
Introduction: what is critical environmental politics?

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On 28 September 2021 – precisely while we started to collect thoughts and ideas for this introductory chapter – Greta Thunberg addressed the Youth4Climate¹ delegates gathered in Milan for the upcoming Pre-COP 26.² Her ‘Blah blah blah’ speech was to become as iconic – if not more iconic – than her notorious *j’accuse* – ‘How dare you?’ – uttered at the UN Climate Meeting roughly two years prior.

Since Thunberg’s words are very often commented upon but seldom reported, we find it important to quote her at some length:

There is no planet B’ there is no planet blah – blah blah blah, blah blah blah.

‘This is not about some expensive politically-correct green-assed bunny-hugging or’ blah blah blah.

‘Green economy’ blah blah blah.

‘Net zero by 2050’ blah blah blah.

‘Net zero’ blah blah blah. ...

Thunberg continues, we contend, with an accurate delimitation of the field of critical environmental politics:

This is all we hear from our so-called leaders: words – words that sound great, but so far have led to no action.

Our hopes and dreams drown in their empty words and promises.

Of course we need constructive dialogue, but they’ve now had 30 years of blah blah blah and where has that led us?

Over 50% of all our CO₂ emissions have occurred since 1990,³ and a third since 2005.⁴

All this while the media is reporting what the leaders say that they are going to do instead of what they are actually doing. ...

They say they want solutions, but you cannot solve a crisis that you do not fully understand and you cannot balance a budget if you do not count all the numbers.

And as long as we ignore equity and historic emissions, and as long as we don’t include consumption of imported goods, burning of biomass etc. etc., and as long as clever accounting is one of the most efficient ways of reducing emissions, we won’t get anywhere.

And the climate crisis is of course only a symptom of a much larger crisis – the sustainability crisis, the social crisis – a crisis of inequality that dates back to colonialism and beyond – a crisis based on the idea that some people are worth more than others and therefore have a right to exploit and steal other people’s land and resources – and it is very naive to believe that we can solve this crisis without confronting the roots of it.

Right now we are still very much speeding in the wrong direction ⁵

In light of yet another underwhelming outcome at the Conference of the Parties (COP) 26 in Glasgow,⁶ it seems to us that Thunberg’s words call for a deep rethinking of what critical environmental politics has theoretically meant thus far (next section) and on what conjunctural

field it will most likely be deployed in the future (subsequent section). After reflecting on these issues, we briefly present the structure of this handbook (final section).

CRITICAL ENVIRONMENTAL POLITICS: WHAT DOES IT MEAN?

Critical, environmental, politics: three words that both individually and taken together hardly seem to require clarifications. That the environment has become a major political issue is uncontested even by most resolute denialists of climate change or its anthropic causes (Jacques et al. 2008; Oreskes and Conway 2010). Moreover, decades of debates and interventions have not produced much, at least if we consider the situation about climate change and other alterations to the processes that, since the inception of the Holocene about 10 000 years ago, have reportedly ensured a 'safe operating space' for humanity (Rockström et al. 2009). This alone suggests the need for a thorough critique of environmental politics carried out thus far.

As a proper field of political intervention, rather than a set of occasional measures, environmental politics began around 1970 in correspondence with government and public acknowledgment of an 'ecological crisis', that is, of structural problems with the relationship between fast-growing, ever more industrialized societies and their biophysical milieu. The notion of crisis, incidentally, shares its etymological basis with the notion of critique, as both derive from the Greek word *krinein* – 'judge', 'decide'. A crisis, especially if it endures and worsens in spite of decades of efforts to tackle it, asks for an assessment of its origins and possible solutions. This amounts to being critical, right?

Well, not necessarily, or at least, the point needs specification. Is it the same, for example, to write a handbook of critical environmental politics and a critical handbook of environmental politics? A quick reflection suggests this is not the case. Critically addressing a subject matter requires sound research: setting valid questions, looking for relevant evidence, and probing a terrain of inquiry carefully and rigorously. So, a critical handbook of environmental politics should just be a good handbook of environmental politics. Referring to critical environmental politics, instead, gives the work performed a peculiar qualification – a posture. Being critical is not just about doing a good job but, first, addressing the job in a particular way.

What is this way? Most answers to what 'being critical' is focus on the theoretical level, though this by no means rules out empirical research, as long as on-field inquiry is always based on some explicit or implicit theory. In a frequently cited account, Cox distinguishes between 'problem-solving' and 'critical' theory. The former aims to 'help solve the problems posed within the terms of a particular perspective which was the point of departure'. It therefore 'takes the world as it finds it, with the prevailing social and power relationships and the institutions into which they are organised, as the given framework for action'. The latter

stands apart from the prevailing order of the world and asks how that order came about. Critical theory, unlike problem-solving theory, does not take institutions and social and power relations for granted but calls them into question by concerning itself with their origins and how and whether they might be in the process of changing'. (Cox 1981, pp. 128–9)

A critical outlook is committed to questioning the backdrop against which, or the framework whereby, problems are identified and solutions devised, and in so doing being attentive to the origin and contestation of institutional arrangements, power differentials, agency distribution, knowledge and authority claims, reality definitions, interest and identity attributions, and the

transformative potential of alternative approaches and social struggles. It is therefore sensitive to historical change. For Fraser (1989, p. 113) critical theory is the ‘self-clarification of the struggles and wishes of the age’. Similarly for Horkheimer – exponent of a school including several generations of German philosophers and social theorists in the Western European Marxist tradition that, being named ‘critical theory’ (see Chapter 1 in this volume), should epitomize what a critical posture is about – holds that a critical theory ‘never aims simply at an increase of knowledge as such’ but at ‘emancipation from slavery’ (Horkheimer 2002, p. 246).

Leaving aside for the moment who the subject of emancipation is, being critical thus entails both doing good research (increase of knowledge) and making that research instrumental to tackling domination. This goal reminds the Enlightenment principle of human progress, a famous description of which comes from Kant. For him (Kant 1784 [2009]), enlightenment is the task for humanity to emerge from immaturity, which depends on a lack of courage to use one’s reason, intellect, and wisdom without the guidance of someone else. His famous motto is *Sapere aude!* (Dare to be wise!) – a call for the use of reason to emancipate themselves addressed to each and every human being. However, there is a difference between, say, assuming that just by letting reason do its job (for example, undertaking effective research) domination will eventually be wiped out, and claiming that reason cannot do its job well unless domination itself falls under its gaze. This involves also, and perhaps primarily, being alert to the dominative assumptions and outcomes hidden within our own intellectual posture.

Postcolonial and decolonial scholarship has been particularly effective in denouncing the dominative implications of a pretended universalism of reason. According to Said (1993, pp. 278–9), the critical tradition stemming from, or aligned with, the Kantian framework, performs a false universalism that ‘assume[s] and incorporate[s] the inequality of races, the subordination of inferior cultures, the acquiescence of those who, in Marx’s words, cannot represent themselves and therefore must be represented by others’. This false universalism, which has effectively supported Western imperialism, is also endorsed for Said by critical theory. This claim finds some support in Horkheimer’s own words. He contrasts traditional theoretical thinking, with its outlook on ‘the genesis of particular objective facts, the practical application of the conceptual systems by which it grasps the facts and the role of such systems in action [as] external’ to itself, with the critical questioning of the dominative grounds and implications of such endeavour; yet he also holds that ‘the free development of individuals depends on the rational constitution of society’ (Horkheimer 2002, pp. 208, 246), suggesting the presence of an ordering principle that should be brought to light and let unfold or promoted against reactionary forces. That is, on one side, Horkheimer questions the dominative implications of the case for what Nagel (1986) has aptly termed the ‘view from nowhere’ – the distinctive objectivism of Western civilization that has as a cornerstone Descartes’s idea of a mind separated from the body yet capable of apprehending the world as it is, and that finds a functional equivalent in Kant’s a-priori elements of reason. On the other side, Horkheimer seems to believe in a critique of Western reason from within this very reason, according to the latter’s view of history, subscribing to the idea of a ‘progress’ over premodern or non-modern forms of life. This standpoint, postcolonial and decolonial scholars claim, makes it impossible to address coloniality as an imperialist endeavour repeated time and again through a systematic devaluation and subjection of peoples and places under the justification of helping these to catch up with the ‘advanced’ part of the world. The problem with the Enlightenment’s equation between reason and freedom, notes Allen (2016, p. 3), is that ‘the language of progress

and development is the language of oppression and domination for two-thirds of the world's people'.

After this is acknowledged, however, where do we go? To make its point, postcolonial and decolonial scholarship has built to a significant extent on French poststructuralism (Eagleton 1998; Go 2016), that is, its deconstruction of the modern argument for universal reason and progress as a narrative among others, with no superior access to a trans-historical or transcultural truth. This entails that social arrangements can and should be questioned only in their own terms and within their own boundaries, without a possibility of appealing to an external principle. Hence, for example, the controversy over the Universal Declaration of Human Rights. This conclusion, however, has recently met with growing concerns that it may entail a weakening of the possibility to challenge the global reach of a ruling order that, through technological advancement, corporate expansion and neoliberal regulation, is entailing a growing exploitation of humans and nonhumans. The issue, more precisely, is that contestations of injustices grounded on difference instead of inequality (a concept that entails a standard for comparison) may be a blunt weapon against a hegemonic ideology that portrays market differentiation, individual competition and a 'flat' ontology of monetary equivalents as the only Reason of the world (Dardot and Laval 2017). Can this new type of universalism – not of principles or ends but of results, the unpredictable combination of myriad of independent decisions, whose necessity is testified by its very actualization – be tackled through an argument for radical diversity and incommensurability? Preoccupations that this may not be the case are expressed from various perspectives: for example, that late feminism's focus on difference to the detriment of redistribution and representation may have come up to effectively support neoliberal politics (Fraser 2009); or that mobilizations based on claims about identity and lifestyles are proving ineffective in engendering political change (Mouffe 2013); or else that the deconstruction of scientific assertions is benefitting ruling elites, corporate interests and reactionary forces rather than disadvantaged groups and unrepresented ecological concerns (Latour 2004; McIntyre 2018).

However, if both the case for a view from nowhere and for a view from anywhere – which replicates the former in reverse (poststructuralism may repudiate Western reason but is an offspring of the latter!), becoming in this way more resistant to contestation – can hardly serve the purpose of a critique aimed at emancipation from domination, does the idea of a critical posture keep any meaning and purpose? An initial reply is that it does not; that the traditional notion of critique as based on claims, counter-arguments and protests is doomed. This argument has been made by scholarship, especially feminist, partaking in 'new materialisms' (Coole and Frost 2010; Dolphijn and van der Tuin 2012), also known as the 'ontological turn' (Pellizzoni 2016; Holbraad and Pedersen 2017) that has involved philosophy, the social sciences and the humanities at the turn of the twenty-first century, gaining momentum in subsequent years. The shared tenet of an otherwise diversified intellectual tide is an argument against both naturalism and culturalism: the former for its several dualisms (mind/body, masculine/feminine, nature/culture, and so on), which imply the dominance of one polarity over the other, deemed passive, deaf and valueless; and the latter for its failure to question the language/matter duality ending up with the same result and an inability to acknowledge the agency and vitality of matter and the body. Critique, new materialist scholars remark, has traditionally dealt with concepts and discourses, focusing on 'errors and points of contention' (Grosz 2005, p. 27), regarding materiality as passive and limiting, and positioning the critic 'as the dispassionate outsider who stands above and outside the epistemological or philosophical fray' (McNeil 2010, p. 433).

This has been unable to yield social and political change. Critique as discourse deconstruction is therefore to be replaced with embodied practices, where alternative ways of living are experimented with and affirmed. This, we may argue, is what is happening with a host of ‘prefigurative’ mobilizations where corporeality and new socio-material entanglements become sites of resistance, creativity and hope (for example, Yates 2015; Schlosberg 2019; see Chapters 34 and 35 in this volume).

A critique embodied in materiality and everyday practices should ostensibly circumvent the politically disabling alternative between the view from nowhere and the view from anywhere. However, the argument for prefiguration has been targeted with the same criticism of ineffectiveness it addresses to traditional protest. If discourse deconstruction is a blunt weapon against a ruling order based on violence, exploitation, systematic devaluation and, increasingly, the adoption of deconstructive styles by ruling elites themselves, some scholars wonder how effective can be an embodied politics that struggles to transcend the level of small groups, that the commodity system intercepts as lifestyle, profitable market niches, and that governments ever-more leaning towards the market ideology welcome as a self-help reply to a shrinking welfare state (De Angelis 2013; Haiven 2016; Pellizzoni 2021a).

Does the alternative between the view from nowhere and the view from anywhere, or between a discursive and an embodied approach, exhaust the space for conceiving and enacting critique? Not necessarily. There is a line of argument, connecting otherwise distant scholars such as Foucault and Adorno, that opens up a possibility for critique to be both historically and culturally located and transformative (Allen 2016). Both Foucault and Adorno subscribe to the emancipative ethos of Enlightenment without endorsing its metaphysical assumptions about progress as the universal affirmation of Western modernity as it is and as a whole, making a case for an immanent critique, that is, a critique that turns against themselves the assumptions and conceptual tools available in the historical moment, questioning their foundation as bound up with specific power relations, hence raising the issue of ‘how not to be governed like that, by that, in the name of those principles, with such and such an objective in mind and by means of such procedures, not like that, not for that, not by them’ (Foucault 2007a, p. 44). For Foucault the task of a critique so conceived is to bring into question the ruling ‘problem-ization’ – why and how certain issues emerge as problems and the horizon of meaning that even opposed solutions share – from within itself. Think, for example, of how, in the debate over the ecological crisis, those who call for more technology and those who call for a return to ‘simpler’ ways of living generally share a same understanding of what technology is about. Problematizing that understanding, then, means regarding technology, as currently conceived and implemented, as neither ‘good’ nor ‘bad’ but – using Foucault’s term – ‘dangerous’, by which he means that, whatever the situation and its dominant accounts, ‘we have always something to do’ (Foucault 2000, p. 256). This amounts to saying that technologies are amenable to different developments according to different purposes, rather than just according to different possibilities of fulfilling same purposes, as if these were self-evident and constrained by the materiality of devices and by their conditions of production. Existing socio-material arrangements can and should, instead, be only the starting point for a rethinking and transformation of technologies that builds on contesting their very matter-of-factness, their apparent necessity. Similarly, Adorno proposes the ‘non-identical’ as an alternative to ‘identity-thinking’, the matter-of-fact appearance taken by historically located and culturally loaded apprehensions of the world. Against the argument for an actualization of socio-technical potentialities that can be fostered or hampered but not diverted, ‘negative dialectics’ means for him a ‘historically

situated response to a particular form of social organization and its accompanying worldview' (Allen 2016, p. 193), showing precisely its non-necessity: that 'it need not be' (Adorno 1973, p. 321). On this view, 'the positive meaning of freedom lies in the potential, in the possibility, of breaking the spell or escaping from it' (Adorno 2006, p. 174). The separation between nature and society, and the domination of the latter over the former in the name of progress, represents a key element of this spell, to which even critical theorists have proven sensitive. Habermas (1983, p. 108), for example, has claimed that 'for the sake of removing socially unnecessary repression we cannot do without the exploitation of external nature necessary for life'. A statement that Marx, in spite of his nuanced account of the relationship between humans and nature, would arguably underwrite (see Chapter 4 in this volume).

It is of the utmost relevance for a critical environmental politics, then, that for Adorno it is not possible to instrumentalize and exploit non-humans without doing the same to humans. Even for the late Foucault (despite his well-known disregard for nature), freedom builds on a particular relation with oneself and with the world (Iofrida and Melegari 2017). For both these scholars, moreover, it is not possible to predict where critique will lead to, precisely for its immanent character, alien to any claim of historical necessity. Its only normative benchmark is freedom from domination (of humans and non-humans alike, and together: an issue on which Adorno is most explicit), which means inclusion, justice and respect for the other. Its way of proceeding is contestatory, first and foremost of the aprioristic assumptions that naturalize power relations foreclosing imagination and acknowledgement of alternatives, in so doing giving relevance to embodied experiences, especially of injustice and suffering, which are neither ruled out nor hypostatized, but seen as affecting and effecting thinking, and vice versa (see, for example, Foucault 1988; Adorno 1998a). An immanent critique, moreover, acknowledges that experiences of injustice and domination never repeat themselves in the same way, yet they can be recognized across time and place. It is on this recognizability, which Walzer (1990) names as minimal or reiterative universalism, that emancipatory thrusts can build up and find support beyond the confines of specific communities or social groups.

Equally important is to take notice that a critical posture so conceived entails a peculiar relationship with uncertainty or non-knowledge. The case for progress as a pathway towards the full realization of universal Reason crucially builds on science, and specifically on the incomplete, ever-revisable character of scientific knowledge. Outside the laboratory or the university lecture hall, the assumption of knowledge perfectibility has effectively authorized a sort of retroactive application of its future accomplishment in terms of sufficiency of the knowledge available at any given time for handling the world in full accord to purposes. This has led to a neglect of early warnings of 'unpredictable' adverse effects of technology, a preference for amount of yield against resilience and reversibility, an assumption of resolute technical progress, and so on. The tendency to conflate knowledge exhaustiveness as a normative ideal – the vanishing point of the scientific enterprise – with the capacity of handling biophysical processes has gained momentum in recent years, the purpose of basic research having been increasingly diverted from cognition to usability (Stokes 1997). Acknowledgement of incompleteness, in the Adornian account of non-identity, means instead that the anticipated matter-of-factness to which action should conform is incompleteness itself (Pellizzoni 2021b). In the lexicon of Adorno, it is impossible to do full justice to the Other – and all the better if this leads to an attitude of humbleness and respect, a care in avoiding smugness and assimilation, a demand of friendship rather than an attempt at lordship, and a search for 'agreement between human beings and things' (Adorno 1998b, p. 247). This position draws inspiration

from Benjamin's (2019, p. 203) claim that a type of labour is possible which 'far from exploiting nature, is capable of delivering her of the creations which lie dormant in her womb as potentials'. Benjamin's envisaged horizon appears now increasingly crucial, yet foreclosed by a critique of technology harnessed in a conflict between technophiles and technophobes that is largely fictitious and instrumental to dominative designs.

If the above provides an account of the type of job 'being critical' entails, be it a matter of academic work, action research or civic mobilization, the account cannot but invest the notions of environment and politics themselves. Environment is not the same as nature. The latter is a complex concept which, according to Williams (1983), can be drawn to three main meanings: the whole material reality; the opposite of culture, that is, the sphere of what is not altered by humans; and the essence or distinctive features of a being. This applies to the Western tradition, as all these meanings presume the external similarity and internal difference between humans and non-humans that Descola (2014), Viveiros de Castro (2014) and other anthropologists have shown to be specific to Western ontology. Environment, however, is a relational concept. When applied to the biophysical world it draws attention to interaction instead of identity. It is not by chance that it has become synonymous with ecology, the study of the relationships between organisms and their biotic and abiotic surroundings, whose official birthday is 1866, when the German biologist Ernst Hæckel reportedly coined it. The rise of this relational perspective is thus concomitant, and hardly unconnected, with what Foucault (2007b) terms the liberal problem of government, as a political focus on the handling of the dynamics involving populations and their biophysical milieu, with the crucial help of specialized knowledges. Environment, therefore, is a concept where knowledge and power are deeply intertwined from the outset. Political and cognitive aspects are constitutive of the notion. The environmental crisis is a crisis in the relationship between humans and nature, and surely not a crisis of nature, if by this we mean the planet. Life has proven capable of surviving the most adverse conditions, as the vestiges of past geological eras indicate.

Therefore, a critical outlook cannot but scrutinize the notion of environment, a task that should also involve a critique of what counts as 'environmental' and what constitutes 'environmentalism'. This has traditionally been set by Western standards, the bounds of which have coincided with the legitimization of 'white' and colonial visions, and the de-legitimization of other, indigenous, non-white and non-modern visions, ontologies and knowledges not orientated towards extractive relationships. While the environment has been framed as 'an exotic elsewhere' (Di Chiro 2008, p. 286) environmentalism has traditionally been constructed as a 'cult of wilderness' legitimating the dispossession of peoples from their land, and as an approach that should not be concerned with livelihoods, human labour, and materiality, but rather with presumed 'post-material' values and issues (see Chapters 35, 37 and 42 in this volume). Decolonizing the notion of the environment hence means to make visible the alternative genealogies of environmental thought that have been silenced by an assumed universal meaning of green concerns.

Furthermore, scrutinizing the notion of environment also entails an investigation of how it is used in political action and struggles, which brings into question a great deal: for example, the type of value humans assign to the biophysical world, and how this value comes about. Without pre-empting an issue touched upon in various chapters of this volume, a critical posture should ostensibly question the idea that value is a thing or an intrinsic quality of things, conceiving of it as a consequence of acts of valuation and evaluation (Muniesa 2011; Lamont 2012), as this allows inquiry into the underlying assumptions about worthiness and

how to protect or increase it, and related power relations, bringing to light conflicting moral economies and challenging the claim that any judgement of worth can ultimately be traced back to a single metric (see Chapter 23 in this volume). Indeed, many emergent mobilizations in the Global South and Global North contest precisely this, enacting what Centemeri (2018) terms ‘alternative value practices’.

Undoubtedly, a critical outlook should also extend its gaze to the notion of politics. This entails taking a post-foundationalist posture, that is ‘a constant interrogation of the meta-physical figures of foundation’ (Marchart 2007, p. 2), whereby politics is not simply the ontic manifestations of conventional politics (including, for instance, the political system and institutions, or politics meant as the ‘art of government’), but also encompasses ‘the political’, the ontological dimension of the institution of society which is characterized by the absence of a final ground or ‘closure’ of the social. Political difference explains the ‘unbridgeable gap’ (Marchart 2007, p. 6) between, on the one hand, concepts such as polity, policy, politics and police, and on the other ‘the political’ or radical antagonism, that is the instituting moment of the social.

A critical approach should also involve a critique of those instituted forms of conventional politics that contribute to mark the current socio-ecological crisis. It is in this sense that, as political ecology has forcefully voiced since at least the 1970s, dealing with the environmental question is an inescapably political endeavour and, vice versa, politics cannot prescind from its environmental groundedness and implications. That is, a critical approach to politics is intimately tied to a critical approach to the environment. This involves critiquing the continuous ‘displacement (or denial) of the real socio-ecological processes’ (Chapter 32 in this volume) that drive the socio-ecological crisis, such as the capitalist mode of production and consumption and its generalization through an ‘imperial mode of living’ (Brand and Wissen 2012) that is deeply rooted in everyday practices. Such a suppression occurs by means of a politics of unsustainability (Chapter 9 in this volume) that has turned the ‘ecological transition’ into a new orthodoxy (Brand 2016) where, as in the famous novel *The Leopard* by Tomasi di Lampedusa, ‘for things to remain the same, everything must change’. A paradigmatic case is the European Union (EU), an actor traditionally considered to be environmentally progressive. Here, while the environment has moved centre stage, with the ecological transition raised to the rank of newly established ministries in several European countries, and the Next Generation EU mobilizing unprecedented funds with the goal of climate protection, eco-politics is reduced to a techno-managerial issue, revolving around issues such as green finance, commodification of nature, circular economy and, most likely, even reliance on nuclear energy and fossil gas as tools for win-win solutions that can harness momentum for further economic growth.⁷ Such politics of unsustainability involves, as we argue in the next section, on the one hand a new approach to the environmental challenge, whereby ecological limits are turned into an opportunity for market-led valorization, and on the other an intimate relationship with the slippage into post-democratic governance through consensual governing and a mainstreamed environmental discourse that attempts to erase social antagonism (see Chapter 32 in this volume).

Related to the point above, a noteworthy direction of inquiry over politics and its ongoing transformations considers the change occurred to the notion of crisis. According to the modern conception of reality, time and the human agent, crisis meant a decisive moment of confirmation or upheaval of the political order (Koselleck and Richter 2006), yet it now increasingly expresses a permanent situation from which there is no exit. This is exemplified well by the growth of debt as a structural condition at individual and collective level (Graeber 2011;

Lazzarato 2012), or by the shift from one ecological emergency to the next (heath waves, hurricanes, pandemics, industrial accidents, and so on) with hardly any break. That is, some scholars contend, crisis has become a way of governing (Lazzarato 2015; Gentili 2018). More precisely, we would be witnessing an intensification of the ‘administrative’ concept of government that Foucault (2007b, 2008) had detected first in liberalism and then in neoliberalism; an intensification possibly engendering a new political condition, with novel forms of domination. The project for this volume started before the onset of the COVID-19 pandemic. The book was developed at the same time as this was unfolding, and completed before its end. Various chapters touch upon it though without giving it central stage, which in our opinion is correct as the scope of a handbook must go beyond the headlines, dramatic that these may be. However, voices have been raised claiming that the COVID-19 pandemic is a crucial step towards the normalization of the state of emergency, main restrictions of fundamental rights in the name of a bio-political necessity being bound to endure in some form or another after the end of the pandemic (Agamben 2021). Beyond the specific case, an administrative declension of crises has an impact on critique, as it increasingly crushes the latter on a problem-solving plane, foreclosing, among the other things, the possibility to question the growing account of adaptation as the sole sensible approach to climate change, pandemics, job precarity and a host of biophysical and social issues. A claim that not only assumes that the status quo is unchangeable (not ‘in time’, at least), but opens avenues for an expanding sector of economy that works on emergencies, the endless modulation of which corresponds to endless opportunities of profit. Also on this view, a critical approach to environmental politics is more necessary than ever.

Finally, another emergent line of inquiry in recent environmental politics scholarship comes from new materialist literature, especially at the crossroads between science and technology studies (STS) and feminist and postcolonial theory. What has come under the spotlight is the way ‘knowing, the words of knowing, and texts do not describe a pre-existing world [but] are part of a practice of handling, intervening in, the world and thereby of enacting one of its versions – up to bringing it into being’ (Mol and Law 2006, p. 19). The world, it is claimed, takes shape and meaning, emerging from an indistinctiveness that constitutes the (moveable) border of thinkability, only together with a cognitive act which is inseparable from history and flesh. Moreover, ‘if reality is done, if it is historically, culturally and materially located, then it is also multiple’ (Mol 1999, p. 75). It is ‘open to an alternative ordering or recomposition of the relational field’ (Clark 2013, p. 2828). Hence, a focus on emergent ‘ontological struggles’, on their crucial building on a denaturalization of Western dualisms in favour of perspectives by which ‘all beings exist always in relation and never as “objects” or individuals’ (Escobar 2010, p. 39). The notion of pluriverse is often evoked in this regard (Kothari et al. 2019), as not a kaleidoscope of declensions of a same world but a world comprising many worlds (Blaser and de la Cadena 2018).

CRITICAL ENVIRONMENTAL POLITICS: CONJUNCTURAL ELEMENTS AND FUTURE SCENARIOS

The task of a handbook, we believe, is to offer an updated compass of a problem field, without succumbing to the lure of fashionability, using interpretive lenses provided with a focus deep enough to help the reader discern what is most relevant in ongoing events and emergent trends.

On one side we have to acknowledge the growing significance of the ontological politics practised by socio-ecological mobilizations and initiatives in the Global South and also increasingly in the Global North, as underpinning a new type of emancipatory politics – for humans and non-humans alike, and together – grounded in materiality that can itself nurture critical environmental politics. On the other side it is important to take note of how environmental movements' approach towards global environmental governance has evolved in recent years, such that it becomes hard to talk of 'traditional' mobilizations, in relation to usual politics of discourse (voicing and lobbying). Both issues are addressed from different perspectives in a number of chapters. It may however be useful to delve here into the latter as a way to contextualize the book in its entirety vis-à-vis the challenge of climate change, which now ostensibly encompasses and synthesizes the whole case for an environmental politics.

The current historical conjuncture is marked by a key relationship: that between ecological issues and transnational governance. Our crux is that Greta Thunberg's words – and, more importantly, the massive movements they inspired – constitute a remarkable shift in the history of that relationship. In brief, they put an end to the United Nations Framework Convention on Climate Change (UNFCCC)⁸ as the centripetal force for climate-related imagination, as the main attractor of ecology-related policy efforts. This does not mean that, post-Greta, critical environmental politics is entirely unprecedented: many features of Fridays for Future or Extinction Rebellion existed in previous mobilizations, especially those of the alter-globalization cycle. Yet, what we believe is important to emphasize is the progressive disintegration – endogenous as well as exogenous – of the UN-led governance process, which represents a moment of discontinuity from both an institutional and a social movements' perspective.

From the 1960s onwards, owing to convergent pressures by engaged scientific communities and vocal social movements, ecological issues have gradually become pivotal both in national and supranational political agendas. Up until the late 1980s, however, this unprecedented importance constituted a barrier to capital accumulation. As O'Connor (1973) and Gorz (1978 [1980]) remarkably showed, environmental protection was seen as a necessary evil, an additional cost to be either internalized within firms or externalized onto governmental budget, but eventually driving to an identical outcome: an increase in market prices for 'dirty' commodities. Although historical evidence suggests that ruling elites were most often willing to privilege profits over a liveable planet, it is worth noting that legal controversies over ecological issues – most often following socio-ecological mobilizations – were usually regulated within a command-and-control legal framework (Klein 2015), or else public regulation. The best example of this procedure is the Montreal Protocol which, in 1987, phased out a number of substances that were industrially useful but also detrimental to the stratospheric ozone layer (Epstein et al. 2014).

This situation significantly changed with the rhetoric of 'sustainable development' (SD) (in 1987) and was eventually reversed by the discursive formation of the 'green economy' (GE), arising within innovative business circles in the early 1990s. Whereas the main tenet of SD is the conviction that economic growth, biospheric health and future generations' best interests may go hand in hand (if properly balanced), the disruptive kernel of GE is the idea that what was once conceived as crisis *of* capitalism (that is, the ecological crisis) is from now on to be regarded as a crisis *for* capital. That is, GE postulates that the internalization of environmental limits does not constitute a burden but, rather, opens up a new strategy for market-led valorization (Leonardi 2019). This also led to significant shifts in environmental policy discourse after the 1970s. On the one hand, there was a change in discourse from 'growth versus the

environment’, which characterized international environmental governance of the 1970s (more particularly, global forums, such as the 1972 United Nations Conference on the Human Environment and the 1974 Cocoyoc Symposium), to ‘growth for the environment’, which has emerged since the Brundtland report and further strengthened in later UN conference (the 1992 UN Conference on Environment and Development and the 2002 Johannesburg World Summit on Sustainable Development), most especially with the 2012 Rio + 20 summit under the aegis of the new GE concept (Gómez-Baggethun and Naredo 2015). On the other hand, there was a shift from a political discourse, characterizing the early days of global environmental governance, to an increasingly technocratic discourse where the ecological crisis is set as an apolitical problem requiring techno-managerial fixes.

A brief glance at the historical development of global climate governance shows the connection between the emergence of SD and GE and the governmental design of market-based schemes. The Kyoto Protocol is the first legally binding agreement on climate change whose main tenet is undoubtedly the beginning of carbon trading, for which it unmistakably represents an ‘official’ date of birth. The basic economic rationale which frames the flexibility mechanisms is that trading emissions permits and credits on dedicated markets would simultaneously reduce the aggregate cost of meeting the targets, foster sustainable development in non-industrialized countries and create profitable opportunities for green business. This formula indicates that global reliance on specifically dedicated markets as an exclusive policy option is connected to an extremely entrenched political belief according to which climate change, although a historical market failure (since negative externalities were not accounted for), could be viably solved only by further marketization.

This assumption has represented the red thread of climate governance as a whole and remained intact in the much celebrated Paris Agreement (signed at COP 21, in 2015). In passing, this uncontested centrality is consistent with the hypothesis according to which the environmental limit is turned by GE into an element of the process of valorization. That the COP-system is entirely reliant on this wager is shown once more by the inability of delegates at COP 26 to move beyond exclusive market mechanisms and to design a non-market mechanism – as prescribed by article 6 of the Paris Agreement. As far as carbon trading is concerned, it must be noted that negotiators in Glasgow reached an agreement over transparency by detailing the rulebook, the impact of which on fraudulent practices, such as double counting, is expected to be significant. Yet, the main flaw of the Clean Development Mechanism still undermines all efforts: carbon offsets – awkwardly renamed Article 6, paragraph 4, emission reductions (A6.4ERs) – do not achieve actual mitigation as they simply shift emissions from one side of the world to the other without any benefit for the atmosphere (Leonardi 2017).

