforcing the decline in growth overall.

This, incidentally, helps account for the growing problems China's leadership are facing in making their own transition from a low-wage, mass export economy to one of high-wages, and mass consumption. This "high road" path is visible for all to see, and China's style of capitalist organisation should, in principle, allow a greater co-ordination amongst units of capital to enable it to be taken – the co-ordination problem inherent to high growth capitalism, of it being rational for capitalism as a whole to pay high wages, but not for any individual capitalist, can be overcome through state action.

But in reality higher costs for the employment workers are *not* reappearing as bigger markets for other capitalists to sell into: rather, workers are forced to devote more of their earnings to essentials, and the paucity of social provision in China continues to enforce high rates of saving. The result is a smaller than optimal domestic market, relative to rising labour costs; various solutions present themselves, including (for example) steps to loosen the *hukou* domestic registration system that enforces such restricted access to social services for millions of new urban dwellers. The primary winners from this process, as elsewhere, are those who can sit at the top of the essential-delivering systems – food, energy, water, and data: it is notable that China's richest man throughout the early 2020s was owner of its biggest bottled water company.

Farewell to the working class

To summarise: the global working class has quite likely peaked as both a share of the global population, and in absolute terms, given the likelihood of the demographic transition and, crucially, the rising costs and challenges in continuing to draw people into the global systems of labour. Ironically, this reduction in its size, either proportionately to humanity as a whole, or in absolute terms, is increasing the potential leverage and power of those remaining workers: that as labour power remains necessary at key parts in the system, and as technologies like AI and Big Data have failed to replace it, the relatively "tight" labour markets that cause such consternation for businesses are creating greater capacities for workers to reassert their power in the labour market. The "Great Resignation" was one, immediately post-pandemic version of this; the uptick in unionisation and strikes over 2022 and 2023, notably in the most neoliberal labour markets in the West, the UK and the US, was another edition.

But looking further out, the conditions of this upsurge and renewed potential work against its spread and generalisation. It is because workers are becoming less prevalent than they were that they can, in some sectors, command an economic power; to the extent that workers are necessary in the essential industries in particular, that power will be substantial. But what it does not point towards, as perhaps working class consciousness might arguably have once pointed towards, is the generalisaiton of that economic consciousness into an understanding of the need to change the whole of society. This is, obviously, a commonplace observation, not only (infamously) from Lenin in *What is To be Done* but from the entire Second International tradition in socialism since at least the late nineteenth century: of a recognition that the economic status of being a worker alone might only guarantee what Lenin called "trade union consciousness".

In its place, there is the potential for what Mike Davies, in his last book,[25] and more recently Ajay Singh Chaudhary[26] have

25 Mike Davies, *Old Gods, New Enigmas*, Verso, 2019.

26 Ajay Singh Chaudhary, *The Exhausted of the Earth*, Repeater, 2024.

pointed to, which is that the very experience of common crises mediated by common enemies – the corporations that squat in the centre of the new, shortage economy – can provide the political basis for a common programme. What Chaudhary calls "exhaustion" and the shared experience of ecological decline creates the possibility for shared consciousness and action.

This points away from the old, productivist politics and programme of earlier socialisms, and towards a politics in which securing and planning for those essentials (water, food, energy, data) in worsening conditions is one pillar, with maximising immaterial consumption and freedom is the other. Support for care work, for public spaces and public events, for incomes separated from work, and for socially just adaptation of our towns and cities are the new essential requirements.[27] We are not caught between the Apocalypse and Utopia, or socialism and barbarism, but instead face the smaller but more fundamental fights to secure social justice and meaningful lives for all in an unstable, rapidly changing world.

27 Brian Stone Jr., *Radical Adaptation: transforming cities for a climate changed world*, Cambridge University Press, 2023.

Maura Benegiamo[1]

The Labor of the Future, the Future of Labor? A Just Transition Critique of the Digital Agriculture Utopia[2]

Self-driving tractors, drones, sensor-equipped animals, automated greenhouses, and vertical urban farms – these are the seemingly labor-free components of a digital-green agricultural sector. In her contribution to BG's "Allied Grounds" text series, Maura Benegiamo shows the limits and, at the same time, the highly speculative nature of these transformative visions, which fail to respond to current emergencies and accelerate the destruction of the socio-ecological foundations on which societies are based.

In my research work, I explored the features of agrarian extractivism in green development processes and their relation to the transformations of the neoliberal political economy triggered by the multiple crises of 2007-2008. Fifteen years and two more global crises later, the COVID-19 pandemic and Russia's war on Ukraine, invite us to take stock of these transformations and the evolution of the promises of green growth and their impacts on labor and the environment. In this regard, recent policy claims about a digital transition for the agrarian sector provide some useful insights for examining such issues and the challenges they pose to the construction of an anti-capitalist common

1 Maura Benegiamo is a researcher in economic sociology and labour studies at the Department of Political Science, University of Pisa.

2 This article has been originally published in the Berliner Gazette's "Allied Grounds" text series. Available on: https://berlinergazette.de/a-just-transition-critique-of-the-digital-agriculture-utopia/

ground in the broader context of the ruination of the common social reproductive capacity, economic stagnation, and ecological degradation of late capitalist societies.

The idea of a "digital agricultural revolution" gained policy consensus in the aftermath of the 2008 food and financial crises, to be definitively affirmed as a transition strategy in the post--COVID-19 era. Organizations such as the FAO, the OECD or the EU insist on the role of digital, precision, and data economy technologies in the transition to more resilient, productive and environmentally efficient food systems. This perspective is also linked to the notion of Industry 4.0, which was launched by the German government in 2013 and was the theme of the World Economic Forum's Annual Meeting in 2016. The concept, also known as the Fourth Industrial Revolution, highlights the potential impact of a range of new technologies that combine the physical, digital and biological worlds to create a new "cyber-physical space" of action. Within this framework, the "farm of the future" is often portrayed as a technological utopia in which automated and hyper-connected systems – including self-driving tractors, drones, sensor-equipped animals, automated greenhouses, and vertical urban farms – are managed by a new figure of the digi-

Artwork: Colnate Group, 2023 (cc by nc)

tal farmer, whose work is made easier, more dignified, and less burdensome by these same technologies.

In what follows, I focus on three main issues that emerge from these imaginaries: how the future of labor is conceived, what kind of nature this presupposes, and how such perspectives relate to the urgencies of an economically and ecologically devastated present. Although limited to the agrarian sector, these aspects allow for a more general understanding of contemporary class politics, since they demonstrate the material form that capitalist relations take when the re-production of life is both a limit and a frontier of capitalist development, raising the question of what a just transition requires and why it is important to reclaim it.

From self-driving tractors to 4.0 assembly lines

Indeed, there is no trace of the thousands of agricultural workers, seasonal workers, migrant bodies who harvest the food that comes to our tables, nor of their struggles and demands. In its most futuristic version, the digital transition seems to be designed not for them, but against them. However, the actual capacity of digital technologies to replace these typologies of work remains an open question. Instead, scholars attest to the intensification of agricultural labor and its exploitation. This is what the new super-intensive and multitasking machines, from self-driving tractors to the new 4.0 assembly lines, are designed for, offering the possibility of carrying out several operations simultaneously, more quickly and with increased production volumes. It is probably worth recalling what the history of science and technology in the context of capitalist development has long demonstrated, i.e. that technology, in addition to being an instrument of production, has above all acted as an instrument of control, discipline or reduction of the workforce.

But it is not just a matter of contradicting the notion of supposedly disembodied, immaterial and neutral properties of technologies in order to expose the material relations that permeate them. If digitization and automation reinforce capitalism's

reliance on unequal, racialized, and gendered relations of production and expropriation (including the semi-slave labor training artificial intelligence or employed in manufacturing; the incorporation of bodies and everyday life into knowledge-based circuits of valorization; and the uneven environmental impacts of digital infrastructures), it is also important to understand the relationship between these patterns of exploitation and the imaginaries of labor conveyed by top-down digital transition policies.

In their book "Surrogate Humanity: Race, Robots, and the Politics of Technological Futures," Neda Atanasoski and Kalindi Vora explore the colonial and racial roots that permeate techno-scientific imaginaries of automation and the future of work. Questioning the dream of a post-work future driven by technological progress (a vision often also shared within Marxist circles), they focus on the accompanying promise of a full 'realization' of human nature, whose features, however, unmask the liberal subject and expose the colonial hierarchies that sustain productivist visions of labor:

> "Technological futures tied to capitalist development iterate a fantasy that as machines, algorithms, and artificial intelligence take over the dull, dirty, repetitive, and even reproductive labor, the full humanity of the (already) human subject will be freed for creative capacities. Even as more valued tasks within capitalist regimes of production and accumulation, such as knowledge work, become automatable, the stated goal of technological innovation is to liberate human potential (its non-alienated essence, or core) that has always been defined in relation to degraded and devalued others – those who were never fully human."

Farming without labor?

A just transition that moves beyond these techno-liberal imaginaries will therefore need to develop cross-cutting and intersectional alliances between situated knowledge, expertise and points of view in order to provide alternative technological solutions that do not replicate racialized and gendered notions of devalued labor, but rather demand an engagement with the diversity of su-

bjects that sustain capitalist production in order to promote their ability to participate in future imaginaries of labor. This also means recognizing that, as Anna Save put it, "under capitalism, labor is called upon to mediate social metabolism in capitalist ways."

In the context of today's corporate food regime, only those enterprises that can intensify and expand production, with adequate economies of scale, can survive the pressures exerted upstream and downstream of the agro-industrial system. The accelerated decline in the number of agricultural enterprises worldwide shows that these development prospects do not suit the majority of farmers, who are forced into an unbearable race of intensification, leading to increased indebtedness and new trajectories of land expropriation and rural expulsion.

Similarly, and despite the emphasis by planners and experts on digital strategies to cope with increasing uncertainty, threats and risks, the feasibility of digital intensification is a rather distant hypothesis for many small and medium farms, including in the Northern context. In fact, as many researchers have already demonstrated, the digital agricultural perspective, whose technologies are mostly designed for the North American model of extensive plantations, is only cost-effective in the context of the increase in farm size and land concentration that characterizes the evolution of the corporate food regime and that deprives farmers of the possibility of negotiating a fair price for their products and of adopting more ecologically sound paradigms, such as those proposed by agroecology. All this in anticipation of a hyper-technological transformation of food systems, the feasibility of which can already be questioned, but whose mirage simultaneously supports and hides the more concrete paths of intensified exploitation and ecological degradation.

Reprogramming the future

If these transformative approaches are not tailored to the majority of those working in agriculture, then they are also not tailored to the areas in which they are intended to operate. This is

not only because the agro-industrial model has not yet demonstrated sufficient regenerative capacity to reverse the downward trajectory of yields and biodiversity loss, while remaining heavily dependent on fossil fuels for cultivation, transport and marketing of products. But also because these territories are already threatened by systemic collapse: their capacity to sustain social life is deeply compromised by multiple trajectories of abandonment, including the growing phenomena of farmland abandonment, and the impacts of climate change and ecological degradation. Let's think about what a "transition 4.0" could mean, for example, in a context such as Italy, where the salinization of watercourses, frequent floods, heat waves and droughts are already affecting the productive capacity of entire areas and are at the origin of major ecological disasters, such as the double flooding that hit the Emilia Romagna region between May 2 and 17, 2023.

These dynamics show the limits and, at the same time, the highly speculative character of the current promises of green/digital transition, which, while neither repairing nor responding to current emergencies, accelerate the destruction of the socio-ecological foundations on which societies are based. Similarly, capitalism's insistence on technological solutions for agrarian systems is nothing more than a bet on accumulation through expropriation. Political ecology has largely demonstrated how labor and nature are intensely co-constructed and influence the space of social reproduction. In the utopian futures of digital capitalism, new processes of valorization capitalize on new (cyber) natures that are associated with unequal paths of exploitation, characterized by a further casualization of rural labor driven by public-private debt. At the same time, the promise of a capitalism that can harness the generative and productive capacities of these natures for an affluent and prosperous future is increasingly counterbalanced by an impoverished and ecologically devastated present. Following these insights, a just transition requires not only decolonizing techno-scientific imaginaries and rethinking the relationship between labor and social metabolism, but also putting territories and their defense back at the center of labor

demands, pursuing a politics of attention capable of repairing the socio-ecological foundations of coexistence, against the concrete devaluation of human livelihoods and the non-human environment driven by a neoliberal logic that indebts (present) life to the promise of future abundance.

Kai Heron[1]

Forget Eco-Modernism[2]

Recent years have seen renewed debate on climate strategy on the left. Here, Kai Heron responds to the arguments of the proponents of a left ecomodernism, and argues that it risks reactionary political consequences.

For some years now eco-socialist debate has been locked into orbit around two sharply contrasting perspectives: degrowth and left eco-modernism. The former, represented by Jason Hickel, Giorgos Kallis, Stefania Barca, and others, claims that the growth-based paradigm — capital's endless material and energetic throughputs, the use of gross domestic product (GDP) as the measure of a healthy society, and an ideology of progress determined in accordance with capital's priorities — is a barrier to a post-capitalist future.

To disentangle our collective reproduction from capital, radical versions of degrowth have called for reductions in material and energetic throughputs in the imperial core, ecological and climate reparations, technology transfers to support a global green transition, global developmental convergence, and reductions in personal consumption for heavy consumers. These features are combined with a call for the expansion of green industry and energy, common ownership of the means of production, reduced working weeks, and democratic planning.

1 Kai Heron is a Lecturer in Political Ecology at Lancaster University and a Co-Director of Abundance.

2 This article has been originally published in the Verso Blog Post. Available on: https://www.versobooks.com/en-gb/blogs/news/forget-eco-modernism?srsltid=AfmBOorZTb4Byj0igjDMp9moBXeMn4b87IywFAqIULGgqGljjf9_1J_C

This vision for degrowth requires revolutionary transformation in how we live our lives. Rather than mediating the pursuit of human and non-human needs through the profit motive, degrowth focuses on the need for democratically planned production to directly deliver what everyone and everything needs to survive and flourish. All of this, degrowthers argue, is not just desirable but essential to provide a secure ecological niche for human and non-human life. As Kohei Saito puts it in *Slow Down: How Degrowth Communism Can Save the Earth*, it's degrowth or barbarism.

Left eco-modernism on the other hand is usually represented by Matthew Huber, Leigh Phillips, and proponents of a growth-based Green New Deal such as Robert Pollin. For left eco-modernists — as opposed to reactionary eco-modernists, or capitalists — degrowth is both unnecessary and politically poisonous. It's unnecessary because technological advances in hydrogen fuel, carbon capture and storage, nuclear energy, and renewable energy systems means that a high-consumption lifestyle for all is possible providing capitalism is abolished and workers take control of the means of production. It's politically poisonous because, as Cale Brooks writes in *Damage Magazine*, degrowth is a 'politics of less' that cannot rally support among workers who are already struggling to make ends meet.

For left eco-modernists, the climate crisis is irresolvable under capitalism not because of 'growth' but because the law of value dictates investment decisions. If something isn't profitable, it isn't pursued. Under socialism, all kinds of technologies and ecological projects that are currently off the table would become possible. The high fixed-capital costs of nuclear power, for example, deters investment by private capital, but a workers' state freed from the profit motive could invest the time and labour needed to make mass nuclear energy a reality and drive down emissions.

The debate between degrowth and left eco-modernism has been instructive on several fronts. It raises important questions about the kind of technologies we would like to see in a socialist future: should or shouldn't we have nuclear power, for instan-

ce? For degrowth's proponents, nuclear presupposes a particular division of labour that may not be desirable in a post-capitalist future, requires large amounts of water for cooling which may place stress on limited reserves on a warming planet, and produces long-lasting nuclear waste. Yet for left eco-modernists the fact that it does not contribute to global heating means it is a 'clean' fuel source that should be considered in a wider energy mix.

Exchanges between left eco-modernists and degrowthers have also prompted questions about who might be the subject of revolutionary struggles to come. As Huber and Phillips say, a 'politics of less' is unlikely to win many proponents among the imperial core's working classes when standards of living are everywhere in decline. The degrowth response is that such a position doesn't propose a politics of less per se, but rather a qualitatively different form of life, a politics of *more* richness and diversity many of the proposals for which have broad scientific and popular support. The high consumption lifestyles of many workers in the core are also said to be impossible to rollout to global working class within socio-ecological limits and are based — at least in part — on the past and present exploitation of the Global South's lands, seas, and labour. Left eco-modernists reply by denying that value drains from the periphery to the core of the capitalist world system are significant and that non-trivial ecological limits necessitate reductions in material and energetic throughputs.

An exhausted debate on an exhausted earth

The dialogue between degrowthers and left eco-modernists has clarified the political stakes of what it means to struggle for a green transition on an exhausted earth. It is evident that the differences between degrowth and left eco-modernism are real, substantive, and irreconcilable, that the two outlooks present distinct post-capitalist visions based on opposed analyses of the political subject that might secure a post-capitalist transition, how they might secure it, and upon what technological basis. But for all this, the debate has become increasingly unedifying.

Part of the problem is that the left eco-modernists have consistently misinterpreted degrowth as a homogenous political perspective and subsequently missed some of the intricacies and weaknesses of degrowth. Degrowth's proponents are united by the idea that 'growthism' or the 'growth-based paradigm' is a barrier to human and non-human flourishing, but beyond this there are many disagreements about how to bring about a more sustainable social system and what that system would look like. Proposals range from degrowth anarchism, to eco-socialist degrowth, to degrowth policy wonkery, and even degrowth business models. To treat these very different political horizons as one is to miss something important about the breadth of degrowth's influence and appeal across the political spectrum, but also its lack of innate political vision. Simply put, degrowth is not a politics, it's an umbrella term for a series of socio-ecological propositions that have been fused onto a diversity of political perspectives, resulting in very different ideas about what degrowth means.

One of the most promising fusions is the combination of degrowth with eco-socialism explored in the work of Michael Löwy, Kohei Saito, Gareth Dale, Stefania Barca, John Bellamy Foster, and others. Whereas many non-Marxist proponents of degrowth limit their critique of capitalism to merely a critique of 'growth' — a blunt weapon that conflates growth's numerous denotations — Marxist degrowth draws on the far sharper critical instruments of historical materialism including exploitation, surplus-value, commodity fetishism, dependency, and social reproduction. And while many non-Marxist proponents of degrowth have overlooked the importance of class struggle and the site of production to socio-ecological transformation, Marxist degrowthers emphasise the need for class struggle and transformations in what is produced, how, and by whom. On top of this, work by Jason Hickel, Mariano Féliz and others has drawn degrowth into proximity with anti-imperialist and Third World Marxist thought, potentially opening movements in the core to repertoires of struggle, avenues of action, and acts of solidarity with struggles from the Global South.

While disagreements inevitably persist among Marxist degrowthers, and while proponents tend to overstate the novelty of degrowth's contributions to international socialist thought, the fusion of degrowth and Marxism is arguably one of the most exciting intellectual developments on the imperial core's left.