For our purposes, it is key to assess also the disruptive nature of SD/GE on social movements’ side. Our main argument is that, since the 1990s, the policy framework aimed at posing ecological issues as drivers of capital accumulation has attracted even radical imaginaries as it ostracized denialists of various forms. Again, global warming is an example: the UNFCCC process being a centripetal force for social advocacy, most climate justice (CJ) actors ended up playing as legitimacy providers for climate governance (at the very least from Kyoto 1997 to Paris 2015).

As is well established, CJ as a political tool for social mobilizations has emerged in close connection with the anti-globalization cycle of struggles, also referred to as no-global, new-global or ‘movement of movements’ (Chapter 13 in this volume). It was at that juncture that ecology ceased to be perceived as an area among other areas, as a specific sector to be

linked to others, to instead be turned into a systemic viewpoint, a general connective tissue, and a broad perspective through which the traditional dualism between nature and society could be redefined. It is no coincidence that the expression ‘climate justice’ was coined in a 1999 text circulated on the eve of the Seattle uprising.

In that context, what the movement of movements wanted to emphasize was ‘the ethical and political dimension of global warming’, conceived of as a ‘not purely environmental or climatic issue’ (Corporate Watch 1999). Quite correctly, climate naysayers – or, merchants of doubt (Oreskes and Conway 2010) – were indicated as reactionaries unable to face an enormous and unprecedented challenge: making atmospheric stability a political stake. Perhaps less correctly, in hindsight, the UN-led climate governance was seen as a meaningful response; if not immediately effective, at least politically adequate to this challenge. Every preliminary definition of ‘alterglobal’ CJ cannot but be based on the recognition that those who have been least responsible for the historical volume of emissions are those who are most vulnerable to pay the price it entails. In this perspective, CJ was originally, for the most part, a geopolitical critique dealing especially with historical responsibility (for cumulative emissions) (Carbon Brief 2021) and (repayment of) climate debt. Against this background, it is possible to distinguish among three different strands of self-portrayed CJ:

1. Pro-corporate elites (for example, World Resource Institute) – progressive neoliberals, in Fraser’s (2019) terms, according to which eco-competition plus the Green Climate Fund⁹ would be effective in tackling carbon inequality.
2. Large environmentalist non-governmental organizations (NGOs) (for example, Greenpeace), often part of the Climate Action Network, according to which divestment strategies plus the Green Climate Fund could be better candidates.
3. Radical unions, global networks and locally unwanted land use (LULU)/environmental justice movements from below (for example, Climate Justice Now!), according to which market-based solutions plus money transfers per se could not work without a deep restructuring of exploitative social relations.

Schematically, and in the absence of a mass movement, the following can be stated: group 1 has consistently supported the COP system; group 3 has mostly opposed the COP system; group 2 – by far the largest civil society advocate of CJ – has oscillated between tepid endorsement and mild criticism, but has nonetheless consistently provided climate governance with political legitimacy. A significant confirmation can be found in the following 2010 interview with Kumi Naidoo, Executive Director of Greenpeace. Asked about the NGO strategy in the dramatic aftermath of COP 15, Naidoo explains that campaigning within the UNFCCC was still to be a key component of it:

At Greenpeace we are intensifying our efforts and we have an effort to put more pressure on the US, China, the BASIC countries [Brazil, South Africa, India and China] in general as well as trying to see if the European Union which were fairly marginal in the politics played out in Copenhagen, can get their act together and add some momentum to the talks. The UNFCCC is also going through a transition because with de Boer¹⁰ leaving there is anticipation that perhaps someone from a developing country might be appointed who would bring urgency to the negotiations.¹¹

These words echo the typical group 2 comment at the end of every COP: ‘it’s not enough, but it’s a first step in the right direction’. In our interpretation, however, this course of actions progressively lost support to eventually end in Katowice at COP 24 (in 2018). As the climate

movement's confidence in COP's ability to produce substantive progress and handle the climate crisis in an efficacious and socially just manner progressively weakened, strand 2 moved closer to strand 3's positions, as a reformist approach aimed at influencing the COPs was gradually discarded in favour of a more radical approach, thus facilitating a relative unification of the climate movement (see also De Moor 2018). The core of climate governance (global warming exists and can only be solved by markets) was undermined by two unexpected events:

1. the rise of a 'denialist front' within the COP system itself (USA, Russia, Kuwait, and Saudi Arabia). These four countries stated that the latest IPCC report was not to be 'welcome' but, rather, 'taken note of';
2. the delegitimization of climate negotiations on the part of group 2 of the CJ camp.

If Donald Trump was the political personification of the first process, Greta Thunberg played the same function as regards the second. Her message, in Katowice, was threefold:

1. Delegitimation of the UNFCCC elites: 'our political leaders have failed us' so 'I will not ask them anything. Instead, I will ask the media to start treating the crisis as a crisis' (Katowice, 3 December 2018);
2. Inversion of the relationship between economy and ecology: 'some companies and some decision makers' are to blame for the climate crisis. They 'have known exactly what priceless values they are sacrificing to continue making unimaginable amounts of money' (Davos, 22 January 2019);
3. Call for action rather than negotiation: 'We've had 30 years of pep talking and selling positive ideas and I'm sorry but it doesn't work. Because if it would have, the emissions would have gone down by now The one thing we need more than hope is action' (Stockholm, 24 November 2018).

All these speeches by Thunberg heavily impacted on group 2 of CJ, as shown by the reaction of Greenpeace at the end of COP 24: 'People expected action and that is what governments did not deliver. This is morally unacceptable and they must now carry with them the outrage of people and come to the UN Secretary General's summit in 2019 with higher climate action targets' (Greenpeace International Executive Director, Jennifer Morgan). More importantly, these speeches fuelled a political process which eventually erupted in the first global climate strike on 15 March 2019. Instead of NGOs providing legitimacy, 2019 brought to the UNFCCC a mass movement undermining its very *raison d'être*.

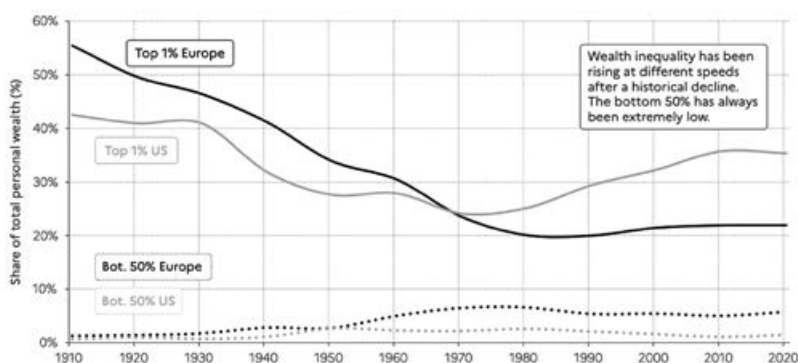
This mass movement for CJ is marked by some key features. First, it thoroughly changed the social perception of climate change: from apocalyptic scenario to driver of youth world-wide mobilization. Second, it incorporated the centrality of transversal feminism not only in respect of critical repertoires, but also, more directly, within its structure of leadership: Greta Thunberg is accompanied by young women such as Vanessa Nakate, Luisa Neubauer, and Angela Valenzuela. Third, within and against the institutional process of climatization of the world (Aykut 2020), it turned CJ from an oppositional stance to a general political framework for the convergence of different struggles.

From this perspective, it is important to highlight that the four climate strikes of 2019 progressively enlarged CJ's focus on geopolitics so that it now includes social inequality within national communities as a key target of its critical endeavour. What is now explicitly posed

is an unprecedented proximity between social equality and conflicts for atmospheric stabilization (linked primarily to emissions reduction). In order to properly grasp this fundamental extension of the scope of CJ, it may be useful to link it to the crisis of the UNFCCC as the centripetal force for climate-related imagination. We contend that this crisis is an instance of what Sachs has described as the crisis of development as West-centric *Weltanschauung* (worldview) of the post-World War II world:

A suspicion spreads among the global middle class that the expectations kindled by development are not going to be fulfilled. Alienated from their traditions, aware of Western living styles through their smart phones, yet excluded from the modern world, this is the fate of too many people, and not only in poor countries. Thus, cultural confusion and ecological crises fuel fear of the future. (Sachs 2019, p. xv)

Elaborating on Sachs's crucial insight, we may say that the UNFCCC's promise of social inclusion through green growth (or, climate mitigation as achieved through carbon trading) has not materialized. On the contrary, inequality worldwide has been increasing since the 1980s. With specific regard to the US and EU, the *World Inequality Report* contains a remarkable graph (Figure I.1).



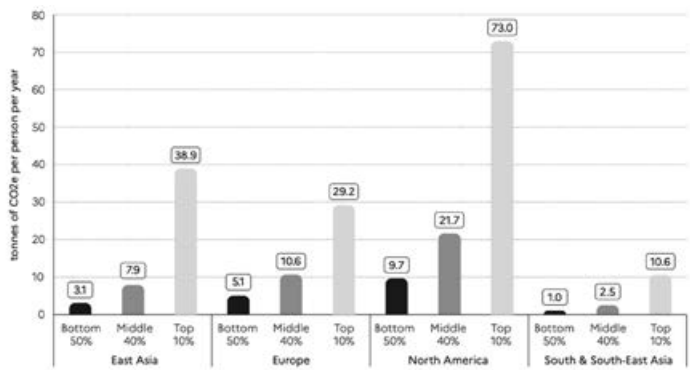
Source: Chancel et al. (2021).

Figure I.1 Top 1 per cent versus bottom 50 per cent wealth shares in Western Europe and the US, 1910–2020

However, what is even more remarkable is that this data is openly connected with greenhouse gas (GHG) emissions not at the country level – where inequality often is obfuscated by the failure to account for imported emissions owing to offshoring heavy industries – but, instead, at the per capita level, as Figures I.2 and I.3 show.¹²

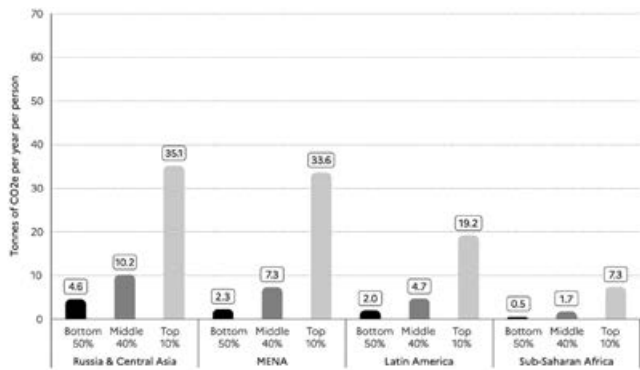
This interest on carbon inequality is a direct consequence of CJ's 'new clothes' and can be appreciated in the insightful figure from an Oxfam Media briefing in September 2020 (Figure I.4).

What is key here is a new understanding of what has to change in order for the 1.5°C target (set by the Paris Agreement) to be achieved: not the lifestyle of developed countries in general but, primarily, the lifestyle of the richest 10 per cent, worldwide. This does not mean that indi-



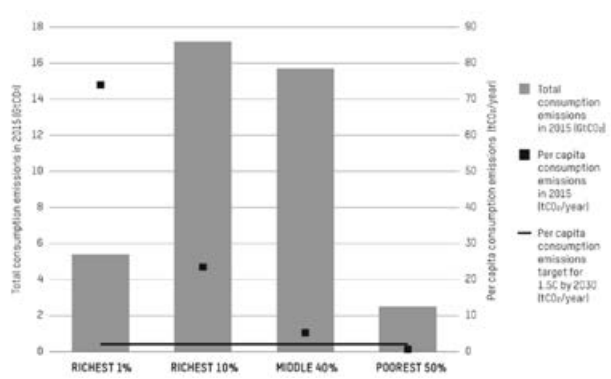
Source: Chancel et al. (2021).

Figure I.2 Per capita emissions across the world, 2019 (1)



Source: Chancel et al. (2021).

Figure I.3 Per capita emissions across the world, 2019 (2)



Source: Gore (2020).

Figure I.4 Total and per capita consumption emissions of individuals in different global income groups, 2015

vidual contributions are to be considered unimportant; the opposite is true, when it comes to climate activists (Wahlström et al. 2019). Simply, contemporary CJ postulates that individual efforts can be effective only against the background of more systemic transformations.

While it is not possible to anticipate how the climate movement will fare in the face of the mounting challenges of the politics of unsustainability, what we have tried to show in this section is that a critical take on environmental politics cannot leave aside not only the ‘ontological’ struggles developing in the Global South and Global North at different scales, from the everyday to the national, but also the current historical conjuncture concerning global environmental governance and movements’ positioning in and contribution to it. That is, a critical outlook should consider praxis as a fundamental dimension for nourishing the sociological imagination, so that observing, investigating and, even, partaking in social processes and practices can generate grounded theoretical reflection eventually feeding into emancipatory and transformative processes.

STRUCTURE OF THE BOOK

In the sections above we have depicted our understanding of a critical approach to environmental politics – its rationale and distinctive outlook. We neither expected nor pushed the contributors to endorse this account; all the more so considering the number of issues worthy of entering a handbook, and the variety of perspectives from which they could be addressed. However, browsing the pages of the book, our feeling is that the authors collected may not explicitly or entirely subscribe to what we have said about immanent critique but at least endorse its spirit. This, therefore, can be regarded as a common denominator of otherwise varied, sometimes contrasting, theoretical orientations and substantive focuses. Similarly, we have suggested that chapters include a section devoted to introducing the topic and its genealogy, subsequently addressing its problem-framing and relevant ideas and contentious issues, and ending with open questions and transformative potentials. Some authors felt comfortable with this structure; others interpreted their remit more freely. Contributors chose equally freely how to connect and balance conceptual elaboration, literature discussion and empirical insight. We believe all this provides the pages of the book with a healthy variety and individuality of approaches.

The field of environmental politics cannot be delimited according to well-established criteria, nor can the issues addressed be displayed according to a consensual organization. That said, the book aims to, and we think does, offer an overview of the state of the art, covering questions of significant relevance for a critical view on environmental politics. Entries have been selected after a great deal of discussion and some inevitable sacrifice – otherwise the reader now would be holding or watching a far bulkier text: too much, we felt. Yet, topics that were not attributed an entry of their own are often addressed within one or more chapters. An example is new materialisms. This emergent theoretical perspective is involved in many ways in a number of chapters, which confirms its relevance for a critical approach to environmental politics, as we have stressed previously. Dispensing with a dedicated discussion, which would inevitably be partial and tentative given the pervasiveness of new ontological perspectives and, most importantly, the pace of their current evolution across the Global South and Global North, was felt to be an acceptable choice faced within space constraints. At the opposite side of the spectrum of potentially significant topics, we have sacrificed issues boasting

a long-established literature to the benefit of less covered issues, or to ways of addressing them in an exploratory, even challenging, way. All things considered, we believe the entries included offer a comprehensive array of questions and outlooks that move across a variety of temporal and spatial scales, institutional levels and cultural perspectives, though – for the reasons outlined above – special emphasis is given to the impact of Western modernity and capitalism on socio-material organization and human–non-human relations, and how such impact has been and is being strengthened and challenged.

For the sake of space we will not follow the usage of synthesizing here each contribution. Giving an outline of the book's structure may suffice to conclude this introduction.

The book is organized in six parts. The first is devoted to theoretical strands of great relevance in constituting the framework of a critical outlook on environmental politics: 'Critical theory', 'Decolonial ecologies', 'Feminisms and the environment', and 'Marxism and ecology'.

The second part addresses notions of the contested status which makes them pivotal to the articulation of academic debates, political actions and societal struggles: 'Anthropocene', 'Buen Vivir', 'Degrowth', 'Limits', and 'Sustainability'.

The third part focuses on key issues, some referring to resources, others to challenges, conflicts, institutional arrangements, knowledge, and regulatory approaches, namely: 'Agrarian development and food security', 'Bioeconomies', 'Cities and the environment', 'Climate justice and global politics', 'The Common(s)', 'The cultural political economy of research and innovation', 'Disasters and catastrophes', 'Energy politics and energy transition', 'Expertise, lay/local knowledge and the environment', 'Extractivism and neo-extractivism', 'Religion and ecology', 'Social metabolism', 'Technological fixes', and 'The values of Nature'.

The fourth part deals with how the relationship between nature and society is regulated and governed (or allegedly so), by means of different types of institutionalized arrangements, with related power effects and agency implications. The chapters included are 'Democracy and democratization', 'Environmental violence', 'Environment-related human mobility', 'Financialization of nature', 'Fossil fuels and state–industry relations', 'Global environmental governance and the state', 'Just transition', and 'Sustainable welfare'.

The fifth part takes a perspective opposite to the former, namely, bottom up. It addresses manifestations of social effervescence concerning the environment, all important but differing according to focus, conception, target, organization, cultural background, and location. The chapters included are: 'Climate change consensus', 'Ecological mobilizations in the Global South', 'Engaging the everyday', 'Environmental movements', and 'More-than-social movements'.

The final part is devoted to emergent issues and perspectives. These are fundamentally concerned with whether and how human and non-human agential powers and societal goals can or should be reframed, also as a result of technological change. The chapters included are 'Decolonizing environmental politics', 'Digitalization and other promissory infrastructures for sustainability', 'Eco-feminism and the commons', 'Geopower', 'Post-work and ecology', and 'Transformative innovation'.

NOTES

1. <https://ukcop26.org/pre-cop/youth4climate-2021/> (accessed 27 December 2021).
2. <https://ukcop26.org/pre-cop/pre-cop-milan/> (accessed 27 December 2021).
3. Baseline year for the Kyoto Protocol.
4. Ratification year of the Kyoto Protocol.
5. See: <https://www.carbonindependent.org/119.html> (accessed 27 December 2021).
6. https://unfccc.int/sites/default/files/resource/cop26_aup_2f_cover_decision.pdf (accessed 27 December 2021).
7. At the time of writing this chapter, gas and nuclear energy are seriously being considered for inclusion in the EU sustainable investment taxonomy; see <https://www.euractiv.com/section/energy/news/gas-and-nuclear-fate-of-eu-green-taxonomy-now-in-the-hands-of-von-der-leyen/>. Moreover, the war in Ukraine is likely to deepen this trend.
8. The UNFCCC established an international environmental treaty to tackle ‘dangerous human interference with the climate system’. It was signed by 154 states at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro in June 1992. It established a Secretariat headquartered in Bonn and came into force in March 1994. The treaty called for ongoing scientific research and regular meetings, negotiations, and future policy agreements designed to both reduce greenhouse gasses and allow ecosystems to adapt to climate change.
9. The Green Climate Fund is a fund established within the framework of the UNFCCC as an operating entity of the Financial Mechanism to assist so-called developing countries in adaptation and mitigation practices. The objective of the Green Climate Fund is to ‘support projects, programmes, policies and other activities in developing country Parties using thematic funding windows’. It is intended that the Green Climate Fund be the centrepiece of efforts to raise Climate Finance under the UNFCCC.
10. Yvo de Boer, Dutch, has been Executive Secretary of UNFCCC from 2006 to 2010. After him, the role has been filled by Costa Rican Cristina Figueres (2010–16) and Mexican Patricia Espinosa (2016–ongoing).
11. https://www.huffpost.com/entry/climate-2010-an-exclusive_b_520531.
12. It should be underlined that these figures refer to production-based rather than consumption-based emissions, thus, owing to far-reaching processes of delocalization, we can expect that they underestimate the Global North’s contribution to carbon emissions, as demonstrated by some studies (Peters et al. 2012; Steinberg et al. 2012; Wiedman et al. 2015).

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3. Feminisms and the environment

Corinna Dengler and Birte Strunk

INTRODUCTION

In mainstream environmental politics, discussions on gender, if considered at all, rarely go beyond an acknowledgement that women are more vulnerable to environmental degradation and climate change, for example due to unequal access to resources. However, critical discussions on gender and the environment have gone much deeper. In this chapter, we retrace feminist academic engagement with the environment from the late 1970s onwards to shed light on the often neglected feminist roots of critical environmental thinking. This chapter only contains some fragmentary glimpses on the topic; for a more extensive overview of the field, we recommend the *Routledge Handbook of Gender and Environment* edited by Sherilyn MacGregor (2017).

In writing this chapter, we approach the topic from a specific standpoint. Feminist standpoint theory, informed by the work of theorists such as Donna Haraway (1988) and Sandra Harding (1991), highlights the need to acknowledge that what we know about the world depends on our materially grounded and socioculturally formed standpoint. As white, female-assigned, middle-class feminist ecological economists and degrowth activists based in the Global North, we are particularly interested in feminist approaches that aim for a reflective, engaged standpoint between science and activism, as well as in those that have the potential to enhance the degrowth project. Against this background, we structure the chapter as follows: we start with an introduction to various streams of critical feminist academic engagement with the environment and then proceed to a brief discussion of the role of women and/or queer activists in environmental justice struggles. In the penultimate section we trace how these feed into a critical-feminist degrowth approach and note open questions that arise for us as degrowth scholar activists in engaging with the introduced streams. The final section concludes.

FEMINIST ACADEMIC ENGAGEMENT WITH THE ENVIRONMENT

In this section, we introduce six streams of thought that we have identified as major academic discourses at the intersection of feminism(s) and environmentalism, namely, the subsistence approach, materialist ecofeminism, feminist ecological economics, postcolonial feminisms and the environment, feminist political ecology and feminist new materialism.¹ For each, we provide a brief overview of the historical context of its emergence, main assumptions, key concepts and contentious issues. While all approaches critically question power hierarchies within capitalism, each has a distinct focus on where this power manifests: contested *conceptual* realms of dichotomies that need to be broken down, *material* practices of a parallel structural devaluation of nature and care work or power-imbued definitions of, for example, ‘the economy’, ‘development’ and ‘nature’. The following section is hence written to illustrate the

breadth and variety, but also the interrelationship between various streams of critical feminist environmental scholarship.

The Subsistence Approach

The subsistence approach, sometimes also referred to as the Bielefeld approach, was formulated by Veronika Bennholdt-Thomsen, Claudia von Werlhof and Maria Mies in Germany from the late 1970s onwards. It originally drew on Rosa Luxemburg's work in approaching three distinct questions: (1) the women's question regarding the undervaluation of household work; (2) the question of continued colonial relations despite formal decolonization; and (3) the nature question on the exploitation of what is seen as 'free' resources (Mies 1986). While Rosa Luxemburg (1913 [2003]) did not address specifically these three questions, she put forward the concept of an ongoing primitive accumulation, which poses a critique to Marx, who regards primitive accumulation as prevailing only in the early stages of capitalism. Luxemburg, instead, highlights how capitalist accumulation always needs an exploitable exterior, a non-capitalist outside, to stabilize itself.

The subsistence scholars turned this perspective into a fruitful lens through which to approach the three questions outlined above. Women's unpaid labour, so-called 'developing' countries and nature all serve as reservoirs for non-capitalist exploitation, an exploitation that orthodox Marxists have remained blind to. The Bielefeld scholars argued that this exploitation is fundamentally relevant for continued capital accumulation – naming the three realms of nature, women and exploited countries 'the colonies of the White Man' (Bennholdt-Thomsen and Mies 2000, p. 12). Non-monetized household production, for example, can be understood as an internal colony that exists amid capitalist milieus (Mies 1986). But exploitation goes beyond that of unpaid care, as Mies (1982) showed with her research on rural women in Narsapur, Southern India, who produced at home for the lacemaking industry. Even when household production is drawn into marketized production, it is seen as the cheapest type of production – the 'housewifization' of household production feeds into the narrative that any income generated by women only complements that of the male breadwinner and can thus be remunerated below subsistence level. Von Werlhof (1988) predicted that this dynamic, which includes the flexibilization of work, will increasingly lead to a housewifization of wage labour, where men would also become 'housewifed'. An important element of this relation is that capital accumulation not only exploits subsistence production but also destroys it, as can be seen most evidently in the example of the natural environment (Bennholdt-Thomsen and Mies 2000).

The analysis the Bielefeld scholars have put forward, however, goes beyond pure critique. Instead, it offers an alternative conceptualization of both 'the economy' and 'the good life': economic activity no longer centres around capital accumulation but around 'life and everything necessary to produce life on this planet' (Bennholdt-Thomsen and Mies 2000, p. 5), that is, subsistence production. Their concept of subsistence production challenges the neat distinction between production and reproduction prevalent in orthodox thought. In doing so, the Bielefeld scholars have offered a bottom-up *perspective* (rather than a ready-made economic model), which has since then inspired many contemporary feminist debates on social reproduction.

Materialist Ecofeminism

Materialist ecofeminism resembles the subsistence perspective described above and ‘sees a connection between the exploitation and degradation of the natural world and the subordination and oppression of women’ (Mellor 1997, p. 1). While both approaches share a general outlook, the two strands emerged in different discursive and geographical settings: Ecofeminism originated in the Anglo-American tradition as an academic-activist field from the mid-1970s onwards and received increasing attention in the aftermath of the 1980 *Women and Life on Earth: Ecofeminism in the Eighties* conference in Amherst. It was originally developed by early ecofeminists, such as Carolyn Merchant (1980 [1990]), Val Plumwood (1993), Greta Gaard (1993), Ariel Salleh (1997) and Mary Mellor (1997), but also – and here we see important overlaps with the theoretical strands discussed in other sections of this chapter – by Maria Mies and Vandana Shiva (1993). In more recent years, research on specific topics, such as ecological citizenship and the politics of care (MacGregor 2006), public money (Mellor 2016), intersectional ecofeminism (Kings 2017), and the forces of reproduction (Barca 2020), have further refined and diversified ecofeminist thought.

Some feminists were quick to brush aside all ecofeminism as essentialist, since there is a marginal stream in ecofeminism, sometimes termed ‘cultural’ or ‘spiritual’ ecofeminism, which evokes a feminine essence that presumably is closer to nature (Biehl 1991). However, the majority of ecofeminist analysis is decidedly materialist (Salleh 2009; Oksala 2018). Materialist ecofeminism, rather than seeing women as naturally caring or closer to nature, focuses on the embodied materiality arising from the subordinate position women have historically had in society, which is closely linked to the gendered division of labour women have been socialized into. Moreover, from the beginning there have been ecofeminists pointing out the need for a queer ecofeminist theory. Queer ecofeminism traces, for example, how it is precisely those identity groups that are oppressed in Western ideology that are seen as ‘closer to nature’, while, ironically, queer sexualities are frequently devalued for being ‘unnatural’ (Gaard 1997).

To support our argument that most of ecofeminism is materialist, let us take a look at two of the founding texts of Anglo-American ecofeminist thought, namely, Carolyn Merchant’s 1980 *The Death of Nature: Women, Ecology and the Scientific Revolution* and Val Plumwood’s 1993 *Feminism and the Mastery of Nature*. Merchant (1980 [1990]) retraces how the feminization of nature, the naturalization of ‘the feminine’ and the discursive and material subordination of both goes back to the scientific revolution in the sixteenth century and is reified under capitalism. In the preface of the book, Merchant claims that there are

no unchanging ‘essential’ characteristics of sex, gender or nature. ... In seeking to understand how people conceptualized nature in the Scientific Revolution, I am asking not about unchanging essences, but about connections between social change and changing constructions of nature. (Merchant 1980 [1990], p. xvi)

Similarly, Plumwood (1993) shows how the hierarchization inherent in dichotomies, such as culture/nature, male/female and production/reproduction, lies at the very core of the devaluation, exploitation and destruction of female-codified care work and nature. She argues that the assumption that (especially rural) women have a different relationship with nature is not based on “essentialism”, the appeal to a quality of empathy or mysterious power shared by

all women and inherent in women's biology' (Plumwood 1993, p. 35), but on a different socio-historical position women are ascribed to in patriarchy.

Ecofeminist political economy, as another sub-stream of ecofeminist thought, takes a closer look at how economic systems are deeply gendered and rely on the exploitation of female codified unpaid care work and the environment. Ecofeminist political economists see the monetized economy as the tip of an iceberg (Mies 1986), the top layers of a cake (Henderson 1980) or more generally 'a small part of a much greater sustaining whole' (Mellor 2009, p. 252). They would commonly reject the commodification of nature to make its contribution to production processes visible and instead argue that ecofeminist analysis needs to 'start from the fundamental necessities of life' (Mies and Shiva 1993, p. 20).

Feminist Ecological Economics

The focus on the economics of nature-care relations as explored by feminist political economists is further taken up in the field of feminist ecological economics, which grew out of two streams of contributions: ecological economists who dealt with feminist issues and feminist economists who dealt with ecological topics. These contributions started to merge in the 1990s with various papers published, for example, in the *Ecological Economics* special issue on *Women, Ecology, and Economics* edited by Ellie Perkins (for example, Jochimsen and Knobloch 1997; O'Hara 1997; Pietilä 1997) or, more recently, with the *Feminist Economics* symposium on *Ecology, Sustainability, and Care* edited by Julie Nelson and Marilyn Power (for example, Nelson and Power 2018; Dengler and Strunk 2018). Conceptually, the starting point of feminist ecological economics is the acknowledgement that the formal, growth-driven, money-dominated economy is only one facet of 'the economy' and that without social reproduction, on the one hand, and natural processes, on the other, no formal economic activity would be possible. Nonetheless, as feminist scholars have demonstrated since the 1990s, mainstream economic theory marginalizes both these contributions to economic activity, treating them – if at all – as 'externalities'. Against this background, O'Hara (2009, p. 190) emphasizes, in feminist ecological economics 'what typically has been considered an "externality"', now becomes the focus of analysis'.

Feminist ecological economics is thus concerned with what is and what is not considered economics, a distinction that in our current economic system runs along the line of what is counted in gross domestic product (GDP). Biesecker and Hofmeister (2010, p. 1703) argue that 'it is the structure of separation between the productive and the reproductive that has given rise to the present socioecological crisis situation' and have coined the term '(re)productivity' as a category of mediation between the two spheres. (Re)productivity tries to overcome the structural devaluation of non-monetized caring activities and the natural environment, which occurs in an economic paradigm that focuses only on the monetized economy. In seeking to revert the hierarchical dominance of market activities over non-market caring and ecological provisioning, feminist ecological economics puts the principle of 'social provisioning' (Power 2004) or the 'economy of socio-ecological provisioning' (Dengler and Lang, 2022) at the centre of what economics *is*.

Drawing from feminist scholarship more broadly, feminist ecological economists suggest conceptualizing social reproduction beyond markets, to start from local places and commons and emphasize the importance of institutions-building and collective decision-making (Perkins 2007). While exploring these pathways, feminist ecological economists also reflect on poten-

tial negative social or environmental repercussions of particular strategies. For example, concerning valuation, feminist ecological economists note two problematic consequences of valuating in monetary terms: the strengthening of hierarchies between the monetary and the non-monetary, and the increase of disposable income for ecologically harmful consumption (Perkins 2007; Dengler and Strunk 2018). While feminist ecological economists do recognize the need to make unpaid care as well as natural processes more visible within current, money-focused valuation systems, they generally advocate for decoupling social recognition from monetary valuation in the long(er) term.

Postcolonial Feminisms and the Environment

All three approaches introduced so far in one way or another criticize certain facets of what is understood as ‘the economy’. Postcolonial feminist scholars extend this analysis to how discourses on ‘development’ either enable or prevent critical outlooks on environmental politics. Whereas Chapter 2 of this volume explores the relations between postcolonial studies and the environment in greater detail, this section aims at giving a brief genealogy and overview of discussions on feminisms and the environment in the Global South.

An early dispute on postcolonial feminisms and the environment concerned the *Women, Environment and Development* (WED) approach. WED proponents, such as Vandana Shiva (1988), not only asserted women a higher vulnerability regarding environmental degradation, but in taking inspiration from ecofeminist discourses and activism, such as the Chipko Movement in India (Shiva 1988) and the Green Belt Movement in Kenya (Maathai 1985), also emphasized women’s agency in resisting environmental destruction. Early critics, such as Bina Agarwal (1992), argued that WED scholars tend to homogenize women and overlook broader socio-political processes and intersections with, for example, class, race or caste. Currently, this intersectional perspective arguably prevails in much of postcolonial ecofeminisms.

Postcolonial feminisms that engage with the environment are multifaceted and regionally diverse, and there are plenty of debates on the intersection of feminism and environmentalism in the context of Latin America (for example, Svampa 2015), Africa (for example, The WoMin Collective 2017) and Asia (for example, Rao 2012). Generally, postcolonial (eco-)feminisms are often closely linked to critiques of development (Aguinaga et al. 2013) and engage, for example, with questions of extractivism, collective modes of social reproduction or caring for the human and more-than-human. Drawing on the example of feminist perspectives on (neo-)extractivism in Latin America, it is important to acknowledge that the effects of resource extractivism are not gender (or race or class) neutral but multiply existing vulnerabilities (Deonandan et al. 2017; Cielo and Coba 2018). The resistance against these intersectional inequalities is led by local, often indigenous, communities that in many cases reject the anthropocentric understanding of nature as fundamentally distinct from humans, thereby offering a window of opportunity for post-extractivism. While this is by no means a call to exoticize an ‘indigenous’ Other and her life in harmony with nature (Argyrou 2005), there is plenty to learn from postcolonial feminisms regarding alternatives to ‘unfettered economic growth, extractive capitalism, and the concentration of wealth and power in the hands of a few, who have known plenty but cared too little’ (Johnson and Wilkinson 2020, p. xxi). One of the main lessons is arguably that in most postcolonial feminisms, the concept of ‘care’ from the very beginning also includes care for surrounding nature, based on a non-anthropocentric notion of interdependence that transcends the nature/culture divide (Singh 2013; Cielo et al. 2016).

Feminist Political Ecology

Overcoming anthropocentric dichotomies is a topic that also plays a role in feminist political ecology (FPE), a stream that offers yet another perspective on critical feminist environmental scholarship by linking the previously mentioned political economy debates to critical geography. Similar to materialist ecofeminism, FPE thus shares the basic assumptions that both women and the environment are exploited in patriarchal capitalism and that hierarchical dualisms, such as human/nature, reason/emotion, male/female or North/South need to be overcome.

More specifically, FPE applies feminist perspectives to the interdisciplinary research area of political ecology that emerged in the 1970s and, in its original coinage, studies ecological distribution conflicts. In analysing topics such as access to resources or, more generally, the power relations inherent in the society/nature relationships, political ecology offers a contextual and holistic perspective on versatile relations of exploitation between societal and ecological systems. With their edited volume, *Feminist Political Ecology: Global Issues and Local Experience* Dianne Rocheleau, Barbara Thomas-Slaytern and Esther Wangari (1996) founded FPE as a distinct stream of thought that links political ecology with central insights from feminist cultural ecology, feminist geography and feminist political economy. The editors emphasize that FPE 'rejects dualistic constructs of gender and environment in favor of multiplicity and diversity, and emphasizes the complexity and interconnectedness of ecological, economic, and cultural dimensions of environmental change' (Rocheleau et al. 1996, p. 289). Feminist political ecology takes a power-sensitive and grounded approach to studying the gender(ed) dimension of, for example, resource endowment, environmental policies or environmental activism, where

conceptual weight is given to the ways in which capitalism transforms and produces nature, and as such processes intersect with gender hierarchies at different scales, patterns of enclosure and marketization are seen as having important gender effects. (Elmhirst 2015, p. 62)

FPE analyses are often driven by case studies, and those case studies often take a post-structuralist and performative approach to gendered subjectivities (Elmhirst 2011). For example, Andrea Nightingale (2011) thoroughly analyses the strong ties between the ecological materiality of space and social inequalities, drawing on anthropological fieldwork that illustrates how intersecting power dynamics with regard to caste/purity and gender are inscribed into everyday practices in north-western Nepal (for another example, see Cole 2017).

Recent developments in the field are surveyed in *Feminist Political Ecology and the Economics of Care: In Search of Economic Alternatives* (Bauhardt and Harcourt 2019). The edited volume hints at a future FPE agenda that aims to create systemic alternatives that are 'inter-generational, interspecies, and intersectional, based on an ethics of care for human and non-human others' (Bauhardt and Harcourt 2019, p. 14). Research in this field provides a rich reservoir of case studies on ecological distribution conflicts, which are analysed through the lens of an intersectional feminist, and sometimes also a queer and/or posthumanist perspective.

Feminist New Materialism

Feminist political ecology, as described above, partly draws from the stream of new materialism for its case study analyses, particularly when it comes to the question of transcending binaries – Haraway's (2008) 'naturecultures' is an example of a new materialist concept that has inspired other streams of feminist thought in transgressing the nature/culture dichotomy, thereby recognizing humanity as an integral part of nature. So what exactly is feminist new materialism?

New materialism is an approach that more abstractly deals with meta-questions of materiality, agency and relational ontologies. It is strongly inspired by feminist scholarship, drawing from post-Marxism, parts of ecofeminism and science and technology studies. As a response to poststructuralism's strong focus on discourses, feminist new materialist scholars align with the 'material turn' and highlight the role of matter and materiality, specifically drawing from feminist scholarship engaging with bodies, environment and critical philosophy of science (for example, Barad 2007; Alaimo and Hekman 2008). In doing so, feminist new materialists question to what extent non-human entities are endowed with agency. Karen Barad's ontology of agential realism, for example, rejects the ontological primacy of 'things' that can interact and instead talks of phenomena, which 'are the ontological inseparability/entanglement of intra-acting "agencies"' (2007, p. 139). Such an approach fundamentally questions conceived notions of agency and matter, and proposes radically new ways of viewing the world.

Even though it might not be obvious at first sight how this emphasis on materialization, matter and agency contributes to social-ecological transformations, feminist new materialists do offer starting points for engaging in critical environmental politics. Diana Coole and Samantha Frost (2010, p. 20), for example, have argued that global warming precisely forces us to put 'new emphasis on the material dimensions of social existence', and that those new emphases are necessary to address environmental crises in any meaningful manner. This type of new materialism is different from the original, Marxian approaches of *historical* materialism which stress the emancipatory potential of (class conscious, organized) human beings, thereby perpetuating a human-centred ethics. New materialism, instead, aims to overcome the centrality that is often granted to human beings and human bodies in social theory. Instead of combating the Anthropocene (Crutzen 2006) or the Capitalocene (Moore 2016), Haraway (2016, p. 41) argues for making kin in the Chthulucene, an entirely different multispecies story, where 'human beings are with and of the earth, and the biotic and abiotic powers of this earth are the main story'. Such views on posthumanism claim that an anthropocentric worldview is precisely part of the problem that has brought about environmental crises (Braidotti 2013). New materialism thus aims to overcome a range of dualities that manifest anthropocentrism, such as nature/culture, human/non-human or subject/object. Discussions on 'queer ecology', then, draw on these transgressions to show how a change of perspective from an anthropocentric to a more ecocentric worldview challenges the putative naturalness of gender and/or monogamous heterosexuality, thereby queering our perspective on feminisms and the environment (Alaimo and Heckman 2008; Mortimer-Sandilands and Erickson 2010).

FEMINIST ACTIVIST ENGAGEMENT WITH THE ENVIRONMENT

We agree with van den Berg (2019, p. 55), who highlights that it ‘is important to recall that feminism and environmentalism were both practices first and theory second’. Therefore, in this section – although it has been partially touched upon in the previous section – we explicitly acknowledge that feminist academic engagement with the environment is inextricably linked with activism and note the crucial role of women and queers in environmental justice struggles around the world (see also Gaard 1997; Perkins 2013).

The claim made here is twofold. First, many of the aforementioned scholars not only theorize about feminisms and the environment but are also political activists in the environmental and/or feminist movement. This ranges from the Indian ecofeminist Vandana Shiva, a leading voice in the Navdanya movement, who has been fighting for free (non-privatized) seeds, biodiversity preservation and food sovereignty for about 40 years, to feminist political ecologists who, as described above, often commit to participatory research designs and activist approaches to science. Second, and arguably more importantly, women have been at the forefront of non-theory-led environmental activism around the globe (Perkins 2013; Rodriguez Acha 2017). Examples include Berta Cáceres, a Honduran indigenous and environmental activist, who supported feminist and LGBTQ*IA+ rights and who was murdered for her unyielding fight for territorial rights of the Lenca communities; Patricia Gualinga who tirelessly fights against oil drilling and for indigenous and environmental rights in Sarayaku in Ecuador; or Greta Thunberg, whose ‘*Skolstrejk för klimatet*’ from August 2018 has been the starting point of the Fridays for Future movement.

It is crucial, however, to acknowledge that the role women and queers play in activism does not exhaust itself in individuals, whose names we read in newspapers. Most of the environmental justice struggles are local struggles against environmental destruction or displacement. In many instances, these local environmental justice struggles are led by women’s and queers’ grassroots activism, an empirical fact that is tied to women’s social roles as ‘carers’ for the health and safety of families, communities and the environment (Rocheleau et al. 1996; Perkins 2013). For example, Deonandan et al. (2017, p. 415) find in their case study on women’s activism against a nickel mining project in El Estor, Guatemala, that women activists often take on the role as ‘bridge leaders’, who are ‘less known outside the group, but who work to build movement strength and cohesion [and in] doing so, they service an equally – or perhaps even more – critical role, within the community itself’.² Hence, while individual names can be starting points for acknowledging the historical relevance of women for environmental activism, it is women’s and queers’ roles in grassroots organizing, community mobilizing, social movements and lived resistance that should be recognized as building alternative futures.

TOWARDS A CRITICAL-FEMINIST DEGROWTH APPROACH

Having introduced various streams of feminist theorizing on the environment and the role of activism, we now transpose this analysis onto our own standpoint as degrowth scholar activists and ask what degrowth can learn from the feminist engagement with the environment. Degrowth, as an interdisciplinary academic discourse and activist movement, does not aim for negative growth rates in a growth paradigm, but seeks to spell out possibilities for a social-ecological transformation towards an economic and cultural system no longer reliant

on constant acceleration for social stability (for a more extensive introduction to degrowth, see Chapter 7 in this volume). In its critical analysis of growth and capitalist logics, degrowth shares many positions with the previously discussed streams of feminist environmental thinking. However, when browsing through degrowth founding texts, we may easily get the impression that it rests on all-male theoretical origins, with Nicholas Georgescu-Roegen, André Gorz or Serge Latouche often named as the ‘founding fathers’.

So, after this introduction to feminist academic engagement with the environment, we may ask: But what about the ‘founding mothers’? How does the feminist critique of science or economic growth facilitate a more profound understanding of structures of oppression? What mechanisms of exclusion are in play when these contributions are structurally forgotten and how can we disrupt and overcome them? And what if we queered the founding mother/founding father binary altogether? We argue that degrowth is in need of a basic analysis of the relation between capitalism/growth and patriarchy, which many of the abovementioned streams of thought offer, as the hope of overcoming the growth paradigm without tackling its patriarchal roots is futile. However, despite the increased engagement with feminist theories in degrowth scholarship (for example, Dengler and Strunk 2018; Gregoratti and Raphael 2019; Hanaček et al. 2020; Saave and Muraca 2021), most notably in the *Feminisms and Degrowth Alliance* (FaDA) network, we contend that a feminist degrowth approach remains a project in the making.

We argue that the streams presented in this chapter offer a fertile ground for furthering a feminist degrowth approach. By going back to the early works of subsistence scholar Maria Mies (1986), ecofeminist political economist Mary Mellor (1997) or feminist economist Marilyn Waring (1988), for example, degrowth scholars learn how in a capitalist system there is a structural similarity of the devaluation of female-coded reproductive labour and the destruction of nature. Re-reading the feminist ‘wages for housework’ campaign from the 1970s can inspire degrowth scholars to reason about the dilemma of valuation and thoroughly transformative approaches to the question of how to ‘value’ social reproduction (Toupin 2018; Dengler and Lang, 2022). Queer ecologies as, for example, explored by Catriona Mortimer-Sandilands and Bruce Erickson (2010) help to move beyond Cartesian dualisms and binary thought structures, as well as to overcome the heterosexism that strongly influences the way we see, approach and experience nature. Engaging with the Spanish ecofeminist Amaia Pérez Orozco’s (2014) work on the ‘sustainability of life’ opens up conceptual space to put collaborative and relational activities necessary to sustain life over time, including both its material and symbolic dimensions, the human and more-than-human as well as their interrelations, at the core of social organization. Moreover, Silvia Federici’s (2019) latest book on feminism and the politics of the commons, as well as a recent special issue on feminist political ecologies of the commons and commoning (Clement et al. 2019) show how feminist and degrowth perspectives intersect around questions of collective forms of caring for the human and more-than-human (see also Federici’s contribution to this volume, Chapter 39). These are only some among many examples of where we think a critical-feminist degrowth approach should start digging for its feminist intellectual roots.

CONCLUSION

In this chapter, we provided an overview of critical feminist engagement with the environment from the 1970s onward. We first introduced a range of theoretical streams, then discussed the role of women's and queers' activism, and finally reflected on degrowth as an activist-academic approach that shares a critical perspective on environmental politics but needs to become integrally more feminist. All approaches share a critical starting point of questioning power hierarchies within capitalism, while focusing on different facets of these power structures. Some recurring themes are, for example, the critique of culturally embedded conceptual dichotomies such as nature/culture, production/reproduction or human/non-human; the highlighting of the structural devaluation of that which is not monetized – often natural processes and social reproduction; and the demand to broaden or entirely overcome particular conceptualizations of 'the economy', 'development' or 'nature'. When talking about the role of activism, we noted that not only are feminist scholars often activists but, importantly, it is women and other subaltern groups who – owed to the gendered division of labour that comes along with an increased vulnerability to environmental damages – have historically played a crucial role in environmental justice struggles, and continue to do so today. Thereafter, we engaged in a critical reflection on degrowth to outline where we see open questions and starting points for future research. We argued that degrowth shares a critical perspective on capitalist power structures with many streams of feminist academic engagement with the environment and, moreover, shares an explicitly activist agenda with many of the women-led activist groups. Nonetheless, we argued that even though much of this intellectual heritage of critical feminist environmental thinking of past decades could be made fruitful for degrowth research, it has not yet been integrated sufficiently. We hope that this path will be taken up in future research.

NOTES

1. This classification is subjective in nature. We might also, for example, distinguish materialist ecofeminisms with regard to regional varieties, such as an (hegemonic?) anglophone tradition, Latin American popular (eco-)feminisms, the German subsistence approach and feminist environmentalism in India. Also, some fields as, for example, queer ecology might be considered its own stream of feminist environmental scholarship, instead of a subset of ecofeminisms.
2. For other examples, see Fakier and Cock (2018) on ecofeminist organizing in South Africa, Singh (2013) on the affective labour of growing forests in India and Christiansen (2021) on gendered relinking to indigenous knowledge in the example of water protectors at Standing Rock in the US.

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5. Anthropocene

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INTRODUCTION

This chapter deals with the concept of Anthropocene, a techno-scientific label proposed by specialists in earth system sciences, as a technical name for a geological epoch marked by a significant impact of purposeful human activity on Earth's geology and ecosystems. In environmental politics it is also a conceptual framework within which to observe the constraints and potentials of contemporary natures and societies through the interrelationship between ecology and justice. The simplistic reading of the Anthropocene is one in which humanity's propensity for broadly understood development (as an instrument of emancipation), resulted in a systemic destabilizing of non-human nature.

This, in turn, is now undercutting the attainments of that development and threatening to bring down the whole process. Yet with a multitude of subsistence, control, learning, conflict, contraction and expansion activities taking place in the everyday interactions between over 7 billion humans themselves (with varying consequences for the biosphere: human and non-human life) a new way of presenting some of that interaction is needed in order to fight to extinguish the destructive and unjust interactions while amplifying those that are regenerative and emancipative. The hegemonic conception of development is unable to articulate a globally just and sustainable universal format of these interactions, differentiating between the political and economic obstinacy to deviate from a destructive path and the existing instances of climate-restorative livelihoods.

In this chapter we overview the concept of Anthropocene in the literature, from the origins in geology to contemporary variations in social sciences and humanities, presenting questions and critique with the aim of proposing a systemic paradigm shift (in the Kuhnian sense) in how science explains its reproduction and origins. This paradigm shift leaves open the details of applicability of the surveyed critiques to particular instances and experiences. Also, it is proposing a loose intellectual structure of constraints on historical progress of human emancipation and socio-metabolic patterns (see Chapter 21 in this volume), and through it provides holistic future perspective without invalidating the complexity of particular current and historic instances.

It proposes to leapfrog the intricacies of explaining how Anthropocene happened to the Earth (let alone by whom exactly it has been brought about and when) by focusing on explanatory unification of seemingly widely disparate phenomena associated with it and explanatory conceptual clarification provided by a principle theory model¹ (cf. Van Camp 2011; Domazet et al. 2020). We argue that Anthropocene is a condition of combined ideological (through growth for profit accumulation) and socio-technical organization (capital-driven fossil fuel combustion), whose non-catastrophic conclusion requires regeneration, degrowth (Chapter 7 in this volume) and commons governance (Chapter 14 in this volume) in diverse locally meaningful ways. Otherwise, the hegemonic growth ideology remains intellectually locked into the paradox of emancipation and self-destruction on multiple levels of scale.

EVERYDAY REALITY OF THE ANTHROPOCENE: THE CONCEPT OR THE TECHNO-SCIENTIFIC LABEL

According to Steffen et al. (2007), in 1873 an Italian geologist and priest Antonio Stoppani wrote about the ‘anthropozoic era’. The first to use the word ‘anthropocene’ was a Russian geologist, Aleksei Pavlov, in 1922, describing the ‘present day’ as a part of an ‘Anthropogenic system (period) or Anthropocene’ (Lewis and Maslin 2015, p. 171). It was brought to general attention by the Ukrainian geochemist, Vladimir Vernadsky, as an idea that the biosphere, combined with human cognition, had created the Noösphere (from the Greek for mind), with humans becoming a geological force (Vernadsky 1945). However, the chronostratigraphic Anthropocene Working Group (AWG), founded by the International Committee on Stratigraphy (subfield of geology), sees the term as widely used since it was coined by Crutzen and Stoermer in 2000 to ‘denote the present geological time interval, in which many conditions and processes on Earth are profoundly altered by human impact’ (Crutzen and Stoermer 2000, p.17).

As is explained by Cruzen and Stoermer, this impact has intensified significantly after 1800 CE with the Industrial Revolution’s rapid course, taking us out of the Earth System state typical of the climatically remarkably stable Holocene Epoch. Geological changes hitherto only attributed to asteroids, tectonic plate shifts and volcanoes are now causally ascribed to gross human activity with a cumulative intensity of a geophysical force profoundly affecting the planet, from major biogeochemical cycles to the evolution of life (Lewis and Maslin 2015). We are currently witnessing visible human alterations of the biological fabric of the Earth (increased erosion and sediment transport associated with urbanization and agriculture), of stocks and flows of main elements in the planetary machinery, such as nitrogen, carbon, phosphorus and silicon, and of energy balance at the Earth’s surface (Steffen et al. 2007).

Environmental changes caused by these include global warming (Chapter 32 in this volume), sea-level rise, ocean acidification and spreading of oceanic ‘dead zones’, rapid changes in biosphere both on land and in the sea as a result of habitat loss, great loss of biological diversity (the sixth mass extinction), and the proliferation and global dispersion of new minerals, such as concrete, fly ash and plastics (Zalasiewicz et al. 2010). Lewis and Maslin (2015, p. 172) note that human actions may well constitute the Earth’s most important evolutionary pressure, as ‘the development of diverse products, including antibiotics, pesticides, and novel genetically engineered organisms, alongside the movement of species to new habitats, intense harvesting and the selective pressure of higher air temperatures resulting from greenhouse gas emissions, are likely to alter evolutionary outcomes’.

The term ‘Anthropocene’ has been widely used in environmental sciences for the past 15 years. It has been popularized in prominent science journals and even in popular periodicals such as *The New York Times*. There have been many conferences on the topic, as well as art exhibitions and performances. As a concept, the Anthropocene caused debates in the field of earth sciences, and has been contested, and even renamed, within the social sciences. Nichols and Gogineni (2018) notice that natural sciences and social sciences/humanities have different motivations for establishing a new geological era, and different parameters for identifying it. There have been voices advocating for a more interdisciplinary definition coming from both camps (Ellis et al. 2016; Trischler 2016; Nichols and Gogineni 2018). Although the differences in conceptual delineation and use of the term in earth sciences and social sciences/humanities are primarily ontological and epistemic, their consequences are also thoroughly political.

The problem with the natural and technical sciences, the science, technology, engineering and mathematics (STEM) fields, is related to their capacity to change methods, paradigms, but especially the viewpoint of the culture/nature distinction and/or boundaries. In 2007, Steffen et al. described the Earth System (the holistic approach to the Earth adopted by scientists in the 1980s) as ‘the suite of interacting physical, chemical and biological global scale cycles and energy fluxes that provide the life support system for the life on the surface of the planet’, but in the last paragraph of the description the authors add ‘Finally, the Earth System includes humans, our societies and our activities; thus, humans are not an outside force perturbing an otherwise natural system but rather an integral and interacting part of the Earth System itself’ (Steffen et al. 2007, p. 615).

This addition was novel for geologists who are socialized into thinking from the ‘third person point of view on the world’ in which humans are detached from nature, as opposed to a ‘first person point of view of the world’ in which humans are inseparable from nature (Bilgrami, 2014). Anthropocene scientists now challenge this long-standing disciplinary view of nature, and are currently changing the main standpoint related to nature in the STEM fields. The conceptual standpoint, paradoxically, resulted in human domination over nature and in its irreversible damage through a 400-year long detachment from nature (Nichols and Gogineni 2018). This change has moral and political implications, and many argue for a firmer ‘paradigm shift’ in the natural sciences (Hamilton 2016).

However, geologists from the AWG remain mostly interested in the methodology of defining the start of an epoch (stratigraphy), as they have been trying to establish the ‘golden spike’ – a signal in geological data that would indicate a change in the Earth System related causally to *Homo sapiens*. After agreeing that the Holocene Epoch is not best suited for current times, there are intense and lasting debates within the community of exactly when, in terms of a geological timescale, the new epoch – Anthropocene – started. There are two main perspectives, called the Orbis spike and the bomb spike (Lewis and Maslin 2015).

The Orbis (‘the world’ in Latin) spike dates the beginning of the Anthropocene epoch in 1610, when the wide-scale swapping of species between continents that began in 1492 was first truly felt, and the core samples of the Antarctic ice showed a dramatic dip in atmospheric carbon dioxide levels at that point. Scientists theorize that this was caused by the rampant death that followed the colonizers in the New World as around 50 million people were exterminated, by a combination of warfare, enslavement and infectious diseases (Newson 1992; Lewis and Maslin 2015). Since many of those people were farmers – especially in South America – when their fields were no longer tended, trees were able to grow back and suck carbon dioxide out of the atmosphere. Many argue that this view of the Anthropocene is wrong because it divorces the concept from the modern industrialization and burning of fossil fuels.

According to a recent AWG report (Subramanian 2019), it seems that for the majority on the panel the bomb spike² is considered to be a better candidate for the beginning of the epoch in a geological time scale. The bomb spike denotes the starting of the new epoch in the mid-twentieth century. At that time, a rapidly rising human population accelerated the pace of industrial production, the use of agricultural chemicals and post-war construction boom. Also, the first atomic-bomb blasts littered the globe with radioactive debris that became embedded in sediments and glacial ice, becoming part of the geologic record. All of this marks the beginning of the great acceleration, the sharp rise in the destructive environmental effects of human industry since the second half of the twentieth century (Steffen et al. 2015).

This, almost purely technical, use of the Anthropocene in the field and subfields of geology, becomes reinterpreted for different purposes within the fields of social sciences and humanities. As Lorimer (2017) sums up, the scientific categorization question in natural sciences provoked an intellectual fury in social sciences, owing to political consequences of a seemingly disinterested naming and dating issue. From the perspective of social sciences these can be described as issues related to intellectual zeitgeist, as an ideological provocation, as new ontologies of shared planet and culture, and science fiction. Anthropocene in social sciences has connections to, and implications for, family, education, politics, social movements, class, gender, race, law, work, culture, care, history, time, space, science, technology, language, the arts, religion, and what it means to be human on this endangered planet (Sklair 2017).

As an ideological provocation (Lorimer 2017), the Anthropocene becomes contested as a grand narrative about human–environment relations and recast as Capitalocene (Moore 2015, 2017; Angus 2016; Malm 2016), Anthrobscene (Parikka 2014), Chthulucene (Haraway 2015, 2016) and Plantationocene (Haraway 2015). Researchers are focused on the debates about the social, ecological and planetary implications of development, capitalism, modernity and humanism. The arguments for Capitalocene and Anthrobscene are predominantly related to ‘metabolic rifts’ (Chapter 4 in this volume) and social inequalities caused by capitalism, recently in neoliberal form and related to half of cumulative emissions of climate-altering gasses. This perspective, rooted in structure of ownership of the means of production and structure of its output distribution, warns that humanity cannot go on living and consuming as we do now, that we must radically change our lifestyles and socio-economic organization by changing/ending capitalism and creating new types of societies.

However, there are persuasive warnings that although capitalism makes anthropogenic damage to the planet worse (by exponentially intensifying growth of throughput, for example), its cessation is a necessary but not sufficient condition for overcoming the injustice and unsustainability of the Anthropocene (Chakrabarty 2009; Haraway 2015). We also need new types of relationships with nature and other non-human beings, as elaborated by Chthulucene (Haraway 2015; Tsing et al. 2017), which invites a subsequent epoch devoid of human exceptionalism in a multiple species world. Furthermore, feminists have contested the notion of Anthropos being linked to all of humanity, rather than the narrow masculinist logic of resource extraction (Gibson-Graham 2011), with Raworth (2014) even suggesting the neologism ‘Manthropocene’.

For the postcolonial researchers (see Chapters 2 and 37 in this volume), Anthropocene becomes Anglocene, a problem caused, named and only discussed by Northern, anglophone ‘anthropocenologists’ (Bonneuil and Fressoz 2016); and Plantationocene – a problem started with the colonization and social and ecological predations of colonial capitalism (Haraway 2015; Lewis and Maslin 2015). We should also mention the group still wedded to the third-person perspective on historical roots of the contemporary global challenges, tightly related to the AWG of stratigraphy geologists (predominantly Caucasian men), proclaiming a ‘Good Anthropocene’. Self-described as ecomodernists, they imagine the epoch in which humans achieve their Enlightenment destiny as the ‘Good Species’ through efficient, but not polluting technology, urbanization and decoupling of human subsistence from nature (Bloomquist et al. 2015). Ecomodernists fail to acknowledge the links between the global environmental destruction and the social metabolism of capitalist modernity, which is why critics describe their vision as a Promethean technofix (Hamilton 2015).

(RE)THINKING THE ANTHROPOCENE

Anthropocene as a concept on a metaphorical level successfully connects deep time with the future of humans (Lorimer 2017). However, the concept within itself contains paradoxes, seemingly strikingly implausible conceptions indicating a hidden and important truth, such as the universal human distribution of benefits and impacts containing waste inequalities, comparison of meagre humans and their short lives with mighty tectonic events, development through destruction, and similar (Domazet 2017). As Bonneuil (2015) argues, it seems that we need a plurality of narratives from many voices rather than a single grand narrative, but that would invite a plurality of concepts leaving us without the signifier for a unique global situation we are all in (though not all directly experiencing it in the same way).

Who Are 'We' in the Anthropocene

Even positioning yourself in relation to Anthropocene is a harder task than simply accepting that you are an individual from a species that plays a special role in a recent, though specific, geological epoch. Consider an analogy to Lewis's (2019) illustration of a well-known cultural reference from a book on surrogacy and feminism. Lewis (2019) portrays Atwood's (1985) *The Handmaid's Tale*, as a type of wishful dystopia, or 'dystopia that functions as utopia'. Although counterintuitive (that is, paradoxical) at first, Lewis asks us to imagine how much easier politics would be if the only thing standing in the way of peace and harmony were 'evil religious fundamentalists with guns' (Lewis 2019, p. 19). We would not need to worry about capitalism or racism, our own complicity in both or either, all women are equally oppressed. Applying this to climate change and environmental degradation, how much easier it would be if all of humanity were equally responsible for, and vulnerable to the environmental degradation and breakdown of stable climatic conditions. Would it not be easier if the only thing standing between unified humanity and mitigation of climate catastrophe were some fundamentalists with 'smokestacks'? To think like that we would have to completely ignore the history of colonialism, oppression, capitalism and extractivism, together with the everyday social inequalities related to race, gender and poverty. However, we would also have to ignore our daily reliance on benefits of modernity.

Climate change universalizes the future of humanity (Jasanoff 2011), and the Anthropocene conceptualized as a consequence of 'human' activities universalizes the guilt for the far-reaching and deadly changes to all of humanity. When humanity is portrayed as a unified historical and political body, we end up hiding the vast inequalities in wealth and power that characterize the contemporary 7-plus billion people on the planet. The educated and well-fed few then end up speaking for all, in constructing the history of how humanity got to the current state, and what ought to be done to overcome it (Domazet et al. 2014). Less than a fifth of the currently living humans live in nation states whose economies account for more than a half of greenhouse gas emissions and command most of the military and political power (UNDP 2013).

Even the educated and well fed are of different socio-demographic backgrounds, if they are women, women of colour, or represent some other 'minority group', that they are probably well situated, and that their norms echo the hegemonic norms deeply rooted in the political institutions of their society, makes them prone to be in favour of the (capitalist) status quo. As Magnúsdóttir and Kronsell (2015) have found when studying the connection between the

representation of women in climate politics and the nature of climate governance policies in the Scandinavian countries; when female policy-makers are not ‘vulnerable’ or ‘activists’ (‘virtuous’ as authors say), but are a part of a high-consuming elite with large per-capita emissions, they often fit their views to the patriarchal institutional environment, and the outcome is that there is no difference in policies related to climate governance, despite greater female representation in the political bodies.

There are humans on Earth who have at various times in history been considered more disposable than others, but there are also non-human beings who have no voice at all despite significant roles played in the stability of the planetary climate and metabolic circulation (Patel and Moore 2018). Tsing et al. (2017) write of ‘ghosts and monsters’ of the Anthropocene. Ghosts are broken interdependencies between species as a consequence of environmental destruction, erosion of soils, industrialization and extinction that multiplies across species. The leaky sewers and stinking garbage are also ghosts of the Anthropocene. Monsters of the Anthropocene pertain to all the living creatures living in symbiosis with other living creatures. For example, human bodies contain more bacterial cells than human cells; without bacteria our immune system does not develop correctly.

When conditions suddenly shift, former life-sustaining relations sometimes turn deadly, as is explained in the example of the mutating gut bacteria in humans owing to low-dose chronic exposure to radioactivity (Tsing et al. 2017, p. M3). Another example is the commercial hunting of sea otters off the Pacific North America which led to a dramatic reduction of the marine kelp forests by removing the otters that keep sea urchins in check. The sea urchins overpopulated the area and destroyed all the kelp forests that were previously abundant, which became apparent only when otters were no longer there (Parker 2017). Ghosts and monsters are exposing the challenges of the Anthropocene in terms of complex relations, intersectionality of culture and nature, past and present times, and entanglements of all lives on Earth. For our purposes here, they are contenders for agents in the conception of Anthropocene beyond simple humans vs. nature perspective.

Questions of Scale and of Universals in Friction

The Anthropocene (as well as the Earth System concept, and global climate change) is a conceptual construct of world-making in which the living Earth is imagined and represented as a unitary object in need of an integrated governance, and not as a space of agreements among biological and political collectives (Miller and Edwards 2001). As noted by Jasanoff (2015, p. 44) ‘Seen as a collective phenomenon, aggregated at a global level, [global climate change] reduces the possibility of attributing responsibility to agents at lesser scales, such as specific nations or forms of consumption’. It disconnects nature from culture with profound ethical and political consequences (Latour 1993; Kinchy 2014). Dissociation of atmospheric carbon from the activity that produces it completely ignores the hybridity of nature–culture networks (Neimanis et al. 2015), and upscaling also makes the environmental crisis less governable (Kinchy 2014) as hardly anyone lives daily in the global realm.

The reality of the Anthropocene in the globalized world is hard to comprehend. Tsing (2005) writes about friction, encounter between local and global in which a new messy reality is produced depending not only on culture, but also on different actors and their negotiation related to the universals. Universals are universal aspirations, as Tsing (2005, p. 1) notes: ‘Capitalism, science and politics all depend on global connections. Each spreads through aspi-

rations to fulfil universal dreams and schemes.’ Those are, for example, ‘prosperity’, ‘human rights’, ‘freedom’, ‘growth’, ‘environmentalism’, but also ‘emancipation’ and ‘development’. However, the universal is what we cannot not want, even if it so often excludes us (Spivak 1999). That is, the universals offer us a most direct (and conceptual) chance to participate in the global stream of humanity. We cannot turn universals down, whether we place ourselves inside or outside the West; we are stuck with universals created in a cultural dialogue (Tsing 2005).