Yet according to left eco-modernism, any engagement with degrowth marks a radical departure from Marxism and from the interests of the working-class. For Huber, insofar as degrowth has gained popularity, it is among the 'professional managerial class' whose 'contempt for the working (and consuming) masses' and whose psychological turmoil about their 'complicity in consumer society' finds its clearest expression in degrowth. For left eco-modernists, what's needed is a return to class politics of the 'classical Marxist' variety. 'There is no need to add any "eco-" prefix to Marxism to explain our predicament', Huber and Phillips argue, because 'classical Marxism's explanation and concomitant prescription for correction are already sufficient.'

This argument would be persuasive if left eco-modernism were offering an anti-imperialist and ecologically literate Marxist politics, but this is not the case. In their recent review of Kohei Saito's work, Huber and Phillips present their clearest summation of left eco-modernist politics so far and in the process demonstrate that the perspective is better described as a social chauvinist deviation from Marxism, a worrying reactionary tendency platformed by ostensibly left-wing outlets, that could have a damaging influence on trade union and social movement activity in the core.

There are at least three areas where Huber and Phillips' article reveals left eco-modernism's reactionary character: its rejection of the existence of value transfers and uneven ecological exchange, its vulgarized interpretation of Marx's analysis of capital, and its claim that left environmentalist recognition of socio-ecological limits is a brand of neo-Malthusianism. These political and theoretical commitments converge to support a narrowly nationalist, ecologically illiterate, vision of socialist transition which intentionally or not finds common ground with ascendent 'national conservative' thought in the US and elsewhere.

Value transfers

One of left eco-modernism's defining features is a denial of the existence of value transfers and uneven ecological exchange from the periphery to the core of the world system. In their recent review, Huber and Phillips cite Charles Post's 2011 article *A Critique of the Theory of the 'Labour Aristocracy'* to claim that the idea of value transfers has been 'long discredited'. Yet Post's article is by no means a decisive critique of value transfers or uneven ecological exchange, and its conclusions are at the very least questionable. Zak Cope refuted Post's empirical and conceptual evidence more than a decade ago, while numerous works have since been published showing the past and present significance of value transfers and uneven ecological exchange, even as the material standard of living in the imperial core continues to decline.

It is also revealing that in their rebuttal of value transfers neither Huber and Phillips, nor Post, engage with Third World and anti-imperialist Marxist thought, which while by no means homogenous on this or any issue has compellingly shown the import of value transfers and uneven ecological exchange both historically and in the present day. Important overlooked references include Amiya Bagchi, Utsa and Prabhat Patnaik, Ali Kadri, Anuouar Abdel-Malek, Walter Rodney, Samir Amin, Ruy Marini, Claudio Katz, and Intan Suwandi.

Value transfers and uneven ecological exchange have to be denied by left eco-modernism. To accept that workers in the core might benefit from the proceeds of capitalism's global division of labour — whether through wages, consumer goods, raw material transfers, infrastructure, health care, and so on — is for them to muddy the waters about working class interests in the core and working class entanglement within imperialist and neo-colonial systems of accumulation. In the left eco-modernist imaginary the worker must be a pure, abstract, exploited totem, a repository for their revolutionary hopes. In this imaginary — and it is an imaginary — the working class cannot be a global, complex, living and differentiated class of actually existing people. It is inconceivable

that though they are exploited themselves, through their differentiated integration into capital's circuits of accumulation, workers in the imperial core may also participate in the realization of value generated through the exploitation, domination, and even death, of workers elsewhere in the core and in the periphery. The working class, in other words, is internally differentiated along gendered, racial, and national lines, and the immediate interests of various sectors of the global working class can and do come into opposition with one another.

Grasping this is an important condition for international solidarity and the formation of ecological politics on the right terms. When workers in the imperial core consume foodstuffs produced through widespread drought-inducing deforestation, for example, or when they're employed to build weapons used to commit genocide on Palestinians, solidarity requires a degree of material 'sacrifice' on the part of workers in the imperial core. As Lenin once put it:

> internationalism on the part of oppressors or 'great' nations, as they are called (though they are great only in their violence, only great as bullies), must consist not only in the observance of the formal equality of nations but even in an inequality of the oppressor nation, the great nation, that must make up for the inequality which obtains in actual practice. Anybody who does not understand this has not grasped the real proletarian attitude to the national question.

Making up for this inequality through acts of working class internationalist solidarity, and by aligning struggles in the core with those of workers in the periphery, creates the subjective and material conditions for a social revolution om which workers the world over can find their common interest in dismantling capital. As Marx argued, this is the only kind of revolution that can produce "world historical, empirically universal individuals" where there are otherwise only "local ones."

Through its denial of value transfers and under-theorisation of how imperialism is reproduced through the everyday lives of workers in the core, eco-modernism refuses this difficult political terrain. Huber and Phillips suggest it is 'slander that wor-

kers in the developed world are imperialists whose everyday lives are a primary driver of "ecological breakdown"' This is putting words into the mouths of degrowth Marxists. No proponent of the synthesis between Marxism and degrowth has claimed that the lives of workers in the imperial core are a primary driver of our compounding ecological crises. But to say that workers in the imperial core can contribute through their work or consumption should be beyond dispute. To deny this is to blind oneself to the reality of historical capitalism.

The fetter thesis

Left eco-modernism's vision of a socialist transition depends on a vulgarized reading of what G.A Cohen calls Marx's fetter thesis. This is the idea that capital establishes the material and social basis for socialism because at a certain point in capitalism's development its relations of production become a fetter on the forces of production, which is to say that private property and the private appropriation of socially produced wealth becomes a barrier to human flourishing. To secure further development of production and human emancipation, the relations of production must therefore be 'burst asunder', as Marx put it, by the associated producers, ushering in a socialist non-class-based society. The fetter thesis is what lies behind left eco-modernism's support for nuclear energy, conventional agriculture, and the idea of widespread sustainable air travel.

Revealingly, Huber and Phillips say that the fetter thesis is 'central to the theory of historical materialism'. To make their point, the co-authors turn to the global response to COVID-19, in which the production and distribution of lifesaving personal protective equipment and vaccinations were indeed fettered by the profit motive. Huber and Phillips choose this example to assert the fetter thesis' universal applicability. From here, they claim that Saito's apparent rejection of the fetter thesis is part of his strategy of 'cherry-picking from the Marxist canon' to support preconceived political conclusions.

On this, Huber and Phillips should heed their own words. Marx did indeed write about how capital can fetter production and human development, but Marx and others in the Marxist tradition have also repeatedly observed how capital actively ruins the conditions for a post-capitalist, eco-socialist future through what Ali Kadri has recently called the waste of workers, fixed capital, and ecologies.

In a speech delivered to London's German Workers' Educational Society in 1867, Marx spoke about the conditions of struggle in Ireland, explicitly linking Ireland's fight for decolonization to ecology. British colonial rule, Marx argued, had deindustrialized Ireland, transforming it into an export-orientated agricultural economy organized around the needs of its colonizer. The result was the destitution of the Irish worker and peasantry, most notably in the potato famine, and what Marx called the 'exhaustion of the soils', which was less and less able to sustain arable production. These findings would be repeated by numerous anti-colonial Marxist thinkers including Walter Rodney, José Mariátegui, Amílcar Cabral, and Thomas Sankara.

In *Capital Volume One*, published the same year Marx delivered his speech on the Irish Question in London, Marx generalizes these observations. What István Mészáros calls capital's 'metabolic control', is once again said to impoverish what Marx this time calls the 'original source of all wealth — the soil and the worker.' With regards to the working class, Marx writes that 'in agriculture as in manufacturing, the transformation of production under the sway of capital, means, at the same time, the martyrdom of the producer, the instrument of labour becomes the means of enslaving, exploiting, and impoverishing the labourer…In modern agriculture, as in the urban industries, the increased productiveness and quantity of the labour set in motion are bought at the cost of laying waste and consuming by disease labour-power itself.'

As for the soil, Marx remarks that 'all progress in capitalistic agriculture is a progress in the art, not only of robbing the labourer, but of robbing the soil; all progress in increasing the

fertility of the soil for a given time, is a progress towards ruining the lasting sources of that fertility…Capitalist production, therefore, develops technology, and the combining together of various processes into a social whole, only by sapping the original sources of all wealth – the soil and the worker.'

Capitalism, in other words, leads to the unevenly distributed ruination of the worker and non-human nature. This amounts to a refutation of Huber and Phillips' one-sided interpretation of the fetter thesis. By stripping workers of their vitality, freedom, and self-determination, and by undermining the ecological conditions of production, capitalism's metabolic control is undermining rather than *laying the groundwork* for communism. It is not that the forces and relations of production are coming into contradiction — though this can happen — it is that the totality of capitalist social relations also come into contradiction with, and ruin, or cannibalize its social and ecological basis.

In his 1920 text *Left-Wing Communism: An Infantile Disorder*, Lenin carries Marx's idea forward:

> Capitalism could have been declared — and with full justice — to be 'historically obsolete' many decades ago, but that does not at all remove the need for a very long and persistent struggle on the basis of capitalism.

Samir Amin would later reconfirm Lenin's conclusion in his study *Obsolescent Capitalism*, which argued for capital's essentially ruinous nature in colonies and neo-colonies. As would Anouar Abdel-Malek in his study of the place of war in global accumulation, István Mészáros in his writing on waste and capital's under-utilization, and Ali Kadri in his study of global imperialism.

What emerges from these writings is an appreciation of capital's violent dialectics of production and destruction. In place of left eco-modernist just-so stories about how every technological advance is a step towards socialism, we are thrown into an uncertain and uncomfortable reality: capital develops "forces of destruction" as Marx puts it at least as much as it develops forces of production. In fact, in today's world, wrecked, ruined, and ra-

vaged by capital's metabolic control, capitalism arguably destroys and renders destitute far more than it produces or emancipates.

In short, capital is a killing machine. The longer it lasts, the more it kills, maims, and deprives, the more it robs the global working classes of the conditions they need to create a viable post-capitalist future. This is the urgent challenge we face, and it is one that a one-sided interpretation of the fetter thesis and left eco-modernism conceals through techno-optimist fantasies.

Anti-ecologism

Left eco-modernism's commitment to the fetter thesis also produces a peculiar kind of ecological illiteracy. The basic eco-modernist idea is that once capital's metabolic control over our exchanges with non-human nature have been put to an end, all ecological boundaries and limits can be overcome through sheer ingenuity. As Huber and Phillips explain with reference to global greenhouse gas emissions: 'When we fully shift to clean energy sources such as nuclear, wind, and solar, that climate-related limit on energy use will have been transcended. The only true, *permanently* insuperable limits we face are the laws of physics and logic.'

The first problem with this argument is that Huber and Phillips provide zero evidence to support it. It is simply taken on faith that the levels of energy consumption used in the imperial core can be expanded to the rest of the world without the necessary extraction of resources – lithium, uranium, silica, silver, bauxite, copper — or disposal of waste in various ecological and energetic sinks encountering socio-ecological constraints. In a move worthy of Jeff Bezos and Elon Musk, Huber and Phillips briefly allude to space mining and space derived energy sources as a kind of get-out-of-jail-free card for the issue of resource limits.

Maybe space mining is possible. Maybe we don't need to worry about disrupted nutrient cycles and eutrophication, or how conventional food systems contribute to biodiversity loss, or the socio-ecological perils of nuclear energy production. But, as Ajay Singh Chaudhary argues, left eco-modernism must provide evidence. So far it has offered only blind faith and techno-optimism.

Unfortunately, as Chaudhary writes, where Huber and Phillips do provide evidence in support of nuclear energy, conventional agriculture, and their other preferred technologies, academic literature is selectively chosen and complicating socio-ecological factors in the technology's viability are frequently overlooked.

All of this would be bad enough, but Huber and Phillips take the extra step of accusing anyone who takes the idea of socio-ecological limits or thresholds seriously of being neo-Malthusian, the same term used to describe a racist eugenicist like Paul Ehrlich, the infamous author of *The Population Bomb*. To do this, they stretch the definition of neo-Malthusianism beyond breaking point.

Huber and Phillips are correct to say that numerous supposedly ecological limits are in fact socially created limits imposed by the prevailing mode of production. The racist, colonial idea that we need to reduce the human population to avoid climate catastrophe, for example, naturalizes the capitalist mode of production. In truth, it is capital's organization of human and non-human nature, not the number of people alive today, that is destroying the planet. Even so, as Huber and Phillips themselves acknowledge with respect to the concentration of greenhouse gasses in the atmosphere, there are real biophysical limits that must be respected to maintain a habitable planet for human and non-human life as we know it.

When Huber and Phillips say that recognizing the existence of such socio-ecological limits is 'a species of neo-Malthusianism', they give the term an entirely new meaning. The term neo-Malthusian is usually reserved for those who have replaced Thomas Malthus' ideas of fixed limits on human population numbers with the belief that economic growth and technology can stave off demographic challenges. For neo-Malthusians, in other words, human population increases are still a threat, but the crisis can be averted through technological advancement and increased material throughputs. Degrowth Marxism is neither populationist nor does it argue that technological advances are the way out of the ecological crisis.

Ironically, Neo-Malthusianism properly defined shares far more common ground with Huber and Phillips than it does with

degrowth. Though neither Huber nor Phillips share neo-Malthusianism's concern with rising population numbers, they do participate in the neo-Malthusian tendency to fetishize a very particular configuration of techno-fixes — conventional agriculture and nuclear energy in particular — which are not aligned with the class interests of many of the world's working classes and which require downplaying the socio-ecologically devastating effects of both industries.

Left eco-modernism: a social chauvinist deviation

Left eco-modernism's lack of engagement with Third World Marxism, its denial of value transfers and uneven ecological exchange, its vulgarization of Marx's analysis of capital, and its anti-ecologism converge in a narrowly nationalist theorisation of socialist transition that comes dangerously close to a programme of nationalist renewal rather than an international socialism.

In his book *Climate Change as Class War* Huber claims to present a politics for 'the majority', by which he means the world's working classes, but in an early footnote he clarifies that the book's analysis and political proposals will be circumscribed within the boundaries of the United States, the working class inhabitants of which form a *minority* of the diverse and divided global working class that is the proper subject of Marxist analysis.

At the end of their article, with their view similarly limited to the political core, Huber and Phillips make a case for unionisation among industrial workers. Good quality well-paid union jobs in green industry are, they suggest, the path to socialism. Huber and Phillips fail to situate this narrowly economistic theory of class struggle within Marx and Marxism' broader vision of social transformation through social revolution. Nor do they place it within an internationalist project of anti-imperialist solidarity, such as that we've seen among the imperial core's trade unions and social movements in response to Israel's genocidal campaign in Palestine. Because of this, Phillips and Huber's article effecti-

vely ends with a class-aware proposal for national renewal that is not at all dissimilar to certain kinds of national conservative thought developing in the US and elsewhere. There is a certain cross-over here with those like the conservative co-founder of *Compact*, Sohrab Ahmari, whose latest book *Tryanny Inc.*, as Jodi Dean has written, calls for renewed working class trade unionism, but unlike Huber and Phillips does so in the name of saving capitalism from itself. Dean ends her review with a plea for the left to avoid the temptation of courting the national conservative right in a bid to amplify its reach and impact. Huber and Phillips' left eco-modernism appears to ignore this warning.

Huber and Phillips have repeatedly claimed degrowth is a middle-class project, but the class affiliations of left eco-modernism has rarely been scrutinised. Michael Lieven argues that Huber's work is aimed less at class struggle than at a class compromise between a primarily white US working class and capital that is 'liberal — and not even liberal'. Indeed, Huber and Phillips have repeatedly published in outlets including *Unherd* and *Compact*, whose editorial lines combine appeals to a nationally circumscribed working class with socially conservative, often anti-trans, racist, and Zionist commentary. In their contributions to these outlets, both authors accuse the Left of rejecting the working class as a political subject and of moralising about working class consumption in the imperial core. This line of argument resonates nicely with national conservative forces who hope to build a new class compromise between certain sections of the imperial core's working class and its capitalist classes.

Lenin once said that social chauvinists insist 'upon the "right" of one or other of the "great" nations to rob the colonies and oppress other peoples.' This is the upshot of a politics, such as the left eco-modernist version of class struggle, that denies the presence of value transfers and uneven ecological exchange, that downplays the socio-ecological consequences of continued or expanding material and energetic throughputs, and that takes a national working class, rather than the global working class, as its political subject. This, very simply, is a politics that has no place on the left.

Eco-communist strategy

Writing in 1995, with an eye to the world's burgeoning ecological crises, Mészáros warned that in the future 'the challenge facing socialists will present itself as the necessity to put the pieces together and make a workable social metabolic order out of the ruins of the old.' This is still our challenge nearly 30 years later, and the ruins are piling up. Last year was the first time average annual temperatures exceeded the milestone of 1.5C above pre-industrial levels, life sustaining biodiversity has declined 69% in 50 years, ocean temperatures are quite literally off the charts, microplastics are now a constituent part of every raincloud, toxic forever chemicals are present in every new born baby, life expectancy is starting to reversein the imperial core, imperial wars and genocides are waged with near-impunity, the far-right is in resurgence, and global hunger and dispossession are on the rise. Capital's metabolic control over socio-ecological interactions, in other words, is ruining workers and ecosystems alike. Rather than fettering our collective ingenuity, it is killing workers everywhere and robbing them of the conditions needed to build a world where humans and non-humans alike can flourish.

On a planet wrecked and ruined by capital, further debate with left eco-modernism is a distraction. What's needed more than ever is a deep reflection on political strategy. How can those of us living in the imperial core leverage our position to win an eco-communist future for all? How can we support and amplify existing socialist and anti-imperialist projects and struggles in the periphery? What does a green transition for the core look like in practice if it doesn't exploit the periphery's lands, seas, and labour? And what does it mean to fight for a better future on a wounded world? These are the urgent questions of our time. They are questions left eco-modernism has no answer to because it denies the fundamentals of the problem. To move forward together, then, we must forget eco-modernism.

Vishwas Satgar[1]

End Ecocidal Capitalism or Exterminate Life on Planet Earth: A South African Contribution to Ecosocialist Strategy[2]

Introduction

Globalized carbon capitalism is like a snake eating its own tail, self-inflicting wounds. This is not new in the history of capitalism. Between 1870 and 1914, capitalism was also plagued by a general crisis, contributing to imperial conflict and the First World War (which claimed the lives of ten million people). Rosa Luxemburg wrote her classic *Accumulation of Capital*, published a year before the war, in this context. She observed:

> "The more ruthlessly capital sets about the destruction of non-capitalist strata at home and in the outside world, the more it lowers the standard of living for the workers as a whole, the greater also is the change in the day-to-day history of capital. It becomes a string of political and social disasters and convulsions, and under

1 Vishwas Satgar is an Associate Professor of International Relations, editor of the Democratic Marxism Series and principal investigator for Emancipatory Futures Studies in the Anthropocene at the University of the Witwatersrand, South Africa.