However, universal claims do not make everything everywhere the same. As Tsing (2005) reminds us, the global in connection with the local produces a new reality, a reality of a universal co-produced in friction. Frictions are, therefore, ‘the awkward, unequal, unstable, and creative qualities of interconnections across difference ... Rubbing two sticks together produces heat and light; one stick alone is just stick. As a metaphorical image, friction reminds us that heterogeneous and unequal encounters can lead to new arrangements of culture and power’ (Tsing 2005, pp. 4–5). A great deal of our understanding of the Anthropocene arises in this way, through a combination of our own and our community’s particular position and the global material and historical flows.

There are, nonetheless, considerable efforts in downscaling, and at the same time integrating and managing the problem of the mentioned complexities. We know the global phenomenology of the Anthropocene and we know it is connected to contingent human activity; it did not just spring up on any of us. In spatial, rather than temporal, and geographical, rather than historical, thinking we find the connected concept of ‘anthromes’ (as opposed to more familiar biomes). Anthromes, or ‘anthropogenic biomes’, present the view of the terrestrial biosphere that takes into account the ‘sustained direct human interaction with ecosystems’ (Ellis and Ramankutty 2008, p. 439), providing an alternative global framework for ecological understanding of the terrestrial biosphere as it exists today. Unlike biomes, anthromes form heterogeneous landscape mosaics, which are moreover fractal in nature, reproducing the said heterogeneity across spatial scales from family units to global extent of networked human civilization (Domazet et al. 2020).

We can attempt to understand the concept’s familiar patterns even when instantiated at different scales, from local to continental. When combined with a mapping of human cultural institutions collating the intentional aspect of human populations inhabiting an anthromic unit, this conception allows us to model the sustainability potential of a chosen unit under the global constraints. This puts the concept to use in constructing a mental model of a downscaled (for example, nation level) and therefore operational Anthropocene thinking (Domazet et al. 2020). Culture thus emerges as a key to explanation of how ‘we’ got here, how our aspirations and fulfilment led the planet to Anthropocene dead ends, and how and where to we could advance from this point on. Culture interprets the past and is making futures.

Human Agency

The history of how we got here is necessarily related to (1) the technological (material and intellectual) structures of energy conversion (incoming solar into intentional human use), (2) social structures that distribute energy and maintain the energy conversion structures, and (3) cultural institutions of governance of energy and society (Domazet 2017). Ever since there have been stable human groups, as humans are essentially social animals, there have been forms of (1)–(3), however basic from a current perspective. For Anthropocene to be a special

configuration on the face of the planet, something radically different had to have taken place in these groups.

The techno-scientific understanding of Anthropocene (above) tends to argue that a discovery, an abrupt change, innovation in the domain of energy conversion technology (1 above) pushed the changes in the social organization of energy conversion (2 above) and the imaginary of social reproduction (within 3 above). Following on from the structure outlined in Domazet (2017), human agency's most direct impact on (1)–(3) is in the domain of cultural institutions of governance of energy and society (that is, 3 above). Anthropocene, material, biological and socio-structural is an effect of how some humans wanted to govern energy distribution and maintenance of socio-technical structures in their own community, and eventually most of the world. Predictably, it is a question of power and agency. Anthropocene is an age of intense power accumulation (through profit) resting on intense utilization of energy from fossilized stocks of historical solar energy input.

This framing matters as we need new intellectual paradigms within which to seek reversals of Anthropocene's devastating impacts on the stability of the biosphere, without consigning human communities to misery. In the short time available for the deep structural change required, we are forced to try out novel reorganizations of the interaction between technology, society and cultural imaginary without waiting for lengthy causal-mechanical analyses of how exactly their multiple hypothesized fundamental entities around the globe impact each other. We can bridge the gap between the shock warnings of imminent catastrophe (Chapter 16 in this volume) and a purposeful reaction to them by the principle theory paradigm, summarizing the basics of the unexceptionable generalizations of the global phenomena. The fundamental intellectual task within this paradigm is to generate explanations of the Anthropocene and its possible non-catastrophic outcomes, derived from a set of formally expressed necessary conditions or constraints on possible phenomena in ontological domains (1)–(3) sketched previously (cf. Domazet 2017 for a lengthier exposition).

Instead of debating the possible past alternative trajectories, it is of crucial importance to understand what type of cultural aspirations, universals, got us here, and drove the development in those domains. Who got where? (How) can we change? In what way should some change, and what should others do? This is the type of urgent questions within the concept of Anthropocene; urgency but not described as a crisis, for which the technocratic solutions would be sought (as proposed by the ecomodernists and other techno-managerialists), and as a grand challenge in need of radical solutions, first and foremost mental, or normative, followed by structural and technical ones. First we ought to discuss development, growth, technological innovation, freedom, humanity and nature.

Second, we have to discuss not just universal aspirations toward human development, but also capitalist narratives of growth and the aims of technological innovation. Vying for dominance here are narratives of extraction of resources from nature's cyclical processes through increasing collective knowledge of these cycles' causal-mechanical structure (Mokyr 2017), aspiration to understand world ecology from the perspective of autonomous individuals dependent solely upon each other for survival (Pagden 2013), or from the perspective of capitalism's hunger for constant cheapening of nature and labour (Patel and Moore 2018). In all these it was the change in cultural institutions of governance of energy and society that initiated the phase shift in the dominant technological mechanisms of energy conversion, and the distributional structures of useful energy and technology maintenance (1 and 2 above).

Latour (1993) argued that the separation of nature from culture is a constitutional move of modernity. The rise of the Enlightenment ideals, primarily of rationality, has indeed brought to the (Western) modern world a new medicine, and science and technology, making a significant contribution to what we today understand as health and wealth we enjoy. However, this was powered by the fossil fuels, and the expectations of capitalist production. We did not produce a culture dematerialized and ontologically separated from nature, but a change in our cultural institutions which was sustained by a change in distributional structures and energy conversion technologies. Growing widespread use of fossil fuels through the 19th and 20th centuries was not driven by population growth – more healthy, long-lived people wanting more stuff – but by the competitiveness of capitalist production and an ever increasing effort to lower the cost of input: energy and labour, while accumulating profit (Malm 2016, Domazet 2017, Patel and Moore 2018). Without the cultural promise and desirability of profit accumulation, fossil energy's technological infrastructures would not have been widely installed even if the growing human population had clamoured for their direct and indirect output. This does not pertain to humanity's Enlightenment ideals of useful knowledge expansion and emancipation, but to expansion of capital through continuous incorporation of cheap nature and cheap humans (labour) (Moore 2015).

Consequently, modernity brought us illnesses, dominance of economic values (see Chapter 23 in this volume), especially of the growth paradigm, the exploitation of humans, and alienation. The effects were industrialization, technological innovation as an instrument and utility of mass production and consumption, and exponential exploitation of natural resources. It resulted in environmental degradation, increasing scarcity of essential materials (such as agriculturally useful phosphorus), terrifying loss of biodiversity to the point of the sixth mass extinction, global sea-level rise and climate change, and unprecedented wealth inequality. The West has been aggressively exporting its ideal of modernity, its universals, to other peoples, and now we have come to understand that to continue and further spread the modern way of life we would soon require more than one planet, three would not be enough.

In this concept of modernity, we end up with the planet we have tarnished and soon struggle to sustain livelihoods for all humans on it. Is this the modernity that we were all aspiring to as humans? Can we envisage any other type of modernity that can arise from facing the consequences of the 'modern' choices, and contingencies and paradoxes that it yielded? We must, but should clear the air of the paralysing intellectual myths that economic growth-driven mitigation of climate change will suddenly become just, that the Anthropocene condition was inadvertently produced by rational technological improvements in human livelihoods the world over, and that a technological change within the same distributional and cultural structures will neutralize the drivers of climate and biodiversity catastrophe (Domazet 2018).

In *Fossil Capital* (2016), Andreas Malm argues that the characteristics of a capitalist organization of the economy were the dominant drivers of the shift from water (renewable) to coal (fossil) in the early industrial period. Malm claims that the modern fossil economy may not have started if it were not for other social, distributional and interpersonal factors favouring a push for its development against other readily available 'useful-energy' resources (flowing water). This implies that if we had organized our production around different energy transformations and their associated social distribution and governance aspects, the Anthropocene expansion might not have happened the way it did. The aim is not to open the argument here whether it would have happened in some other damaging way given capitalism's historical

precedence to fossil energy-based industrialization (cf. Patel and Moore 2018), but to point to the role of cultural and distributional drivers of the technological change.

The problem with the fossil economy is not just the pollution, environmental degradation and carbon dioxide, but also subjugation, exploitation, inequality and injustice. The established fossil-fuel industry drove the expansion of production and capital, and created instruments for its own further expansion into new territories. Heede (2014) shows that productive organizations (corporations in many cases) that have extracted, refined and sold the fossil fuels driving the climate change of the Anthropocene, account for nearly two-thirds of all the carbon dioxide emitted since 1750. Half of the culpable emissions of these giants have been released since 1986, almost within our lifetimes and well after political action to stop irreversible climate damage had been initiated (Rich 2019). Some humans, by this account, take vastly greater benefits from this than the rest of the human population. While some humans lack the energy for self-realization, others trade it as surpluses. Also, the available solar energy is sufficient for everyone's nutrition, shelter and education. However, alternative renewable resources have been too often pushed out of the competition with the help of the political, psychological, cultural and economic power of the fossil fuel capital. This is the story of the Anthropocene, an epoch in which particular human power aspirations and parts of human distributional structure dominated the Earth to the sixth mass extinction.

CONCLUSION

The community-level strategies of rapidly converting the biophysical, social and cultural characteristics of the Anthropocene into a more sustainable world-ecology outlook will require constructing a functional causal-mechanical understanding of interactions between justice and renewable energy technologies. For example, from a global *longue durée* perspective these strategies combine understanding of constraints in energy-distribution aspirations into a unified narrative with the decoupling of human self-fulfilment from the capitalist ideology of indefinite exponential economic growth. Given the lack of miraculous and rapidly scalable, impactless energy conversion technologies that would simply replace the useful energy supply without affecting distributional structure and the hegemonic conception of a good life, our change must begin with the cultural imaginary and distributional reorganization to make the fairest use of the available technological mechanisms.

A change of the conceptual framework built around energy transformations, social structures, and social expectations and aspirations along the lines of degrowth thinking (Kallis et al. 2015) aims to combine the Enlightenment ideals with the possible society-energy sustainable futures. This will not instantaneously end the Anthropocene, but will steer it towards Anthropocene 2.0 with a non-catastrophic ending. We propose that a way out of paradoxes of the Anthropocene is to view the concept differently from a caricature humanity's expansion against nature in a zero sum environment of a finite planet. Anthropocene is a paradox felt in friction of past and future, local and global, nature and humanity. It is a novel epoch in geological history given our understanding of human emancipation and cultural intentions, and our observation of the material changes in the biosphere.

The key is to retell the story of Anthropocene with understanding of the contingencies in historical causal interactions between culture, society and energy (all broad signifiers for domains (1)–(3) presented previously), instead of as a geologically deterministic effect of

a noble cultural cause. Transformations of the incoming and stored solar energy, distribution channels of that energy within human communities and the human world system, and governance institutions framing justifying and maintaining the transformations and distribution will play a key conceptual role in that retelling. The aspects of justice and injustice, colonization and decolonization as reflected in these concepts will provide the entry points for dissolving the paradox; opening up to a plausible conception based on the concealed truth of how some humans brought all humans to the point of geological significance.

NOTES

1. Principle theory model is a visionary understanding in the physical sciences that can, according to Einstein's reflection on the development of special theory of relativity, offer a breakout from a conceptual blockade in times of crises of (Kuhnian) paradigms (Einstein 1919). As an explanatory model it does not speculate about a detailed causal mechanism (such as mechanistic gears and pulleys) through which constituent elements of the phenomena are connected, but establishes process generalizations about universal constraints of change of the said phenomena (thus, rules, principles and flow patterns). The latter are 'based on the self-evident rationalizations of the experiences and axiomatic relationships in the conceptual structure' (Domazet et al. 2020, p. 279). In an intellectual crisis of paradigm change, advantages of principle theories over constructive theories, according to Einstein, are 'logical perfection and security of foundations' (Einstein 1919, p. 13). The principles are generalizations extrapolated from empirical observation of phenomena that have been found to hold without exception, and are thus elevated to status of postulates on which to build interpretative understanding of the situation (Van Camp 2011). We argue that Anthropocene is a condition of combined ideological (through growth for profit accumulation) and socio-technical organization (capital-driven fossil fuel combustion), whose non-catastrophic conclusion requires regeneration, degrowth and commons governance in diverse locally meaningful ways. Otherwise, the hegemonic growth ideology remains intellectually locked-in in the paradox of emancipation and self-destruction on multiple levels of scale.
2. The bomb spike refers to the peak of the excess radiocarbon signal arising from atom bomb tests in 1964. As Waters et al. (2016) explain, detonation of the Trinity atomic device at Alamogordo, New Mexico, on 16 July 1945 initiated local nuclear fallout from 1945 to 1951, whereas thermonuclear weapons tests generated a clear global signal from 1952 to 1980, the 'bomb spike' of excess ^{14}C , Pu-239 , and other artificial radionuclides that peaks in 1964. The bomb spike is, as suggested by Lewis and Maslin (2015), a competing explanation to the dip in atmospheric carbon dioxide (CO_2) in 1610, named the Orbis spike. This 'bomb spike' approximation is based upon a peak in atmospheric radiocarbon recorded in annual tree rings from pines in the park by Niepołomice Castle, Poland (Rakowski et al. 2013).

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6. Buen Vivir

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INTRODUCTION

The concept of *Buen Vivir* (in Spanish; in Quechua or Kichwa, *Sumak Kawsay* or *Alli Kawsay*,¹ in Aymara *Suma Qamaña*, translated here as the Good Life) reached international attention with the new Constitutions of Ecuador (in 2008) and Bolivia (in 2009) and the debates around them and their innovations, such as rights of nature, and global citizenship. In this context, it was adapted relatively quickly in global environmentalist movements, primarily through the translation of central activists and intellectuals.

This chapter presents a condensed overview of the development of the concept of the Good Life in its different moments, always focusing on its political aspects and uses. It explores the development of this concept in the indigenous movement of Ecuador, includes some references to its appearance in Bolivia, sketches the impact of its inclusion in the Constitution of Ecuador, and traces its history since then, especially, on the global level. Thus, this chapter will not engage in a debate on anthropological evidence, such as the Good Life among the Achuar (Descola 1986), the Shuar (Mader 1999),² or the Canelos Kichwa (Whitten and Whitten 2015).

Buen Vivir as a political concept has developed with and through the indigenous movement since its beginnings and served as a condensation of both identitarian strategies and platform to present political demands to the state and the wider society (Chapters 2, 29 and 37 in this volume).

BUEN VIVIR BEFORE BUEN VIVIR

For some time, the consensus of many researchers was that the Good Life as a political concept was born in the 1990s in the Ecuadorian Amazon (Cubillo-Guevara and Hidalgo-Capitán 2015). This changed with the work of Inuca Lechón (2017), who, as a member of the indigenous movement and Kichwa intellectual, had access to the archives of the movement and the texts in Kichwa. His research showed that the Good Life developed first as part of an internal discourse or internal framing within the movement that was not intended to communicate demands to the non-indigenous society but to organize and mobilize the members of the movement. The indigenous movement has been a significant political and social actor of Ecuadorian society since the 1920s. While its organizations shifted from a socialist view on society as class-based, influenced by the Socialist and the Communist Party, to an identitarian view on society as based on racist discrimination, influenced by the church, they finally arrived, in the 1980s, at the position that the problems of the indigenous population need to be understood in their double dimension as both class-based and ethnic.

The Good Life appeared in the 1930s and 1940s in texts of the organizations of the indigenous movement of that time, mainly land-worker unions connected to the Communist Party. The journal of the movement at that time, *Ñucanchic allpa*, includes in its edition from 10

February 1939 a call in Kichwa to its readers to send their children to school and to organize in unions, cooperatives or otherwise. This call is backed by the claim that ‘in the past, everyone lived well, they did not lack anything, they knew everything’ (Inuca Lechón 2017, p. 159). Thus, in the beginning, the Good Life – still as *Alli Kawsay* – highlights the relationship of a better pre-colonial past with self-organizing and knowledge. A later edition of the same journal, from 28 May 1940, insists on overcoming 400 years of enslavement and poverty to put the Good Life into practice (Inuca Lechón 2017, pp. 159–60).

In the 1940s, this concept was included in the educational material that was also used by the clandestine schools of the indigenous movement (Inuca Lechón 2017, p. 158). In the field of education, the Good Life had a first career that later permitted re-translations into a more political usage. Especially in the material produced during the educational expansion and the alphabetization campaigns of the 1980s, the Good Life had a prominent role. In a textbook from 1982, *Sumak Kawsay* is presented as related to a located knowledge and wisdom (Inuca Lechón 2017, p. 164). Other books from 1984 and 1986 went in similar directions. In a textbook from 1990, *Alli Kawsay* is ‘embedded in the proposal to educate from the knowledges of the Kichwa world’ (Inuca Lechón 2017, p. 167).

During that time, the Good Life in its different versions was reintegrated into the political discourse of the movement. It was understood as a firm rejection of the attempts to integrate the indigenous peoples into a non-indigenous society, especially by non-government organizations (NGOs) and churches, and a proposal for an internal integration of the indigenous peoples (Inuca Lechón 2017, pp. 162–3). *Sumak Kawsay* became the motto of a new national indigenous organization created in 1980 that would later turn into the center of the indigenous movement in Ecuador (Inuca Lechón 2017, p. 156). In particular, a text written by Conterón and de Viteri in 1984 impacted on the discursive development of the renewed movement. It uses a motto in Kichwa that could be translated as ‘with unity for land, for the beautiful life until freedom’ (Inuca Lechón 2017, p. 170). With this, the fight for land and *Sumak Kawsay* is also a battle for liberation. The Spanish sections of the text contain ideas that show how the organizations of that time inserted the Good Life into the discourse of the movement to strengthen and politicize indigenous identity. Indigenous peoples are consistently understood as indigenous nationalities fighting ‘for land, health, education, social equality, for a change of society, for a new society, without exploitation, domination, and discrimination’ (Conterón and de Viteri 1984, p. 2). As nationalities, they have their own culture and history, their own languages and literatures, elements of their own religions, and proper forms of economic, social, and political organization (Conterón and de Viteri 1984, p. 7). The land is defined as the basis of all this (Conterón and de Viteri 1984, pp. 5, 17).³

This discursive development is not isolated. Around the same time, several regional indigenous organizations pronounced similar demands. During the 1980s, the indigenous movement defined a discourse that from 1986 would be manifested in the national indigenous organization Confederation of Indigenous Nationalities of Ecuador (CONAIE). In their first publication, they condense this development into a few lines:

The indigenous movement created conceptual instruments, and we discussed the coherence of our theoretical postulates with the daily practice. Thus, we adopted the concept of indigenous nationality, understood as a community of history, language, culture and territory; we fight so that the plurinational, pluriethnic, and plurilingual character of the Ecuadorian society will be recognized; for the recognition of the native territories as they are the basis of our subsistence and of the social and cultural reproduction of the different nationalities; for the respect of the diversity and cultural identity,

for the right to an education in the native language with contents according to every culture, for the right to a self-managed development and for the right to have a political representation that allows to defend our rights and raise our voice. (CONAIE 1989, p. 279)

With this, the discursive context where Good Life could develop as a political concept is sketched. However, it would not be until the 1990s that it received more definition as a proper concept, and it would not be until 2007 that it would become part of the discourse of the indigenous movement on a national level.

FROM AMAZONIAN *SUMAK KAWSAY* TO ECUADORIAN *BUEN VIVIR*

The 1990s were a time of widespread mobilizations of the indigenous movement in Ecuador. During the first national indigenous uprising in 1990, the movement became visible and communicated its ideas of a plurinational state, land reform, agricultural credits and others to the government and the general public. Then, in 1992, the indigenous organizations of the Amazon marched to Quito in order to demand territorial autonomy. Finally, in 1994, in a second national indigenous uprising, the movement showed the stability of its demands and capacity to mobilize. It had become a central actor in Ecuadorian politics. This moment of massive mobilization brought public attention to the movement. Suddenly, its demands were heard – but not always understood.

In this context, the Good Life appears for the first time publicly and in a communication that includes the non-indigenous society, in 1992, a few months after the indigenous march. The Plan Amazanga is a study of the Kichwa communities in the Ecuadorian Amazon carried out by a group of indigenous intellectuals led by Alfredo Viteri for the indigenous organization of the Pastaza province. It focuses on the management of renewable resources and refers to the philosophy of the Kichwa peoples of the Amazon as opposed to Western ideas of sustainability (Silva 2003, p. 85). This search for points of contrast shows the step from an internal discourse to an external one. The Good Life shifts from strengthening and politicizing indigenous identity to making it connectable to global discourses, especially those that are development-related. This is connected to the growing importance of NGOs and development actors for the indigenous organizations, especially in the Amazon. With this, it is about making oneself understandable to external actors, the search for allies and the definition of enemies. After the assertion of a general degradation of nature, culture, and society in the region, as well as a weakening of the indigenous organizations, the Plan Amazanga develops a complex cosmovision around spirits and gods where ‘there is a communion of the human with the ecosystem’ (Viteri et al. 1992, p. 4) and a way to maintain this: the *Sacha Runa Yachai* (knowledge and wisdom of the human beings of the jungle). This specific knowledge is based on three interrelated principles: *Sumac Allpa* (land without evil), *Sumac Causai*⁴ (pure and harmonic life), and *Sacha Causa Ricsina* (the art of understanding: understand–comprehend–know–convince yourself–be sure–see). *Sumac Causai* is defined as follows:

It is the theory and practice that shows how one ought to live. This principle makes it evident that life is the unifying substrate of everything. It defines the equalitarian, communitarian, integrative and reciprocal sense between the communities of the Kichwa society. Present are: the true word, hospitality, reciprocity and solidarity, sharing, the ethics of communitarian work, respect for wisdom, and

respect for freedom. The vigor of Sumac Causai is fed from the permanent dialogue with nature and its spiritual dimension. (Viteri et al. 1992, p. 56)

The first text distributed outside of Ecuador⁵ on this topic, written by another member of the traditionally influential Viteri family of Sarayaku, Carlos Viteri, further develops this cosmovision's spiritual background. The territory where the Sarayaku-Kichwa live is defined by spirits and gods and the souls of the ancestors. They can communicate with shamans and, thus, establish the rules for the search for a *sumac allpa* that is a necessary condition for a *sumac causai*. This idea is also relevant to foreigners and non-indigenous (Viteri Gualinga 1993, p. 150). The Good Life had turned into an invitation to the general society to look for alternatives to a destructive reality.

A connection between Plan Amazanga and the text by Carlos Viteri to the earlier development can be suspected: on the one hand, several of the involved leaders were teachers of the system of intercultural bilingual education. They had worked with the textbooks Inuca revised. On the other hand, the already quoted Rosa Vacacela de Viteri was co-founder of the Instituto Amazanga, an indigenous-run institute dedicated to research on indigenous cultures and related to many of the texts discussed here. The detailed conceptual development of the Good Life especially by Viteri Gualinga led some researchers to consider *Buen Vivir* an 'Amazonian Ecuadorian social phenomenon' (Cubillo-Guevara and Hidalgo-Capitán 2015, p. 329). However, it should be evident by now that it was created through the work of the whole Ecuadorian indigenous movement with inspiration from external actors, such as the Catholic Church and educational actors, and that it goes beyond its anthropological anchoring in the Amazon.

The next step, national diffusion within the indigenous movement, was reached in the early 2000s. In 2000 and 2001, the journal of the indigenous organization of the highlands, *ECUARUNARI*, published two articles that mention *Sumak Kawsay*, specifying some of the contents already revised here, such as the idea of a harmonious relationship between human-kind and nature (Inuca Lechón 2017, p. 171). In 2002,⁶ Carlos Viteri published another text on the Good Life that would become well known. In this text, he explains that there is no conception of development among the indigenous peoples of the Amazon, but rather a notion of the Good Life understood as central to the indigenous philosophy of life and in permanent construction (Viteri Gualinga 2002, p. 1). Knowledge is here defined as 'the basic condition for the management of the local ecological and spiritual bases and the autonomous solution of necessities' (Viteri Gualinga 2002, p. 2). Therefore, it is the basis for an adequate adaptation to the environment. This is by no means a return to pre-Hispanic times, but instead the planned and controlled integration of external knowledge into local self-management (Viteri Gualinga 2002, p. 5). This text had a central role in the diffusion of the Good Life as it was here where *Sumak Kawsay* was translated for the first time as *Buen Vivir*, and, thus, made understandable for the Spanish-speaking society (Cubillo-Guevara and Hidalgo-Capitán 2015, p. 316).

In his unpublished thesis in anthropology, Viteri further develops his reflections on *Sumak Kawsay* in Sarayaku, shifting its understanding slightly. Quoting Descola (1986) and Guillermo Bonfil Batalla and his proposal of an ethno-development (Viteri Gualinga 2003, pp. 9–10), Viteri defines '*súmak káusai* as the axis of a true self-determination' (Viteri Gualinga, 2003, p. iv) that is directed against the bad life (*llaki káusai*), caused by poverty, violence, and ignorance (Viteri Gualinga 2003, p. 82). As the philosophy of life of the Sarayaku-Kichwa, it represents their knowledge, norms and values, and therefore is the basis

for the satisfaction of needs for the moment (Viteri Gualinga 2003, p. 1). All that is related to the land and the production of abundance in relation to nature. It is about *munai allpa*, the ideal and desirable land that is fertile and can be used for different types of activities and crops, as well as about the forest where abundant game can be hunted (Viteri Gualinga 2003, pp. 47–9). The idea would be to have enough and avoid excess – this ‘shows that it is possible to apply the parameters of *súmak káusai* to the monetary economy’ (Viteri Gualinga 2003, p. 86). By this time, it was evident to Viteri that this concept had an important political potential:

The most convincing long-term weapon that the people of Sarayaku have in this unequal economic and epistemological ‘war’, expressed in the exploitation of petrol, is the definition of their present and future process in the paradigm of *súmak káusai*. This implies the strengthening and the recuperation of values as the basis of the cognitive and identitarian strength of the people of Sarayaku. (Viteri Gualinga 2003, p. 85)

The trajectory of *Buen Vivir* in the 1990s shows what Inuca Lechón terms *yachay tinkuy* – a meeting and confrontation of knowledges and cultures. While the earlier versions were directed towards a political redefinition of indigenous identity influenced by leftist parties and, later, the Catholic Church, the Amazonian texts of the 1990s and early 2000s go a step further. The indigenous identity is the unquestionable basis for far more radical demands for autonomy and self-determination and the rejection of capitalism and colonialism (Inuca Lechón 2017, p. 157). Another new idea introduced in the 1990s is the ecological view of *Sumak Kawsay* as a way to protect nature and the relationship of humankind to its environment. The Good Life was presented explicitly as a possibility for dealing with the destruction of nature and natural resources. This proved to be a promising point of connection to Western discourses. In a widely read article, Viteri Gualinga (2002) was quoted by Acosta (2002, p. 46) in a widely read article, as an example of critique of the Eurocentric location of the idea of development, initiating the discussions on *Buen Vivir* in the non-indigenous society.

Beyond some less influential mentions, the Good Life reappears in discussions on the Ecuadorian Constitution in 2007 and 2008, introduced by Alberto Acosta, Mónica Chuji, Pablo Dávalos, and others.⁷ The indigenous movement and its main organization, CONAIE, also presented their proposals, where Good Life had a relevant role. For them, *Buen Vivir* is tied to the ‘construction of a postcapitalist and postcolonial society ... a society that recovers the teachings of its ancestral peoples and can live in harmony with our Pachamama’ (CONAIE 2007, p. 1). At that time, CONAIE understood the Good Life as related most importantly to the economy. The economy should not be guided by the idea of rentability but by human well-being (CONAIE 2007, p. 7). This can be achieved through the ancestral indigenous principles of reciprocity around the *Sumak Kawsay* (CONAIE 2007, p. 21).

Finally, the Good Life was introduced prominently in the Constitution of 2008 and, consequently, in state policy, such as the Development Plans 2009–2013 and 2013–2017.⁸ The Constitution also meant a division of the different groups fighting for a *Buen Vivir*: the state had a socialist and developmentalist understanding of it, the eco-socialists and post-developmentalists, such as Acosta, saw it as a way by which to overcome destructive capitalist growth, and the indigenous movement as a radicalization of their already established discourse around indigenous nationalities, territorial autonomy and plurinationality (Hidalgo-Capitán and Cubillo-Guevara 2017). These three roughly defined groups had a different way of diffusing the concept, thereby affecting its global perception.

BUEN VIVIR AS A GLOBAL POLITICAL CONCEPT

Alberto Acosta had to step down as the president of the constituent assembly shortly before concluding the draft of the Constitution because he refused to put a hold on the discussions to issue the text quickly, as President Rafael Correa planned. With this, he broke with the government of Correa, president of Ecuador between 2007 and 2017, and turned to intensive work to diffuse globally his understanding of *Buen Vivir*. His eco-socialist and post-development view of the Good Life was received widely in academia and social movements around the idea of degrowth. Acosta was already well connected internationally, especially in Germany, where he had lived and studied in the 1970s. His first text in English on the topic was published in 2009 and connected *Buen Vivir* to plurinationality and the rights of nature, both innovations of the Constitution. *Buen Vivir* is understood as part of planning for development that leads the ‘construction of an equal, egalitarian and free society ... only ... possible through the participation of all’ (Acosta 2009, p. 109). Thus, the idea of development itself is brought into question, and an age of post-development prepared (Acosta 2009, p. 110). The Good Life is presented as ‘harmonious relations among human beings individually and collectively and with nature’ (Acosta 2009, p. 112). It must be guaranteed by social, economic and environmental rights that expand social capacities and economic solidarity. For Acosta, the Correa government is unwilling to make the necessary changes; instead, it sticks to neo-developmental practices that are unable to overcome neoliberalism.

A later text by Acosta seeks explicitly for connections to other discourses. While he repeats the main contents already reproduced here, he adds the concept’s potentiality to overcome historical mechanisms of exclusion, as well as a broad series of influences for *Buen Vivir*:

The *Buen Vivir*, as a proposal in construction, questions the Western concept of well-being and, as a fighting proposal, confronts the coloniality of power. Thus, without minimizing this contribution of the marginalized, we must accept that the Andean vision is not the only fountain of inspiration to impulse the *Buen Vivir*. Even from circles of the Western culture, many voices have arisen already long ago that could be somehow on the same page with this indigenous vision and vice versa. The concept of *Buen Vivir* has not only a historical anchoring in the indigenous world, it is also sustained in some universal philosophical principles: Aristotelian, Marxist, ecological, feminist, cooperativist, humanist ... (Acosta 2010, p. 13)

The idea of the Good Life being a proposal in construction can be found in Viteri Gualinga (2002, p. 1). However, the step from the general openness of the concept to a wide connectivity with similar concepts of different contexts is new. This decisive innovation of Acosta enabled the later global career of the Good Life.

This can be seen in a text that Acosta writes with two of the most prominent intellectuals of the degrowth movement. After a short reference to the indigenous background of the Good Life and other concepts, they come to a concise definition of what it means:

Buen Vivir does not synthesize a mono-cultural proposal, as is the case of ‘development’. It is a plural concept (it would be better to speak of ‘Good Livings’ or ‘Good co-livings’) arising especially from indigenous peoples, without denying the technological advantages of the modern world or possible contributions from other cultures and knowledge that challenge the presuppositions of dominant modernity. *Buen Vivir*, as an open and under-construction proposal, enables the formulation of alternative views of life that encompass harmony with nature (as a part of it), cultural diversity and pluriculturalism, co-existence within and between communities, inseparability of all life’s elements (material, social, spiritual), opposition to the concept of perpetual accumulation, return to use values

and movement even beyond the concept of value. *Buen Vivir*, in short, proposes a civilizational change. (Kothari et al. 2014, p. 367–8)

In the enterprise of diffusing *Buen Vivir* in the context of post-development and degrowth, Acosta is accompanied by another scholar-activist, Eduardo Gudynas. While Gudynas is well-known for developing the concept of neo-extractivism and his defense of the rights of nature, his engagement with the Good Life is more recent. This could be owing to the activities of both Acosta and Gudynas (and other relevant proponents of *Buen Vivir*) in the *Grupo Permanente de Alternativas al Desarrollo* (Permanent Group of Alternatives to Development), a working group organized in 2010 by the regional office of the German Foundation Rosa-Luxemburg in Ecuador.