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> these conditions, punctuated by periodic economic catastrophes and crises, accumulation can go on no longer. But even before this natural economic impasse of capital's own creating is properly reached it becomes a necessity for the international working class to revolt against capital."[3]

From a Marxist ecological perspective, the catastrophes Luxemburg refers to here, resulting from the destruction of natural economies and non-capitalist strata, can be seen as referring not only to the economic convulsion brought on by capital, but also to its ecocidal logic. This is associated with enclosures in the centers and peripheries, large-scale destruction of human and nonhuman life, and expropriation resulting in ecocide. War is merely one form and moment of extending this logic of deep systemic crisis. In such conjunctures, strategic working-class and anti-oppression politics must come to the fore in order to leverage the crisis against capitalism. However, this kind of conscious strategic politics is not always given or inevitable; sometimes, the crisis of capitalism is also the crisis of the historical social forces meant to resist it.

Today, capitalism is facing the fourth general crisis (roughly from 2007 to the present) in its history. This is a crisis of socioeconomic and ecological production on a world scale. It is a product of the restructuring of the global political economy through the neoliberal class project (starting around 1980), its implementation and lock-ins through structural adjustment and austerity, punctuated by currency collapses, ballooning private and public debt, overheating of housing markets, economic collapses, and widespread precarity. Neoliberal logic intensified surplus value extraction through the contraction of welfare regimes, deindustrialization, precarious labor market regimes, and a global labor arbitrage based on low unit-labor cost manufacturing in China and much of the Global South, promoting universal commodification including nature itself. In this context, global rivalries have been intensifying between a declining U.S. hegemon and geopolitical contenders, with the recent proxy war in Ukraine between the

3 Rosa Luxemburg, The Accumulation of Capital (New York: Monthly Review Press, 1951), 466–67.

United States/NATO and Russia portending the intensification of militarized geopolitical competition. Despite the ideological varieties of neoliberalism, in different national and regional contexts, the current realities we live is its world-making essence.

In the four decades of its existence, neoliberalism has also accentuated deep systemic crisis tendencies, emanating from production/reproduction, nature/society, and economy/state divides. These have propelled monopoly-finance capital into a phase of authoritarian neoliberalism: thin market democracies entrenching the power of transnationalizing propertied classes from the United States and Brazil to South Africa and India. A global ecofascist project, plunging the world into chaos and accentuating the ecocidal logic of global carbon capitalism, has arrived, threatening everything.[4]

In this context, democratic ecosocialist strategy has to proceed from the urgent premise that we must end ecocidal capitalism or face the end of life on Earth. This imperative is what distinguishes the fourth general crisis of capitalism from all previous crises. It is a *poly*-crisis, or multilevel total crisis, that cannot be managed with shallow reformism and technological fixes, at least not if human and nonhuman life are to survive. Moreover, democratic ecosocialist strategy has to come to terms with the complex global political field it has to contest, particularly the underlying conditions generating and maintaining an ecofascist class project. Along with this are the self-induced disruptions of global carbon capitalism, plus the spaces this provides for strategic advance and agential challenges, enabling a counter-hegemonic project on national and global scales.

To explicate these areas of strategic analysis, first we must situate the victory of carbon capital's lock-in of fossil fuels, which has been deeply embedded in global climate politics, providing a crucial element of ecofascist class politics. Second, we must analyze how the 2021 UN Climate Change Conference in Glasgow (COP26) ensured the continuity of the ecofascist project. Third,

4 Vishwas Satgar, "The Rise of Eco-fascism," in Destroying Democracy: Neoliberal Capitalism and the Rise of Authoritarian Politics, ed. Michelle Williams and Vishwas Satgar (Johannesburg: Wits University Press, 2021), 25–48.

contemporary global carbon capitalism has unraveled as a challenge and limit to the advance of the ecofascist project.[5] Fourth, insights into democratic ecosocialist strategy and the climate justice project in South Africa can serve as examples of how to respond to the larger ecofascist conjuncture. The politics of defending the commons and advancing democratic systemic reforms must be highlighted to accelerate and deepen a just transition. Finally, I conclude with challenges to planetize the movement to end ecocidal capitalism and defeat the ecofascist class project.

Carbon capital's victory and the lock-in of fossil fuels

The increasing use of oil, coal, and gas is exacerbating the climate ecological rift and creating a global gas chamber capable of wiping out human and nonhuman life. Despite this dangerous prospect, the U.S. hegemon, the largest historical carbon emitter, and the UN multilateral processes have not put the work on track to solve the climate crisis. With almost three decades of climate science, multilateral negotiations, and everyday climate shocks—together with a 1.1°C temperature increase since before the Industrial Revolution—fossil fuels still dominate the global political economy. In 2021, the International Energy Agency declared that no new oil, coal, and gas investments could take place if net zero is to be reached by 2050. However, so far, carbon-addicted states and corporations have not been adhering to this. At the same time, we have to ask: Why did the United States, the United Nations, climate change conferences, and the International Energy Agency not declare this in the 1990s or early 2000s? The simple answer is that carbon capital won and entrenched the use of fossil fuels, despite the scientific urgency of reducing carbon emissions and the worsening climate crisis.

Three crucial political-economic conditions gave rise to this. First, there is the power of the carbon capitalist lobby in the Beltway in Washington DC. Since James Hansen drew attention to

5 In this article, I use democratic ecosocialist forces and climate justice forces

the urgencies in climate science in 1988, Exxon, together with the American Petroleum Institute, National Association of Manufacturers, U.S. Chamber of Commerce, and thirteen other industry associations went on the offensive.[6] The Global Climate Coalition unleashed a public relations exercise that gridlocked the Beltway and sowed confusion in the U.S. public and among global ruling classes. Climate science denialism, discrediting climate science and scientists, strategic lobbying, and dishonest marketing all went into overdrive, even affecting the UN climate change negotiations. The UN Intergovernmental Panel on Climate Change, despite insisting on reducing carbon emissions, failed to place sufficient emphasis on the rapid phaseout of fossil fuels in the global economy, allowing the idea of carbon credits, technological schemes with respect to carbon capture and sequestration, and negative carbon emissions to subvert the process. Meanwhile, the U.S. public was kept in the dark about the urgent findings of climate science, with the captured political leadership in Washington overtly supporting fossil fuel interests. The Global Climate Coalition, for example, declared that it had won and was disbanded by 2002. Contemporary resistance to complex hydrocarbon extraction has been occurring in this context of the perpetuation of business-as-usual fossil fuel production. "Blockadia" and even divestment have been unable to stop the fossil fuel juggernaut.

Second, given that the United States has been dominated by carbon capital, which is closely tied to ruling financial interests, it has failed to provide decisive leadership in the UN multilateral processes, from the Kyoto Protocol to the Paris Climate Agreement. U.S. presidents have consistently maintained that the "American way of life is not up for negotiation" and there can be no binding regulatory commitments, despite the deadly consequences of carbon emissions. This failure of imperial leadership emboldened a call for "catch-up carbon development" in the Global South and ensured fossil fuel spigots remained open over the past twenty years to meet the needs of China, India, and other G20 countries.

6 Nathaniel Rich, Losing Earth: The Decade We Could Have Stopped Climate Change (New York: Picador, 2019), 182–83.

At the same time, the billions for a just transition promised to countries that did not cause the climate crisis have not materialized. This has ensured that countries in the Global South, including fossil fuel resource economies, have remained trapped in resource extraction. The winner in this context has been carbon capital.

Third, despite the fanfare, backslapping, and public relations projection of a great success, after the Paris Climate Agreement was put in place, a ruling-class ecofascist project has congealed and is shaping climate politics. This is made up of two dominant ideological currents: (1) Center-right neoliberals who hide behind the failed UN climate negotiation process and now the Paris Climate Agreement. Their rhetoric is all about market-led just transitions, technological fixes (carbon capture and storage, a not-always-green push for hydrogen, electric vehicles, and geoengineering), and finance (carbon offsets, trading, and taxes). Yet, in practice, these leaders and their countries have not been shining examples of decarbonization—quite the opposite. The use of fossil fuels and climate modernization is the name of the game, with the assumption of a linear and gradual process of change by 2050. They claim that the climate emergency can be managed from above and are sending mixed signals to the people to placate concerns, while actually trying to manage elite risk. (2) Hard-right neoliberals have accepted globalized accumulation and embraced exclusionary and racist nationalisms, and are ambivalent about climate science and its urgent messages. Where there has been a rejection of climate science, racist neo-Malthusian attitudes have emerged to buttress carceral border regimes.

COP26 and the continuity of the ecofascist project

The COP26 climate negotiations in November 2021 happened in the context of COVID-19 ravaging our societies, a powerful expression of the revenge of nature. In many ways, it serves as a prelude to the greater pain awaiting our societies as the climate crisis worsens. Despite this, world leaders and carbon ruling clas-

ses came up short in their commitments. According to Columbia University's Center on Global Energy Policy, after assessing nationally determined commitments, the world was only on track to cut emissions by 9 percent by 2030, far short of the necessary cutting of emissions by about half.[7] Only fourteen countries have signed the net-zero goal into law. It would seem as if will and commitment is faltering at a policy-implementation level. The Joe Biden administration, while promising a "renewable energy revolution," has released massive amounts of petroleum from U.S. reserves and has placed pressure on fracking businesses to meet supply-side shortfalls. U.S. coal use is also on the rise. This has been induced by high oil prices and the bans imposed on Russia in response to the Ukraine War. According to the U.S. government itself, U.S. crude production is anticipated to climb to new heights under Biden.[8] Other examples of ongoing carbon criminality include Justin Trudeau's administration in Canada, which is delaying delivery of a promised cap on emissions from the fossil fuel sector, insisting there is no need to curb production.[9] In South Africa, the Cyril Ramaphosa regime, one of the most carbon-intensive economies even in the BRICS countries, is still obsessed with a coal-heavy energy mix (at least up until 2030) and is currently pursuing off-shore oil and gas extraction, gas-based Karpowerships (to meet supply-side challenges), nuclear power, and fracking. Center-right neoliberals are becoming indistinguishable from hard-right neoliberals, as ecofascism marches on.

Despite all the fanfare at COP26 about finance capital pulling the plug on fossil fuel investments, this is far from what is happening in reality. Despite its declared intentions, the Glasgow Financial Alliance for Net Zero, which includes the Net Zero Banking Alliance launched in April 2021, has funded huge tran-

7 James Glynn et al., "Tallying Updated NDCs to Gauge Emissions Reductions in 2030 and Progress Toward Net Zero," Center on Global Energy Policy at Columbia University SIPA, March16, 2022.

8 See Derek Brower, "Big Oil Has Nothing to Complain About Under Joe Biden," Financial Times, April 1, 2022.

9 Joe Lo, Cloé Farand, and Isabelle Gerretsen, "Canadian Government Ducks Fight with Oil and Gas Industry," Climate Home News, March 31, 2022.

sactions that go against the net-zero target, with dire implications for carbon lock-ins for coming decades. This includes $10 billion to Saudi Aramco (Citi, JPMorgan Chase) and $1.5 billion to Abu Dhabi National Oil Co. (Citi) in May 2021; $12.5 billion to QatarEnergy (Citi, JPMorgan Chase, Bank of America, Goldman Sachs) in June 2021; and $10 billion to ExxonMobil (Citi, JPMorgan Chase, Bank of America, Morgan Stanley) in August 2021.[10] In the thirteenth annual report *Banking on Climate Chaos*, the following critical observation is made:

In the six years since the Paris Agreement was adopted, the world's 60 largest private banks financed fossil fuels with USD $4.6 trillion, with $742 billion in 2021 alone. 2021 fossil fuel financing numbers remained above 2016 levels, when the Paris Agreement was signed. Of particular significance is the revelation that the 60 banks profiled in the report funneled $185.5 billion just last year into the 100 companies doing the most to expand the fossil fuel sector.[11]

Maturing contradictions and capitalism's systemic disruptions

The current debate among the global capitalist intelligentsia revolves around the end of globalization and the fragmentation of the neoliberal economic order. Dani Rodrick in 2016 was already cautioning ruling classes "not to fret" about deglobalization, as what was required was an adjustment from *deep* globalization. A more moderated globalization, the argument went, was on the table, with imbalances being adjusted and greater government responsibility coming to the fore.[12] Since then, various important developments have emerged to challenge liberalized trading systems. Donald Trump's big push to decouple the U.S. economy from China, the

10 "Bankers Lie About Fossil Fuel Finance," Climate and Capitalism, March 31, 2022.

11 "Banking on Climate Chaos," in Fossil Fuel Finance Report 2022 (Rainforest Action Network, BankTrack, Indigenous Environmental Network, Oil Change International, Reclaim Finance, Sierra Club, and Urgewald, 2022).

12 Dani Rodrik, "There Is No Need to Fret about Deglobalisation," Financial Times, October 4, 2016.

impact of the COVID-19 pandemic on supply chains (including vaccine apartheid), Brexit, ongoing technological rivalry between the United States and China, and the Russian offensive in Ukraine have contributed to upending all illusions about energy dependence. All the assumptions of open intellectual property and free-market trading systems have been shattered as governments rethink degrees of integration, globalization, and how to manage systemic risk. The space this opens for exiting imperial disciplining and accelerating deep just transitions cannot be underestimated.

Nevertheless, the remaking of global trading systems is merely the surface expression of the deeper systemic crisis tendencies shaping and limiting the globalized logic of the ecofascist class project. Financialized inequality and structural unemployment, further entrenching class, race, and gender divides in society, are exacerbating the crisis of social reproduction in households and beyond. According to recent reports on executive pay packages, the trend of concentrating wealth at the top has continued, despite the suffering inflicted by COVID-19 on societies, with 280 of the 500 S&P companies that have reported figures this year highlighting that the median pay for CEOs in the largest capitalized firms on U.S. stock exchanges has jumped to a record $14.2 million for 2021, up from $13.5 million in 2020.[13] Moreover, the median CEO to worker pay ratio has shot up to 245 for 2021 from 192 for 2020, an extremely large year-over-year increase. Women globally are in the lowest paid work, with 75 percent of women in developing regions in the informal economy, and about 600 million in the most insecure and precarious forms of work. Women do twice as much unpaid care work (with annual estimates at $10.8 trillion) and work longer days than men on average (when both paid and unpaid work is counted).[14] In South Africa, structural unemployment has been above 20 percent since the 1970s. Today, its highly globalized and financialized economy has an unemployment rate of 35.3 percent and the highest Gini coefficient (63) in the world, with

13 "US Executives Reap Record Pay as Historic Income Gap with Staff Widens," Financial Times, April 3, 2002.

14 "Why the Majority of the World's Poor Are Women," Oxfam, accessed May 27, 2022.

71 percent of the wealth owned by 10 percent of the population. In this context, inviable societies and the failure of trickle-down economics are also engendering new forms of resistance to tackle class, race, and gender oppression. These forms of resistance can either be captured by exclusionary nationalisms or can be mobilized in a transformative direction.

The ecological rifts of capitalism are manifold. Biological disasters such as COVID-19 are certainly going to increase as natural habitats are destroyed. Biological warfare (involving laboratories experimenting with dangerous pathogens) and climate change will contribute to the proliferation of more pathogens, while ecofascist anti-science positions create more vulnerable populations. The enabling conditions for more zoonotic diseases are ripe. This means more disruptions, and these pandemic threats make it essential for public health systems to be strengthened and repurposed to also face the challenges of the worsening climate crisis. Water peak is another major ecological rift being exacerbated by wasteful water use (agriculture accounts for 70 percent of global water withdrawals, including the use of irrigation systems), pollution from mining, mismanagement of water commons, and climate impacts on the hydrological cycle through floods and droughts (currently such catastrophes have tripled from 97 per annum during the 1980s to an annual average of 309 between 2010 and 2019).[15] According to one estimate, water scarcity could impact global gross domestic product by up to 14 percent in 2050, with the Middle East being one of the most affected regions. In this context, tighter water regulations on use and re-use, as well as democratic planning and management of the water commons, will be necessary to limit the power of corporations to appropriate and wastefully utilize scarce water resources.

The climate ecological rift is the most dangerous and intersects with other systemic crisis tendencies. As more coal, oil, and gas are extracted, global heating and ultimately more intense climate extremes (droughts, coldwaves, floods, heatwaves, cyclones/hurricanes, and tornadoes) register as shocks. Scientific

15 Li Yuan, "Scientists Warn of Widespread Drought in the 21st Century," Phys.org, January 28, 2022.

attribution is clear on this planetary shift. In 2021, the United States experienced twenty separate billion-dollar weather and climate disasters (ranging from a coldwave event, wildfires, floods, tornadoes, tropical cyclones, and severe weather events), totaling about $145 billion (slightly cheaper than climate shocks in 2005 and 2017).[16] Madagascar, on top of a major drought in 2021 that left one million people in food stress, had to deal with four tropical cyclones (Emnati, Dumako, Batsirai, and Ana) in early 2022, which destroyed about 90 percent of agricultural crops in some areas, affecting many people.[17]15 These shocks are examples of climate injustices perpetuated by the ongoing emissions from using and burning fossil fuels. The most recent report from the UN Intergovernmental Panel on Climate Change Working Group III on Mitigation underlines the importance of urgently phasing out fossil fuels, including preventing new investments over the next three years.[18] Yet, from the preceding analysis on ecofascism, carbon investments and lock-ins continue.

The liberal democracies, as thin market democracies entrenching the sovereignty of capital, are in deep systemic crisis. It is more than legitimacy crises; it is about degeneration into authoritarian and neofascist politics.[19] The U.S. military-industrial-security complex is now driving an agenda for a New Cold War with Russia and China, while the U.S. public has no say over this plutocratic foreign and national security direction. Biden has also increased U.S. military spending to $800 billion, unleashing further emissions on the world given the high carbon footprint of the U.S. military, from point emissions in producing military technologies to waging warfare. The Russian offensive and the U.S. proxy war in

16 Adam B. Smith, "2021 U.S. Billion-Dollar Weather and Climate Disasters in Historical Context," Climate.gov, January 24, 2022.

17 "Extreme Weather and Climate Events Heighten Humanitarian Needs in Madagascar and Around the World," ReliefWeb, February 25, 2022.

18 Intergovernmental Panel on Climate Change, Climate Change 2022: Mitigation of Climate Change (Geneva: Working Group III, IPCC, 2022).

19 Michelle Williams and Vishwas Satgar, Destroying Democracy: Neoliberal Capitalism and the Rise of Authoritarian Politics (Johannesburg: Wits University Press, 2021).

Ukraine not only intensify this spiral, but also reinforces a global food shock (largely due to climate impacts on globalized value chains) that began in 2021, which has been amplified by supply-side constraints in wheat, fertilizer, and cooking oil. The spike in food prices is also compounded by the spike in global oil prices. China has its own financialized overaccumulation challenges such as its huge housing bubble bursting (the Evergrande problem). Volatility in its stock exchanges and being ensnared increasingly into global rivalries with the United States all add up to a possible conflict that can lead to mutual economic destruction, given how interlocked China and the United States are in economic terms (trade, debt, investment).[20] The convergence of antiwar (including anti-nuclear, anti-chemical, and anti-biological weapons), climate justice, and food sovereignty forces in this moment is crucial.

We must situate the struggles for socioeconomic and socioecological survival in South Africa and subsequent decades in this context of global political, economic, and environmental instability.

The South African climate justice project

In April 2022, South Africa experienced a flash flood primarily located in the province of Kwazulu-Natal (KZN), killing close to five hundred people, destroying nearly four thousand homes, displacing more than forty thousand people, and affecting over six thousand schools. The cost of the damage is estimated at R17 billion. This flash flood comes on the heels of the worst drought in the history of the country (from 2014 to 2021), tornadoes, flash flooding (including in 2017, 2019, and late 2021 in KZN), landslides, and wildfires. The African National Congress government has not learned any lessons from these climate extremes and has not placed South Africa on a trajectory toward a deep just transition. Instead, it has had a discursive approach to climate policy and multilateral negotiations for almost three decades, while continuing to support and expand a carbon-based mineral-

20 Graham Allison, Nathalie Kiersznowski, and Charlotte Fitzek, "The Great Economic Rivalry: China vs the U.S.," Belfer Center, March 23, 2022.

s-energy complex. As the twelfth-highest carbon emitter in the world and with its intensive use of coal since the late nineteenth century, South Africa should have been trailblazing in terms of systemic adaptation and decarbonization.

In 2018, when the United Nations issued its 1.5°C report, the initial core of organizations that make up the Climate Justice Charter (CJC) movement, over sixty organizations including trade unions, called on the South African president and parliament to convene an emergency sitting of parliament to deliberate on the science and climate policy implications of the report, given that South Africa is heating at twice the global average, which, if this were to continue to increase in linear fashion, would place it at a 3°C increase with a global 1.5°C overshoot.[21] The government ignored this call to place the country on a climate emergency footing to deal with climate-induced weather extremes. Subsequent calls made during South Africa's drought and in engagements with South Africa's parliament for mainstreaming a climate emergency response were also ignored.[22] In this context, the CJC movement has charged the president, his cabinet, the premier of KZN, the mayor of eThekwini (Durban), and the deputy chairperson of the Climate Commission with culpable homicide for the loss of lives during the recent flooding. This refers to illegal and negligent action. This move by the CJC movement is an unprecedented attempt to secure climate justice utilizing criminal law and has received extensive media coverage in the South African context.

The CJC movement has to be located within the making of global climate justice politics. There have been two cycles of climate justice resistance (from 2004 to 2015, then from 2015 to 2020). The second cycle of resistance spawned 1°C movements such as #NODAPL, Extinction Rebellion, Sunrise Movement, #FridaysForFuture, Indigenous peoples' resistance to the destruction of the Amazon, and the South African Food Sovereignty Campaign (SAFSC). The SAFSC emerged during the worst drought in the history of South Africa. It mobilized with drought-impacted communities

21 "Open Letter to President Cyril Ramaphosa: Demand for Emergency Parliamentary Sitting on UN 1.5°C Report," South African Food Sovereignty Campaign, October 23, 2018.

22 See media releases of the South African Food Sovereignty Campaign.

against high food prices and hunger. These basic needs of communities became the basis to link the climate crisis and injustice. In 2015, the SAFSC convened a hunger tribunal with trade unions, faith-based communities, and the South African Human Rights Commission and picketed outside the Johannesburg Stock Exchange.[23] In 2016, it hosted drought speak outs with drought-affected communities, built a campaign around #FoodPricesMustFall, and led a bread march through the streets of Johannesburg.[24] In 2018, it developed a Peoples' Food Sovereignty Act, which it took to South Africa's parliament and seven government departments demanding adoption.[25] All these concerns about climate extremes, a heating country, and the need for systemic transformation were ignored by the African National Congress state.

By 2019, the SAFSC began working actively on a CJC process for South Africa. It convened dialogues with drought-affected communities, media, trade unions, social and environmental justice organizations, climate scientists, youth, and children; activists were invited to write articles; conference platforms were created; and eventually a draft of the CJC was published online for public comment for the first half of 2020. It was finally launched by South Africa's leading ecosocialist feminists on August 28, 2020.

Today, the CJC movement is endorsed by 261 organizations and is still growing.[26] The CJC was handed over to South Africa's parliament on October 16, 2020, World Food Day, with the demand that it be adopted as per section 234 of the South African Constitution, which provides for such charters. While this has not been conceded yet, the CJC is now a rallying point across progressive civil society, providing greater ideological coherence and a pluri-vision for what

23 "Memorandum of Demands to the Johannesburg Stock Exchange (JSE)," South African Food Sovereignty Campaign, October 23, 2018.

24 "Press Release: Statement from the National Coordinating Committee Meeting," South African Food Sovereignty Campaign, March 16, 2018.

25 "National Peoples Drought Speak Out and Bread March Memorandum," May 16, 2016; "Press Release: The ANC Government Is the National Disaster in the Water Crisis," South African Food Sovereignty Campaign, February 12, 2018.

26 "Endorse," Climate Justice Charter Movement.

a democratic ecosocialist South Africa could look like. This is not a blueprint but an aspirational framework, a signpost, of where the country should go if we are to survive a climate-driven world.

The CJC is anticapitalist, ecofeminist, and decolonial; it is ultimately about emancipatory ecology. This distinguishes it from climate modernizing capitalist approaches or deep ecology approaches, which tend to assume that green capitalism (markets, technology, and finance) will solve the climate crisis and blame humans for the ecological crises of our time. Emancipatory ecology recognizes that (1) humans are dependent on nature as socioecological beings; (2) nature, like workers, is a source of value; and (3) nature has limits. Moreover, the sources of knowledge in such an approach center the tacit knowledge of the subaltern (workers, peasants, Indigenous peoples, grassroots women, and the victims of carbon capitalism more generally). Hence, the CJC embodies the aspirations of key subaltern forces shaping South African society. It contains transformative goals, principles to guide the deep just transition, fourteen systemic alternatives, a conception of a people-driven climate justice state, and a strong commitment to renewing commoning practices and radical Pan-Africanism, as part of building global solidarities.[27]

In the light of the continuity of the ecofascist project globally and in South Africa, the CJC movement has entered a new strategic phase of campaigning.[28] In its strategic perspective document titled What Next For the Climate Justice Charter Movement?, the CJC movement advances the following crucial aspects of a transformative political orientation:

1. A theory of change centered on defending the commons and advancing deep transformation through democratic systemic reforms as part of accelerating and deepening the just transition. Democratic systemic reforms represent a constitutive form of power from below and can be calibrated as weak, strong, and transformative based on political

27 Vishwas Satgar, "Marx, the Commons and Democratic Eco-socialism," in Marx Matters, ed. David Fasenfest (Leiden: Brill, 2022), 181–97.

28 "What Next for the CJCM?," Climate Justice Charter Movement.

contingencies and the relations of forces. The politics of democratic systemic reforms will come to the fore in the context of pushing for the rapid phase out of fossil fuels; advancing decarbonization in communities, workplaces, and sectors; developing democratic plans to address climate risks; and advancing transformative regeneration in the context of climate shocks and state failure.

2- Strategic transformation through a climate justice political project and developing policy content for an accelerated and deep just transition from below. Currently, the CJC movement is busy developing the systemic alternatives in the charter into policies for South Africa's deep just transition. The first policy on a universal basic income has been developed based on an intensive universal basic income/grant campaign (the #UBIGNOW campaign during the COVID-19 pandemic) and in-depth economic modeling. Policies on the water commons, rights of nature, zero waste, socially owned renewable energy, and food sovereignty will be developed this year through public engagements.[29] In addition, the CJC movement is working on a macroeconomic Climate Justice Deal for the country. This has involved collaborations with various heterodox economists.

3. Crucial programmatic and tactical priorities. Currently, the CJC movement has an umbrella campaign "to accelerate and deepen the just transition," and through this platform is building convergences and solidaristic actions, including working with communities leading food sovereignty pathway building, frontline organizations standing up to off-shore oil and gas extraction, organizations campaigning against nuclear power, developing a peoples just transition planning tool (which will inform a campaign for the rapid phase out of fossil fuels), working with communities facing water crises, and building a legal network for climate justice. The CJC movement in South Africa is not about

29 "Policies," Climate Justice Charter Movement.

importing or downloading a template for its struggle and strategic politics. It is building on and going beyond traditions of mass politics prevalent in the South African context. In coming months, the CJC movement will take the leap to become a formal mass-based member-driven organization of movements, community organizations, and individuals grounded in local organizing. It will also be debating and clarifying how to ensure that South Africa's 2024 national elections are climate justice elections.

Challenges to planetize the movement to end ecocidal capitalism

The CJC movement, like climate justice forces in other parts of the world, is attempting to scale up and intensify a third cycle of climate justice resistance (2020 until the present), but it faces certain common challenges. These include:

- Going beyond single issue, symbolic, and apocalyptic climate politics. The climate crisis is multifaceted and cannot be overcome in a piecemeal manner. Neither can it be overcome by mere performative denunciation, shaming, and endless critique. Symbolic climate politics has reached its limits. We are running out of time and climate justice forces have to present concrete answers to accelerate and deepen the just transition. They have to assail power structures, contest power, and lead from above and from below with concrete answers. We are now in the era of climate elections. This does not mean narrow electoralism or endless bottom-up building. Working strategically with this complexity is the only antidote to the other extreme of apocalyptic climate politics that debilitates transformative praxis with its doomsday discourses and paralysis talk. The world needs inspirational examples and political tipping point interventions that democratically leapfrog societies beyond carbon capitalism.

- Climate justice activism has to be about transpolitics, ensuring workers go beyond narrow economistic demands, feminists beyond women's oppression, and environmentalists beyond specific environmental problems. Bridges have to be built, convergences cemented, and a common programmatic solidarity has to be engendered as part of tackling the dangerous climate contradiction while addressing class exploitation and multiple oppressions. We all have to be intersectional as well as anticapitalist.
- Climate justice politics has to go beyond crowd politics, theater outside climate summits, and national "cloning" of international trends. Though transnational solidarities are important, this is no substitute for national movement building, which has to take center stage in the third cycle of resistance. Powerful national movements have to be supported, encouraged, and institutionalized systematically. There are no shortcuts given the scale and pace of transformation, and the urgency of calling for accelerated and deep just transitions now. Such movements have to build capacities to create new ecological societies, advance climate justice projects, and through democratic systemic reforms start realizing the making of democratic ecofeminist-socialist societies now.
- Finally, climate justice forces have to rally and actively support the building of a climate justice bloc of governments, workers, peoples, and movements. More active solidarities have to be built that cut across the Global South and North to ensure climate pariahs can be undermined from within and from outside. Most importantly, such a bloc has to accelerate the realization of a global deep just transition and the making of a new planetary climate emergency institutional architecture for a world entering permanent crisis and uncertainty.

Part II

Mariano Feliz[1]

Green Developmentalism as "Cause Of" and "Solution To" Capitalist Crisis in Argentina[2]

Argentine territory has become an area of dispute between transnational corporations and their states of reference for reterritorialization. The operations of big capital seek not only the possibility of accessing broad sources of strategic inputs, but above all the configuration of a new set of social relations that allow their exploitation, appropriation, and use — with profit margins such that they contribute to a mass of global profits that have not been able to recover since the 2007–08 Global Financial Crisis

For over a decade, the Argentine economy has been undergoing the transitional crisis of the hegemonic neo-developmentalist project (Féliz 2022). On the way out of the long-standing crisis, Argentina's dominant sectors have begun to reconfigure the patterns of dependency in the country. Fundamentally, this reconfiguration is based on the attempt to construct a new position for Argentina as a supplier of the necessary raw materials for global capital's energy transition.

In the current global crisis of capital, one of its most relevant facets is the climate crisis, which threatens the reproduction of life on the planet. Capital, as always, seeks to commodify the solution by looking for options that guarantee its reproduction on an

1 Mariano Féliz is a professor at the Universidad Nacional de La Plata and researcher at the CIG-IDIHCS of the CONICET/UNLP, Argentina.

2 This article has been originally published by the International Research Group on Authoritarianism and Counter-Strategiest. Available on: https://irgac.org/articles/green-developmentalism-as-cause-of-and-solution-to-capitalist-crisis-in-argentina/

expanded scale. In this sense, from its points of reference in the imperialist powers, it is consolidating a process of energy transition that seeks, slowly but surely, to replace non-renewable and highly polluting energy sources (fundamentally coal and oil) with "cleaner" alternatives (wind, solar, hydro, tidal, etc.) and other sources that are presented as transitional (such as gas or nuclear energy).

Imperialisms propose forms of transition to a new green capitalism whose core is the electrification of capital. If for a long century capital reproduced itself on the basis of the use of coal and — especially in the twentieth century — oil and its liquid fuel derivatives (Malm 2016), in the twenty-first century the bet is to put electric energy at the centre. To this end, it is essential to build means of storing, transporting, and utilizing this form of energy that can take full advantage of all available energy production alternatives, many of which are fluctuating, cyclical, and discontinuous.

In this process of transition, global capital seeks to connect with new niches for harnessing renewable (or transitional) energy sources and critical minerals for this displacement. In this sense, some Latin American regions are positioned as key points in this global reordering of the sources of circulating constant capital in the form of these critical inputs. In particular, Argentina is repositioning itself as a potential supplier due to it having significant reserves of shale gas, lithium in salt flats, and sources of hydrogen production from water, among other key elements (such as uranium, gold, copper, and traditional fertile land for biomass production).

Argentine territory has become an area of dispute between transnational corporations and their states of reference for reterritorialization (Féliz and Pintos 2021). The operations of big capital seek not only the possibility of accessing broad sources of strategic inputs, but above all the configuration of a new set of social relations that allow their exploitation, appropriation, and use — with profit margins such that they contribute to a mass of global profits that have not been able to recover since the 2007–08 Global Financial Crisis.

In this context, the dependent condition of the Argentine territory is rearticulated to seek new sources for the super-exploitation

of labour and nature. The plundering of strategic natural wealth at this stage in the era of capital builds new channels for the expanded reproduction of the unequal exchange of value and use-values.

At the heart of the dependency relation is unequal exchange. The classical canon focused on one of the dimensions of this leakage: the leakage of value. The sustained loss of value (wealth in its capitalist form) was found to be the essence of dependency (Marini 2022). Territories with a low level of development of their productive forces which encounter highly developed imperialist spaces lead — through the operation of the law of value on a global scale — to a monumental and systematic loss of the social wealth created in the former (Amin 1974a, 1974b; Marini 2022). This is a central mechanism in the dynamics of capitalism's uneven and combined development.

This drain of value condemns dependent capitalism to multiply the super-exploitation of labour power as a means of compensation. The premature consumption of the labour force, particularly through the payment of remuneration below the cost of the reproduction of that force (Carcanholo 2013; Osorio 2013), condemns millions of people in these territories to mere subsistence in conditions of precarity and widespread misery (Féliz 2021).

A relatively unexplored dimension of this unequal exchange has been that these territories have historically been suppliers of raw materials and inputs for imperialist capitalisms and their capitals. While this is well known, theory tends to overlook the impact that this type of exploitation has on the dependent economy, based on its capacity to generate ground rent and unequal ecological exchange. Firstly, the frontiers where capital advances to plunder natural wealth become sources of ground-rent appropriation (Féliz 2021; Osorio 2017). The possibility of private appropriation of use-values at low costs (that is, relative to other countries of the globe) allows extractivist companies the possibility of appropriating not only these riches (converted into capitalist values) but also the appropriation of extraordinary masses of value in the form of rent. Given its nature, land rent is reinvested to a lesser extent than pure profit, and therefore a large

part of it leaves the dependent territory for global circulation. This rent manifests itself as an excess return for the capital that plunders, and becomes an additional source of value leakage; not coincidentally, the massive returns from the big oil and mining companies end up being recirculated through the companies' partner in crime: the global financial system (Toussaint 2019).

Unequal ecological exchange (Peinado 2019) completes the triangle of plunder in the dependent economy. The realization of plunder involves the super-exploitation of nature insofar as extractivist processes over-exploit resources beyond the possibilities of their natural reproduction and without any consideration for the social costs of these activities (Féliz and Haro 2019). The presence of extraordinary rents multiplies the pressure for extraction. In turn, disregard for social and environmental costs, among others, amplifies the drive for destruction. In the case of projects linked to the energy transition underway, in most cases the associated industrial processes include high water consumption in thirsty territories, polluting chemical processes, and scales of extraction that represent the total deterritorialization of peoples and communities in the territories of plunder, reterritorialized as sacrifice zones (Svampa and Viale 2014).

Given the projections of plunder, the volumes of ground rent and unequal exchange will soon multiply many times over, and thus consolidate patterns of dependency. The expectation is that exports of shale gas (Barragán 2022; Gilbert 2023), lithium (Camblor 2022), and hydrogen gas (Consejo Económico y Social 2021, 37) will increase exponentially in a few years, which for the Argentine economy will remove a constraint that expresses the conditions of its dependence: the external constraint. The characteristics of the country's productive development have led to an excess demand for international currency in the process of capitalist accumulation. The specificity of local accumulation, the pressure of plunder, and the great inequality of its social structure combine with an insufficient supply of international currency. Matching this is the growing burden of external indebtedness that has progressively and cyclically consolidated a seemingly unmanageable demand for foreign currency (Féliz 2023). In the

new phase of capital's energy transition, the strategy of neo-developmentalism in Argentina aims to relax these contradictions at the cost of multiplying the chains of structural dependency.

Extractivist projects for a new dependency in Argentina

The aim is for the transitional crisis of the neo-developmentalist project in Argentina to be overcome through the reconfiguration of dependency relations in the new phase of the global energy transition. These intentions have manifested in a multiplicity of neo-extractivist projects that have been multiplying over the last two decades, accelerating since the global crisis of 2007.

In the era of the emergence and consolidation of the neo-developmentalist project, beginning with the government of Néstor Kirchner in 2003 (–2007), numerous open-pit mega-mining projects were promoted. In particular, metalliferous gold mega-mining in the Andes Mountains became the focus of multiple socio-territorial conflicts (Svampa 2011). These projects advanced with the approval of numerous exploration and exploitation projects in the early years of the period. The state, at different levels, promoted regulations that encouraged large-scale mining activity. State support ranged from fiscal stability and tax exemptions to political protection for large corporations. This protection included the use of state force to disband mobilizations and resistance against the initiatives, and ignoring (or directly hiding) the "invisible" but real costs of these megaprojects: contamination of water courses, destruction of communities and their traditional activities, multiplication of the costs of capitalist "development" (higher housing rents, increase in illicit activities in the villages, multiplication of the exploitation of women and feminized bodies).

Resistance to these projects has been varied and has involved the strengthening and expansion of assembly spaces in the territories where these projects were to be imposed. The actions and articulation of the Unión de Asambleas Ciudadanas (Union of Citizens' Assemblies, UAC) expanded and multiplied. Among

the main milestones of anti-mining resistance, we find the case of the people of Esquel in 2003, and the "Chubutazo" uprising of 2021. In 2003, the people of the city of Esquel (in the province of Chubut, at the foot of the mountain range) confronted the Meridian Gold mining company's project to exploit open-pit gold mining just ten kilometres from the city. Grassroots organizing forced a plebiscite to be held, which was rejected by 82 percent of the voters, preventing the project from moving forward (ENDEPA 2023). Almost two decades later, in the same province, popular struggle forced the provincial legislature to repeal a regulation that allowed mega-mining in the central plateau of the province for the Navidad project, where the Canadian company Pan American Silver intended to extract silver, copper, and lead.