In the short text Gudynas contributed to a book on degrowth, he makes clear that the primary meaning of *Buen Vivir* resides in the critique of and the proposal of alternatives to the conventional idea of development (Gudynas 2014, p. 201). He distinguishes different uses of *Buen Vivir*, highlighting that its substantive use corresponds closely with degrowth as it would be an alternative to development and not, as other uses, development alternatives (Gudynas 2014, p. 202). This substantive version of *Buen Vivir* is plural, open, and under construction. It criticizes the ideas of a historical linearity of development in favor of a multiplicity of historical processes and the connection of welfare and well-being with material consumption. This is why it is based on a diversity of knowledges that coexist in an intercultural manner without Western dominance. The separation of society and nature, and therefore the opposition of culture and nature that is constituent of Western philosophy, is rejected in favor of ‘communities of extended or relational ontologies’ (Gudynas 2014, p. 202). All this turns *Buen Vivir* into a non-essentialist perspective that can be adapted to every context. Its intercultural perspective and relational ontology turn it into a more radical concept than degrowth itself (Gudynas 2014, p. 204).

Gudynas distinguishes the Bolivian *Suma Qamaña* and the Ecuadorian *Sumak Kawsay*. The main difference is that the Bolivian version has a deep understanding of community (especially the *Ayllu*) that the Ecuadorian version lacks (Gudynas 2014, pp. 202–3). He is mistaken; the Ecuadorian *Sumak Kawsay* and its variants build on a strong concept of community beyond the European understanding. Of more relevance for the global diffusion of *Buen Vivir* is the insistence on its basis in Western thought. ‘The two most important sources are environmentalism, which proposes the rights of Nature, and new feminism, which questions patriarchal centralities and claims an ethic of care’ (Gudynas 2014, p. 203). At this point, the indigenous peoples are effectively expropriated of their culture. Indigenous movements as political actors do not appear at all. For Gudynas:

Buen Vivir represents the confluence of knowledge of different origins, and it cannot be restricted to be an ‘indigenous’ idea. This is because there is no such thing as an indigenous knowledge in the singular, as this is a colonial category. Thus, *Buen Vivir* incorporates some concepts and sensibilities of some indigenous groups, as each one has a specific cultural background the *suma qamaña* posture of *Buen Vivir* among Aymara communities is not the same as *sumak kawsay* of the Kichwas in Ecuador. These are positions pertaining to each social and environmental context, which, furthermore, have been affected, hybridized or mixed in different ways with present-day or modern thought’. (Gudynas 2014, p. 203)

The *Buen Vivir* developed by the indigenous movement in Ecuador over 80 years is, thus, nothing more than one of many variants, all with the same value and legitimization. This

weaponized relativism corresponds with what Grosfoguel terms epistemic extractivism: an attitude that ‘tries to extract ideas in order to colonize them by subsuming them under the parameters of Western culture and episteme’ (Grosfoguel 2016, pp. 38–9) instead of trying to understand them in their context and a horizontal dialogue. It is an act of decontextualization and depoliticization in order to resignify indigenous ideas for Western audiences. By this, some intellectuals can accumulate symbolic capital within academia, excluding and invisibilizing the original producers of the knowledge. Therefore, the same people that are stripped from their natural resources by economic extractivism, are stripped of their knowledge by epistemic extractivism. Applied to our example, Acosta and Gudynas appear as the ‘inventors’ of *Buen Vivir* – at least, in what is relevant to the Western world. This gives them prestige and influence not only within academia, but also in progressive social movements. With this, the unequal global division of knowledge production and the inherent disqualification of non-Western knowledges is reinforced (Grosfoguel 2016, p. 40).⁹ This leads to the fatal political consequences of depoliticization, anthropologization – in the sense that *Buen Vivir* is understood as unpolitical cultural artifact – and invisibilization of a politically important concept and the social movement behind it and turns *Buen Vivir* into an empty concept that contains hardly anything beyond good intentions.

This is especially interesting as another intellectual who also is critical to development, but less well connected to European social movements, accomplishes a much deeper and respectful understanding of the Good Life. Arturo Escobar understands the relational ontologies expressed in, for instance, *Sumak Kawsay*, as part of ontological struggles that ‘have the potential to de-naturalize the hegemonic distinction between nature and culture on which the liberal order is founded’ (Escobar 2010, p. 39). Thus, they could help to overcome ‘two of the most damaging features of modern theory: pervasive binarisms, and the reduction of complexity’ (Escobar, 2010, pp. 40–41). This is also why the integration of *Sumak Kawsay* into the logic of the European-originated nation-state is at least complicated. Escobar also offers an understanding of the tendency to invisibilize the indigenous movements as originators of the concept: ‘Indigenous claims are usually taken as “beliefs”’ (Escobar 2010, p. 40) and not as systematically produced political demands. This is related to the inability of the Northern traditions of thought to understand the spatiality of *Sumak Kawsay* and the concepts of interculturality and plurinationality (Escobar 2010, p. 42). Highlighting the constructed character of spatiality and community could also be a way to overcome the essentialist views of some authors.

There is not much to say about the state-version of *Buen Vivir*. The political changes since 2017 connected with the presidency of Lenin Moreno and his break with the project of Correa slowly eliminated it from public policy in Ecuador. Moreover, the discussion within international party politics and parliaments lost track after the end of the Yasuní-ITT initiative¹⁰ in 2013.

The indigenous movement took a long time to integrate *Sumak Kawsay* fully into its discourse. While it appeared on the national level for the first time in the discussions over the Constitution of 2008, it was only in the Political Project – a comprehensive text of demands and main concepts – of the CONAIE of 2012/13 that it was included fully and interrelated organically to the other concepts. In this text, CONAIE distinguishes the state-version of *Buen Vivir*, connected to Western ideas of welfare, from the indigenous version of *Sumak Kawsay*. *Sumak Kawsay* is developed in ‘the communitarian life system’ (CONAIE 2013, pp. 38–9). It is about an alternative to capitalism and other destructive forms of development that break

with the equilibrium between society and nature and ‘proposes to guarantee the life of human beings in harmonic relationship with nature’ (CONAIE 2013, pp. 39–40). This is connected to principles of other indigenous peoples that refer to a ‘land without evil’. While they repeat the main contents, already known from the texts quoted earlier, the focus is slightly different. In this document, CONAIE openly introduces an indigenous communitarianism as part of its discourse. This shift is expressed in its understanding of *Sumak Kawsay*:

Sumak Kawsay originated from the family and communitarian matrix, in the millennial historical process, it is based on the collective and communitarian vision of the goods, means of production. It is born from the communitarian regime, where there is no concept of property or private, but where the means and property are communitarian. (CONAIE 2013, p. 39)

This definition of the Good Life goes beyond the Amazonian version and includes the socialist and communitarian ideas present in the movement. With this, CONAIE tries to offer a generic Good Life that is inserted in their discourse and main demands and, at the same time, can connect to the different local versions of the Good Life that exist in their member organizations. It is worth noting that CONAIE maintains the idea of an openness of the concept, but grounds it in concrete territories and communities, unlike the other proponents of the Good Life discussed here. The Good Life they demand does not break with the *Sumak Kawsay* of Sarayaku, for instance; instead, it offers a more general framework that respects the concrete and local contents.

Nevertheless, Good Life lost track also in the discourse of the indigenous movement in Ecuador. The Rebellion of October 2019 – a general uprising against the government’s neo-liberal policy led by the indigenous movement – took place with significant participation of the indigenous movement and was an opportunity for them to present their demands (Altmann 2020). While *Sumak Kawsay* is still in those demands, it lost its centrality to other concepts, such as post-extractivism or territorial autonomy. Instead of *Sumak Kawsay*, other, more localized concepts, such as *Kawsak Sacha*,¹¹ the living forest, have been put forward in recent years, especially by the Kichwa of Sarayaku. *Kawsak Sacha* is also the concept that has been more actively promoted than *Sumak Kawsay* by the indigenous movement and its members on an international level, with several intellectuals, most prominently Patricia Gualinga, presenting it in different countries and focusing mainly on social movements.

CONCLUSION: DEATH OF THE GOOD LIFE?

The attentive reader will have noticed that the references to original texts discussed here end around 2015. This is not owing to an end of the academic debate on *Buen Vivir*, where the work of Hidalgo-Capitán, Cubillo-Guevara, Lalandier, Cuestas-Caza, and others continue to introduce new and important aspects and material, especially concerning its development in the Amazon and its local practices in indigenous communities. Instead, there is a double tendency: as already revised in the previous section, since the second half of the 2010s, the Good Life lost relevance in Ecuador and among its defendants there. Also, the social movements outside Ecuador that received *Buen Vivir* with interest in the years around 2010 shifted their focus towards more local fights or other concepts. For Germany, a decline in the discussions on *Buen Vivir* can be detected after the Degrowth Conference in Leipzig in 2014 where it was discussed prominently. After that, several influential organizations – political parties and

foundations, Association for the Taxation of Financial Transactions and for Citizens' Action (ATTAC) and local initiatives – lost interest in *Buen Vivir* and started favoring more concrete fights, for instance, against coal exploitation. For the moment, it seems that the Good Life has been reduced to a debate within a section of the degrowth movement, and is losing ground in the wider ecologist movement.

While the Good Life is no longer as appealing as it has been for some years, its short history as a globally relevant political concept can leave some lessons. For its inventors, the indigenous movement, especially in Ecuador, *Sumak Kawsay* fortified the much older demands for territorial autonomy by including cultural aspects and the role of the community. For the Ecuadorian government (and, to a lesser degree, the Bolivian government), *Buen Vivir* was the motto for an inclusive social policy with some elements of environmental protection. As the government in Ecuador shifted back to a neoliberal view since 2017, *Buen Vivir* became pointless for them. In the degrowth and post-development movement, the Good Life was an opportunity to open a new horizon of possibilities. While the international background is not as relevant today as it was in 2010, the new understandings of community and the centrality of locality continues. The Good Life may be dead as a single concept, but it lives on in a new and broader way to understand reality.

NOTES

1. For a discussion of the differences between *Buen Vivir*, *Sumak Kawsay* and *Alli Kawsay*, see Inucla Lechón (2017).
2. This book is the Spanish translation of an unpublished text of 1996.
3. It is worth noting that this text also condemns research on indigenous nationalities that is not controlled by them (Conterón and de Viteri 1984, p. 22).
4. Note that the way how *Sumak Kawsay* is written changes over time.
5. In the same year, 1993, the Good Life appears in the Bolivian discourse, close to radical Indianist institutions (Nikolaus 2012). The relationship between the Bolivian Good Life and the Ecuadorian Good Life is yet to be established.
6. Circulating since 2000 as a manuscript.
7. A compilation of some major contributions can be found in Hidalgo-Capitán et al. (2014).
8. For an analysis of the Development Plan 2013–2017, see Cuestas-Caza et al. (2020).
9. The criticism of Grosfoguel is directed primarily against Walter Mignolo and Aníbal Quijano who were translators of *Buen Vivir* and other concepts into the post-colonial and decolonial discourse.
10. This initiative, to not exploit petrol in a natural park in the Amazon in exchange for the creation of an international fund that would be dedicated to education and welfare politics in Ecuador, was developed by Acosta and others and ended owing to the lack of interest in the countries of the Global North.
11. <https://kawsaksacha.org/> (accessed 3 May 2022).

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7. Degrowth

Ekaterina Chertkovskaya

INTRODUCTION

This chapter is written against the background of the ongoing coronavirus pandemic, which has already taken 6.3 million lives. Having purportedly been transmitted from a wild animal, COVID-19 spread quickly across the world via global travel and trade channels. Healthcare systems have experienced severe capacity restrictions, not being able to provide intensive care on time or lacking the basic protective equipment. This appalling situation is in many instances the consequence of austerity policies following the 2008 financial crisis, aimed at boosting economic growth by supporting financial institutions and taking funding away from the welfare system. Suffering from the virus, in turn, has reflected social inequalities, with the less privileged groups being both more exposed to and more affected by it. The pandemic has been argued to be the result of anthropogenic intervention into natural habitats, in particular industrial farming (Wallace 2016; Spinney 2020).

Parallel to this, the climate crisis has been unfolding fast in front of our eyes, with hottest temperatures recorded in Antarctica, bushfires of a scale not seen for a long time in Australia and other extreme weather events that started the third decade of the twenty-first century. While urgent climate action has been called for, the key frameworks for addressing sustainability still prioritise economic growth, such as the circular economy or the widely celebrated Sustainable Development Goals (SDGs). Moreover, interests of for-profit corporations are heavily present in the governance mechanisms put into place to foster transition, such as the European Green Deal that was launched by the European Commission in December 2019.

These socio-ecological crises are laying bare the problems of the capitalist system and indicate the need for system change. Degrowth scholarship and activism call for and give a vision of this change, being one of the many radical alternatives that make up the pluriverse – a post-growth and post-development world where many worlds fit (Kothari et al. 2019). It is an umbrella term that critiques the centrality of economic growth and, more generally, the economy in contemporary societies, and embraces alternatives that are ecologically sustainable and socially just (Chertkovskaya and Paulsson 2016). In line with degrowth thinking, bio-physical throughput – resource, energy and material flows – should decrease while ensuring well-being for all (Kallis 2018). Ultimately, degrowth is about reorganising societies on different principles and represents a particular ethical and political worldview. The word ‘degrowth’ itself was coined in 1972 as ‘décroissance’ by André Gorz, whose work has been an important inspiration for the degrowth community (Kallis et al. 2015a; Leonardi 2019). Having been taken up in activist circles in France in the late 1990s, degrowth spread to Italy and Spain in the early 2000s, and has since emerged into an international academic-activist research area and, arguably, a social movement (Kallis et al. 2015a). Within academia, degrowth might be said to have roots in the fields of ecological economics and political ecology, but currently it is a truly interdisciplinary and transdisciplinary discussion (Barca et al. 2019).

This chapter is devoted to introducing degrowth to anyone interested in environmental politics and making connections between the two areas. It is structured as follows. First, the degrowth critique of economic growth is articulated. Second, degrowth as a concept for alternative socio-material organisation of economies and societies is presented. Third, one of the most contentious issues in degrowth today – politics and governance – is addressed. Finally, I conclude by discussing how to foster the transformative potential of degrowth.

WHAT IS WRONG WITH GROWTH?

For the degrowth scholarly and activist community the centrality of economic growth in societies is key to the diagnosis of the multiple crisis of capitalism (Brand and Wissen 2012). However, it is important to explain the types of growth that are questioned and why. The types are (1) the goal of gross domestic product (GDP) growth and quantitative expansion of national economies, (2) growth of biophysical throughput, and (3) capital accumulation and productivism (Chertkovskaya and Paulsson 2016).

GDP Growth and Quantitative Expansion of National Economies

Economic growth may be referred to as ‘the monetary value of goods and services exchanged in a given market, calculated in each country as its Gross Domestic Product (GDP)’ (Kallis et al. 2020 p. 9). Among economists, policy-makers and businesses there is currently a common view that economies need to keep growing perpetually and at compound rates. Global aggregate GDP growth rates are usually expected to be around 3 per cent per year, so that the economy would double in size in 24 years (Hickel 2019; Kallis et al. 2020). For degrowth scholars, this aim is both absurd and destructive. To avoid any misunderstanding, it is worth articulating that degrowth is not about decreasing GDP, recession or austerity, with the latter implemented in the name of growth. Instead, perpetual economic growth on a finite planet is argued to be impossible but also not needed for good life (Kallis et al. 2015b).

Gross domestic product is the key indicator for prosperity, used by most countries across the world. This indicator, however, prioritises monetised economic activity and does not include ecological degradation that comes with it, nor does it include non-monetised activities – such as unpaid care work – that are essential for economies and life (Dengler and Strunk 2018). Note that the founding father of this indicator, Simon Kuznets, was explicitly saying that it was not a measure of welfare (NBER 1934). He developed the predecessor of GDP – the gross national product (GNP) – during the Great Depression in the US to analyse its economy during hardships, but was not arguing for universal use of it. Nevertheless, the indicator was given its own life outside that context. While alternative indicators need to be introduced, it is important to remember that quantitative expansion of economies should not be a goal in itself (Chertkovskaya and Paulsson 2016).

The pursuit of growth is not just about GDP, but is a way of thinking – sometimes referred to as growthmanship, growth machine politics or growth paradigm (Clark 1962; Molotch 1976; Dale 2012) – that has gone into different spheres of society, such as economy, education, healthcare and urban planning. Deprioritising the goal of economic growth is thus key to the degrowth agenda.

Biophysical Throughput

Growth of biophysical throughput – material and energy flows in and out of economies – is problematic as it is key to ecological degradation. Since the 1950s, exponential economic growth has been associated with exponential growth of energy use, greenhouse gas emissions, waste and other indicators of biophysical throughput (Steffen et al. 2015). The mainstream discussions on sustainability – represented by organisations such as the European Union (EU), the United Nations (UN), the Organisation for Economic Co-operation and Development (OECD), individual nation states and many companies – have engaged with this problem. However, instead of questioning the pursuit of economic growth, these organisations have come up with new conceptions of growth that assume the possibility of growth without environmental degradation, such as green economy, green growth and circular economy. These conceptions are based on the hypothesis that it is possible to decouple economic growth from growth of biophysical throughput, via innovative technologies, efficiency improvements or the expansion of supposedly less resource-intensive sectors of the economy, such as services.

The decoupling hypothesis has been powerfully debunked by degrowth scholarship (for example, Hickel and Kallis 2019; Parrique et al. 2019), complementing the vast research on this topic in the field of ecological economics. First, there is no empirical evidence of decoupling economic growth from biophysical throughput at the global level and over a sustained period of time, and while it might be possible for carbon emissions, this decoupling would not happen fast enough to limit the temperature rise to 1.5°C or well below the 2°C goal of the Paris Agreement (Hickel and Kallis 2019). The growth rates targeted by the SDGs require efficiency improvements three to six times faster than ever before in history to achieve decoupling, which shows how unrealistic these targets are and also contradictory with environmental targets within SDGs (Hickel 2019). The service sector and the digital economy depend on very tangible processes and infrastructures, whether mining for minerals, energy for data centres or materials for undersea cables. The information and communication technologies already account for 3.7 per cent of global greenhouse emissions, which are expected to rise to 8 per cent by 2025 (The Shift Project 2019).

Degrowth scholars also note the rebound effects, and the Jevons' paradox, as efficiency gains in production tend to bring about increases in overall production, consumption and, hence, the corresponding throughput, thus partially or totally counterbalancing the efficiency gains (Parrique et al. 2019; Ruzzenenti et al. 2019; York and McGee 2016). In the IPCC emissions scenarios, there is a reliance on technological solutions, such as bio-energy with carbon capture and storage (BECCS) or other forms of geoengineering, even if they do not seem to be viable in the nearest future (Allwood et al. 2019). Moreover, these solutions are also seen as ethically problematic from a degrowth perspective. For example, there can be potentially dangerous unexpected consequences, such as carbon spills due to seismic activities, or local communities not being able to have control over the technologies directly affecting them (Muraca and Neuber 2018). Thus, to meet the goals of the Paris Agreement, only a low energy demand scenario is seen as viable from the degrowth stance (Hickel 2019; Hickel and Kallis 2019). For this to happen, a radical reorganisation and dematerialisation of economic activity are needed.

Capital Accumulation and Productivism

The unlikelihood of decoupling economic growth from growth of biophysical throughput is an important insight from degrowth scholarship, informed substantially by work in the related field of ecological economics. However, degrowth is not just about downscaling economic activity to live within planetary boundaries. This type of reorganisation can be achieved in a myriad of problematic ways – for example, benefiting the privileged while putting others into extreme hardships. Degrowth, however, is calling for a just society where well-being is equitably distributed (Muraca 2013; Kallis 2018).

The capitalist system is geared towards growth, and the key economic agents within it are corporations. The profit motive can be seen as the striving for growth at the organisational level. Thus, ecological limits of growth seem to be unresolvable within capitalism (Kallis 2019a). Furthermore, capitalism is an extremely unjust system, with sharp divisions between and within societies, and growing inequalities, based on extractivism, dispossession and exploitation (Chertkovskaya and Paulsson 2021). It is also a particular idea of ‘good life’ that capitalism promotes, with consumerism and social acceleration at its centre. Not only do these go hand in hand with massive extraction, resource use, overproduction and waste, but they are also seen as lacking meaning from a degrowth stance. Work and production are key to defining us as human beings today, but few are privileged enough to have dignified and secure jobs, while work in exploitative conditions is key to the economy and contributes to environmental degradation (Chertkovskaya and Stoborod 2018; Barca 2019). The focus on growth and development within capitalism also comes with marginalisation and oppression of other ways of living and worldviews, with, for example, indigenous groups having to fight for the survival of their ways of life and the spaces they inhabit (Milanez 2019). Thus, degrowth is not compatible with capitalism and calls for society to be organised on different principles (Andreucci and McDonough 2015; Chertkovskaya and Paulsson 2021).

Even if a different and a more just system is in place – say, socialism – but it still has pursuit of growth or constant expansion of the economy at its core, the problems would remain (Kallis 2019a). The experience of former communist countries, such as the Soviet Union, shows how the pursuit of growth and economic expansion were key for their economies, which was achieved at the cost of environments and people (Chertkovskaya 2019). Thus, from a degrowth stance, economic growth is a focal point, and deprioritising it is key for any socio-ecological transformation. Also, it is important to clarify that deprioritisation of growth does not mean that growth will not occur at all, and that no organisations or sectors of the economy could expand. Degrowth, instead, is about not making growth the goal of economic activity and about refocusing the economy on sufficiency, ecological sustainability and social justice, which I elaborate in the next section.

DEGROWTH AS AN ALTERNATIVE

Degrowth puts ecological sustainability, social justice and human flourishing at the core of societies, therefore the economy is seen as a means to a good life rather than the dominating sphere it is currently. Care, conviviality, mutual aid, solidarity and direct democracy are some of the key terms in the degrowth vocabulary, which gives an idea of the type of society the degrowth community strives for. This would be a society based on cooperation, bottom-up

organising and that is joyful to live in. Well-being in line with degrowth is associated with satisfaction of material needs, and gratification from a myriad of activities and processes that do not require much resource use, namely, ‘doing’, ‘loving’ and ‘being’ (Helne and Hirvilammi 2019). Thus, degrowth offers a decommodified and more relational understanding of well-being, which comes with slowing down, more time for reflection, contemplation and even idleness. Degrowth is about living well with limits, both biophysical and ethical (Kallis 2019b). These limits are to be collectively decided, reflected on and (re)negotiated. The rest of this section elaborates on a degrowth vision for the economy and then on degrowth as a research area and a social movement within the pluriverse of alternatives.

A Degrowth Economy

When it comes to the economy, decommodification and eco-sufficiency are some of the key words to describe it. Decommodification is where many activities that make up the current economic sphere will exit the realm of the monetised economy (Fournier 2008). Areas such as education and healthcare, as well as many other spheres of public welfare, would be organised and evaluated on their own terms – for example, the value of knowledge and human life – instead of in monetary terms, and accessible to everyone. Or, spheres such as housing would be seen as a basic human need rather than an asset for speculation. Trade would be openly relocalised (Liegey et al. 2016) and based on cooperation and solidarity, while being open to connections with other spaces and to new people.

In the current growth-centric economy the key and most dominant economic agent is the corporation, and the most visible economic practices are for-profit, obscuring the whole variety of economic activity that is out there. However, not-for-profit organisational forms (Hinton 2020) would be most compatible with degrowth. These include cooperatives, commons, community organisations or social enterprises, guided by the principles of eco-sufficiency and justice (Johanisova et al. 2013). In an openly relocalised economy, organisations would usually be smaller and of medium size, but united into networks that share knowledge and tools. However, for some spheres of life, such as public transport, larger scales and more centralised planning might be needed. Thus, organisations can be operating at different economic and geographical scales. Non-hierarchical practices and direct democracy would be common in these organisations, and relations with suppliers and similar organisations would be built on solidarity and mutual aid. When identifying particular organisational forms and practices as connected to degrowth, it does not mean that these would not (re-)produce contradictions and power relations. Thus, it is important for anyone who is part of these initiatives to be self-reflective and self-critical, redefining and renegotiating organisational practices in line with degrowth values. This has been termed a ‘nomadic utopianism’ approach for doing degrowth in practice (Barca et al. 2019).

The organising principles described above already exist in many spaces across the world. Post-2008 Greece is one place that has become a centre for various collective and not-for-profit initiatives, which are organised on non-hierarchical principles, with direct democracy decision-making at the core (for example, Kokkinidis 2015). These initiatives sometimes unite in networks, which enables them to support each other and act as political agents. An example is the Renewable Energy Cooperatives (REScoop) network, which unites more than 1500 cooperatives across Europe (Huybrechts et al. 2017), already contributing to energy transition. Another example are ‘design global manufacture local’ models, which are

based on the idea of creating and sharing open source designs across the world, while enabling local production, whether of wind farms or prosthetic arms (Kostakis et al. 2018). Rural communities and farmers are using digital tools to create solidarity trade networks that enable a direct connection between producers and consumers. Some groups use community currencies as part of their local exchange and trading systems, organising money and even markets on the principles of decommodification and mutualism (Joutsenvirta 2016; Lloveras et al. 2020). In some contexts, these practices embody what Sekulova et al. (2017, p. 2362) have named ‘fertile soil’, that is, ‘a particular quality of the social texture, characterized by richness, diversity, unknowns but also by multiple tensions and contradictions’. Acknowledging these contradictions and reflecting upon them act as nourishment for these groups, and are key to determining their continuation. This speaks to what has been referred to previously as nomadic utopianism.

Degrowth in the Pluriverse of Alternatives

Degrowth as a concept comes from the European context and can be seen as a response to the crisis of capitalism in a modernised and industrialised world (Kothari et al. 2014). Thus, it speaks most to the Global North, but aligns with the broader discussion on the pluriverse. Different while synergetic, alternatives from all over the world that make up the pluriverse challenge the ontology of modernity as universal and call for a world where different worlds fit (Kothari et al. 2019). They have a common understanding of the roots of the crisis, and compatible worldviews of an ecologically sustainable and socially just world beyond growth and development; ‘[a]rising from different cultural and social contexts, they sometimes differ upon the prognosis (what and how shall be done), but they share the main characteristics of the diagnosis (what is the problem and who is responsible for it)’ (Kothari et al. 2014, p. 366). Together, these efforts help to decolonise both social relations and the socio-ecological imaginary itself.

Scholars in a broad range of geographical contexts have been making connections to degrowth and articulating how it speaks (or not) to these spaces (for example, Xue et al. 2012; Chertkovskaya 2019; Gerber and Raina 2018; Milanez 2019). While degrowth has been particularly inspired by the late twentieth-century intellectuals such as André Gorz, Cornelius Castoriadis, Ivan Illich, Serge Latouche or Nicholas Georgescu-Roegen (Kallis 2018; Leonardi 2019), there is no single and key founding author whose thought has to be drawn on when engaging with degrowth. Earlier traces of degrowth-connected thinking can be identified in the thought of nineteenth-century anarchists and socialists (Chertkovskaya 2019; Koch 2019; Chapter 4 in this volume). The work of feminist scholars since the late twentieth century has a great deal in common with degrowth, and can help to nuance the discussion on economy, work and care, centring them on social reproduction instead of growth (Chapter 3 in this volume; Gregoratti and Raphael 2019). Moreover, there is a continuous discussion and reflection on how to integrate the multiplicity of voices into the degrowth scholarship and movement, making sure that degrowth is not only a critique of growth and capitalism, but also a feminist and decolonial endeavour (for example, Dengler and Seebacher 2019; Nirmal and Rocheleau 2019).

Degrowth is a burgeoning interdisciplinary research area and, arguably, a social movement that brings together academics and activists who share the ideas of degrowth. Repoliticisation is an important word, that is, degrowthers are not afraid of being explicitly political, and

indicating how what is presented as neutral or scientific is politically shaped. The researchers interested in degrowth connect it to themes in their respective fields, which contribute to challenging the centrality of growth and economy in academia itself. When it comes to environmental politics, the frame of this book, a degrowth approach to it implies looking at how a radical socio-ecological transformation not centred on growth could be conceived within this field of study. This might come with analysis of global or local environmental politics through a degrowth lens, with a focus on grassroots environmental politics or other directions (for example, Ford and Kuetting 2020). This brings me to the discussion of the politics of degrowth.

THE POLITICS OF DEGROWTH

The politics of degrowth and the strategy associated with it is a key emerging discussion in the area (Barca et al. 2019). While there are many already existing bottom-up initiatives, it is acknowledged that they are currently at the margins of the mainstream growth-focused economy. Policies and institutions are often shaped to benefit large and for-profit companies, with corporate lobbying shaping different levels of politics. This holds for most national and supranational institutions, and governance frameworks, such as the SDGs put forward by the UN and the European Green Deal currently implemented by the European Commission. Thus, the question of reshaping policies and institutions of society to foster socio-ecological transformation becomes important, and something the degrowth movement cannot avoid addressing if the intention is systemic change.

If there is one theoretical concept that can help to characterise the politics of degrowth, it is direct democracy, which refers to a 'broader social regime that institutes collective forms of decision-making, produces the subjects that internalise its values, and hence realises the ideal of a free, autonomous society, i.e. a collectivity that consciously and reflexively decides and changes its institutions' (Asara et al. 2013, p. 235). It includes a particular process of decision-making – collective and participatory – but goes beyond it. This principle permeates through alternative organising practices associated with degrowth (for example, Kokkinidis 2015; Sekulova et al. 2017). When it comes to political action, the Indignados, the Occupy movement and the climate justice movement are all examples where direct democracy is key to how protest, direct action or disobedience are organised (Asara 2016; Kaufer and Lein 2020). Ende Gelände direct climate action taking place in Germany, for example, is organised in this decentralised way, where many autonomous action groups make up the multitude that occupies a coal mine, with practices of mutual aid being key to each of these non-hierarchical units (Vandepitte et al. 2019).

While it might be difficult to imagine direct democracy in current political institutions, where power is given to representative bodies or experts, it is not impossible either. These types of practices exist in Rojava, where governance is organised via municipal citizens' assemblies, united into a confederation and has been exercised in the most vulnerable circumstances, such as the war against the Islamic State and attacks by the Turkish state (Cemgil 2016). These principles of governance are based on the idea of libertarian municipalism put forward by Murray Bookchin. Governance based on Bookchin's principles of municipalism has also been connected to degrowth, with degrowth municipalism understood as orientated

towards openness, collective sufficiency and organic abundance, fostered via institutionalisation and cultivation of active political life (Vansintjan 2018).

In Europe, attempts have also been made to bring direct democracy into party, the EU and municipal politics. Direct democracy mechanisms, often with the use of digital tools, have been applied in new political parties, such as the Alternative in Denmark (Husted 2018). While not without challenges and compromises when the change from a movement to a party takes place (Husted and Hansen 2017), these parties show how decision-making at party level can be achieved in new ways. Democratising institutions of the EU with direct and participatory democracy mechanisms is on the agenda of the Democracy in Europe (DiEM25) movement, which has thus far coordinated the most degrowth-connected Green New Deal for Europe proposal (GNDE 2019). Finally, the practices referred to as new municipalism have gained traction in many European cities, which are ‘aiming to democratically transform the local state and economy’ (Thompson 2021, p. 1). To work out how to act together as the local states, the municipalities following the new municipalism approach have united into a network of ‘fearless cities’ to share knowledge and support each other (Barcelona en Comú et al. 2019; Russell 2019).

It is not surprising that direct democracy mechanisms and the close connection to the grassroots is possible to find at municipal level, which is a small and operationable unit closely connected to the local level. Many current initiatives that are part of the degrowth imaginary – bicycle kitchens (Bradley 2018), makerspaces, repair cafes, urban gardens – are often supported by municipalities. The same initiatives can be justified by different logics though, such as political commitment or investment in the entrepreneurial image of the city (North and Nurse 2014). This holds for the Fearless Cities network too, where municipalities range from pragmatic and entrepreneurial, ‘representing more constrained, reactive responses to neoliberal austerity urbanism, to more proactive, contentious, expansive programmes for transformation of state/capitalist social relations’ inspired by Bookchin (Thompson 2021, p. 2). However, even if aimed at transformation, municipalities are often constrained in their resources and decisions, especially by the state (Eizaguirre et al. 2017).

With direct democracy being a key value for the politics of degrowth, there has also been an ongoing discussion of policy mechanisms that could foster degrowth, such as a shorter working week, basic and maximum income, and debt audit (Buch-Hansen and Koch 2019; Kallis 2018). It has been noted that the primary spaces for enacting these policies are nation states, which seems to be in contradiction with the bottom-up politics of degrowth (Cosme et al. 2017). Thus, the possibility of reconciling this contradiction and the role of the state become important and probably some of the most contentious topics in the degrowth movement (D’Alisa 2019).