Within a few years of the global crisis, the Argentine economy simultaneously entered an energy crisis. The privatization of the state hydrocarbon company YPF in the 1990s (sold to Spain's Repsol corporation) had led to the collapse of proven reserves of conventional hydrocarbons (particularly gas), and in the framework of an economy articulated around the indiscriminate capitalist consumption of this form of energy, the country entered into an external deficit in its energy account (García Zanotti 2020, 24). The country's traditional external restrictions expanded to unsustainable levels in the context of the global crisis and external over-indebtedness. This was the context of the 2012 decision to bring YPF back into public ownership (no longer as a "public company" but as a public limited company with the state as majority shareholder). The first steps of this new strategy involved starting to deploy the development of a number of unconventional hydrocarbon fields, especially in the southwest region of the country. There, in the province of Neuquén, around the town of Añelo, began the process of accelerated exploration and exploitation of the unconventional hydrocarbon deposit known as Vaca Muerta. Preliminary information indicated that it was one of the main deposits of this type in the world and could potentially turn the Argentine territory into a major net exporter of gas, oil, and their derivatives. With control of YPF (the country's main company in the sector), and with

the state in the hands of the neo-developmentalist coalition who had been provided with their biggest mandate (during the Cristina Fernández de Kirchner presidencies of 2007–11 and 2011–15), the government began to deploy a strategy that would overcome the impossibility of accessing international credit (which had been blocked off since the debt crisis of the late 1990s). The path began with an agreement with US-based Chevron. The agreement was reported to be riddled with secret clauses, and created the conditions for the deployment of multi-billion dollar investments in the territory where Vaca Muerta was located.

Social resistance to the mega-project was not long in coming. On the one hand, it raised questions about the same issues being raised of mega-mining. The scale of production and the extraction techniques involved large volumes of water consumption, sand (which had to be brought in from other areas), and the use of highly polluting chemicals. In addition, the profit-driven nature of the venture would have a huge impact on the economy of the communities in the area, multiplying the cost of residential rents and the price of basic necessities. At the same time, the development of this activity began to be denounced as the cause of multiple earthquakes that had damaged the homes of local communities (Aranda 2023). Popular resistance to the advance of this new stage of hydrocarbon extractivism has predominantly been led by the Mapuche communities in the region, which has led to unprecedented levels of political and police persecution. The assassinations of activists such as Rafael Nahuel and Santiago Maldonado in 2017 in the context of resistance actions, and the 2022 detention of Mapuche women (who together with their young children were illegally transferred to the city of Buenos Aires, more than a thousand kilometres from their home), could be seen as the peak of this persecution.

More recently, the initiative for large-scale exploitation of lithium deposits in salt flats in northwestern Argentina has been gaining momentum. The "lithium triangle" — between Chile, Bolivia, and Argentina — contains one of the world's largest deposits of this mineral, with 65 percent of global reserves (Fornillo

2015, 2019). These projects are focused on extraction for export to industrial centres such as China and Germany. In general, they are directly linked to industries that see in lithium batteries the possibility of their "green renewal", such as the automotive industry (Aráoz 2021). A paradigmatic case in Argentina is the lithium extraction project in the northwestern province of Catamarca, in the Andes Mountains. In this region, the US-owned company Livent has been extracting the mineral from the salt flats in the Antofagasta region since 1997. With a water-intensive operation in arid land, the company signed an agreement with Germany's BMW in 2021. The carmaker seeks to secure a new source of this mineral, essential for the survival of its business, while reducing its dependence on one single supplier (Australia) (Infobae 2021). The agreement had the explicit institutional backing and support of the national and provincial mining ministries and the explicit opposition of the communities in the region. They reject the project because of its effects on the local ecosystem, and because they were not consulted (as established in ILO Convention 169 regarding the obligation of informed consultation with the communities). As the ancestral inhabitants of these lands point out, the struggle is between lithium and water (and life). In the months after, extraction projects multiplied, and the state has taken the initiative to promote them (Risso 2023a, 2023b). In 2022 it submitted a bill to the National Congress to promote electromobility, so as to encourage the development of this sector based on stable fiscal benefits (Kulfas 2021), and recently formed the Mesa del Litio (lithium working group), a meeting between the governments of the provinces of Salta, Jujuy, and Catamarca (the provinces with the largest proven reserves) to agree on joint strategies for the mineral's exploitation. At the same time, YPF is working on several projects to promote the exploitation of the mineral (through its affiliate YPF Lithium) as well as its industrialization for the production of batteries (through its subsidiary Y-Tec in Berisso, province of Buenos Aires). These projects are being carried out without any consideration for local communities' demands to be heard regarding their perspectives and needs (Lag 2021).

Finally, in parallel, initiatives for the production of so-called "green" hydrogen and the extraction of gas (and oil) in deep waters have recently begun to develop. On the one hand, within the framework of COP26 in November 2022, the Argentine government announced the project of the Australian investment firm Fortescue Metals Group for the production of green hydrogen in the province of Río Negro, in the south of the country. The hydrogen will be exported mainly to Germany, and could account for ten percent of the electricity consumed in that country. Green hydrogen is produced by electrolysis of water — the main input — and requires large amounts of electricity. The Fortescue project involves the upstream installation of wind farms and solar panels (whose production and maintenance are not really "green"), as well as access to sources of demineralized water (produced from water resources such as the Río Negro or brackish water from the Argentine sea). Meanwhile, US-based MMEX and Germany's Siemens are proposing to install a plant on the main island of Tierra del Fuego Province (the country's southernmost province). As in other cases of large investments by transnational capital, the companies' main concerns are fiscal stability and the free availability of international currency.

Green dependency and the negation of the "Other"

Green capitalism, in its developmentalist form in dependent Argentina, is constructed by presenting it as the new solution to the problem of "development". If historically agro-exports and later industrialization were the key to overcoming Argentina's "backwardness", today the global energy transition is presented as a new opportunity. This strategy presents a paradox because it is precisely in and through primary export growth and dependent industrialization (dominated by transnationals) that the social, economic, and political crises of the Argentine territory have been accentuated. The multiplication of foreign trade in primary products, the subsequent expansion of industrialization, and the crisis of this process

in recent decades have not helped the situation regarding poverty (which in 2023 exceeded 40 percent of the population), precarity (more than a third of salaried employment is informal, and millions of non-wage earners are forced to subsist under these conditions), and exclusion. The project of dependent capitalism in Argentina always confronts myth with reality, but the dominant sectors do not accept the need to build social alternatives.

In recent decades, developmentalist extractivism has increasingly sought to turn Argentina into a territory of plunder, inserted into the new global value chains linked to green capitalism. In this way, it denies the possibility of any development alternative based on local resources, popular initiatives, and ecosocialist proposals. In particular, the ideological blindness imposed within the framework of dependent capitalism suggests the impossibility of an alternative to the domination of global capital, both productive and financial. State institutions only support those projects promoted by transnational corporations with the backing of big global finance capital, without questioning the exorbitant demands (subsidies, tax exemptions, regulatory reforms) that they demand in order to "collaborate" in Argentina's development.

Dependent extractivism deepens the plundering of the commons as a response to the extended cycle of financial dependence. Faced with a process of over-indebtedness, the response is the unsustainability of life to guarantee the sustainability of the debt (Féliz 2023). Plunder represents the destruction of life and its conditions of reproduction in order to guarantee the payment of foreign debt and the transformation of surplus value into global money.

The advance of extractive projects linked to green capitalism is built on the systematic denial of the rights, demands, and dreams of the people who settle in the territories decreed as "expendable". The people struggling for the defence of life are conceived of by capital as a disposable and irrational Other. Collective demands for a dignified life and requests for informed consultation are systematically denied. The state operates at all levels to deny the people's right to build a liberating territoriality and proposes a new campaign of capitalist reterritorialization (occupation).

Recently, the Argentine army announced a plan to militarize all those regions subjected to "green" exploitation (Duarte 2023).

The media and developmentalist journalism construct a discourse that stigmatizes alternative proposals to the endless plundering. Other claims are either denied as falopa ("drugged", i.e. made under the influence of narcotics) "imperialistic" (i.e. allegedly promoted from outside to "stop" possible development), or presented as "anti-Enlightenment irrationalism, anti-scientific and anti-productivist discourse, and obtuse prohibitionism, a form of green neo-luddism that ... signifies a real deformation of the real environmental agenda and can be traced back to the 'save the whales' marketing or the struggles between European and US multinationals that gave rise to the GMO controversy" (De la Calle 2021).

Any attempt to question the advance of plundering capitalism is rejected ad hominem (in view of who is doing it) and in limine (without considering the arguments). The Indigenous communities that reject the destruction of their ancestral territories are challenged by state institutions of colonial origin and racist imprints. The extreme expression of this problem has recently come to the fore in the mountainous province of Mendoza. Despite the formal protection of the National Constitution, the territorial demands of Mapuche communities in areas of hydrocarbon exploitation in the south of the Argentine nation-state came up against members of the Mendoza provincial legislature, who, contrary to the historical truth, voted to approve a declaration stating that "the Mapuche should not be considered native Argentine peoples" (Díaz 2023).

These institutional outbursts only seek to portray segments of the population as "enemies" of progress, as foreign agents (in the case of the Mapuche communities, as "Chileans") seeking to halt economic progress. The high-sounding declarations of the hegemonic discourse express the refusal of the political forces representing the "parties of order" to accept that behind the progressive discourse of progress (pun intended) there is only the capitalist drive for its valorization at the expense of dignity and life.

Conclusion

The global energy transition and the resulting new dependencies in Argentina are deeply intertwined with the dynamics of capitalist expansion, exploitation, and domination. The reconfiguration of dependency relationships within the country reflects not only economic shifts but also social and environmental injustices perpetuated by the pursuit of profit at the expense of people and nature.

Argentina's trajectory through the transitional crisis of the neo-developmentalist project underscores the complexities of navigating global capitalist forces in the midst of a shift towards becoming a supplier of raw materials for the energy transition. This underscores how the country's continued reliance on extractivismo exacerbates inequalities and perpetuates social and environmental degradation.

The expansion of extractive projects, particularly in the mining and energy sectors, has been met with widespread resistance from local communities, Indigenous groups, and environmental activists. These struggles highlight the inherent contradictions of green capitalism especially in dependent territories, which purports to offer solutions to environmental crises while perpetuating and multiplying patterns of exploitation and dispossession.

Furthermore, the denial of the rights and voices of those affected by extractive projects reflects a broader trend of marginalization and repression in the name of capitalist development. Local communities, in particular, continue to face systemic discrimination and violence as they resist processes of deterritorialization that destroy their lands and livelihoods.

Ultimately, the pursuit of green dependency by global capital in Argentina reinforces the need for alternative visions of development that prioritize social and environmental justice over profit and exploitation. Building solidarity among affected communities, challenging hegemonic discourses, and advocating for collective organization for social change are essential steps towards creating a radical alternative to dependent capitalism's project.

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Lavinia Steinfort[1]

Public Ownership and Energy Democracy: Struggles for a Feminist Transition[2]

A feminist energy transition is one that works for everyone. Clearly, that is more easily said than done. Public services including energy supply have been under attack for decades. People have become used to price hikes, job cuts, reduced quality and ultimately, a break-down of the social fabric. Many people have lost sight of the fact that energy is a fundamental right on which human and other life depends, rather than a commodity for profit. How can public ownership and energy democracy offer a way out?

For-profit economics, underpinning virtually every energy privatisation and market liberalisation around the world, is the biggest barrier to putting the rallying cries for climate action and system change into practice. For as long as energy - and the energy transition alike - is something to be profited from, the rush for fossil fuels alongside renewables will continue to result in an ever expanding energy mix, both in terms of production and consumption. In previous years, only half of new energy demand was met with renewables. Global carbon emissions from carbon fuels reached a record high in 2023. And the villains are not just the fossil fuel giants. Between 2016 and 2022, some of the world's biggest 'green' multinationals, such as Tesla, Siemens and Iberdrola have profited over US$175 billion. This is more than

1 Lavinia Steinfort is a feminist socialist, political geographer and researcher at the Transnational Institute.

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seven times the real financial support that rich countries have provided to poor nations to tackle and adapt to climate change (despite pledging US$100 billion a year in 2009). The underlying dynamic: private and multinational companies merely invest in the transition when public funds secure their profits. But climate and energy policies that are propping up profits give vested interests all the more reason to push up energy production and consumption. This is making it impossible to decarbonise society, with ever more devastating impacts on future generations and already discriminated groups, such as gendered and racialised working class communities.

How can we make sure a feminist energy transition is the solution? As the Energy Democracy Declaration, created by a variety of Indigenous representatives, trade unions, ecofeminists and climate justice organisations, points out: through policies that combine defending and advancing peoples' right to energy with urgently curbing consumption and adapting to the climate crisis. To address these dimensions jointly and not let one undermine the other, we must talk about ownership and control. Through an expansive understanding of public ownership and popular participation, dissident genders - together with the whole public - collectively decide how, why, where, and with which resources and technologies, energy is used and produced.

Public ownership constellations, that combine State-owned enterprises with more localised governance, are the policy prerequisite for the popular classes to be in charge in a coordinated fashion. This is not an apology for reckless (multi)national oil companies, such as those based in the Gulf, or for (other) State-owned enterprises that are colonizing lands, grabbing critical raw materials, and dispossessing entire rural communities, Indigenous or otherwise, in the name of an energy transition. This is the basic recognition that in order to meet peoples' energy needs, whilst tackling the climate crisis we must envision systemic alternatives - and public ownership can be exactly that. Especially when struggles go beyond reclaiming the energy sector from the market and beyond establishing government control. For public

energy systems are public in as much as they are democratic. Although this is true for all public services, it is particularly urgent for the energy sector due to all the extractivism pertaining to the whole energy value chain. Thus, ongoing social struggle and deep democratic decision-making is necessary to build up the feminist popular powers that can hold public energy to its values. This is surely a never ending struggle but based on Costa Rica's democratic banking model, which sits alongside its public energy sector described below, a key step would be to put gender justice in the legally binding mission and mandate of every state-owned energy company. On top of this, through gender-balanced boards a variety of energy workers and precarious users - from single parents to informal care workers and undocumented migrants - can attain decision making powers. And what if we would organise towards territory-wide energy observatories - mirroring the water observatories from Paris to the Catalan city of Terrassa that are improving water governance?

As feminists we must dare to advocate for public energy models that are rooted in justice, solidarity and democracy. This implies sensitivity to context and the need for bridges. Context is vital because there is no one-size-fits-all approach. Although public ownership must be understood as fundamentally at odds with the extraction of profits, how workers (women and otherwise), communities and governments co-shape the whole energy value chain must be a scaled endeavour aiming to align the concerns of all the rights-holders across a certain territory. This means making sure that national policies and ownership forms are informed by, reflecting and supportive of local realities, but also that communities work together to enable an equitable sharing of wealth, power and resources. More so, as a feminist energy transition will still depend on lots of land to put up solar and wind installations, it is key to involve rural, peasant and Indigenous communities in ways that can reverse centuries-long exploitive extraction. This can come in the form of Free, Prior and Informed Consent by making sure nearby communities, particularly but not solely Indigenous communities, are fundamentally involved

from project design and planning all the way to implementing and running (renewable) energy infrastructure. Then, meeting the energy needs surrounding populations will no longer be an after-thought but part of its core mission.

However, we should also not shy away from the technical complexities of the transition. The energy sector consists of massive infrastructure that spans from generation sites to high--voltage transmission lines to more regional distribution grids to supply facilities. And since the majority of people on this planet need more energy than they can locally produce, we have to figure out the interface between decentralized generation and accountable publicly owned electricity utilities. Again, that's not to excuse the extractivism for which many such utilities are responsible but to argue for transforming these utilities into a democratic undertaking that can uphold the right to sustainable energy whilst following the lead of affected communities. This surely requires equitable and participatory governance with poor, marginalised women, among others, in the driving seat.

Such a feminist energy model may actually enable societies to prioritize essential, social reproductive energy use - whether it is to keep hospitals, schools, water provision and public transport running, or power and make visible all the care, cooking and cleaning work that is still predominantly done by women. At the same time, public ownership is an encompassing approach that can once and for all curb the endless energy hunger that mainly benefits a rich and exploitative Global North, alongside pockets of elites across the Global South. Why? Because once energy is in public hands, populations themselves have finally a way in to design a comprehensive and coordinated phase out of fossil fuels, in parallel to a massive democratic ramping up of renewables. Altogether, this will help us to not only wind down fossil fuels but also put a stop to unnecessary if not excessive energy production and use. This way, we can speed up the transition whilst upholding peoples' right to increasingly clean, renewable energy.

A feminist energy model is not a pie in the sky but has been in the making for years, if not decades. In Catalonia, the Alli-

ance against Energy Poverty has been working predominantly with women in energy poverty to achieve legislation in 2015 that bans electricity cut offs. While, in the city of Cadiz, women have been leading on developing a social bonus on residential bills that much better reflects people's actual energy needs.

On the other side of the Atlantic, in Costa Rica, people and women in particular, have been resisting privatisation and improving public energy by forcing the Costa Rican Electricity Institute (ICE), which is the state-owned utility, to engage in popular dialogue with affected communities. The success of Costa Rica's public energy consists of an effective State-municipal–cooperative model in which the utility is responsible for the bulk of all power generation, while working alongside more local public enterprises that serve the urban areas of the country and four big cooperatives that operate in the rural regions. Instead of market competition running the show as is the case in many other countries, collaboration is. And as a result, it is one of the few countries that has decarbonised its electricity mix at affordable rates. The take--away: gender-just energy requires a state that stands up against big business by daring to really share power with communities across the rural-urban spectrum.

Now, to not only put a stop to fossil fuel extraction but also stand up against the many forms of extractivism that are happening in the name of a transition, we must defend the right to land, the right to sustainable energy and the rights of women, girls and dissident genders, jointly. And based on many energy transition struggles around the world, public power combined with energy democracy is our best shot to do this.

Chris Vrettos[1]

People or Planet: A False Dilemma[2]

As the world grapples with runaway climate change, growing inequalities, and a resurgent far right, the political establishment feels increasingly outdated. Progressive green-left coalitions must translate generalised discontent and polarisation into grassroots support for a bold climate agenda, providing global political and everyday societal energy solutions.

There's a festering, yet completely normalised, form of dissonance in global (climate) politics. Every year the UN issues increasingly stark warnings of humanity facing "climate chaos" due to continued fossil fuel investments. Yet, governments from Greece to Guyana, and from the US to the UAE, maintain tired arguments of "energy security" and "market dynamics", presiding over the largest expansion of fossil fuel infrastructure in human history.

While the Right drifts ever deeper into hyper-libertarian, anti-science, and conspiracy theory arguments to support its scaling down of climate policies, progressives (including social democrats and Greens) are not coming up with a convincing counterargument. Climate solutions – those that are not redistributive, do not address (carbon) inequalities, and do not adopt a cross-sectoral approach – are becoming increasingly harder to sell. As stark, increasing socioeconomic disparities plague even mature democracies like Germany and Sweden, the patience of

1 Chris Vrettos works for REScoop.eu, the European Federation of Energy Cooperatives, and Electra Energy (Greece).

2 The article has been originally published in the Green European Journal: https://www.greeneuropeanjournal.eu/people-or-planet-a-false-dilemma/.

voters is becoming razor-thin. This might help explain the rise of Alternative für Deutschland (AfD), partly linked to a backlash against a law on heating, a flagship policy for the Greens that was hotly contested even within the ruling coalition.