On the one hand, the principle of direct democracy undoubtedly does not apply to current nation states or supranational institutions, such as the EU, which endorse neoliberal policies and are closely connected to powerful corporate structures. Moreover, the state often acts in preventive ways, limiting grassroots activities. For example, a vibrant practice of timebanks in Finland – where people exchanged services outside the monetary system using hours instead of money – was severely challenged when the state demanded these activities to be taxable according to their monetary value (Joutsenvirta 2016).

On the other hand, the literature that has theorised the state in relation to degrowth thus far, from Marxist stances, has argued that the state can act in the interests of people rather than corporations and become an enabler of socio-ecological transformation (D’Alisa 2019; Koch

2020). This understanding of the state suggests the possibility of a dialectical relationship between the state and the grassroots groups, where the grassroots would push the state and its institutions to pursue radical change, including transforming the state itself and its institutions to be more responsive to bottom-up demands. While the state is seen as inherently oppressive from an anarchist perspective, this does not mean that attempts to push the state are to be ignored. For example, the dialectical tension with the state is part of Bookchin's idea of libertarian municipalism, where the word 'tension' is key (Bookchin 1991). That is, the emphasis on direct democracy does not necessarily rule out the state and representational politics as a terrain for change, and can reinforce grassroots efforts (Teivainen 2016).

Systemic change in state politics requires grassroots organisations, social movements and radical municipalities finding the spaces to challenge states and supranational institutions, and demanding accountability. There are examples where the demands of the grassroots shake up the terrain of representative and expert politics. The youth climate protests contributed to the concept of 'just transition' (see Chapter 13 in this volume) making it into the European Commission's European Green Deal, though devoid of its radical meaning, which brings up the need for continuous dialectical tension with the state to avoid co-optation.

CONCLUSION: SHIFTING THE PARADIGM IN TIMES OF CRISIS

In this chapter I have articulated critiques of growth, alternatives associated with degrowth and the politics that would foster radical socio-ecological transformation. However, degrowth and similar alternatives are marginal within the political landscape today. Thus, in the conclusion I reflect on the actions that could build up the transformative potential of degrowth, namely, activating alternative imaginaries and building alliances.

Buch-Hansen (2018) identified four criteria that are key to a paradigm shift: deep crisis, an alternative political project, a comprehensive coalition of social forces promoting the project in political struggles and broad-based consent. For him, while degrowth as a political project indicates ways out of the multiple crisis of capitalism (Brand and Wissen 2012), there is neither a coalition of forces promoting it nor a broad-based consent, so the prospects of a paradigm shift towards degrowth remain bleak. While his analysis still holds, new crises such as the COVID-19 pandemic keep exposing fundamental problems with the capitalist system. These crises open spaces for thinking about different pathways for societies, but are also a struggle of different political ideologies, such as attempts to go back to business as usual, political closures and conservatism, or global solidarity.

Thus, it is an extremely important time for the degrowth movement to mobilise and activate radical alternative imaginaries. Key to this is to find narratives to articulate the need for socio-ecological transformation built on mutual aid and open relocalisation, and explain how this change would ensure satisfaction of material needs, dignity and social welfare. It should be acknowledged that there is a rising critique of growth in academia and society today, which degrowth scholarship has definitely contributed to, not least due to the problematisation of decoupling (Hickel and Kallis 2019; Parrique et al. 2019). For example, 11 000 scientists who signed a public letter on climate emergency suggest deprioritising growth in policies (Ripple et al. 2020), which has also been called for by institutions such as the European Environmental Agency (EEA 2019), or the Intergovernmental Science-Policy Platform on Biodiversity (IPBES 2019). There is a great deal of work to be done to have others adopt this position.

Another necessary step would be to convincingly communicate the ethical and political alternative associated with degrowth.

Organising as a movement and building a strong interconnected network is also key to this endeavour. Degrowth is unlikely to receive broad political support on its own, and does not need to compete for being the alternative. There are many worldviews compatible with degrowth across the globe and different movements that degrowth can connect to. Thus, what is important is to build alliances of radical forces that share a wide set of principles in order to create a broad coalition, including anti-austerity, climate, decolonial, feminist, indigenous and labour movements, progressive political parties and organisations, academic networks and many others. While degrowth is a small movement in itself, being an umbrella term, it might also have the potential to bridge discussions that are currently not connected. This broad coalition of social forces would be more vocal and visible to obtain consent from the wider public, ultimately building the critical mass that can drive the greatly needed socio-ecological transformation.

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8. Limits

Erik Gómez-Baggethun

INTRODUCTION

Limits to growth, the idea that the economy cannot expand forever in a finite planet, are the central proposition of environmentalism (Meadows et al. 1972; Kallis 2020). Modern formulations of this idea are often grounded in the thermodynamic vision of the economy first formalized by ecological economist forerunner Nicholas Georgescu-Roegen (1971). Ecological economists portray the economy as a subsystem of the biosphere. The Earth is a closed system for materials (except for the negligible event of meteorites) and solar energy enters at a fixed rate, so physical resources are finite. Entropy prevents complete recycling and renewable technologies depend on finite materials. Hence, the thesis goes, the economy cannot grow perpetually: the scale of the economic sub-system is constrained by the physical limits of the host ecosystem (see also Daly 1973, 1996; Martínez-Alier and Schlüpmann 1987).

In 1972, Club of Rome's Report *Limits to Growth* set the thesis of physical limits in the policy agenda, triggering a heated debate, and convincing many political leaders about the impossibility of growing perpetually in a finite planet (Martínez-Alier 2014a). Ideas about social limits to growth also followed. Hirsch (2005) called attention to how affluent societies produce social scarcity. As societies become richer, larger shares of the new goods and services become unavailable for many. In this economic competition, growth fails to deliver its promise of generalized abundance, as those with less wealth aspire to equal the rich. The affluent society, Hirsch argues, is a frustrated society, trapped in a hamster wheel of growth and consumption that is incapable of improving human satisfaction through increased material standards.

After an initial highpoint in the 1970s, the thesis of limits declined during the 1980s and 1990s (Gómez-Baggethun and Naredo 2015), but only to resurge in the twenty-first century around notions of planetary boundaries, peak oil, post-development, post-growth and degrowth.

Limits is a contentious concept in environmental politics, full of paradoxes and conundrums (Dobson 2016). Attacked and defended with equal passion, they define major ontological and ideological divides, and have been scenario of enduring confrontations between environmental scientists, economists and political scientists (Ehrlich 1968; Beckerman 1974; Bruckner 2013). Limits split scholars across disciplines and environmental philosophies but also within them, for example, confronting neoclassical economists against ecological economists (Solow 1973; Daly 1985, 1997; Stiglitz 1997) and green growth against degrowth advocates (Asafu-Adjaye et al. 2015, Kallis and Bliss 2019; Gómez-Baggethun et al. 2020; Robbins 2020).

Conversely, limits have given way to diverse affinities of intent. These include those that are intuitive, such as policy and business in defense of growth, but also those that are counter-intuitive, such as liberals siding with Marxists in defense of growth and industrial technology (Simon 1981; Philips 2015; Robbins and Moore 2015; Huber 2021).

The contentious nature of limits makes it an idea of particular interest for critical environmental politics. This chapter engages with the thesis of limits, assesses critical reactions to it, and scrutinizes disputes regarding their nature, relevance, and political implications. It shows how, since the 1970s, mainstream economics and policy have reframed limits, turning them into an increasingly abstract and toothless idea. It also makes the case that authors from political ecology and degrowth have also contributed to this tendency by means of framing limits as social constructs devoid of material content. The chapter is organized in three main parts. Following this introduction, the next section puts debates on limits in historical perspective. The third section discusses contentious issues and standpoints. The final section concludes with a summary of key messages.

THE ETERNAL RETURN OF LIMITS

The first conceptualization of limits is attributed to Archimedes of Syracuse, who developed the idea to measure curved figures and the volume of a sphere in the third century BC. Thereafter the concept has become a commonplace in mathematics, and has made its way into political, economic and environmental debates.

Throughout history, debates on limits have repeatedly flourished, declined and returned. While a comprehensive history of limits is beyond the scope of this chapter, we will point to episodes during which limits gained salience in philosophical, economic or political debates. Without pretense of representativeness (the sample is definitely biased to western history and debates), we provide below a brief overview of three of these episodes: Ancient Greece, the establishment of economics as a discipline, and modern environmental policy.

Ancient Greece as a Culture of Limits

Few other civilizations have been so concerned with limits as Ancient Greek culture (Castoriadis 2005; Kallis 2020). ‘Nothing in excess’, the second aphorism inscribed in the Temple of Apollo at Delphi, stands as testimony to this concern.

Aristotle defined limits as the last point, form, end of substance of things.¹ This account is consistent with the view of limits as ‘accomplishment’, the open and the endless being instead regarded as incomplete, confused or hubristic (Pellizzoni 2021). Castoriadis (2005, p. 82) notes that the idea of limits was intrinsic to the Greek notion of ‘development’. Development was not understood as an indefinite process, but as directed to a desired state of maturity. Development, Castoriadis states, could only be conceived in relation to this state, defined by a citizen norm (*kalós kagathós*) or limit (*peras*),² that could not be transgressed (doing so meant moving backwards). Hence, development could only be conceived in relation to a final state or destination. The unlimited and the infinite (*ápeiron*) was correspondingly regarded as unfinished and imperfect. (Castoriadis 2005, p. 83).

Greek philosophers, statesmen and lawmakers instituted limits in morals, policy and law. Prudence (φρόνησις, *phrónēsis*), the ability to discern the appropriate course of action in each situation, was (together with justice, fortitude and temperance) one of the four cardinal virtues of mind in classical philosophy and one of the most esteemed personal qualities in Ancient Greece. First derived from Plato’s *Republic*, and then expanded by Cicero, it was considered by ancient Greeks as the cause, measure and form of all virtues.

Notions of limits, moderation and prudence were deeply embedded in law and the societal norm. Kallis (2020, p. 76) notes that ‘the very creation of the Athenian polis at the sixth century BCE was an act of legislating limits’. The central thesis of classicist Richard Seaford on the invention of money, Kallis (2020, p. 77) writes, ‘is that much of Greek culture and philosophy was shaped in reaction to money’s seemingly limitless character’. For Seaford, the potentially unlimited nature of money, described disapprovingly by many Greeks, from Solon to Aristotle, explains the anxiety Greeks had around limits. Greek culture can be read as a reaction to the unlimited power of money that was beginning to be unleashed at the time (Kallis 2020, p. 78).

Classical philosophy appraisals of prudence and limits were preserved through the Middle Ages by Christian philosophers (such as Thomas Aquinas), until finally declining around the fourteenth century. A comprehensive account of the historical developments that turned the negative conception of the ‘unlimited’ into a positive one is beyond our scope, but Castoriadis (2005, p. 84) emphasizes a set of factors that were decisively involved the transition to modernity and the emergence of capitalism, including the collapse of the medieval worldview, the expansion of the bourgeoisie, the enthronement of science and technology, the idea that natural forces can be controlled through reason, and emerging notions around the indefinite progress of knowledge (see also Adorno and Horkheimer 1997).

Temporary Emancipation from Limits

A second episode of interest in the history of limits concerns the evolution of ideas in economic thinking that took place between the mid-eighteenth and the mid-nineteenth centuries, when economics took form as a discipline (see, for example, Naredo 2003; Vatn 2016).

Notions of physical limits were strong among early schools of economic thinking. The French physiocrats of the eighteenth century conceived nature as the source of all wealth, and held limits central in their maxim that economics should aim to expand the production of renewable resources (*richesse renaissante*) without undermining the underlying resource base (*biens au-fond*). The idea that the economy could not expand without limit also prevailed in the classical economics period (1770–1870s). Notions of limits and scarcity have been most notably attributed to Malthus (1798) but are also present in David Ricardo’s thesis on the decreasing returns on land, in Marx’s notion of the metabolic rift, and in John Stuart Mills’s forecasts of a stationary state economy (reviewed in Gómez-Baggethun et al. 2010).

In the nineteenth century, industrial development, technological innovation and access to fossil energy triggered fundamental changes in the conception of limits (Pellizoni 2021). Economic analysis gradually changed focus towards more abstract analytical categories: (1) from land and labor to capital, (2) from physical to monetary analysis, and (3) from use values to exchange values (Gómez-Baggethun et al. 2010). These changes gradually shifted the economic spotlight from tangible phenomena (such as agriculture and labor), to the more abstract notions of utility, money and capital, where ideas of the limitless could be more easily accommodated (Naredo 2003).

This epistemological drift continued with the establishment of neoclassical economics, around 1900. By the early twentieth century, a few authors, such as Jevons, Gray, Ramsey, Ise and Hotelling, kept paying attention to limits, raising concerns on impacts of resource depletion on future generations (Martínez-Alier and Schlüpmann 1987). However, concerns over resource limits languished from the 1930s, as economists theorized that technological change

would allow for substitution of scarce resources, spreading the belief that there are virtually no limits to growth (Crocker 1999; Vatn 2016). By the mid-twentieth century, land and natural resources had been entirely removed from economic production functions, and economic concerns on limits had mostly disappeared (Hubacek and van den Bergh 2006).

It was not until the 1970s that economics turned its interest back to limits, through the work of ecological economists, such as Boulding (1966), Mishan (1967), Georgescu-Roegen (1971), Daly (1973, 1996) and Martínez-Alier (Martínez-Alier and Schlüpmann 1987), who set questions of limits and scale as central economic concerns, setting the molds of current discussions on steady-state economics, degrowth and post-growth.

Rise, Fall and Resurgence of Limits in Environmental Policy

In the 1960s, environmentalists brought limits back onto the agenda, calling attention to the adverse effects of pollution and raising the prospect of ecological catastrophe (Ehrlich 1968).

The publication of the Club of Rome report *Limits to Growth* (Meadows et al. 1972) decisively established limits as an important issue in political and economic policy debates. Sicco Mansholt, incoming President of the European Commission, proposed that Europe should not aim at maximizing economic growth (measured by gross domestic product, GDP), stating elsewhere that ‘the central question is how we can reach a zero-growth economy’ (quoted in Martínez-Alier 2014a). In the years that followed, however, the thesis of limits was countered by neoclassical economists, which made the case that price systems and resource substitution enabled by technology turned limits irrelevant for the foreseeable future (Stiglitz 1979). Ideas of limits to growth were also attacked by political ecologists on the grounds that they served neocolonialist agendas that shift responsibilities on to the poor and marginalized (Harvey 1979; Hartmann 1995; Mehta 2013; Benjaminsen et al. 2015).

In 1974, United Nations Environment Programme (UNEP) and United Nations Conference on Trade and Development (UNCTAD) convened an international symposium at Cocoyoc, publicizing the idea of ‘ecodevelopment’ as a compromise to harmonize the right to development in poor countries with concerns over the Earth’s biocapacity. Advancing ideas that resonate with current discussions on the ‘just and safe operating space for humanity’ (Raworth 2017), the declaration emphasized the need to reconcile the ‘inner limits’ of human rights and the ‘outer limits’ of resource depletion, favoring redistribution over economic expansion, and rejecting the idea of ‘growth first, justice later’. The notion of ecodevelopment was, however, short lived. Henry Kissinger, as chief of US diplomacy, rejected the text entirely in a cable sent to UNEP and UNCTAD directors, de facto vetoing the term ‘ecodevelopment’ in international forums (Galtung 2010).

In the 1980s, the Bruntland report (WCED 1987) established sustainable development as a new guiding principle for international sustainability policy, flipping upside down the framing of environmental problems and solutions that had prevailed over the 1970s. Growth was no longer presented as the cause, but as the solution to environmental decline. The report stated that ‘the international economy must speed up world growth’ (WCED 1987, para. 74) and advocated ‘more rapid economic growth in both industrial and developing countries’ (WCED 1987, para. 72). Advancing current theories on green growth and decoupling of economic expansion from environmental impacts through technology, the report stated that ‘more rapid growth could be sustainable if nations shifted the content of their growth towards less material and energy intensive activities and develop more resource-efficient technologies’

(WCED 1987, para. 32). The expectation that growth would be gradually dematerialized and decarbonized was later formalized through the Environmental Kuznets Curve (EKC), a hypothesized relationship between environmental quality and GDP growth. To EKC proponents, various indicators of environmental degradation get worse as the economy grows, but only until average income reaches a particular point, after which, proponents argue, they improve. In this way, sustainable development effectively reshaped sustainability principles to fit economic imperatives of growth (Gómez-Baggethun 2019).

After sustainable development restored political consensus on growth, the specter of limits faded from political debates, but only to return again decades later. Since the early 2000s, environmental activists and intellectuals influenced by ecological economics and post-development studies revitalized controversies on limits to growth, establishing the idea of ‘sustainable degrowth’ in political debates (Latouche 2009). Meanwhile, confidence in the dematerialization promises of sustainable development eroded as scientists showed that the economy kept materializing (Krausmann et al. 2012) and environmental decline kept accelerating (Ehrlich et al. 2012). In the last fifteen years, the return of limits debates is evident from the momentum of ideas such as ‘post-development’ (Escobar 2007), ‘planetary boundaries’ (Rockström et al. 2009), ‘doughnut economics’ (Raworth 2017), ‘prosperity without growth’ (Jackson 2017) and ‘degrowth’ (D’Alisa et al. 2014). Limits have also gained renewed attention in environmental politics, as reflected in revitalized academic debates on the topic (Gómez-Baggethun 2020, 2021; Robbins 2020; Benjaminsen 2021; Kallis 2021; Huber 2021; Pellizzoni 2021).

CONTENTIOUS ISSUES AND STANDPOINTS

Areas where disagreements on limits are particularly strong include precepts regarding their nature, practical relevance and political implications.

Reactionary or Emancipatory?

Prominent strands in political ecology assume default associations between the case for limits to growth and Malthusian narratives of scarcity and austerity, allegedly allied with elite power (Robbins 2020). In effect, Malthusian narratives on scarcity and limits influenced some strands of environmentalism, particularly from the late 1960s to the 1980s in the United States (for example, Hardin 1968; Ehrlich and Ehrlich 1970). However, a default association of the defense of limits to Malthusianism is misleading.

Building on Dale (2012), Kallis (2020) reinterprets the common reading of Malthus, making a compelling case that his preoccupations had little to do with environmental or resource limits, and far more so with combating poverty alleviation policies and the rising egalitarian ideals in his time. Kallis reads Malthus as a founder of an economic ideology favoring market expansion over redistribution and criticizes how influential strands of environmentalism have come to endorse misleading Malthusian notions of scarcity and limits. Malthus’s concerns were not motivated by ecology, but by fear of the upper class of losing their privileges. Authors in ecological economics and degrowth (as two prominent literatures that defend limits

to growth) explicitly oppose Malthus and top-down population control (D'Alisa et al. 2014; Martínez-Alier 2014b).

It should also be noted that contested meanings of austerity serve different and sometimes antagonist political agendas (Gomez-Baggethun 2020). In contemporary debates, the word austerity often evokes neoliberal policies of fiscal discipline. Yet, proponents of limits and degrowth have attacked such austerity as an attempt to resume the engines of growth by cutting on social spending (D'Alisa et al. 2014; Hickel, 2019). Furthermore, the meaning of 'austerity' is by no means restricted to this economic ideology, nor to the sense of sacrifice implied by some authors (for example, Robbins 2020). The idea of austerity as a virtue has longstanding leverage in philosophical thinking, from Aristotle to Aquinas (Illich 1973), and has been an important element of egalitarian imaginaries. For example, austerity was defended with pride by Italian Communist Party secretary, Enrico Berlinguer, who claimed that 'austerity' brought by the 1973 oil crisis would force us to 'shelve the delusion that we can preserve a development model based on a fabricated expansion of individual consumption, which is a source of waste, parasitism, privilege, resource depletion, and financial disarray' (from a speech in 1977, cited in Mingardy, 2015). Austerity and simple ways of living are also advocated by former guerrilla partisan and later socialist President of Uruguay, Jose Mujica, in the name of environmental sustainability and social justice.

Physical Realities or Social Constructs?

Another contentious point concerns the ontology of limits. As noted by Vatn (2016), the existence of some physical limits is ultimately trivial, obvious examples including the Earth's surface (510 million square kilometers) and its volume (about one trillion cubic kilograms). Hence, ontological divides do not typically concern the existence of limits but the notion of 'hard/soft', 'absolute/relative', 'external/internal' limits, expressed through different claims regarding their nature and materiality.

The 'science wars' between natural and social scientists waged over the 1990s evidenced a polarized opposition between 'realist' and 'constructivist' ontological positions (Sokal and Bricmont 1998). While the former (prominent among natural scientists) emphasize the material dimensions of limits, often resorting to physical parameters for studying thresholds and tipping points, the later emphasize their politically constructed character.

Over the 1970s and 1980s a great deal of literature in the social sciences was influenced by the developments in Western philosophy brought about by the 'linguistic turn' induced by French post-structuralist thinkers in the 1970s. Authors such as Derrida, Foucault, Kristeva and Deleuze, challenged and deconstructed predominant beliefs surrounding scientific panaceas and universal truths. Strands in environmental politics and sociology influenced by these ideas have expressed skepticism towards approaches – common among ecologists – conceiving limits as objective realities that could be deciphered by scientists. Literatures in this tradition emphasize that limits are relative and politically constructed, calling attention to arbitrariness and large uncertainties involved in their definition (Kallis 2020; Robbins 2020).

Over recent decades, however, ontological positions have evolved and diversified to cover a continuum in the realist–constructivist spectrum, including soft and hard constructivists (Hacking 1999), critical realists (Archer et al. 2013) and positions that depart from this spectrum. The 'material turn' of the 1990s has been depicted as a reaction against the excessive power granted to language to determine what is real (Barad 2003). According to Pellizzoni

(2016), key features of this ‘new materialism’ (Dolphijn and van der Tuin 2012) include a rejection of the binaries traditional to modern thinking (nature/culture, natural/artificial, reality/knowledge) in favor of an outlook on matter exhibiting agency and where biophysical phenomena are increasingly conceptualized as porous boundaries.

How have these ontological diatribes affected conceptions of limits? A main tendency is that the idea of limits has been devoid of its material content. Environmental science and politics in the 1970s described the ecological crises as an issue of material limits to growth, but since the 1980s, a new narrative built around notions of sustainable development, ecological modernization, and eco-efficiency transformed limits into an increasingly vague idea, where limits are seen as flexible barriers surmountable by technological progress (Gómez-Baggethun 2022).

Perspectives that emphasize the relative and constructed nature of limits are common in ecomodernism (for example, Asafu-Adjaye 2015), including their left-wing variants in political ecology (see, for example, Robbins 2020). Robbins (2012, p. 124) notes that: ‘as normative researchers, political ecologists pursue these [constructionist] claims because they believe that these [categories], in the current socio-political context, are doing pernicious work or helping to secure the power of an elite community’. We have argued elsewhere (Gómez-Baggethun 2020, p. 2) that ‘[t]he irony is that in today’s post-truth era, banalizing research on ecological limits as mere narratives or social constructs pays service (albeit unwillingly) to the same elites and business powers against which such claims were initially conceived’. In effect, however well intended these approaches may be, the intellectual climate of relativism they contribute to generate is now successfully exploited by business power that manufactures uncertainty to undermine environmental regulations in the name of progress and growth (Harremoes et al. 2002).

Emphasis on the relative and constructed nature of limits has also permeated into the second generation of degrowth proponents. For example, Kallis claims that ‘limits are relative. Defined in relation to society’s wants ... constructed under capitalism’ (Kallis 2020, p. 122), and makes the case that ‘there are no external limits’ (Kallis 2020, p. 119).

Limits, Kallis argues, are not external imperatives imposed upon us, but social choices. For those inclined towards a materialist philosophy, however, defining properties of the material world in solely normative terms seems problematic. Limits cannot tell us what we should do, but they do tell us what we cannot do as they define the material frames within which human agency operates and autonomy can be realized (Gómez-Baggethun 2021). The discursive shift from external physical constraints to normative choices feeds into a broader tendency to devoid limits from their material content and accommodate them into a framework where restraint becomes a question of lifestyle choices, rather than something encoded in the ontological character of the world (Pellizzoni 2016; see also Gomez-Baggethun 2022).

Natural versus Regulatory Limits

One consequence of the discursive shift that devoid limits from material content seems to be the blurring of the social and physical dimensions of limits. In effect, the fundamental distinction between regulatory and natural limits seem to be a recurrent omission in the literatures that have shifted the spotlight from the materiality to the social construction of limits.

Regulatory limits (for example, caps on emissions) should not be conflated with natural limits (for example, threshold and tipping points) (Johnson 2013). The former are social

constructs by definition, whereas the latter relate to physical realities, observable as abrupt (non-linear) changes when thresholds are surpassed owing to disturbance or cumulative change.

Distinctions of natural and regulatory limits have long existed in environmental policy debates. Ciriacy-Wantrup (1968) distinguished ‘critical zones’ in the environment from ‘safe minimum standards’ in policy, paralleling the differentiation that Earth-system scientists make today between ‘thresholds’ and the boundaries defining a ‘safe operating space’ for humanity (Rockström et al. 2009). Thresholds are defined by ecological parameters, while notions of ‘safe’ boundaries are contingent on, for example, risk aversion. The distinction matters for several reasons.

First, perceptions of limits can deviate substantially from the reality of limits (Vatn 2016). Second, threshold and tipping are difficult to measure, and their precise location remains elusive to scientists (Dudney and Suding 2020). Furthermore, thresholds are difficult to define *ex ante*, often revealing themselves only after they have been crossed. Hence, the need to resort to the precautionary principle when defining regulatory limits. Third, even when they can be measured with some accuracy, natural limits rarely, if ever, match regulatory limits. Carbon emission caps are informed by the Intergovernmental Panel on Climate Change (IPCC) recommendations but do not reflect them directly. Natural limits are set based on scientific criteria under specific knowledge regimes; by contrast, regulatory limits are set through lobbying and negotiating conflicting values, aims, interests and agendas (Jax 2016). They are shaped by compromises and power relations between parties. Finally, limits can be subject to very different degrees of enforcement. They can be formally sanctioned rules (for example, regulations of nitrate or pesticides levels in drinking water), or reflect merely aspirational (non-binding) targets, such as the 1.5°C of the Paris Agreement. When limits affect environmental problems ranking lower than climate in the political agenda, they may not be enforced at all.

Limits versus Scarcity

Finally, the blurring of the social and physical dimensions of limits contributes to perpetuate persistent confusions between scarcity and limits. Importantly, recognition of environmental limits does not equate to endorsing a worldview of scarcity (Gómez-Baggethun 2020). Frugal and egalitarian small-scale societies from which degrowth takes inspiration are characterized by a cosmology of abundance, and research has portrayed these societies as affluent (Sahlins 1974). Some degrowth advocates have therefore made a case for ‘frugal abundance’, where scarcity could be allegedly overcome by means of voluntary simplicity and institutionalized frugality (Alexander 2017).

Something unlimited cannot be scarce but something limited may or may not be scarce. For a small community of fishers that subsists on a large fishery, resources may be abundant but not unlimited. Natural limits exist to the amount of fish they can extract, which can be defined by physical parameters, such as the fisheries’ regeneration rates. Scarcity (defining what we cannot use as much as we want) is a relation between means and ends, and is socially defined. Limits (defining what is finite) are a property of the material world, and are physically defined.

CONCLUSION

Limits are a key and contentious topic in critical environmental politics. Attacked and defended with equal passion, limits define ontological and ideological divides, and have been scenarios of enduring confrontations between environmental scientists, economists and political scientists.

In this chapter, I have scrutinized disputes regarding the nature, relevance and political implications of limits. I problematized how limits have been gradually reframed over recent decades, from their foundational conception as physical barriers to growth to an increasingly vague and toothless idea devoid of material content. Reframing of limits owes primarily mainstream economic and policy arguments reframing them as flexible barriers surmountable by technology, but has also been furthered by strands in political ecology and degrowth that reframe limits as constructs pertaining to the domain of choices and lifestyle politics.

I claim that critical environmental politics should be wary of this tendency. Critical environmental politics should acknowledge the political dimensions of limits, while also recognizing material constraints as a foundational rationale for economic and political transformations.

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NOTES

1. ‘Limit’ means (1) the last point of each thing ... part, and the first point within which every part is; (2) the form, whatever it may be, of a spatial magnitude or of a thing that has magnitude; (3) the end of each thing ...; (4) the substance of each thing, and the essence of each ... Evidently, therefore, ‘limit’ has as many senses as ‘beginning’, and yet more; for the beginning is a limit, but not every limit is a beginning (Aristotle 1933, *Metaphysics*, 17).
2. Greek dictionaries refer to at two different words to denote limits: (1) *peras* (a) a boundary, limit, extremity, or (b) an end, conclusion), and (2) *horos* (stint, ceiling, border, bound, confine).

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9. Sustainability: buying time for consumer capitalism

Ingolfur Blühdorn

INTRODUCTION

Sustainability is a lead concept, a discursive master-frame, that has dominated eco-political debates and official environmental policy-making for some considerable time, but that may be about to lose its hegemonic power. For the moment, it still seems impossible to think, articulate and discuss issues relating to the biophysical environment and socio-ecological relations without using the terms ‘sustainability’ and ‘sustainable development’. This is exactly what hegemonic concepts or master-frames do: They make us believe that there are no alternative ways to conceive of and speak about particular issues – in the current example, the ecological issue or the ecological question – to politically negotiate them and take related decisions. At first sight, these concepts just seem to be terms, interchangeable with other terms, such as, in this instance, nature conservation, environmental protection or climate protection. However, they come with considerable baggage. For, they selectively frame the particular issue that is at stake, what is perceived as problematic about it and for what reasons, what should best be done about it, who should take responsibility, and so on. As regards environmental politics, it is worth calling to mind, therefore, first, that related debates have had a long history well before the notion of sustainability became prominent, that is, the ecological issue or the ecological question has been perceived through other lenses and formulated from other perspectives. Secondly, there is no reason to assume that the currently prevailing lens, frame or paradigm will always continue to be as prominent as it currently still is. Indeed, an increasing number of scholars are suggesting that sustainability and sustainable development are an exhausted eco-political paradigm (Blühdorn and Welsh 2007; Benson and Craig 2014; Foster 2015). Also, in the affluent consumer societies of the Global North, in particular, an order and ‘politics of unsustainability’ (Blühdorn 2007, 2011, 2017; Blühdorn and Deflorian 2019) now seems more entrenched than ever before. Mainstream eco-political discourse has noticeably narrowed to focus on global warming and decarbonisation. Also, the COVID-19 pandemic, which has triggered unprecedented new investment in the further stabilisation of the established socio-economic order, may have delivered the final blow to the project of an international sustainability transformation, shifting the focus, instead, to the individual and societal ability to absorb and cope with – to become resilient towards – social and environmental catastrophes which are now, increasingly, perceived as normal and unavoidable (Benson and Craig 2017). Thus, the contours of new patterns of framing ecological issues, formulating the ecological question and shaping official policy responses are already becoming visible. For the moment, backward-looking concepts, such as post-sustainability or unsustainability, are used to signal that a paradigm shift is ongoing – until, eventually, critical environmental sociology manages to capture in more specific terms which new frames came to supersede the sustainability paradigm.

The rise, decline and ongoing substitution of sustainability as an eco-political master-frame are the subject of this chapter. As a further preamble, it is worth re-emphasising that critical environmental sociology can be critical in two different ways: first, it contests, politicises and seeks to change established societal conditions, institutions, power structures and socio-ecological relations. This is the activist, normative and transformative dimension of critical environmental sociology in which particular norms are practically applied for purposes of political mobilisation and change. Secondly, critical environmental sociology has a theoretical and reflective dimension that explores which assumptions, epistemologies and norms underpin particular framings of, and proposed solutions to, eco-political questions. In this reflective dimension, critical environmental sociology calls to mind that the eco-political diagnoses and imperatives which eco-political activists articulate and from which they derive the legitimacy and authority of their demands are never objectively valid and incontestable, but always the outcome of earlier processes of contestation and struggles for hegemony. As such, all supposedly categorical eco-imperatives embody the world views, value preferences and power relations prevailing in a particular community or society at a particular time, and they always have a best-before date attached to them. They retain their validity and authority for no longer than these underlying world views, norms, interests and power-relations prevail.