What this far-right rhetoric fails to identify is the extreme carbon inequalitythat underlies our ongoing climate breakdown. This is not a coincidence: despite anti-systemic posturing, fascists and their ideology are the end products of (late-stage) capitalism – something which can be observed from Trump and Bolsonaro, all the way to Hitler's Germany.

As the world veers closer to the precipice of multiple social and climate tipping points, reheated centrist, reformist 1980-esque politics just won't cut it anymore. Slapping a meek carbon tax on private jets (that must be banned), or placing a one-off solidarity levy on multi-billion-dollar oil companies (that must be nationalised and dismantled), is not a convincing sell for citizens who are asked to change the way they heat their homes, commute to work, and eat.

Governments must start confronting the truth and scale of the climate catastrophe head on. They must be honest about how our climate models do not account for tipping points, given the latest climate science that highlights the "safe" carbon budget is actually much smaller than previously thought. Developed countries must radically step up emissions cuts (carbon neutrality by mid-2030s, well into carbon negativity by 2040s) to maintain even a modicum of organised society.

Global warming is accelerating at such a rapid rate that it is blindsiding the climate models of what were once the "doomsayer" scientists. What two years ago was considered radical (cue the IEA's 2021 landmark report calling for an end to all fossil fuel expansion) is now already obsolete. In fact, the majority (60 per cent) of fossil fuel reserves must stay in the ground to have a one--in-two chance of limiting warming to 1.5°C. The IEA's September 2023 report indeed highlights that existing fields and mines will have to close well before the end of their operating capacity.

A heroic act

It requires a bold and unwavering stance to admit and address this crisis. Governments must be equally forthcoming about whose fault all of this is – a politically daunting task. Calling out the military-industrial complex, fossil fuel companies, and the industrial agriculture lobby is a lot of eggs to break all at once. Equally, calling out the nihilism of moderate politicians, who dithered and delayed for the past 30 years, might break away from the decorum of respectability politics, but it's the kind of populist, radically realist type of politics that enthuses, inspires, and, ultimately, garners broad, popular support. Remember Bernie?

Let's be very clear: we are not just stuck between nihilistically moderate politics and an emboldened, resurgent far right; there is a third way. The theory of "post-growth" presents a comprehensive set of ideas for moving the world beyond profit and economic growth to the pursuit of human well-being and environmental sustainability.

Is it an indigenous world understanding? Is it an activist slogan? Is it an emerging academic and scientific field? It is all of the above, and you would be excused for making tongue-in-cheek comparisons to a superhero – a powerful idea coming to save us from cartoon-esque fossil-fuel-capitalist-billionaire villains. Jokes aside, the power of post-growth lies in naming the sectors and practices we must do away with (industrial meat, planned obsolescence, the arms industry, fossil fuels), and opening a context-sensitive discussion on what we should aim towards (local citizen energy, community agriculture, publicly funded education and healthcare). Post-growth thus offers a springboard for left-green-progressive coalitions: a politics that is firmly confrontational in its articulation of what is wrong, yet simultaneously pluralistic, welcoming, and visionary.

A "militant" green-red alliance must also appeal to a broader more moderate audience, to build the grand coalitions needed for radical (political) change. Adopting a "people and planet over profit" vision is the first step. Translating these concepts into

concrete actions is where the political gravity oscillates. Green policies must burnish their redistributive credentials, demonstrating how they lead to *immediate economic relief* and tangible improvements to everyday lives, thus rebuilding previously neglected alliances with workers and unions. In an age where extreme loss and damage are already costing billions to the EU economy (and, even more so, to the global economy), ecological economists must argue for climate policy as the only fiscally disciplined way forward – cue liberals and centrists.

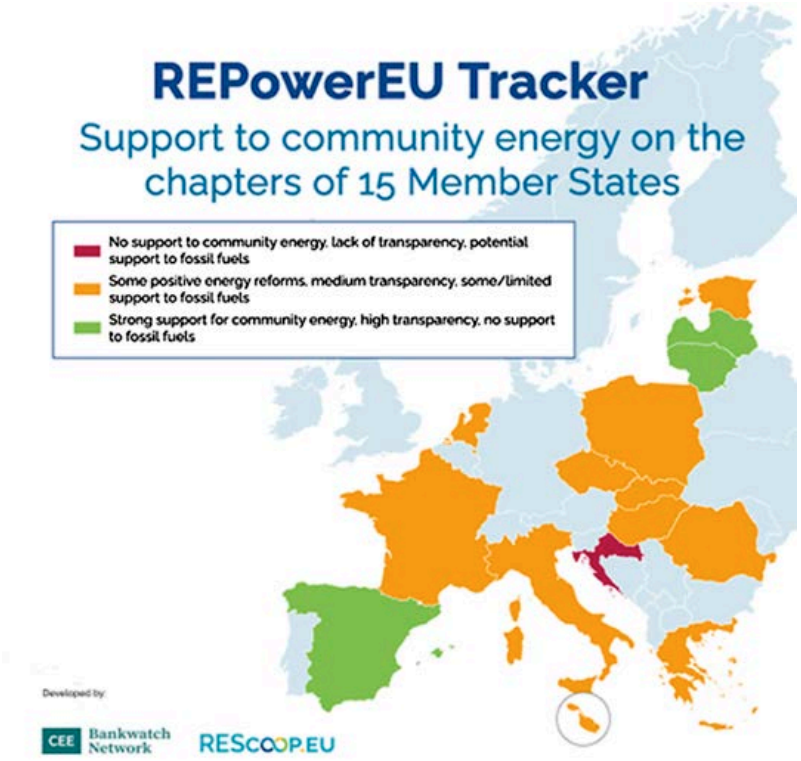
Feeding back to the AfD and heating law example, experience shows that simply imposing bans and regulations by appealing to long-term goals like fighting climate change is the perfect fodder for far-right populists. A strong counter-proposal of social justice is needed. The good news? Addressing social inequalities concurrently with the climate crisis is a widely popular proposal, with a staggering 68 per cent of Europeans being in favour of such a dual approach.

In light of growing populist, and often defeatist, anti-climate rhetoric, civil society must loudly and unapologetically debunk the false dilemma that pits "climate" against "people", and urge policymakers to adopt cross-cutting, intersectional climate policies. In light of the upcoming 2024 European Elections, civil society must demonstrate concrete actions that countries can take to concurrently address social and climate justice.

Solutions like energy communities can promote the faster uptake of clean energy, while reducing bills for households, especially the vulnerable, and building energy security. Despite the political grandstanding against "woke" climate policies, new analysis by REScoop.eu and CEE Bankwatch shows that countries are stepping up investments and reforms to accelerate clean energy. The analysis of the updated Recovery and Resilience Plans, including REPowerEU chapters, from 15 member states shows broad support for accelerated permitting, energy efficiency, and renewable energy. The many reforms and investments specifically around energy communities indicate that countries are taking the need to promote climate policies that are inherently socially just into serious consideration.

Democratic energy

Though mindful not to oversell any solution as a silver bullet, energy communities warrant particular attention. Explicitly functioning as not-for-profit entities following European Directives, they offer a practical articulation of the post-growth vision by prioritising social and environmental outcomes over profit. Energy communities thus not only inspire politically but also address everyday realities by co-developing actionable solutions. They are legal forms through which citizens, SMEs, municipalities and groups can co-own and co-benefit from local renewable energy projects. In producing energy locally, they offer cheaper, more secure access to energy for communities, shielding them from the volatile, for-profit, fossil-fuel-based energy market.



The Energy Communities Tipperary Cooperative in Ireland offers a one-stop shop for citizen-led renovations, thus helping local people achieve deep energy savings and heating comfort. In Greece, the Minoan Energy Community offers free electricity to tens of households through medium-scale, local solar projects. Enercoop, a large cooperative supplier in France, adds a small levy to its customers' electricity bills, which is collectively re-invested in renovations and other energy-saving measures for energy-poor households. In democratising production, energy communities address the yawning gap in modern "democratic" societies – there can be no real democracy without economic democracy, including direct control over food, energy, and material production.

Energy communities prefigure climate solutions that are *inherently both socially just and redistributive.* Bear with me on a thought experiment: what if the ambitious targets of the Energy Performance of Buildings Directive (EPBD) were backed with 100% upfront, zero-interest loans (or grants) funded by innovative sources like a tax on frequent flying. Take the previous example in Ireland and reapply it: imagine placing a levy on the country's top polluter (9.3 million metric tonnes of CO_2 in 2022) and circling that money back into deep renovations for vulnerable households, facilitated by trusted community organisations like local Irish energy communities. The "make or break" element for climate policies is how *relationally fair* they are perceived to be. Which Irish citizen would accept a forced housing renovation conforming with the EPBD, or a meat tax for that matter (since industrial agriculture is the second elephant in the room for Ireland), if Ryanair continues to get away with carbon tax exemptions and fake CO_2 offset campaigns?

We are sitting on a powder keg of widespread social discontent. Experts and civil society have repeatedly warned that the upcoming extension of the Emissions Trading System, which will cover transport and buildings, risks provoking a highly regressive effect, burdening vulnerable consumers. Shifting from a temporary band-aid approach of subsidising energy costs (which amounts to indirect subsidies for fossil fuels), governments are

encouraged to frontload investments in structural approaches such as deep renovations, clean heating and cooling, and (public) electric mobility. These actions, enshrined in the Commission's recent recommendations on energy poverty, are the type of foresight required to buttress European consumers from the persistent energy crisis.

Climate anxiety in check

As I write these words, Greece is enduring a heatwave stretching well into mid-November. Climate anxiety perforates my everyday life, stripping me of joy, excitement, and purpose for the future. What is the point of anything if everything is going to burn anyway? If only we could trade fungible "we told you so" moral--gratification tokens to make up for the decades of establishment inaction, perhaps I could recuperate all that lost serotonin.

In the absence of market solutions to solve the creeping rise of climate anxiety, especially among young people, we need to build up alternatives, *rapidly*. The solutions are there, and most of them are already cost-effective. The European Environmental Bureau highlights that if half of fossil fuel subsidies for heating were redirected to heat pumps, Europe could achieve a decarbonized heating system by 2040. Even when the upfront costs are very high, as in the case of (community-led) district heating projects, public national and EU funds could de-risk the first stages of project development. The Netherlands is a case in point: a multi-million public investment fund is being set up, which will be administered by the community energy organisation Energie Samen, to establish locally owned, renewable district heating projects.

We are "blah-blah-ing" ourselves towards an abysmal cliff of climate tipping points, self-reinforcing earth system feedback loops, and widespread social upheaval. We need broad political coalitions that can translate this sense of urgency into a convincing, populist narrative that excites, angers, enthuses, and, above all, connects. The glacial progress of international politics in addressing climate and socioeconomic crises feels all-encom-

passing. Yet, across the world, a multitude of intangibles is taking root: eco-socialist ideas; beyond growth concepts and theories; horizontal ways of organising such as energy cooperatives.

I do not know if this is what keeps my climate anxiety in check, feeding me the much-necessary hope and drive to continue. Maybe it is just raw anger against a cannibalistic system pulling apart the fabric that weaves life systems together. What matters is that we have never before veered so close to catastrophe and utopia simultaneously, and in these trying times our vision and conviction should remain resolute: from a strong internationalist perspective, European progressives must unite in pushing for a (global) Green Deal with practical, community-rooted solutions that genuinely leave no one behind.

Melissa García-Lamarca[1]

Insurgent acts of being-in-common and housing in Spain: making urban commons?[2]

Introduction

In the second decade of the twenty-first century, it is clear that the urban is no longer merely a site of contentious politics, but one of its primary stakes.[3] Indeed, the urban has (re)emerged across the world as ground zero for insurgent struggles over democracy, capitalism and urban space itself. Shaped by context--specific social, political and economic factors, those engaged in occupying public spaces seek to universalize principles of equality and demand their voices be heard at the same level as those that constitute the order that maintains the status quo.[4] At the same time, these oppositional movements face a pressing need to develop long-term im/material infrastructures towards building real and lasting alternatives.[5]

These struggles, furthermore, rub uneasily against the dynamics of urbanization, embedded in a system with a perpetual

1 Melissa García-Lamarca is an Associate Senior Lecturer at the Lund University Centre for Sustainability Studies in Sweden.

2 This contribution has been originally published In M. Dellenbaugh, M. Kip, M. Bieniok, A.K. Müller & M. Schwegmann (Eds.), *Urban Commons: Moving Beyond State and Market* (pp. 165-177). Berlin, Basel: Birkhäuser.

3 Neil Brenner, "Theses on Urbanization," *Public Culture 25*, no. 1 (2013): 89.

4 Erik Swyngedouw, "'Every revolution has its square': politicizing the post-political city," in *Urban constellations*, ed. Matthew Gandy (Berlin: Jovis, 2011): 22-25.

5 Jeff Shantz, *Commonist Tendencies: Mutual Aid Beyond Communism* (brooklyn: punctum books, 2013), 1.

need to find profitable terrains for economic surplus production, appropriation and absorption.[6] The capitalist mode of production is rooted in the commons that necessarily become part of the urban through the production of space in the city. Urban real estate thus acts as a key mechanism through which the common wealth of the metropolis is privatized,[7] feeding an economic sector founded on credit and rent that facilitates a fundamental redistribution of value. In such a context, what possibilities do insurgent[8] acts of being-in-common have to make urban commons as emancipatory configurations, as processes towards offering a real and durable alternative?

This chapter unfolds three paths to address this question, developed in three sections. Towards defining the urban commons, the first section unpacks »the commons" and »the common" as socio-historically produced configurations, highlighting how both are material and immaterial as well as natural and historical, with both emancipatory and repressive potential. The second section unravels how urban real estate encloses commons at multiple scales, while the third and final section explores how emancipatory urban political activities, specifically acts of being-in-common, relate to making urban commons. These last two sections are grounded in the Spanish urban political economic context of the country's 1997-2007 speculative real estate boom and the forms of being-in-common of Spain's most extensive housing rights movement, the Platform for Mortgage Affected People (PAH), respectively. The conclusion reflects on the question driving this paper, namely, the potential of acts of being-in-common in building emancipatory urban commons.

6 David Harvey, *The Urbanization of Capital* (Oxford: Basil Blackwell Ltd., 1985).

7 Michael Hardt and Antonio Negri, *Commonwealth* (Cambridge: Harvard University Press, 2009), 154.

8 Insurgency is understood here as "a provocation, a forceful intervention that aims not to constitute a singular new order from whole cloth but to radically destabilize authorized forms of power, knowledge and organization and, in so doing, to create the space necessary for new acts of constitution" (Juris and Khasnabish, 2013: 7).

Urban commons: conceptualizing the commons and the common

Early modern European social theorists conceived of "the commons" as the bounty of nature available to humanity, such as air, water, and land, elements often posed in religious terms as the inheritance of humanity as a whole.[9] Hardin's Tragedy of the Commons (1968) was crucial in popularizing, and grossly oversimplifying, the idea of the commons through a neo-Malthusian approach; his influence has endured in creating a false dichotomy between public and private property forms as the only solutions. While the extensive work of Elinor Ostrom and her colleagues[10] has disrupted some of Hardin's thinking through attempts to empirically understand how complex systems of collective management operate, they tend to focus on the internal dynamics of so-called 'natural' commons while neither contextualizing nor questioning the larger political economic structures (e.g. the dynamics of capital accumulation and expansion) of which they are a part.

This raises a larger point regarding much of this 'natural resource' commons literature based on Ostrom and her colleagues' work: it is either conservative or apolitical, neither addressing nor questioning the socio-natural relations of capitalism underlying property relations and the organization of social life, and operates uncritically within liberal-democratic capitalist frameworks. Capitalist development is compatible with many common property systems of resource management,[11] just as the common, discussed below, is an integral part of the capitalist mode of production. Yet if one seeks to ascertain how commons can contribute to a more emancipatory political configuration, it is critical to embed

9 Ibid., viii.

10 For example see Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge, UK: The University of Cambridge, 1990); Elinor Ostrom, "Coping with Tragedies of the Commons," *Annual review of political science 2* (1999): 493–535; Thomas Dietz, Elinor Ostrom and Paul C. Stern, "The Struggle to Govern the Commons," *Science* 302 (2003): 1907–1912.

11 George Caffentzis, "A Tale of Two Conferences: the Crisis of Neoliberalism and Question of the Commons" *the Commoner,* December, 2010, http://www.commoner.org.uk/wp-content/uploads/2010/12/caffentzis_a-tale-of-two-conferences.pdf (accessed August 20, 2013).

explorations of commons in their historical and current political economic dynamics.

Furthermore, references to the commons as resources, or 'natural' resources, reflects a utilitarian and static conceptualization that sweeps their political and socio-natural reality under the table.[12] This emerges in much of the writing around the 'new commons,'[13] where the urban commons, defined flatly as collectively shared urban resources, is a growing field. Urban studies and planning[14] and legal studies[15] are just two fields where these (largely depoliticized) explorations are emerging. Conceptualizing the commons instead as an activity – as relational, not static – is fundamental to unpack the dynamic relationships in society that are inseparable from relations to our environment.[16]

The common, intimately connected to the commons, refers to language, affect, knowledge, creativity and thought; in other words, "immaterial" dynamics collectively shared through networks of social relations. A shifting importance from the commons to the common has been increasingly recognized. Agamben[17] highlights

12 It is important to recognize that "resources can be defined only in relationship to the mode of production which seeks to make use of them and which simultaneously 'produces' them through both the physical and mental activity of the users" (David Harvey as cited in Erik Swyngedouw, "The City as a Hybrid: On Nature, Society and Cyborg Urbanization," *Capitalism Nature Socialism* 7, no. 2 (1996): 65).

13 See for example Frank Van Laerhoven and Elinor Ostrom, "Traditions and Trends in the Study of the Commons," *International Journal of the Commons* 1, no. 1 (2007): 3–28.

14 For example Shin Lee and Chris Webster, "Enclosure of the Urban Commons," *Geojournal* 66, no. 1/2 (2006): 27–42; Ian McShane, "Trojan Horse or Adaptive Institutions? Some Reflections on Urban Commons in Australia," *Urban Policy and Research* 28, no. 1 (2010): 101–116; Jeremy Németh, "Controlling the Commons: How Public Is Public Space?" *Urban Affairs Review* 48, no. 6 (2012): 811–835.

15 For example Sheila R. Foster, "Collective Action and the Urban Commons," *Notre Dame Law Review* 87, no. 1 (2011): 57–134; Nichole Stelle Garnett, "Managing the Urban Commons" *University of Pennsylvania Law Review* 160 (2012): 1995–2027.

16 Peter Linebaugh, *The Magna Carta Manifesto: Liberties and Commons for All* (Berkeley: University of California Press, 2008), 279. From here onward, the commons is understood as a dynamic social relation configured and reconfigured through socio-historical relations and socio-spatial practices, a contested, collective terrain that is under constant transformation, holding both emancipatory and repressive potential.

17 Giorgio Agamben, *The Coming Community* (Minneapolis: University of Minnesota Press, 1993), 79.

how capitalism has been directed not only towards expropriating productive activity but also to the alienation of the very linguistic and communicative nature of humans. Hardt and Negri discuss how the figure of immaterial labor-power occupies an increasingly central position in capitalist production, where the common is the basis of economic production both as a productive force and as the form in which wealth is produced.[18] Much of this writing on the common focuses on how the neoliberal assault is subsuming people into the equation through its seizure of knowledge, language and affect, among others,[19] in what Jodi Dean[20] defines as communicative capitalism.

The common plays a key role in one of the contradictions of capitalism identified by Marx, namely between productive forces and the social relations of production, which generates crises and conflicts that provide potential openings for a transition to socialism. The common, and the commons, are thus clearly embedded in the forces of production through socio-historical processes, and indeed the common is generated through labor's inherently collective process such as pooling resources and the social cooperation of labor.[21] Hardt and Negri[22] envision that the contradiction Marx invokes between the social nature of capitalist production and the private character of capitalist accumulation will result in capitalism sowing the seeds of its own downfall.

While the common is, without a doubt, transforming capitalism in new and unforeseen ways, I posit that it is fundamental to understand how such processes feed into and interact with social struggles over access to, control over, and enclosures of the commons. Following Dean,[23] I believe that the commons must be conceived as equally material and immaterial, as well as re-

18 Hardt and Negri, *Commonwealth*, 280.

19 See Michael Hardt, "The Common in Communism" in *The Idea of Communism*, ed. Costas Douzinas and Slavoj Žižek (London: Verso, 2010), 134.

20 Jodi Dean, *The Communist Horizon* (London: Verso, 2012), 124.

21 Massimo De Angelis, "The Tragedy of the Capitalist Commons," *Turbulence*, http://turbulence.org.uk/turbulence-5/capitalist-commons/ (accessed September 19, 2014).

22 Hardt and Negri, *Commonwealth*, 288.

23 Dean, *The Communist Horizon*, 135.

lational and historical. The commons is often considered only in material terms, characterized by scarcity, but they also have an important immaterial component in their relational meaning that emerges through affect, knowledge, and language. As long as such elements are contextualized in the commons, such thinking can open up ways of instituting politically being-in-common and making commons beyond debates around property regimes and institutional formations. Similarly, while the common is infinite and characterized by surplus, it is embedded within and constitutive of material production and, especially, relationships. So while the common plays a fundamental role in the new frontier of capitalism, the material basis that enables the production of the common is deeply intertwined in the commons.

I thus conceptualize urban commons as a dynamic social relationship that is configured and reconfigured through time and struggle, through socio-historical relations and urban socio-spatial practices; they are a contested, collective material and immaterial terrain. As these dynamics have both repressive and emancipatory potential, politicizing commons is fundamental in order to question how and who creates what kinds of commons. Towards this end, employing the enclosure-commons dialectic can be used to think through processes of exclusion and alterity,[24] as explored in the following section in the case of Spain.

Enclosing commons: Spain's urban political economic condition

The enclosure of the commons has become the modus operandi of neoliberal urbanism today, a process aimed at finding new outlets for capital accumulation through controlling the use and exchange value of urban space or shutting down access to any urban space or sociality that creates non-commodified means of reproduction and a challenge to capitalist social relations.[25] En-

[24] Alex Jeffrey, Colin McFarlane, and Alex Vasudevan, "Rethinking Enclosure: Space, Subjectivity and the Commons," *Antipode* 44, no. 4 (2012): 1247.

[25] Stuart Hodkinson, "The New Urban Enclosures," *City: analysis of urban trends, culture,*

closure speaks not only to original accumulation[26] or the resurgence of statist violence, but also to a messy, practical and highly conflicted claiming of the commons.[27] It forcibly incorporates dynamics that were outside capital accumulation into capitalist production and circulation,[28] as capital acts as a life-colonizing force seeking endless growth and self-reproduction.[29]

Urban real estate acts as a key mechanism through which the common wealth of the metropolis is privatized.[30] This process occurred both at the scale of the urban and at the scale of the body in Spain's third real estate cycle (Figure 1) from 1997 to 2007, the most extensive and profitable boom in the country's history. In terms of the first scale, the construction of housing was embedded in a process where the expanding built environment transformed 'public' wealth and wealth held socially in common into private property. During this period, the compound annual growth rate in nominal house prices was over 10%[31] and the total housing stock increased by over 6 million units.[32] With almost 900,000 housing starts in 2006 alone – exceeding those of France, Germany and Italy combined[33] – the country's built area expanded by almost a quarter of total built area during the boom.[34] In 2006, Spain held

theory, policy, action 16, no. 5 (2012): 515.

26 Karl Marx, Capital: *A Critique of Political Economy, Volume I* 1867 (New York: Penguin Books, 1982), 873.

27 Alex Vasudevan, Colin McFarlane and Alex Jeffrey, "Spaces of Enclosure," *Geoforum* 39, no. 5 (2008): 1642.

28 Isaac Kamola and Eli Meyerhoff, "Creating Commons: Divided Governance, Participatory Management, and Struggles Against Enclosure in the University," *Polygraph* 21 (2009): 6.

29 Massimo De Angelis, *The Beginning of History: Value Struggles and Global Capital* (London: Pluto Press, 2007), 6.

30 Michael Hardt and Antonio Negri, *Commonwealth*, 156.

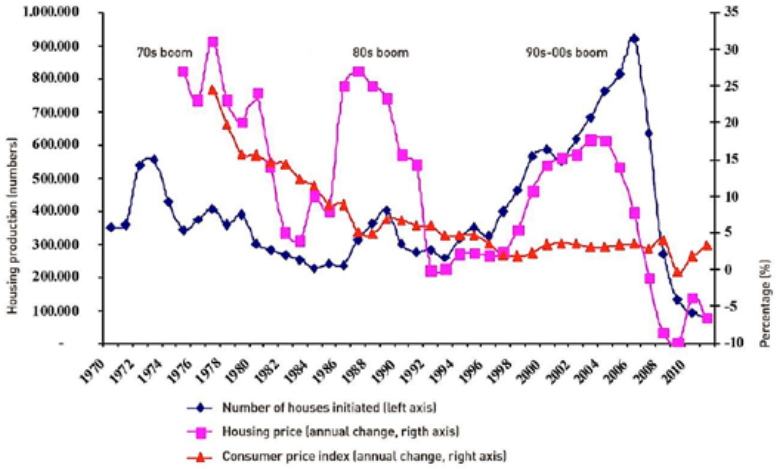
31 European Mortgage Federation, *2010 EMF Study on the Cost of Housing in Europe* (Brussels, 2010), 11.

32 European Mortgage Federation, *Hypostat 2010: A Review of Europe's Mortgage and Housing Markets* (Brussels, 2011), 73.

33 Isidro López and Emmanuel Rodríguez, "The Spanish Model" *New Left Review* 69 (2011): 20.

34 José Manual Naredo, Óscar Carpintero and Carmen Marcos, *Patrimonio Inmobiliario y Balance National de La Economía Española (1995-2007)* (Madrid: Fundación de las Cajas de Ahorros, 2008), 57

Figure 1: Spanish real estate cycles, 1970-2007



Source: Naredo et. al. (2008: 184) from National Statistics Institute (INE), Ministry of Development and Ministry of Housing

the dubious position as the European leader in its use of cement, and stood fifth globally.

While the construction sector has traditionally held a central role in the process of capital accumulation in Spain,[35] the built environment extended far further and deeper than it had previously, both mediated and compounded by the liberalization of housing, mortgage and land markets as well as various phases of EU integration.[36] By 2008, Spain ranked next to the United States in the league of countries with the largest net import of capital, with most private foreign investment fuelling the real estate sector.[37]

35 Daniel Coq-Huelva, "Urbanisation and Financialisation in the Context of a Rescaling State: The Case of Spain," *Antipode 45*, no. 5 (2013): 1220.

36 See for example Isidro López and Emmanuel Rodríguez, ibid.; María-Teresa Sánchez Martínez, "The Spanish Financial System: Facing up to the Real Estate Crisis and Credit Crunch," *European Journal of Housing Policy* 8, no. 2 (2008): 181–196; and Josep Roca Cladera and Malcolm C. Burns, "The Liberalization of the Land Market in Spain: The 1998 Reform of Urban Planning Legislation," *European Planning Studies* 8, no. 5 (2000): 547–564.

37 Marisol García, "The Breakdown of the Spanish Urban Growth Model: Social and Territorial Effects of the Global Crisis," International *Journal of Urban and Regional Research* 34, no. 4 (2010): 969.

The political and ideological project of homeownership, on the other hand, has a long history as a vaccine against social instability during Spain's dictatorship.[38] This project has shifted strategy since democracy was introduced but has by and large continued, with almost 85% of Spanish households becoming homeowners by 2007, one of the highest rates in Europe. Despite real average wages falling 10% during the boom,[39] over 820,000 mortgages were signed each year as people repeatedly heard from real estate agents, developers, builders, financial entities, public administrations and news media alike that "the price of housing never falls" or "housing is a safe investment".[40]

This process of enclosure also occurred at the scale of the body in urban space, as people were a fundamental piece of the puzzle furthering the enclosure of the commons and urban capital accumulation. The enormous increase in the 'wealth' of Spanish households – from 480% of Gross Domestic Investment (GDI) in 1995 to 800% in 2006, of which 540% corresponded to property wealth[41] – occurred at the expense of massive indebtedness, as total outstanding residential loans increased over fourfold from 155 billion euros in 1999 to 647 billion euros in 2007.[42] Mortgages tied an ever-greater portion of the population into homeownership, plugging them into the financial sector's rent extraction mechanisms.[43] In this way, mortgages can be conceived as another strategy by capital to act as a life-colonizing force. They

38 As illustrated by the first Minister of Housing in his inaugural 1957 speech: "we want a country of homeowners, not proletarians" – see José Manuel Naredo, "El Modelo Inmobiliario Español y Sus Consecuencias." *Boletín CF+ S* 44 (2010): 18.

39 López and Rodríguez, "The Spanish Model," 12.

40 Ada Colau and Adrià Alemany, *Vidas Hipotecadas: De La Burbuja Immobiliaria Al Derecho a La Vivienda* (Barcelona: Cuadrilátero de Libros, 2012), 29.

41 Sánchez Martínez, "The Spanish Financial System: Facing up to the Real Estate Crisis and Credit Crunch," 189.

42 European Mortgage Federation, *Hypostat 2010: A Review of Europe's Mortgage and Housing Markets*, 81.

43 Isidro López and Emmanuel Rodríguez, Fin de Ciclo: *Financiarización, Territorio y Sociedad de Propietarios En La Onda Larga Del Capitalismo Hispano* (1959-2010) (Madrid: Traficantes de Sueños, 2010).

aid in the enclosure of commons into private property, providing an income stream to financial institutions as land and housing titles are given to 'homeowners' as claims on their future labor.

Between 1997 and 2006, household indebtedness increased from 55% to 130% of disposable income,[44] placing Spain first worldwide for the highest percentage of long-term household mortgage debt with respect to disposable income.[45] This expanding enclosure of the commons, in its extreme, can also be thought of as a process of proletarianization of those who are thereby excluded from their own substance,[46] in other words, as the dynamic creation of a social group (homeowners) through the way in which capitalism produces, uses up and discards those it needs.[47] This is particularly true as Spain's Mortgage Act obliges those who default on their mortgage payments to continue paying if, once foreclosed and evicted, the bank's confiscation and sale of their house does not cover all outstanding costs.[48]

Since the bust of Spain's boom in 2007, such dynamics have become piercingly acute; unemployment has skyrocketed to over 25% and housing has become a massive point of contention as people are increasingly unable to meet their mortgage payments. More than half a million foreclosures and 250,000 evictions have occurred between 2008 and 2013 according to Spain's justice department, leaving hundreds of thousands with no place to live and a debt to pay for life. At the same time, at least 3.5 million units of housing are empty and banks have been bailed out with tens of billions of euros of public funds. Working and middle class people are bearing the brunt of austerity, debt, foreclosures and evictions in Spain, dynamics that have instigated and fed into a politics of forms and insurgent acts of being-in-common through

44 Albert Puig Gómez, "El Modelo Productivo Español En El Período Expansivo de 1997-2007: Insostenibilidad y Ausencia de Politicas de Cambio," *Revista de Economía Crítica* 12 (2011): 69.

45 Naredo et. al., *Patrimonio Inmobiliario y Balance National de La Economía Española* (1995-2007), 151.

46 Slajov Žižek, "How to Begin From the Beginning" in *The Idea of Communism*, ed. Costas Douzinas and Slavoj Žižek (London: Verso, 2010): 220.

47 Jodi Dean, *The Communist Horizon*, 75.

48 Jesús Castillo, "Current Reform of Spain's Mortgage Law," *Natixis special report* 47 (2013): 3.

housing rights platforms, amidst countless other mobilizations, in cities across the country. The final section of this paper provides some preliminary thoughts on how such forms and acts relate to the (emancipatory) making of urban commons.

Making urban commons? Forms and insurgent acts of being-in-common

Considering the dominant tendencies of capitalist urbanization illustrated by the Spanish case and echoed in dozens of others across the world, the construction of being-in-common is intimately related to struggles over urban commons. Resisting enclosures of the commons is not new;[49] indeed, enclosures happen all the time, as does constant commoning.[50] Following Harvey, commoning is understood here as a social practice that establishes a dynamic, collective and non-commodified social relationship between a self-defined social group and aspects of the existing or to-be-created social and/or physical environment that is crucial to its life and livelihood.[51]

Being-in-common is a subjectivity produced from a reconfiguration of the field of experience[52] when engaged in collective struggles over modes of urbanization and urban life. It is the substance and the essence of the political, aligned with De Angelis' depiction of forces that reclaim life from the privatizing and alienating dynamics of capital accumulation to rearrange social relations according to their own terms.[53] It also sides with Jodi Dean's concept of the "people as the rest of us"[54] – the 99% – as

49 Peter Linebaugh, "Enclosures from the Bottom Up," *Radical History Review* 108 (2010): 11–27.

50 An Architektur, "On the Commons: A Public Interview with Massimo De Angelis and Stavros Stavrides," *e-flux* June-August (2010): 1–17.

51 David Harvey, *Rebel Cities: From the Right to the City to the Urban Revolution* (London: Verso, 2012), 73.

52 Jacques Rancière, *Disagreement: Politics and Philosophy* (Minneapolis: University of Minnesota Press, 1999), 36

53 De Angelis, *The Beginning of History*, 6.

54 Dean, *The Communist Horizon*, 69.

well as with Jacques Rancière's notion of "the part of no part." This idea designates the interruption of a given order by those who have no part in it, illustrating exactly this gap between the existing order and other possible futures.[55]

Those who constitute housing rights platforms in Spain were people who allegedly "had a part," who obtained the credential of "first-class citizens" through being property owners,[56] but are now the part with no part as they have been foreclosed, evicted and often indebted for life. The Platform for Mortgage Affected People (PAH), the most active housing rights movement in the country, was founded in Barcelona in 2009 for the right to housing and has since mushroomed to over 200 branches across Spain. Their three basic, non-negotiable demands include the cancellation of mortgage debt upon handover of the property to the bank (dation in payment), an immediate stop to all evictions where it is the family home and sole property, and the creation of a public park of social housing from empty housing held by financial institutions.

The PAH's method of organization is rooted in various forms of being-in-common, grounded first and foremost in weekly assemblies where people who can no longer pay their mortgage and/or are facing eviction and other solidarity activists come together to coordinate actions and carry out collective advising for mortgage-affected families. Assemblies are fundamental spaces where collective knowledge on how to stall or counteract foreclosure and eviction processes is shared and expanded, and where individuals' fear and shame are shed; it is a place of collective support and support of the collective. Aside from coordinating broader campaigns and actions, here people organize to accompany people seeking mortgage debt forgiveness on visits to their bank branch to demand a response from the director, or to occupy the bank if negotiations are stalled, to mobilize to stop an eviction by placing their bodies in front of the entrance so that the police and the judicial committee carrying out the eviction order cannot enter, or to support empty bank-owned

55 Rancière, *Disagreement*, 11-12.

56 Colau and Alemany, *Vidas hipotecadas*, 74.

flat occupations for mortgaged/evicted families with no housing alternative, among many others. Commoning is ever-present through the PAH's ways of speaking and acting, where a collective – and conflictive – struggle and response is built from individually experienced housing problems.

On the one hand, the PAH fights for and demands that the state fulfill its role as a universal provider of welfare, in particular housing, to all of Spain's residents. But since the state has been too slow or unable/unwilling to provide political and practical solutions, the PAH acts through a collective, horizontal, non-violent, assembly-based and non-party affiliated process, creating a dynamic and non-commodified social relationship between the group and its social and/or physical environment. They generate tools and knowledge based on experience and actions that are shared with all, not only homeowners facing mortgage or eviction problems.[57]

In response to urgent needs, the PAH reclaims the material and symbolic use value of the city, appropriating conceived space and time[58] to simultaneously challenge the hegemony and to rupture the consensus that such spaces hold. Some of these insurgent acts of being-in-common include blocking evictions of mortgaged households and occupying empty bank-owned buildings for mortgaged evicted families. The former involves dozens upon dozens of bodies physically blocking the entrance to properties as eviction orders are being delivered, a tactic first used in November 2009 in Catalonia. Since this time over 1,130 evictions have been blocked across Spain, and banks have been forced to negotiate social rent (30% of a family's income). Building occupations target those vacant dwellings owned by banks that were bailed out by public purses. PAH members have recuperated over 30 buildings across the country, most concentrated in the Barcelona Metropolitan Region and in Madrid, rehousing over 1,150 people. Once occupied, the PAH enters into negotiations with the bank that owns the building for occupying families to pay a social rent.

57 These collective tools are available at http://afectadosporlahipoteca.com/documentos-utiles/

58 Henri Lefebvre, *The Production of Space* [1974] (Oxford: Blackwell, 1991).

The relation of such actions to making urban commons as emancipatory configurations is by no means stable, but is rather undergoing constant temporal and spatial change. For example, the im/material combination of bodies, the gathering of support, solidarity and affect when the PAH acts in common to block evictions can be understood as a process of commoning. Yet what happens to these im/material dynamics once the eviction is blocked? How is the collective and non-commodified relationship between the social and physical environment sustained, for example through assembly spaces and further collective actions? Commoning can be seen in a more sustained fashion in the PAH's collective recuperation of housing, through the relationships built between the occupying group and their social and physical environment as they dwell together and organize themselves. The PAH's occupation manual[59] advises building recuperators to hold regular collective meetings, to legitimize the social value of the occupation by distributing information sheets and talking to neighbors, and to create a neighborhood association for the building to normalize their status, for example. While these give some sense of the urban commons being created, and how they might traverse outside the building, it remains to be seen how and if they can be sustained towards a long-term enactment of realizing other possible futures that transform the existing order.