For the purposes of this chapter, this second dimension of critical environmental sociology is particularly important. That is, the primary question is not how environmental problems and crises might best be resolved, nor to critique the sustainability paradigm for the particular ways in which it frames and addresses eco-political issues. Instead, the agenda is, first, to sketch under what conditions the paradigm of sustainability emerged, historically, and how it understands the ecological question. On this basis, the second objective is to offer an explanation why this paradigm became so powerful. In exploring these questions, I am using an ideal-typical understanding of sustainability as the point of reference. That is, while there have always been more ambitious, strong notions of sustainability and modest weak notions (Jacobs 1999); and while in current public discourse, in particular, the terms 'sustainable' and 'sustainability' are being used in a diversity of contexts – sustainable finance, sustainable tourism, sustainable profit, sustainable fashion, sustainable marketing, and so on – where they often signify little more than a claim to some unspecified deviation from the standard understanding of the noun to which the addition sustainable is attached, I am assuming here an ideal-typical understanding of sustainability and sustainable development that I contrast with other eco-political paradigms, such as traditional conservative conservationism, technology-orientated reformist environmental protection or emancipatory, radical political ecology.

Methodologically, my emphasis here is not on the analysis of particular actors, institutions or power relations, but I am adopting an approach guided by eco-political and sociological theory. This allows for a critical perspective that adds innovatively to the wealth of existing accounts of sustainability. From a current viewpoint, I argue, the overwhelming success of the sustainability paradigm over these alternative framings may be explained, not least, by a dual impasse that had emerged in the latter half of the 1980s, first, in eco-political thinking and mobilisation and, secondly, for European and Western modernity, at large. That is, around the turn of the 1990s, the paradigm of sustainability seemed to offer a viable solution both to specifically eco-political dilemmas of the time and to a dilemma the European and Western project of modernity had to confront. It was this dual promise that rendered the paradigm of sustainability irresistibly attractive – until, eventually, it became evident that it had only bought time for eco-critical thinking, capitalist consumer society and Western modernity

at large, but was not able to resolve their underlying problems and transform their logic of self-destruction. The next section maps out the emergence of the sustainability paradigm and its rise to hegemony. The third section explores from which perspectives this paradigm may be perceived as having failed or as being successful. The concluding section then looks beyond the paradigm of sustainability, both in relation to the framing of eco-political issues and the European and Western project of modernity.

THE RISE TO HEGEMONY

The notions of sustainability and sustainable development were first introduced to environmental policy and governance through the 1987 report *Our Common Future* – often referred to as the Brundtland Report – published by the United Nations' World Commission on Environment and Development (WCED 1987). They were fully mainstreamed through the UN's 1992 Conference on Environment and Development (UNCED) in Rio. These concepts are widely portrayed as constituting an eco-political paradigm but, as signalled above, they are much more than that; and their emergence as a hegemonic master-frame can only be understood, if placed in the context of not only the eco-political debates at the time, but also of international politics in the late 1980s and early 1990s, more generally.

The Eco-Political Impasse

As regards the eco-political background, environmental debates and policy-making had at the time moved beyond traditional-style approaches of conservationism which had mainly focused on setting bits of nature and cultural heritage aside in order to protect them from being spoilt. Nature reserves and cultural heritage organisations continued to play a role at the time, but since the early 1970s, the environmental side-effects of rapid industrial development had become increasingly visible, and citizens placed ever more emphasis on quality of life issues including, for example, matters of health and environmental pollution (Inglehart 1977, 1997). Initially, the primary way in which public authorities were addressing these concerns was reliance on add-on or end-of-pipe solutions. Technological fixes, such as filters, contributed a great deal to cleaning the emissions from industry chimneys or waste water pipes. Yet, they left the underlying causes of environmental degradation in place. They were unable to address, for example, that the capitalist economy is inherently based on the principle of growth, that it exploits finite resources, that its logic of competitiveness and profitability necessarily implies the instrumentalisation and exploitation of nature as well as human beings, that the rule of the market is inherently incompatible with the democratic principles of equality and self-determination, or that the capitalist economy is neither orientated towards, nor regulated by, social needs but driven by its own systemic imperatives of growth, competition and profitability.

Taking account of these more encompassing concerns, a different, much more ambitious strand of eco-political thinking had emerged – strongly informed by the post-Marxist tradition of critical theory – that, in the course of the 1970s, gradually evolved into what some observers later conceptualised as a political ideology in its own right – ecologism (Dobson 1990). Ecologist thinking was much more than just about the natural environment in the narrow sense, but entailed a radical critique of modern society and life at large. It drew attention to

the re-emergence of mass-unemployment in the industrialised North, the persistence of deep poverty in the Global South, capitalist power relations and, closely related, the dominance of forms of rationality which regard nature and human beings in a purely instrumental way, systematically oppressing their autonomy, intrinsic value and inalienable right to authentic self-determination and self-realisation (Marcuse 1972; Gorz 1987). That is, ecologist thinking raised a range of concerns to which neither traditional-style conservationism nor the new technology-oriented environmental protection programmes which some progressive national governments were implementing at the time addressed. It diagnosed a profound crisis not only in ecological terms, but in the social, economic and cultural dimensions of modern societies too. Radically challenging the established socio-economic as well as political order of the industrialised countries, including their relationship with the developing world, ecologists demanded a comprehensive transformation of economic structures. Radical democratisation was their primary strategy for empowering and giving a voice to all those, including nature, who had so far remained oppressed. Ecologism envisaged a radically different society in which the tensions between economic, social and ecological concerns would be fully overcome and socio-ecological relations fundamentally reorganised so as to allow for the full realisation of autonomy. In this, ecologism was – unlike the more traditional approaches of conservationism and technology-orientated environmental protection – profoundly political. Accordingly, it is often also referred to as political ecology (Gorz 1987; Lipietz 1995).

Yet, although its demands for comprehensive sociocultural change – in particular its emancipatory agenda of self-determination and democratic empowerment – echoed many concerns of the new educated and politically articulate middle classes, and entailed many promises to less privileged social groups, radical ecologism also triggered substantial resistance: To the less privileged parts of society, its critical stance towards economic growth and the consumer culture was perceived as a threat to their aspirations for further economic development, social equality and inclusion. To others, the anti-capitalist and anti-consumerist critique of political ecology appeared as a threat to their achievements and the pleasures and conveniences of their established lifestyles. The heart of the matter was, on the one hand, ecologist thinking pursued an agenda of liberation and empowerment but, on the other, it also promoted an ethics of limitation and self-restraint – leaving uncertain how this limitation would be practically achieved and whether it would secure forms of self-determination and self-realisation superior to the supposedly perverted offerings of alienating consumer capitalism. To many, the ecologist critique, therefore, appeared excessively idealistic and anti-modernist. The belief that the protection of the natural environment, the realisation of human autonomy and the achievement of social and ecological peace necessarily demand that the capitalist consumer economy be abandoned seemed overly ideological to them and triggered deep political divisions. This conflict of perspectives gave rise to an eco-political deadlock in which ecological and economic interests seemed mutually incompatible.

In this conflictual constellation the new paradigm of sustainability and sustainable development appeared to be the magic solution. It recognised the new ecological and socio-political concerns articulated, in particular, by the younger, materially secure cohorts in Western, post-industrial societies. However, it also accommodated the interests of those – in the industrialised countries as well as the Global South – who were desperately hoping for further economic development and the improvement of their material situation. The Brundtland Report (WCED 1987) explicitly acknowledged the problems of international inequality and poverty in the Global South, as well as the unsuitability of the industrial countries' model

of development as an example to be emulated in other parts of the world. It emphasised that the protection of the natural environment would, henceforth, have to be a priority concern in all policy-making and confirmed that there are bio-physical limits which must be respected. In line with ecologist thinking, the report also stipulated that the industrial countries would need to undergo a structural transformation in order to make sure that their development remains within ‘the bounds of the ecologically possible’ (WCED 1987, p. 55). However, the Brundtland Commission also suggested that there is no need for any radical departure from the established trajectory of modernisation, for the abandonment of consumer capitalism or for ‘the cessation of economic growth’ (WCED 1987, p. 40). On the contrary, the report explicitly underlined that the international economy ‘must speed up world growth’ (WCED 1987, p. 89). The development of new, resource-efficient technologies, improved management and monitoring schemes, and the internalisation of social and ecological costs which had thus far been discounted were presented as suitable means by which to hold on to the capitalist economy and the principle of economic growth, but would still ‘avert economic, social and environmental catastrophes’ (WCED 1987, p. 89). Just as Ulrich Beck had suggested that a second, ‘reflexive’ modernity (Beck 1993 [1997]) would resolve the problems of the ‘risk society’ (Beck 1986 [1992]), a programme of ‘ecological modernisation’ (Mol und Sonnenfeld 2000) was supposed to address the detrimental side-effects of industrial modernity and ensure that all further development would be socially and ecologically benign. Thus, the paradigm of sustainability bridged the abyss between ecology and economy. With its promise of qualitative, green and sustainable growth, in particular, it allowed diverse societal groups to hold on to their achievements and aspirations. It also helped ecologists to appease the tension inherent in their commitment to both liberation and limitation (Blühdorn 2022) and to overcome their problem of being perceived as overly radical, ideological and anti-modernist.

The Impasse of Western Modernity

Yet, the overwhelming success of the sustainability paradigm was conditioned, at least as much, by parameters well beyond this specific constellation in eco-political debates. At the turn of the 1990s, the collapse of the Soviet Union triggered a wave of huge optimism that the end of the East–West conflict would imply the extension of the Western system of liberal democratic consumer capitalism across the world, trigger a large new wave of economic growth and expansion, initiate a new era of global integration and pave the way towards a world society that would resolve all remaining problems – most notably those related to poverty, the biophysical environment and global warming – in a cooperative manner. The 1992 United Nations (UN) Conference on Environment and Development in Rio de Janeiro – often also referred to as the Earth Summit – was a powerful expression of this new forward-looking spirit and confidence in an integrated world politics under the leadership of the UN. Yet, this hope and prospect emerged at a time when fundamental doubts about the viability of the Western project of modernity and its suitability for globalisation had become so widespread that – as noted previously – even the UN’s Brundtland Commission had acknowledged that this project was deeply problematic and the Western system of liberal consumer capitalism not a model to be emulated by other parts of the world.

While the problems of resource depletion and the *Limits to Growth* (Meadows et al. 1972) had already been highlighted in the early 1970s, a crisis and the possible unsustainability of liberal democracy had been debated since the mid-1970s too (Crozier et al. 1975; King 1975).

The inability of the economic system to sustain full employment and secure welfare and social inclusion for all parts of society had become evident since the turn of the 1980s, at the very latest. In the latter half of that decade, the diagnosis of the risk society (Beck 1986 [1992]) powerfully renewed the much older critique of the ‘dialectic of Enlightenment’ (Horkheimer and Adorno 1944 [1972]) further explicating how the very logic that had secured the enormous success of Western modernity – the logic of rationalisation, individualisation, scientific and technological development, and so on – would lead to a condition of unmanageable risk and probable catastrophe – not just ecologically, but socially, economically, culturally and politically too. Also, social theorists such as Niklas Luhmann powerfully demonstrated that Western societies, whose success he traced back to the principle of functional differentiation, are structurally incapable of resolving the systemic crises, which exactly this principle and logic invariably bring about (Luhmann 1986 [1989], 1987 [1995]). Thus, at the turn of the 1990s, the increasingly widespread awareness of inherent and potentially insurmountable problems which profoundly threaten the viability of the project of Western modernity and its constitutive ingredients coincided with the historical opportunity to expand exactly this system to the globe as a whole – an opportunity that appeared hugely desirable not only from the perspective of the Western economy, but also for all those who had been struggling for so long for human rights, liberal democracy, material improvement and social justice.

In this situation, the paradigm of sustainability promised to provide guidance on how the Western system and project might be retained, and the seemingly inescapable risks avoided. In addition to its new emphasis on qualitative growth that was to replace the traditional fixation on quantitative economic growth, two particularly important elements of its strategy were, first, the shift from traditional centralised, top-down government towards decentralised structures of governance and, secondly, a significant effort to strengthen scientific research in order to put policy on a strong scientific footing, enabling it to foresee, avoid and manage the manifold side-effects which in the past had gone unnoticed until they accumulated to turn modern societies into risk societies.

As regards the former, the UN envisaged a new network and action programme of local and regional initiatives, named *Local Agenda 21*, to become the counterpart to the new transnational and global structures (UN 1993). These initiatives were supposed to push for, help devise and practically implement policy measures and make democratic participation and the engagement of diverse local actors a core principle of sustainable development. Thus, traditional, state-centred environmental politics, which during the course of the 1980s had become increasingly institutionalised, was supplemented by a supra-national as well as a sub-national level of policy-making, and in the aftermath of the Rio Summit, multi-level governance became the mantra (not only) in environmental and climate politics (Pierre 2000; Bäckstrand et al. 2010). This reflected, on the one hand, the new post-Cold War desire for international integration and a one-world politics to address the common problems of the envisaged cosmopolitan society and, on the other, the greatly increased expectations of citizens regarding opportunities for democratic participation. These new forms of governance were said to take into account that in an increasingly complex world, environmental problems have multifaceted causes and implications which can only be addressed through constructive collaboration of diverse stakeholders (Lemos and Agrawal 2006). They were expected to increase the efficiency and effectiveness of environmental policy-making (Pierre 2000), as cooperative, voluntary approaches would engage even those actors which might otherwise oppose environmental policies or obstruct their effective implementation (Newig 2007; Dietz and Stern 2008).

As regards the role of science in environmental politics, the mainstreaming of the sustainability paradigm gave a significant boost to academic disciplines dealing with environment-related issues and to the development of relevant scientific infrastructures. Historically, environmental movements (see Chapter 35 in this volume) had based their demands primarily on aesthetic and religious criteria. Political ecologists – in line with the tradition of critical theory (Marcuse 1964, 1972) – then strongly based their diagnoses and demands on the Marxian argument that the system of capitalism alienates, dominates and enslaves both human beings and nature, violates their inalienable dignity and denies them the right to the autonomous realisation of their authentic self. Thus, the older norms of aesthetics and religion were supplemented by a strong ethics of liberation and emancipatory commitment. Yet, these eco-political strategies of legitimisation and securing authority still remained weak. As with the earlier aesthetic and religious norms, these eco-emancipatory and eco-ethical imperatives, too, proved incapable of unhinging the established logic of modernisation and the rule of consumer capitalism. However, with the rise of the sustainability paradigm, the objectivation and legitimisation of eco-political diagnoses and demands was referred, first and foremost, to the sciences. Empirically orientated environmental researchers now started to document and analyse environmental change more systematically, calculate ‘ecological footprints’ (Wackernagel and Rees 1996) and ‘rucksacks’ (Schmidt-Bleek 1999), measure material flows and identify ‘planetary boundaries’ (Rockström et al. 2009) which must not be crossed. Their objective was to specify solid, reliable, scientific criteria of sustainability, liberate environmental politics from its traditional dependence on soft, subjective and cultural criteria, and thus make sure that a socio-ecological transformation to sustainability would, finally, succeed. For an internationally and globally integrated sustainability politics, in particular, this cross-culturally valid foundation was indispensable.

Thus, sustainability and sustainable development were far more than just eco-politically led concepts; and the sustainability paradigm’s rise to hegemony was conditioned by parameters reaching well beyond environmental concerns in the narrow perception. Essentially, the sustainability paradigm embodied a firm commitment to all core ingredients of the Euro-American or Western project of modernity, such as universal human rights, individual self-determination, liberal democracy, private property, consumer capitalism and the belief in scientific rationality as the basis of truth, knowledge and decision-making. It helped to stabilise and sustain this project at a time when, beyond its enormous strengths, its glaring weaknesses and limitations had become visible, too – but a historical opportunity had emerged for this project to realise its global ambition.

ASSESSING SUCCESS

A decade later, at the UN Rio+10 Summit in Johannesburg (in 2002), there were signs that the sustainability-optimism and the dynamic of the early 1990s was cooling down. Yet, the point when sustainability had visibly lost its radiance as an eco-political lead concept and its ability to galvanise the international community and energise the joint project of a socio-ecological transformation was the UN climate summit in Copenhagen (in 2009), where global leaders failed to reconcile the conflicting interests of their respective countries and agree an effective climate protection programme (Blühdorn 2011). At the time, the collapse of the American investment bank Lehman Brothers and the subsequent crisis of the global banking and finan-

cial system triggered a global economic downturn. Many governments imposed draconian austerity programmes on their countries, and the project of a socio-ecological transformation suffered a significant setback. Meanwhile, sustainability and sustainable development had degenerated into fuzzy concepts unable to guide any restructuring of liberal consumer capitalism or give orientation for a socially and ecologically benign development of the Global South. At the Rio+20 Summit of 2012, again held in Rio de Janeiro, national governments and international institutions then signalled ‘little political appetite for anything but very modest change’ (Linnér and Selin 2013, p. 983). Yet, global warming, resource extraction, biodiversity loss and social inequality continued to worsen in an essentially unabated manner, which put ‘both sustainability governance and the sustainable development concept under growing pressure’ (Bulkeley et al. 2013, p. 958). ‘Mainstreamed as sustainability or sustainable development’, John Foster (2015, p. 2) noted, ‘environmentalism has failed to reduce, even remotely adequately, the impact of humans on the biosphere’. The paradigm that had once been invested with so much hope was increasingly regarded as ‘an irretrievably misconceived framework and a delusive policy goal’ (Foster 2015, preface). A world characterised by unprecedented ‘complexity, radical uncertainty and [a] lack of stationarity’, Benson and Craig (2014, p. 777, original emphasis) noted, ‘must face the impossibility of defining – let alone pursuing – a goal of *sustainability*’. In the wake of the financial crisis, in particular, critical observers increasingly came to believe that the notions of sustainability and sustainable development are not ‘actually part of the solution’ to the socio-ecological crisis, but – given their firm commitment to the established logic of European-American modernity and modernisation – a ‘deeply embedded part of the problem’ (Foster 2015, p. 35).

In public discourse, the concept of sustainability, nevertheless, remained very prominent, not least because in large parts of the eco-political literature, the term continues to be used as if it were semantically and normatively neutral, that is, giving no recognition that the concept carries considerable baggage in relation to a specific framing of the ecological issue which essentially reconfirms rather than challenges the established logic of western modernity and consumer capitalism. Also, in 2015, the UN undertook a new attempt to update and revitalise its sustainability agenda. The document *Transforming our World: The 2030 Agenda for Sustainable Development* (UN 2015) restated the commitment to achieving a genuine transformation, not just marginal reforms, and to achieving it on a global scale. The document specifies 17 Sustainable Development Goals (SDGs) ranging from the elimination of poverty (1) and hunger (2), the provision of quality education (4) and the enforcement of gender equality (5) to the creation of decent work and economic growth (8), the promotion of responsible consumption and production (12) and the guarantee of peace, justice and strong institutions (16). Contrary to suspicions that the concept may be impossible to define, the document holds on to the belief that a globally integrating understanding and agenda of sustainability can be achieved – and implemented. In the wake of debates about a new geological epoch, the Anthropocene (Crutzen 2002), the idea of science-based and technology-supported earth systems governance (Biermann 2012; see also Chapter 5 in this volume) mustered additional support. Yet, the UN’s SDGs are defined in very general terms; many of them seem mutually incompatible, and the time frame set for achieving them – by 2030 – seems unrealistic. Also, when the 2030 Agenda for Sustainable Development was agreed, the international tide of right-wing populism – which is explicitly anti-egalitarian, neo-nationalist, anti-environmental and illiberal – had been well under way, and supranational organisations, such as the European Union (EU) or the UN itself, had run into a profound crisis. The COVID-19 pan-

demic then further darkened the perspective for a structural transformation of the established socio-economic order. It exacerbated social inequalities, further entrenched the power of international corporations, massively reinforced what Bauman (2001, pp. 50–57) termed the secession of the successful – the emancipation of the privileged from social commitments and liabilities (Blühdorn 2022, pp. 40–45) – and it triggered unprecedented investment in the re-stabilisation, instead of transformation, of consumer capitalism. It further cemented the established fixation of governments worldwide on economic growth and competitiveness. Also, it has left national governments – and future generations – with a level of debt that further reduces the leeway for any genuine structural change.

From the current perspective, the profound doubts about consumer capitalism and the European–American project of modernity, which had become visible in the latter half of the 1980s, but had then been suspended by the sustainability paradigm, have re-emerged powerfully – and have become far more forceful than ever before. Most notably, perhaps, the central pillar of the sustainability paradigm – the idea that by means of technological innovation economic growth may be decoupled from increasing resource exploitation and eco-system destruction – has proven untenable. While there are substantial achievements and, undoubtedly, further potentials for increasing resource efficiency, there is mounting scientific evidence that ongoing economic development and growth consistently over-compensate these gains and thus perpetuate the trajectory of unsustainability (Haberl et al. 2020; Wiedenhofer et al. 2020). Also, there is nothing to suggest that the Green Deal and ecological modernisation programmes, issued by many national governments and the EU as a means of post-COVID economic recovery, will avoid these pitfalls.

A second core element of the sustainability agenda, the vision of an integrated and cooperative world society that collectively addresses and resolves issues such as climate change, global justice and the protection of the bio-physical environment, has come under substantial pressure from powerful trends of renationalisation and the new competition of systems that is unfolding between the US and Europe, on the one hand, and China, on the other. Right-wing populist movements and governments are most explicit about their agenda of our country first, but the EU and its member states, too, have demonstrated their inability and unwillingness to engage in a serious politics of redistribution, human rights, social inclusion and ecological integrity, both nationally and internationally. On the contrary, the profound crisis which both the UN and the EU have been facing in recent years signals that the belief in a socially and ecologically pacified world society has given way to the (ever less) tacit recognition that the freedom, rights, values and lifestyles which citizens of the affluent countries of the Global North – and global consumer elites, more generally – regard as non-negotiable, cannot be generalised and that, accordingly, their sustainability for some is predicated on policies of social inequality and the exclusion of others (Brand and Wissen 2018; Lessenich 2019; Blühdorn 2011, 2022).

Also, and by implication, the belief in liberal democracy and democratic governance, another central pillar of the sustainability paradigm, has been profoundly shattered. Already in the early 2000s, discourses of ‘post-democracy’ (Crouch 2004) and ‘post-politics’ (Wilson and Swyngedouw 2014) became increasingly prominent. More recently, there has been mounting evidence of a global ‘recession of democracy’ (Diamond 2015, 2021) and an ‘autocratic-authoritarian turn’ (Lührmann and Lindberg 2019; Blühdorn 2022), which may have to be explained, not least, in terms of a dialectic and multiple disfunctionality of democracy (Blühdorn 2020a, 2020b). These explanations would imply that the prospects for stopping

or even reversing these trends may not be favourable. Meanwhile, the often vaunted new forms of collaborative and multi-level governance proved to have little transformative power. They are now widely criticised for systematically eclipsing all matters of fundamental disagreement, tightly restricting how issues may be framed, and only co-opting instead of genuinely empowering citizens (Davies 2011; Boezeman et al. 2014; Blühdorn and Deflorian 2019). Unsurprisingly, therefore, public trust in the democratic qualities and problem-solving capacities of these governance arrangements is diminishing. The perception that China has dealt with the COVID-19 pandemic more efficiently than democratic systems in the West gives new credence to the belief that authoritarian systems may also be more effective in dealing with issues of climate change, eco-politics more generally, and the risks and catastrophes which in the Anthropocene are increasingly part of the normality governments will have to confront (Shearman and Smith 2007; Beeson 2010).

Finally, the belief in science and evidence-based policy-making, too, has come under significant pressure. In the 1980s, in the context of debates about Beck's *Risk Society* (1986 [1992]), there had been extensive debates about modern science generating at least as many risks and as much uncertainty as it helps to remove. At that time, social scientists had also highlighted that environmental politics is not primarily about empirically measurable conditions but, first and foremost, about social perceptions, values and concerns (Luhmann 1986 [1989]). However, as outlined above, the paradigm of sustainability framed environmental issues primarily as a matter of the natural sciences, technology, the market and professional management. In doing so, it not only ignored the wide range of emancipatory and identity issues which have always figured prominently in environmental movements, but it also failed to take into account that, as a matter of principle, environmental problems, are never objectively identifiable conditions out there in the natural environment, but always perceived violations of sociocultural norms (Latour 2004). That is, the sustainability paradigm systematically eclipsed the irreducibly normative core of all eco-politics. For, what is to be sustained, for whom, for how long, in what condition, by which means and for what reasons are irreducibly political questions which can neither be objectivated nor delegated to the sciences. Currently, the politics of Trumpism, societal responses to the COVID-19 pandemic or the factual management of the unfolding climate crisis powerfully call to mind to what extent political discourse and decision-making are actually governed by subjectively perceived facts rather than scientifically established truths (Fischer 2021). And contrary to common accusations by the liberal left, denialism, post-truth and post-factuality are by no means a phenomenon particular to the populist far right. They are equally widespread in other parts of society which adamantly defend their privileges, values and lifestyles, irrespective of their well-known socio-ecological implications (Blühdorn 2007, 2017, 2022; Blühdorn and Deflorian 2021).

Therefore, in many respects, the foundations of the sustainability paradigm, and of the whole project of a second, reflexive modernity (Beck 1993 [1997]), have become very unstable. However, although the beliefs underpinning this paradigm, individually as well as collectively, are themselves becoming unsustainable, it would be wrong to regard this paradigm as having comprehensively failed. Admittedly, the concepts of sustainability and sustainable development have proven incapable of guiding a social-ecological transformation taking capitalist consumer societies beyond their underlying logic of instrumentalisation, domination and exploitation. They have not resolved the issue of ever-increasing social inequality, nor have they rearranged established socio-ecological relations or power relations between the Global North and the Global South. However, when assessing the paradigm of sustainability,

critical environmental sociology has to be careful regarding the criteria it applies. In its activist dimension, it may judge the paradigm, for example, by the criteria of political ecology, but in its social-theoretical dimension, it ought to judge sustainability by its own criteria and ambitions. For this purpose, it is important to remember that eco-political thinking in terms of sustainability had never intended to reverse the established Western understanding of progress and development, nor to overcome consumer capitalism and its core principles of continuous growth and profitability. On the contrary, its openly declared agenda had always been to defend, sustain and globalise a set of distinctly Western ideas and principles. Sustainability had never been a transformative project but, more than anything, a defensive project. It was, and still is, a strategy for defending the Western claim to progressiveness, superiority and global leadership at a point when this claim was coming under pressure both from the internal contradictions of this project and from the rise of developing countries, such as Brazil, India and China. In this respect the sustainability paradigm was very successful. It managed to appease, at least temporarily, the conflict between the radical critics of Western consumer capitalism and those who were determined to hold on to its core principles and Western modernity. In many respects, sustainability policies helped to ameliorate environmental problems. Also, at least temporarily, the sustainability paradigm appeased the fundamental dilemma of all eco-emancipatory movements, that is, the tension between their commitment to an agenda of liberation and the commitment to an agenda of limitation, which they never managed to resolve (Blühdorn 2022).

Thus, while the paradigm of sustainability has not inaugurated any socio-ecological transformation of the world as envisaged, for example, by political ecologists, it has been very successful in sustaining – in negotiating and ‘buying time’ for (Streeck 2014) – the European-American project of modernity. At the current conjuncture, however, this extra time seems to be running out, not only for the eco-political frame of sustainability, but for the project of European–American modernity, more generally – and for the European–American claim to progressiveness, superiority and global leadership. The issues which have been conceptualised over recent decades, in mainstream discourse at least, primarily in line with the paradigm of sustainability will not disappear. But the present constellation gives rise to new concerns and priorities; it changes the way in which ecological questions are being framed, and it reconfigures the political struggles unfolding around them.

BEYOND SUSTAINABILITY

Critical observers have suggested that the end of sustainability (Benson and Craig 2014) will force an ‘end of pretending’ (Foster 2015, ch. 1) and move capitalist consumer societies beyond their ‘current state of denial’ (Benson and Craig 2014, p. 778). The quick succession of crises which have recently hit these societies, and the world at large – financial, economic, austerity, refugee and migration, climate, COVID-19 – have much increased public awareness of the social, economic, political and ecological vulnerability of consumer capitalist societies. Energised by these crises, and by the threat of a right-wing populist ‘great regression’ (Geiselberger 2017), social movements have promoted post-growth (Latouche 2009; Jackson 2017), degrowth (Kallis 2018), post-capitalism (Mason 2015), environmental justice (Schlosberg 2009) and other notions for a more ambitious, in many respects neo-ecologist, reframing of the ecological issue and as new lead concepts for a genuine transformation of

modern societies beyond their logic of exploitation, inequality, oppression and destruction. Yet, given the power of transnational corporations and globalised financial markets, on the one hand, and the adamant defence by societal majorities of their particular value preferences, interpretations of freedom and visions of a good life, on the other (Blühdorn 2017, 2020a, 2022), the societal and political resonance of these notions has so far remained limited. Although the scientific and public understanding of the social and ecological implications of the established order of consumer capitalism is now more comprehensive than ever before, there is not much evidence of this knowledge – or the manifold crises – triggering any socio-ecological transformation as environmental movements and many scientists have been demanding it for a long time. On the contrary, the COVID-19 pandemic, in particular, has exposed more than ever the inability and unwillingness of modern societies to move beyond their established ‘politics of unsustainability’ (Blühdorn 2011, 2013): Compared to that which a socio-ecological transformation in the ecologist perception would demand, the measures imposed by some governments in order to contain the pandemic were modest, and they were only temporary; still, these restrictions triggered large protests by a wide range of societal groups, giving governments a glimpse of the type of resistance any serious socio-ecological transformation would have to confront. Thus, the pandemic exposed to what extent, in the affluent Global North, social peace and public psychological health are predicated on the normality of growth and consumerism, and to what extent even a partial and temporary suspension of this normality – that is, of sustained unsustainability – triggers great economic, psychological and political instability. Unsurprisingly, instead of taking the pandemic as a final stimulus for the socio-ecological transformation that had been debated for so long, the primary imperative governing the management of the pandemic was the determination to return to and restore normality as swiftly and fully as possible.

Public awareness of the multiple unsustainability of the established order, and scientific knowledge about its causes and implications, may have become more comprehensive than ever before, but the resolve to defend the established freedoms, rights, lifestyles and economic order, nevertheless, seems more unwavering than ever, too. This said, a great transformation is undoubtedly under way. However, instead of being guided by the emancipatory and progressive values which have inspired many eco-movements and critical environmental sociologists so far, this transformation seems to be taking modern societies beyond exactly this normative horizon. Eco-politically, the determined defence of the understandings of freedom, inalienable rights and a good life prevailing in Western consumer societies implies that what environmental movements and sustainability researchers had managed to achieve in respect of a consensus that a profound socio-ecological transformation is both necessary and urgent, is increasingly being challenged and re-politicised – in order to sustain the unsustainable. The deepening division and polarisation within national societies, transnational communities such as the EU and the global community are indicative of a new eco-politics that is – witness the EU’s migration policies – ever more open about the organisation and legitimisation of social inequality and exclusion.

Looking beyond eco-politics narrowly understood, the exhaustion of the sustainability paradigm also signals the exhaustion of western modernity generally, whose life expectancy this paradigm had successfully extended. Beyond Beck’s notion of a second or reflexive modernity that was supposed to resolve the problems of first industrial modernity and fulfil the promises which the agenda of modernisation had left unfulfilled thus far, a third modernity is visibly emerging. In many respects, it seems set to continue the trajectory of its predecessors.

However, it seems to move beyond the specifically European notions of freedom, subjectivity and human rights, and to leave behind the notions of democracy, equality, justice and rule of law which were derived from them. In this emerging third modernity the global power-centre may well move to Asia and the specifically European norms of liberalism, emancipation and progress will lose relative significance. Their ongoing suspension is powered by the interplay of the economic dynamic of market liberalism, the cultural dynamic of second-order emancipation, that is, the ongoing revision of Enlightenment understandings of autonomy, subjectivity and identity (Blühdorn 2020b, 2022), and the technological dynamic of the digital revolution. For critical environmental sociology, given its own normative commitments, this great transformation towards a third modernity represents a significant challenge. In its social-theoretical dimension, it is now confronted with the task of having to diagnose and conceptualise changes which undermine the viability of the transformative project to which it is committed in its activist dimension (Blühdorn 2020b, 2022). Yet, refusing to diagnose and theorise this shift would amount to a ‘refusal to see’ (Foster 2015, p. 7) and thus reproduce the ‘pervasive culture of denial’ (Foster 2015, p. 35) that social movements and critical sociologists have always campaigned against.