Closing thoughts

Regarding thinking through the role of forms and insurgent acts of being-in-common in making emancipatory urban commons, this paper began by theoretically unpacking the commons and the common, defining the urban commons as social relationship continuously (re)configured through socio-historical relations and socio-spatial practices, a contested, conflictive im/material terrain with both emancipatory and repressive poten-

59 See La Plataforma de Afectados por la Hipoteca, *Manual de Obra Social*, available at http://afectadosporlahipoteca.com/wp-content/uploads/2013/07/MANUAL-OBRA-SOCIAL-WEB-ALTA.pdf.

tial. The case of Spain was used to illustrate how the enclosure of commons through urban real estate development during the 1997-2007 boom was deeply intertwined with the rent extraction processes embedded in urbanization, and how this operated at the urban scale with the building boom and at the scale of the body through the provision of mortgages. Countering capital as a life-colonizing force, the life-reclaiming forces that emerge through being-in-common were explored theoretically and through the actions of the Platform for Mortgage Affected People (PAH) in Spain, thinking through the connections that some of their forms and acts of being-in-common rupturing the current order might have to making urban commons.

Critically thinking through urban commons opens up a possibility to rethink neoliberalized urban political economic and ecological orders, opening another window to assess who participates in and who benefits from how built environments are produced and reproduced. Due to the emancipatory and repressive potential of urban commons, their creation in itself does not necessarily lead to a real or durable alternative to capitalism and/or the dominant 'police' order. While they offer valuable potential to think through other configurations that are inherently contested and problematic, this exploration, grounded in the urban struggles over housing in Spain, illustrated the importance of understanding the spatial and temporal dimensions of urban commons, highlighting the need to unpack them through a sustained experience that, in this case, is still in the making. Actions of politically being-in-common might only create dynamic, temporally limited urban commons that enact equality for those who have no part, although – depending on their spatial extension, reception and impact – in the long-term they could have a profound impact on capitalist social relations and the production of urban space. Nonetheless, sustaining these insurgent activities remains one of the central components of an emancipatory politics, for those who do not form part of the system – the 99% – to be-in-common and enact equality on their (our) own terms.

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Giustina Selvelli[1]

Endangered Languages, Endangered Environments: Reflections on An Integrated Approach Towards Current Issues of Ecocultural Diversity Loss

Introduction: threats to biodiversity and linguistic diversity

Since the onset of colonialism in the 15th century, social and ecological changes have been radical and disruptive, with serious consequences, particularly for the survival of vulnerable communities, their languages and their biodiverse habitats (Ghosh 2021). The processes of land dispossession and resource extraction have led not only to the destruction, flooding and submergence of natural wonders, but also of entire social and ethnic groups.

In the last century, the disappearance of minority and indigenous environments and cultures has been accelerated by processes of globalization, urbanization, industrialization and neo-colonialism. Indeed, environmental concerns were given little importance on both sides of the Iron Curtain before the 1960s and the emergence of modern environmental movements: states and societies prioritized economic growth and national security interests over everything else (Kirchhof Mignon and Mc Neill, 2019). Both communist regimes and capitalist societies, driven by the ideology of economic growth and the notion of nature as

[1] Giustina Selvelli is an anthropologist, writer and activist from the University of Ljubljana.

a mere resource, have contributed to the current crisis of biodiversity and linguistic loss we face today, in which countless environmental and cultural landscapes inhabited by communities speaking endangered languages are being wiped off the face of the earth due to economic development pressures, in the form of extractivism (Rivera Andía & Vindal Ødegaard 2019).

Today, the extinction of languages is part of the bigger picture of worldwide near total collapse of ecosystems. In an era characterized by constant technological progress, accelerated communication, socio-economic homogenization and the abandonment of rural areas, the survival of a number of endangered cultural elements and their ecosystems in all parts of the world is facing major challenges. A particularly high price is paid by the languages preserved by indigenous peoples who are linked to traditional ways of life and maintain a privileged relationship with their territory.

An endangered language is a language that is threatened with extinction because its speakers are dying out or switching to another language. Although languages have gone extinct throughout human history, the rate at which they are currently disappearing is unprecedented: 40% of the approximately 7,000 languages are currently threatened with extinction and it is predicted that at least 1,500 languages will have disappeared by 2100 (Olko & Sallabank 2021). There are many types of causes of language endangerment. Firstly, there are causes that physically endanger the population speaking the languages, such as natural disasters, man-made environmental degradation, famine, disease, war and genocide. Then there are the causes that prevent or discourage speakers from using a language, such as political oppression and cultural/political/economic marginalization/hegemony. In many cases, the two causes are linked: for example, patterns of marginalization and discrimination often precede the destruction of the natural environment in which communities speaking endangered languages live (see Brynne Voyles 2015 and Selvelli 2025, forthcoming).

Each language reflects a unique worldview, value system, philosophy and cultural characteristics. For minority communities, languages are carriers of traditions: they underpin cultural

identity and are an essential part of their heritage. The extinction of a language means the loss of cultural, historical, spiritual and ecological knowledge that can be vital not only for the speakers but also for countless other people: a historical heritage of inestimable value for humanity as a whole. Since the most important factor is the attitude of the community of speakers towards their own language, it is essential to create a social and political environment that promotes multilingualism and respect for minority languages, so that speaking such a language is an enrichment and not a source of discrimination. However, it is important not to neglect the role that the physical environment in which communities live plays in maintaining social cohesion and thus in the transmission of the language.

Interrelationship of nature and language: a missing link in academic research?

Languages, like their speakers, are living entities that are constantly evolving, and the changes in their use reflect the broader relationships within their social, political and natural ecosystems. Surprisingly, the complementarity of language and environment as threatened elements has received relatively little scientific interest: Although research into the degradation of indigenous and native peoples' habitats has been a topic that has attracted considerable attention in both academia and the media worldwide for many years (Gray 1996), and although linguists have increasingly addressed the issue of endangered languages in recent decades, there appears to be a research gap. The role of the natural environment in the preservation of endangered languages of minorities and indigenous communities worldwide, including the European continent, has not yet been studied in a comprehensive, relational way, apart from the studies on biocultural diversity expressed in the publications in this field by Luisa Maffi and others (see Maffi 2018, Maffi & Woodley 2010). As suggested by Franco 2022, the field of biocultural diversity studies, which advocates an inextricable link between linguistic, cultural and biological diversity, might be

better defined as 'ecocultural diversity' to distinguish it from the biocultural approach that emerged in anthropology in the 1970s, an interdisciplinary and comparative approach is essential to shed light on the multiple meanings of ecological change and damage for different cultures and societies. Against this background, a relational approach proves helpful, aiming to overcome the separation and dichotomy between the study of the biological life of human organisms in their environment and the cultural life of their minds (Bateson 1972) in society.

This perspective, which I refer to here as 'ecocultural', (preferring this term to 'biocultural') highlights the reciprocal links between humans and place and recognizes the communicative bonds that connect humans to their environment and other social entities, which has been defined as 'sentient ecology' (Anderson 2002: 116). It also sees an inextricable link between ecological and cultural heritage. The ecocultural concept brings together the social, political and ecological dimensions of identity and views humans as cultural and ecological beings. Although the link between our identity and our ecology has long been recognized in many societies (especially those of indigenous communities), others seem to have forgotten its crucial importance (Milstein & Castro-Sotomayor 2020).

At present, the adoption of the ecocultural perspective in academia appears to have been better received by scholars in North and Latin America. In the European academic tradition, for example, the field of minority studies too often focuses only on the cultural elements (folklore and traditions, subordinate position in the system of cultural-political representation) or adopts a purely linguistic-descriptive focus (documenting the formal aspects of endangered languages) and neglects the broader economic, political and ecological aspects that determine the daily living conditions of minorities and the challenges of contemporary glocal phenomena for their societies. Moreover, mainstream linguistics has been and is too often preoccupied with treating languages and their speakers as mere »data sources« "and, in the context of endangered languages, seems uninterested in examining the concrete elements of speakers' environments and lives when analyzing

the conditions for the preservation of linguistic diversity., The field of language ecology (Haugen 1972) has in most cases retained only the metaphorical meaning of 'ecology', without incorporating the physical ecological environment or the relationship to other species. In recent years, an (albeit small) branch of ecolinguistics (see Skutnabb Kangas & Harmon 2017) and the emerging field of environmental linguistics have contributed to emphasize the "mutual relationship between cultural and ecological diversity" (Harrison 2023). They have also highlighted the linguistic implications of threats to the natural environment and the link between biodiversity loss and the loss of linguistic diversity, particularly among indigenous groups and minorities around the world.

In this era of ecosystem destruction, it is clear that an integrated ecocultural vision inspired by a "re-attachment of language to nature" (Harrison 2019) is needed, taking into account the cultural and linguistic consequences of ecological change for communities affected by patterns of environmental degradation. A truly interdisciplinary approach that is sensitive to our globalized environmental problems should be able to recognize the anachronistic nature of any distinction between human history and natural history (Chakrabarty 2009). This approach is based on a relational and cybernetic principle inspired in particular by the theories of the multifaceted scientist Gregory Bateson (1972).

The vulnerable position of minority and indigenous heritage

We are in a time of loss of biocultural/ethnolinguistic diversity, in which we as scholars are called to support the struggles of ethnic minorities to preserve the diversity of languages, cultures and environments from the perspectives of sustainability, diversity and indigenous/minority rights. Minorities and indigenous groups seem to have been largely excluded from the debate on environmental change and remain underrepresented in the debates on the so-called green transition, which directly threatens their territories and resources and thus their cultural heritage. Even

though endangered languages are recognized and protected as intangible heritage in international discourse and rhetoric, as expressed for example in initiatives to preserve linguistic diversity such as the UN Decade of Indigenous Languages, European policies to promote multilingualism and the Convention on linguistic rights (Barcelona 1996), this does not apply to their tangible heritage, which also corresponds to natural environmental heritage. Thus, linguistic rights and environmental rights are not meaningfully related to each other, favouring a more abstract understanding of culture that tends to neglect the importance of the natural environment. In such 'unintegrated' views, the relationship between natural conditions and culture is relatively loose (Laschewski, 2013: 25) and the social component of communities is understood to be independent of specific feelings and practices of attachment to places, and elements of the natural environment. This tendency is problematic, since it portrays indigenous and minority communities as existing in "the "sphere of culture, free of an environmental-material dimension" (Lippart, 2020).

According to an ecocultural (Franco 2022) interpretation, issues related to the preservation of linguistic diversity cannot be considered in isolation from the analysis of the material/ecological environment (Edmonds 2021) in which minority groups live and the social factors that influence their existence. This also has implications for the wider political-ecological dynamics relating to resource extraction and access in areas inhabited by minority/indigenous communities, with the corresponding issues of power relations and relationships with local indigenous knowledge systems. Against this background, I believe that there is an urgent need to include the voices and experiences of indigenous minorities who have lived in their lands for centuries and have a privileged relationship with their environmental heritage (Xanthaki 2019) in the debate on sustainability and the conservation of ecocultural diversity at the global level (see Cultural Survival). An ecocultural approach to the loss of linguistic diversity, complemented by a political-ecological approach that integrates social and natural sciences, helps to shed light on the relationality and interconnectedness

of environmental and socio-cultural phenomena in a minority and indigenous perspective of endangerment.

Given the specific and strong cultural connection that many indigenous groups and minorities maintain with their land (Ford et al. 2020), the physical destruction caused by development projects (such as mining, hydroelectric dams, etc.) is potentially more damaging than for other 'majority' groups in terms of preserving cultural (including linguistic) diversity. The impact of man-made environmental degradation on minorities should be analyzed both diachronically and synchronically in a comparative perspective in a global context, pointing to a variety of historical and contemporary cases involving marginalized minorities and indigenous groups that seem to have been particularly neglected in the national modernization narratives of both capitalist and communist states and continue to be subjected to forms of neocolonialism, land dispossession and cultural genocide. In this context, human rights issues of minorities/indigenous groups and ecological issues of environmental conservation seem to be an indissoluble issue that relates to the broader framework of social ecology, as the preservation of eco-cultural diversity enables the transmission of traditional knowledge, practices and languages across generations (Maffi & Woodley 2010).

Environmental injustice affecting indigenous people worldwide

The heritage of ethnic minorities and indigenous peoples is disproportionately affected by patterns of marginalization and man-made environmental degradation. Is this just a coincidence, or is it a specific pattern of »nationalization«? On all continents (with the exception of Antarctica), minorities and indigenous peoples have been subject to environmental degradation, with profound consequences for the maintenance of ecocultural health, which consists of "a dynamic interaction of nature and culture that allows for the co-evolution of both without compromising either critical ecosystem processes or the vitality of cultures" (Rapport 2011: 1044).

In Europe, these complex ecocultural patterns were disrupted, for example, in the case of the Sorbian communities in Germany, the Saami communities in Norway and the Vlach communities in Serbia, leading to an erosion of the environment and a threat to the minority language. In the case of the Sorbs, lignite mining in the area inhabited by this minority in eastern Germany began more than a century ago. It has led to the physical destruction of dozens of villages (137), with thousands of people affected by displacement and resettlement. The protests against lignite mining have sometimes taken on a cross-border character, with Polish activists also involved. The Sorbian village of Mühlrose is currently being demolished to make way for the Nochten open-cast mine.

In Asia, we can refer to the case of the Sakha (Yakut) people in Yakutia within the Russian Federation; to the case of the Karakalpaks in Uzbekistan, who inhabiting the area where the Aral Sea was located, but also to the Ainu in Japan. As for the Sakha people, this minority and other indigenous groups in this part of Siberia have been affected by the diamond mines for decades. The Vilyuy River, located in a remote area of the Sakha Republic, used to be crystal clear and rich in fish, but is now heavily polluted by diamond mining, which has led to an impoverishment of local biodiversity. In the past, especially in the 1990s, there were protests against the Aykhal and Udachyy diamond mines, but these were immediately suppressed (Crate 1997).

In Africa, environmental erosion has affected the lives and languages of the Ogoni people in Nigeria, the Nubian people in Egypt and the Amazigh communities in Morocco. Shell's environmental destruction of the territories inhabited by the Ogoni minority in the Niger Delta in Nigeria due to oil spills dates back to the late 1950s. It has devastated the land, contaminated the water and air and affected human and animal health. Ken Saro-Wiwa and eight other Ogoni activists who were part of the Movement for the Survival of the Ogoni People were executed by the Nigerian military dictatorship in 1995 for speaking out against Shell over the oil spills (Omoweh 2005).

In North America, communities at risk from resource extraction include the Hualapai (who speak the endangered Upland Yuman languages) in the Big Sandy River area (USA), the Cochiti tribe (and their language, Rio Grande Keresan) in the USA and the Beaver Lake Cree Nation (who speak the endangered Nēhiyawēwin language) in Canada. As for the Hualapai people, their lives are impacted by the Big Sandy Lithium Project in western Arizona, with initial drilling (with 37 exploration wells) taking place in July 2018. The planned development of this lithium mine would destroy the Cofer Hot Springs (Ha'Kamwe'), a medicinal site considered sacred by the local Hualapai tribe: For this reason, there have been protests for years. However, the Australian company Hawkstone Mining Limited continues to maintain that the Big Sandy lithium is ideally suited for the production of lithium batteries for electronic devices and electric vehicles (Kelety 2021).

In South America, communities such as the Manduruku in Teles Pires, Brazil, the Mapuche in Araucania, Chile, and the Kariña (Kari'nja speaking) in Anzoátegui, Venezuela, have paid a high price for environmental injustice. The Teles Pires dam in the Amazon basin, for example, resulted in the blasting of sacred rapids (Karobixexe) for the indigenous Munduruku people and the removal of 12 sacred urns, leading to local protests and actions that were suppressed with police violence (Fearnside 2020). Unlike other dam projects that have been widely reported in the Brazilian and international press, the Teles Pires dam has been ignored due to various factors, such as its geographical remoteness. The paradox is that the Teles Pires Hydroelectric Company has received several green awards for its projects and has also secured carbon credits from the United Nations.

Last but not least is the continent of Oceania, where indigenous peoples such as the Anangu Pitjantjatjara in Maralinga, Australia, the Kanak (who speak the endangered Numèè language) in New Caledonia and the Maori in New Zealand are suffering from various forms of environmental degradation. In particular, the British nuclear tests in the 1950s and 1960s led to many Anangu (Pitjantjatjara), the indigenous people of South Australia,

being forcibly removed from their traditional lands in the run--up to the tests. The forced relocation destroyed the traditional way of life of the Aboriginal families (Palmer 1990). Even today, the lands in the Maralinga area remain problematic for settlement, particularly for traditional cooking. Unsurprisingly, the Aboriginal people of these areas still feel grief and loss over the contamination of their ancestral lands.

Conclusions: ecocultural damage and 'solastalgia'

Man-made environmental destruction for the purpose of economic development affects not only the physical environment of vulnerable minority communities, but also their intangible heritage. It causes not only pollution, but also forced displacement, urbanization and language loss. It is therefore "ecocultural" damage in both direct and indirect ways. In addition, it causes health problems and psychological effects for the indigenous population of the areas affected by environmental degradation, such as the feeling of »solastalgia« among those who are left behind. Solastalgia has been defined (Albrecht 2005) as the emotional distress caused by environmental erosion, the feeling of homesickness while still at home and witnessing the irreversible alteration to one's native land caused by (man-made) environmental change. A number of socio-psychological and anthropological consequences result from the loss of minorities and indigenous heritage of eco-cultural diversity. Compared to the impacts of natural disasters, it is important to note that the sacrifice of these environments for the purpose of resource extraction and economic development is a deliberate, intentional act decided by state authorities and involves a failure to protect elements of ecocultural diversity and the rights of minorities/indigenous peoples.

Damage to the material tangible heritage, which consists of elements related to both the natural and cultural environment, has unfavorable consequences for the survival of the intangible heritage of minorities and indigenous communities worldwide, who are

disproportionately exposed to environmental change. Therefore, issues related to the preservation of ecocultural diversity in all parts of the world cannot be considered in isolation from the analysis of the material environment and social factors in which minorities and indigenous groups live, as well as the broader issues of political ecology involved in the dynamics that regulate such radical changes in the ecocultural systems of vulnerable groups.

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NASLOV ZBIRKE: OIKOS, Rumena

UREDNIK ZBIRKE: dr. Andrej A. Lukšič
TAJNIK ZBIRKE: Nejc Jordan

UREDNIŠTVO ZBIRKE:
Marko Hočevar, Nejc Jordan, Andrej A. Lukšič, Izidor Ožbolt,
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To oppose measures taken by public authorities to mitigate natural/environmental damage and climate change, and to adapt social life to new environmental conditions, is nothing more than that, that these rebels are opposed to the rationally based implementation of the measures. As such, these rebels are perceived as irrational—deniers of scientific knowledge, rebellious souls without a cause, or uneducated individuals who need to be provided with the relevant information.

In more democratically organized societies, these individuals are, at best, invited to debates where, through negotiation and bargaining, they are expected to accept public-private proposals with certain concessions, based on the strength of argument and rational reflection. In more authoritarian societies, public authorities regulate resistance through direct police or military force, threats, legal sanctions or other forms of pressure and compliance, using arguments of power disguised as »rational deliberation«

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