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13. Climate justice and global politics

Stefan Gaarsmand Jacobsen and Oliver Hunt

INTRODUCTION

Issues of social justice are critical to how we think about climate change. This is owing to climate change posing a series of challenges to existing perceptions of what constitutes a just world. Consider that the average per capita carbon dioxide (CO₂) emissions for someone living in Niger is 0.1 tonnes of CO₂, whereas the average per capita CO₂ emissions for someone living in the USA is 16.56 tonnes (Our World in Data 2019). The person from Niger is, however, much more likely to experience the catastrophic consequences, than the average American, owing to existing environmental conditions and limited economic resources to adapt to a warming world (Klein 2015). Studies also show that climate change concerns intergenerational issues. It is the younger and future generations who are most affected by a changing climate, yet they did not indulge in lifestyles that are embedded in capitalist modes of production, capital circulation and patterns of consumption that caused this mess in the first place. Further, climate change is racially unjust (see also Chapter 33 in this volume). Non-elite people of color, most of whom have lived in the Global South, have historically contributed less than most global elites and privileged groups. However, many who have contributed very little to the problem are burdened by a warming world (Althor et al. 2016). These relations demonstrate that the consequences of climate change are unevenly distributed and therefore do not affect everyone equally. The discrepancy between cause and effect makes climate change an issue of social injustices, since at the heart of social justice is the idea that all participate as peers in social life (Fraser 2008, p. 36).

In response to this situation, climate justice has developed in parallel as a concept in academia and as a global movement. It is a central starting point for this chapter that the knowledge and ideas of the movement need to be represented on a par with theoretical insights. For example, the understanding of climate debt developed out of grassroots intervention in the global climate debate, and the force behind structural arguments for equality has emerged from below before it became a part of theoretical conversations (Roberts and Parks 2007). Hence, climate justice was debated academically in relatively small circles, as it was becoming a rallying concept for a global movement (Jacobsen 2018).

In recent years, however, scholars from diverse disciplines have started to develop different theories of climate justice that account for the variegated experiences of climate injustices, hoping that their ethical principles would inform policy debates. We present different suggestions for what should count as the key concepts in climate justice and how these concepts form the basis for conflictual approaches. Claims have been made for historical responsibility, equality, customary rights, needs or climate debt to be the center of gravity for climate justice, and it is important to understand where these differences in emphasis emerge from and how they affect the global political outlook.

This chapter also explores how, at a more general level, the concept of global climate justice has come under pressure from several developments relevant to both the grassroots and the

academic debate. Our argument is unfolded in three subsequent sections. First, we argue that the theoretical development from ethical principles of climate justice to policy-orientated models has made climate justice less politically and ethically potent. Second, we argue that although grassroots mobilizations have attempted to make climate justice the central rallying concept for a global movement, it has proven difficult to uphold the political momentum for climate solutions from below. As an element of this same section, we emphasize the importance of the tradition for environmental justice demands in the activism for climate justice. Finally, we show how the concept of climate emergency places pressure on both theories and mobilizations for climate justice. As a response to the repeated and intensifying scientific warnings on the urgency of decarbonization, different new voices call for types of rapid climate action that are more focused on fast decarbonization among the high polluters than on the question of representing the demands of the most vulnerable. As examples, we examine both the scientific literature on rapid mitigation and the discourses of Extinction Rebellion (XR) to understand how climate emergency might change both the theoretical and political concept of climate justice. Looking ahead, we propose that the most relevant question moving forward is how to articulate demands for climate justice in a time of climate emergency.

THEORIES OF CLIMATE JUSTICE

Acknowledged as a starting point for formal ethical theorizations on climate justice, British philosopher Henry Shue reflected on the central problems for integrating a justice perspective ahead of the negotiations in the annual Conferences of the Parties (COP) meetings in which the United Nations Framework Convention on Climate Change Framework for Climate Change (UNFCCC) has convened most countries globally since 1995. Shue's main focus was 'justice of the international allocation of the costs of dealing with a global environmental problem' (Shue 1992, p. 373). Considerations at that time reflected experiences with stronger claims for equity on the United Nations (UN) level, centered on the rejection and failure of the attempts to form strong alliances among poorer countries, such as the New International Economic Order in the 1970s and 1980s (Gilman 2015). Hence, Shue weighed arguments for and against making a strong division between climate action and justice, giving attention to the issue of rich countries depending on land-use change in the Global South and the possible claims for wealth transfer from the North. A crucial point for Shue, and what makes climate justice unavoidable at the level of global negotiations, is that for very poor countries emissions are tied to survival (Shue 1992, 1993).

In turn, Shue (1999) has since elaborated his approach to climate justice as a question of rights, which has inspired several other ethicists. Moellendorf (2014) has theorized the right to sustainable development, while Gardiner (2006) and Page (2006) have expanded on Shue for the rights of future generations. While Shue's argument relied on historical interpretation of countering political interests, climate ethics has since interpreted climate justice as primarily a moral challenge (Gardiner 2004). A consequence of this has been the development of specific areas of study under the general agreement that the main ethical question is 'how to assign responsibility' (Moellendorf in Boran 2018, p. 28). Debating the 'polluter pays' principle, Caney (2005) argued for an individualist analysis of responsibility instead of Shue's collective approach, which focused on historical national carbon accounting.

An important and complex questions about responsibilities is how to secure justice for actors in the distant future, which climate negotiations often include indirectly, if climate destruction might threaten the very institutions and parties that negotiate about these problems (Skillington 2016). These arguments have formed on the basis of Global South-orientated approaches to distributive justice, specifically Sen's capability theory, which enables a longer view for assessing just policies (Sowers 2007; Schlosberg 2012). Discussing criteria for the fair share of future emissions, Caney (2009) provided a critique of the concept of grandfathering, which is a principle that modifies responsibility for pollution based on the logic that, 'prior emissions increase future emission entitlements' (Knight 2013, p. 410). Grandfathering has been applied in climate policy frameworks for decarbonization¹ as a way of allowing countries and companies to emit more than an equal share of carbon if they are perceived to be of strategic importance to infrastructure and the economy. Very few ethicists and political theorists – across differing views of intergenerational justice, individualist or collectivist approaches – endorse grandfathering since it contradicts both the acknowledgement of historical responsibility and the general egalitarian approach in the UNFCCC's principle of 'common but differentiated responsibility' (Caney 2009, Goodman 2020, Dooley et al. 2021).

The ideas of justice prevalent in climate ethics have come under increasing scrutiny from other sciences only in the past few years. Since the mid-2000s, scholars in international politics and political economy have debated the role of climate justice in climate negotiations and in theories of global developments. Until very recently, however, few political scientists developed climate justice as a theoretical category in its own right in political science. Climate justice was mentioned as a type of framing used by grassroots and non-governmental organizations (NGOs) to explain different problems relating to responsibilities and damages, but not as a starting point for analyses (see Newell 2008; Tanner and Allouche 2011). Among important exceptions to this approach in the early 2010s are Bond's (2012) critical analysis of climate negotiations vis-à-vis the climate justice movement, Tokar's (2014) work to combine insights from social ecology with climate justice and Martínez-Alier et al.'s (2014) work to obtain insights on the broader environmental struggles in the Global South with climate justice politics.

Since the 2015 Paris Agreement² specifically applied the concept of climate justice, there has been a large growth of literature in political science. As part of this development, a number of policy-orientated social sciences have engaged with the ethical interpretation of climate justice. Different critiques from social sciences argue that most of the ethical claims on climate justice are too idealistic, discussing unrealistic demands for both scientific dialogue and policy development (Brandstedt 2019). Indeed, the starting point for many climate policy schemes is very distant from the ethical debates on climate justice. For example, the grandfathering principle is used as a basis for allocating emissions in the European Union's emission trading system (ETS) scheme and strongly counteracts historical responsibilities of emissions. Storey (2019, p. 38) attempts to apply different social science approaches to address the 'failure of ethics to penetrate climate policy, and of climate policy to gain political traction'. Looking at climate justice through the lens of national mitigation problems, Bailey (2019, p. 52) similarly seeks to highlight 'how climate justice negotiates its relationship with other economic and social justice concerns affected by climate initiatives'. Bailey suggests scholars should spatialize the arguments for climate justice to account for other interpretations of justice and provide a defense for existing climate action plans against the right wing. These types of critique of the normative foundations of climate justice seem to regard the concept as a corrective to

existing social power structures, rather than to account for the problem of climate injustices at the global scale.

In recent social science studies that focus on climate-related issues, such as historical responsibility for greenhouse gas emissions (GHGs) and climate debt, there is a sharp divide between different conceptions of climate justice (Warlenius 2013, 2018). Olivier Godard (2017, p. 126) has criticized the arguments for historical responsibility as ‘retrospective illusions’ since it might assume to complete an insight about the destructive nature of the GHGs emitted by rich countries’ inhabitants before the 1990s (Pottier et al. 2017). Godard seems to disregard the historical fact that large oil companies produced research-based knowledge that warned against their plans for fossil fuel use as long ago as the 1970s (Supran and Oreskes 2017). However, Godard (2017) places the onus on proponents of historical responsibilities to avoid any problems of attributing climate debtors and creditors, and rejects the possibility of finding a proper role for climate debt in international negotiations. Instead, Godard (2017) discusses market-based solutions as the only way forward, moving the question of climate justice into the domain of economics.

In wider scientific communities, there are indications that the policy-based approach to just carbon allocation is more dominant than the ethics-based. This is both a reflection of scientific appeal and of the alarming status of the atmosphere. For example, in attempts at calculating national carbon budgets and decarbonization pathways, an inclusion of historical responsibilities tends to diminish the current available carbon budgets of rich countries, even into the negative at the present (Van den Berg et al. 2020). However, disregarding historical responsibility would mean using only a per capita justice criterion, which can also be problematized in the climate budgeting literature. Paradoxically, the defense of historical responsibility can lead back to grandfathering as a guiding principle, the approach otherwise heavily criticized in climate ethics. With the explicit aim to include historical responsibilities, Anderson et al. (2020, p. 7) argue that grandfathering provides a ‘more functional, comprehensive and arguably fairer amalgamation of factors’ than allocating emissions equally per capita.

Importantly, different scientific communities seem to view the philosophical debate on responsibilities as purely theoretical vis-à-vis the research on the global allocation of carbon-intensive activities. Hence, climate justice has been adapted in different fields of research – for example, climate governance, climate economics and international law – as a tool for ongoing academic debates and institutional development. This technical adaptation of climate justice has put pressure on both the understanding of climatic facts and the ethical call for rapid social change in the face of increasing global climate injustices.³ A consequence of the policy-orientated and economic interest in climate justice is that scholars and decision-makers tend to use the concept as a mere corrective to mainstream problems of climate governance and climate diplomacy. This places climate justice within the incremental framework of climate mitigation of the UNFCCC, EU ETS and other international collaborations, and pushes it away from the acknowledgement of the existence of survival emissions and basic rights. This forms a sharp contrast to the transformative, and even revolutionary, notion of climate justice from grassroots movements, which preceded the policy-orientated conceptualization and arguably placed the concept center stage of the global climate debate.

CLIMATE JUSTICE FROM BELOW

Almost simultaneous with the emergence of the concept of climate justice as an academic discourse, the concept started to figure prominently in social movement struggles in the 1990s and early 2000s. For example, Henry Shue's ethical starting point – the juxtaposition of 'survival' and 'luxury' CO₂ emissions – originated in a 1991 report issued by the Delhi-based environmentalist NGO, Centre for Science and Environment (Agarwal and Narain 1991). The climate justice movement (CJM) was one of the principal drivers of the climate justice discourse emerging from below (Jacobsen 2018). It consisted of a loose network that brought together many different actors, from the Global South as well as the Global North, in the fight for climate justice. The movements framing of climate justice was shaped by historical struggles over social and environmental justice. One of its main sources of inspiration is the environmental justice movement (EJM), which rose to prominence in the US in the 1980s, when different movement actors began contesting waste dumping in black communities (Schlosberg and Collins 2014, p. 362). Throughout the 1980s and 1990s, the EJM showed that ecological issues were embedded in power relations and injustices, and the struggle against asymmetric power relations and injustices became an integral part of furthering the movement's ecological interests (Bullard 1990).

The San Francisco-based NGO, CorpWatch, which was also active in the EJM at the time, was one of the early and significant contributors to the development of the idea of climate justice. CorpWatch drew on concepts from grassroots movements from Latin America, India and sub-Saharan Africa, where different notions of ecological debt and environmental colonialism have arisen as part of criticism of heavily polluting oil extraction processes (Martínez-Alier et al. 2014). In 1999, CorpWatch issued a report entitled 'Greenhouse gangster vs. climate justice' (GGCJ), which linked climate change to issues of justice. Inspired by the EJM's focus on power relations, CorpWatch argued that climate negotiations were dominated by the economic interests of multinational corporations and, further, it employed statistics showing that multinational corporations accounted for the majority of global emissions: 'just 122 corporations account for 80% of all carbon dioxide emissions' (Bruno et al. 1999, p. 1). CorpWatch argued that multinational corporations dominated the UN process because companies with profits tied to the fossil-fuel industry lobbied against a green-energy transition and misled scientific debates by producing and circulating scientific knowledge that questioned the correlation between greenhouse gases and climate change (Bruno et al. 1999, p. 13). Ensuring corporate accountability therefore became part of CorpWatch's expansive definition of climate justice: 'climate justice means to hold transnational corporations accountable for the central role they play in contributing to global warming and stripping away the tremendous power they hold over our lives, and in its place building democracy at the local, national and international levels' (Bruno et al. 1999, p. 3). Further, the report contested the differentiated causes and effects of climate change and called upon 'industrialized nations, which historically and currently are most responsible for global warming, [to] lead the transformation' (Bruno et al. 1999, p. 3). CorpWatch's emphasis on the asymmetries between cause and effect showcased how climate change was a question of justice. As one of the authors of this chapter has argued elsewhere, many of these demands were debated in activist circles during protest at COP 6 in The Hague in 2000 (Jacobsen 2018). Here, climate justice mobilizations continued the anti-corporate discourse that was advanced in the GGCJ report and its focus on the uneven causes and effects of climate change. This could, for example, be seen in a short statement

issued on the occasion of the climate justice summit, in which climate activists claimed that the COPs were dominated by multinational corporations (Dissenting voices 2000, p. 11). Also, the statement argued that the uneven responsibilities for climate change amounted to an ecological debt that the Global North had to repay the Global South (Dissenting voices 2000, p. 11). Adding to this, the statement expressed climate activists' sceptical stance towards the Kyoto Protocol: it emphasized that the Kyoto Protocol was an unjust and insufficient measure to address the scope of the climate crisis and instead called for a minimum of 60 percent immediate reductions (Dissenting voices 2000, p. 12).

Many of these demands would steer the trajectory of the discourse of climate justice in the coming years. In the streets of New Delhi, India, during COP 8 (in 2002), a few thousand activists marched for climate justice, declaring that they 'reject the market-based principles that guide the current negotiations to solve the climate crisis: Our World is Not for Sale!' (Roberts and Parks 2009, p. 386). A similar critique appeared in the Bali Principles of Climate Justice issued the same year.⁴ Further, the 2004 Durban Declaration on Carbon Trading expanded the critiques of the Kyoto Protocol. However, at this stage the emerging CJM was still very small and predominantly composed of few active organizations and radical activist networks (Hadden 2015, p. 120). A great deal of this changed at COP 15 in Copenhagen (in 2009), where the movement experienced new momentum. It brought new actors from the Global South into the network and managed to gather around 100 000 people outside the official UN negotiations, becoming the largest cycle of climate-related protests recorded up until then (Hadden 2015).

Copenhagen: System Change Not Climate Change

Several historical developments had made tackling climate change an increasingly urgent matter. Scientists began to link devastating weather events, such as Hurricane Katrina and European heatwaves, to global warming. That scientists emphasized climate change was not an abstraction but causing a series of devastating events unfolding in real time helped make climate change an increasingly important issue in national politics. Concerns over climate change, was also fueled by the publication of the Intergovernmental Panel on Climate Change's (IPCC's) *Fourth Assessment Report* (2007), which highlighted that climate change was happening at a faster rate than previously anticipated and argued that the consequences would be more severe, making the need for climate action increasingly urgent. This furthered inter-movement spill-over. Activists from the alter-globalization movement argued that rising public concerns over climate change, according to long-standing anti-capitalist and social justice activist Tazio Müller, made COP 15 'the perfect opening for a reenergised anti-capitalist politics that can manage to connect to people's widespread worries about climate change, and the impression that what is being done ... is far too little, far too late' (Müller 2008).

In Copenhagen the CJM incorporated critiques of corporate power similar to those seen during previous climate justice mobilizations. Yet, the movement expanded its focus from primarily advancing a narrative holding single actors accountable for climate change, that is, multinational corporations and nation states, to relating the issue to uneven capitalist development. The main argument behind this assessment of climate change was that in a world that has ecological limits, capitalism's imperative of endless economic growth remains premised on a world of endless resources (Müller 2008). Accordingly, capitalism was considered

incompatible with sustainable modes of living. Activists related climate change to broader systemic issues through slogans such as ‘system change, not climate change’ and in the goals that guided the climate justice summit held in Copenhagen. One particular goal for the summit was ‘[t]o both sharpen our understanding of, and to address, the root social, ecological, political and economic causes of the climate crisis towards a total systemic transformation of our society’ (quoted in Russel et al. 2012, p. 17). Further, instead of treating climate change in isolation, climate justice activists linked global warming to several key issues, such as water, energy and food insecurity, arguing that these insecurities were caused by uneven capitalist development (Klimaforum 2009). This framing established a connection between climate change and more place-based struggles over land rights, water and food sovereignty, which many movement participants were also heavily engaged in at the time. Connecting seemingly isolated struggles with one another creates links of solidarities and constructs political identification against a common enemy or towards a common cause (Featherstone 2012). This was crucial in relation to bridging internal differences in the movement that had arisen in Copenhagen, given the new justice-oriented actors that participated in the network.

It was not only the movements’ analysis of the drivers of climate change that took on new forms and meanings in Copenhagen, but the discourse of climate justice was also broadened and fused together a range of progressive ideas and demands. Demands for energy democracy, food sovereignty, a just transition for workers, community-led solutions, development that prioritizes people’s needs over profits and repayment of ecological debt, became part of the discourse of climate justice (Klimaforum 2009). As evidenced by the mention of ecological debt, the discourse of climate justice was still pursuing reparations for countries in the Global South, but climate justice meant more than that. It became an attempt to create a more just world in a broader sense by reversing and overcoming multiple injustices brought about by processes of market-led globalization since the late 1970s. Thus, insofar as the struggles of the CJM could be seen as struggles related to the uneven causes and effects of climate change, they were also connected to wider justice struggles against agribusiness’s dominance of the world’s food system, extractivism, land dispossessions, corporate control and other socio-economic relations that were enabled or reinforced under processes of neoliberal globalization (Harvey 2005; Patel 2008).

After Copenhagen, the CJM began losing momentum. At COP 16 and the subsequent COPs in Durban (2011) and Doha (2012), the CJM was nowhere near mobilizing the same number of people as it had achieved previously (Jacobsen 2018, p. 25). This was expressed by Müller in 2012 when he and fellow activist-scholar and climate-justice organizer Nicola Bullard claimed that ‘the CJM was something of a flop: it failed to establish an anti-capitalist CJ-discourse that was visible and understandable beyond the subcultures of activists and policy-wonks, and thus failed to provide a visible alternative to despair’ (Bullard and Müller 2012, p. 57). Their gloomy assessment of the ‘failure’ of the movement was underpinned by the number of strong individual voices in the network having diminished. There was a general sense, among climate activist, that the UNFCCC would never be able to provide an ambitious, binding climate agreement (Hadden 2015, p. 174). As a consequence, many coalitions moved on and reorientated their focus towards climate justice struggles at the local and national level, where activists believed they could have greater impact. This trend is exemplified in the emergence of movements such as Ende Gelände and Reclaim the Power, which continue climate justice and decolonial struggles at a trans-local level.

CLIMATE JUSTICE IN A TIME OF EMERGENCY

Up until now the UNFCCC has been unable to reach a legally binding treaty that will significantly curb emissions, and international agreements are still premised on voluntary commitments, as was last seen in the implementation of the Paris Agreement in 2015. The inability to rapidly reduce global emissions, together with the IPCC's calls for unprecedented action to tackle climate change, and the European heatwaves in the summer of 2018, created conditions for a new cycle of climate-related mass protests.

Since the Paris Agreement's 1.5°C temperature rise focus and the subsequent publication of the IPCC (2018) report providing insights to consequences of breaching the 1.5 °C rise, the concept of climate emergency has become pivotal for activists and scientists.⁵ While the scientific debate on climate emergency had previously mainly focused on justifications of geo-engineering (Markusson et al. 2014; Sillman et al. 2015), it has now spread to other fields, widening the scope of political and social analysis.⁶ One consequence of this turn, has been an intense research debate on the war-time mobilization for rapid climate mitigation (Delina 2016; Kester and Sovacool 2017; Hulme 2019; Malm 2020). Many of these scientific considerations of the climate emergency seem to have stimulated pre-existing ideas of climate mobilization from below. New grassroots organizations with explicit demands to declare a climate emergency have emerged in the past decade. This is an addition to recent movements based explicitly on climate justice and decolonial principles mentioned previously. Fridays for Future, which has expanded throughout Europe and globally since 2018, has adopted a rhetoric and school-based version of the strike, which underpins a demand for politicians to engage with scientific warnings of the climate emergency (Pellizoni 2019). UK-based XR is our main example, since it has the strongest and most comprehensive appeal to the emergency discourse (see Chapter 16 in this volume) among the new movements. Extinction Rebellion was publicly launched in 2018 having developed a strategy of civil disobedience to force British media and the UK government to declare a state of emergency. Activists have disrupted metropolitan areas of the UK, targeting transportation systems, media headquarters and government offices.

Extinction Rebellion spokespersons have particularly focused on the comparison between earlier IPCC reports and recent scientific observations on the pace of ice-sheet disintegration and biodiversity loss as a consequence of climate change. This has led XR to demand that the UK government declare a climate crisis and reducing GHGs to zero by 2025. There are two main reasons for considering XR and other emergency-orientated movements as part of our understanding of climate justice as a movement. First, there are overlaps in the role XR plays as a locus for climate mobilization, although many new groups of activists have emerged before or alongside XR. Second, viewed through the lens of the theoretical debate on climate justice, the emergency-driven climate movement places itself on the side of climate justice in key aspects: compared with policy-orientated and feasibility-orientated defense of grandfathering, XR's uncompromising demands for decarbonization in rich countries, such as the UK, within half a decade is an implicit rejection of grandfathering or other arguments for prolonging the decarbonization process. The demand seems to be about speed – reaching zero emissions as soon as possible regardless of any customary right of citizens and business in rich countries.

Although there is agreement on acting faster or differently than global political elites, XRs ways of justifying its mobilization is radically different from discourses of climate justice in the climate justice movement. Rapid transformation is demanded as a matter of survival rather

than justice. In several protests, XR has attempted to disrupt everyday life in cities not yet heavily affected by climate change in order to showcase the seriousness of future risks facing populations universally. One main success criterion for the organization is to create very concrete breakthroughs ‘from within’ in some of the most powerful and rich countries within very few years. A letter issued by prominent members of XR epitomizes this point. Explaining how government inaction on climate change meant that ‘the “social contract” ha[d] been broken, and that it is therefore not only our right but our moral duty to bypass the government’s inaction and flagrant dereliction of duty and to rebel to defend life itself’ (Green et al. 2018).

When launching XR in 2018, spokespersons from the organization did not predominantly base their analysis of the climate crisis on political resistance in poor countries at a great geographical distance. Instead, XR argued that ‘we are in a life or death situation of our own making’ (Extinction Rebellion 2019), at a protest held in London banners read ‘Rebellion or Extinction’, ‘Rebel for Life’, ‘Business as usual = Death’. Although XR now claims to have activities in 75 countries worldwide, the vast majority of interventions and groups are registered in Europe, Australia and North America (Extinction Rebellion n.d.). Extinction Rebellion’s starting point is that an imminent or cataclysmic end to life on the planet as we know it will occur in a near future, if we do not act now. These discourses were underpinned by the 2018 IPCC report, in which scientists called for urgent and unprecedented action in the next 12 years to stay below 1.5°C of global warming and that this would reduce the risk of droughts, floods and extreme heatwaves significantly (IPCC 2018, p. 177). By comparison, the CJM formulated demands when the concentration of atmospheric GHGs was lower, hence focusing less on the lack of time and more on setting a path away from a colonial pattern of oppression and inequality.

In a way, XR strategies have turned the logic behind certain climate justice slogans and methods on the CJM itself. On 17 October 2018, XR occupied the London Greenpeace office, asking the organization to take leadership and help ‘ordinary people’ combat ‘climate breakdown’ by pressing the UK government apart from engaging in geographically distant environmental struggles (Rising Up 2018). Similarly, XR’s focus on extinction and death is a radicalization of the just transition slogan ‘there are no jobs on a dead planet’. Following XR’s logic, there are neither jobs nor any relevant claims for justice on a dead planet. This disrupts the logic of long-term global movement building with claims that political and democratic agency will be threatened almost equally in all parts of the world.

However, in moving this radical focus on extinction and temporality into protests and movement-building, XR has encountered a re-emergence of arguments for a stronger sense of class struggle and racism, especially among climate activists in metropolitan areas of the UK (Shand-Baptiste 2019). As a consequence, the XR movement has been dealing with both public criticisms and inner tensions (Cowan 2019). Importantly, climate justice is re-emerging as a key concept for younger climate activists as an answer to these questions. Extinction Rebellion Youth emphasizes their work on climate justice and has formed ties with Internationalist Solidarity Network (Murray 2019).

CONCLUSION AND OPEN QUESTIONS FOR THE FUTURE OF CLIMATE JUSTICE

We have documented some of the key differences between the demands of climate justice as they have developed in theoretical and activist circles, respectively. Despite these differences, both the theoretical and the activist conception of climate justice are challenged by the renewed sense of urgency as GHG emissions have not begun to drop significantly. New groups of activists translate the concept of climate emergency from the biophysical indicators to a political demand with a short deadline. We have argued that both the ethical research agenda and the activists' demands for climate justice have gone through a period of renegotiation as a consequence of the confrontation with developments in global policy-making. This has both resulted in pressure to dilute basic ethical principles and to alter the focus from global networks of solidarity to rapid, state-driven decarbonization. An important question moving forward is, what does it mean to articulate demands for climate justice in a time of climate emergency?

With the challenge of climate emergency discourses came a moment of simultaneity and overlap between grassroots ideas and academic conceptualization. As our overview shows, this overlap marks a difference from the separate pathways of climate justice as movement politics and as a policy-informing concept respectively. The question is, however, how might the moment of shared emergency discourses form climate justice debates in the future? Apart from initial responses to Delina's (2016) work, we have yet to see stronger impacts of the climate emergency concept on the theoretical climate justice literature. One visible tendency is for climate ethicists and policy scholars alike to take a stronger interest in negative emissions, set to increase without limit if decarbonization occurs too slowly (Shue 2017; Robinson and Shine 2018). Some types of negative emissions technology rests upon natural resources, such as forests and ocean life, and political ecologists have warned that the claim on land and resources could displace poor and marginalized groups (Carton 2019). Although the climate emergency debate has appeared in the context of nation-state action, the pathway to net zero leads back to question of justice on a global scale.

This mirrors the process of re-emerging concepts of climate justice within an emergency-orientated organization such as XR. Although climate justice has not emerged as the singular and stable concept for social climate mobilization, the challenge of justice will probably continue to re-emerge as the basis for real solutions to the climate crisis. It seems less probable, however, that climate justice will become a meaningful theoretical category in the policy-orientated research that seeks to adapt it to current trends in international negotiations. The solutions to global warming proposed in the framework of the UNFCCC have hitherto relied on further pressure on land and resources in the Global South and other vulnerable parts of the planet. This is becoming clearer to both researchers, activists and politicians, but further delays to a changed course of action limit the possibilities for credible climate justice pathways. Despite its recent expansion of use, climate justice seems to function very poorly as a mere corrective to the UNFCCC, regional, or national climate policy processes. Hence, the future of global climate justice seems to lie in transformative, perhaps even revolutionary, responses to the climate emergency.

NOTES

1. For example, in the Kyoto Protocol and in the European Union's emission trading system, which both use a system of tradeable emission reduction units.
2. Signed at the end of COP 21.
3. As a counterweight to the emerging technical approaches to climate justice, Bhavnani et al. (2019) have collected a large number of essays, which challenge the mainstream theoretical and empirical understanding of climate (in)justice by revisiting key perspectives including colonialism, queer-theory, indigeneity and temporality.
4. The principles were developed by a coalition of international groups, including members from CorpWatch, Third World Network, Oil Watch, the Indigenous Environmental Network. They stipulated that all communities have the right to be free; it affirmed the rights of indigenous groups to represent themselves; and called for clean and locally controlled low-impact energy sources (CorpWatch 2002).
5. Since 2016, Australian organization Climate Emergency Declaration has been documenting the number and type of declarations of a state of emergency in political jurisdiction globally – from minor municipalities to large bodies such as the Argentinian Senate and the British Parliament.
6. For example, Google scholar 'climate emergency' hits rose from 728 in years 2010–15 to 6380 in years 2015–20.

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14. The Common(s)

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INTRODUCTION AND GENEALOGY

The Commons, the common, common-pool resources, common goods, urban commons, common ground, cultural commons, the common good, the global commons, commoning, uncommons, undercommons, common property, digital commons, and liminal commons.

The discussion on the commons in their different forms is simultaneously omnipresent and underexamined. There are so many different variations of the term ‘commons’ and so many uses that point in different – often complementary and oppositional – directions, which render the process of an intellectual clarification and taxonomization of this new vocabulary a very necessary and urgent exercise for transformative politics. As correctly stated by Bollier and Helfrich (2019), the eclecticism of the commons is no wider than that of other concepts that try to explain forms of social organization, such as the ‘market’ or the ‘public’. This vocabulary remains so mystified primarily because it belongs to an incipient body of literature that tries to make sense of a new array of social phenomena (for example, peer-to-peer production, urban encampments, refugee camps, climate camps, and so on). Moreover, our perception is not yet fully trained to understand the variations of the commons in our everyday activities and thus commons, in their plurality, remain to a degree still invisible to the majority of their actual practitioners (Bollier and Helfrich 2019).

Despite its complicated and often frustrating nature, the exercise of better defining and linking the commons-related terms with real-life examples and everyday activities is not a solely academic task. The creation of an alternative vision for the future necessarily passes through the creation of a new, alternative vocabulary, and the incipient language of the commons has been at the forefront of this effort for the past 15 years or so. It is crucial to protect this incipient language from being transformed into a set of unconnected ‘plastic words’ that can connote almost anything and hence lose their dynamism and their capacity to inspire new social interactions and new subversive political actions (see also Van der Laan 2001).

The terms that appear in the first paragraph of this chapter are only a small fraction of the plurality of the concepts that are being employed in the current literature on the commons. Their genealogical roots can be traced and are embedded in different disciplines and schools of thought. For instance, both ‘common goods’ and ‘common-pool resources’ have their roots in neoclassical economics and they primarily denote types of goods – objects – and thus they pay very little attention to the social relationships and systems of governance that are related to the overuse, depletion or, in contrast, long-term sustainability of the resource systems (see, for instance, Hardin 1968 for overuse and depletion, and Ostrom 1990 for long-term sustainability). ‘Commoning’, on the other hand, a term coined relatively recently by the historian Linebaugh (2009), was employed to portray the commons as an activity and as a living system – a social process – rather than a mere idea or a material resource. Other concepts, such as the ‘urban commons’ or the ‘global commons’, try to shift the focus to the geographical dimension

of the commons. Originating from disciplines such as architecture, urban planning, sustainability science and geography, they highlight that scales and geography matter for the organization and better governance of the commons (see Harvey 2012; Stavrides 2016; Huron 2017; see also Chapter 9 in this volume). Concepts such as the ‘digital commons’ or the ‘cultural commons’ attempt to distinguish between commons that refer to different types of goods (for example, rivalrous or not, digital or physical, and so on), and examine how commons systems with different attributes can be better governed as well as expand on principles that differ from those that Ostrom suggested through her study of small-scale natural common-pool resources (for example, Benkler 2006; Kostakis and Bauwens 2014). Finally, ‘liminal commons’ (for example, temporary occupations, self-organized refugee camps, or even self-organized urban fiestas) focus more on issues of temporality and examine the symbolic and transformative power of ephemeral and transient commons systems, which do not aspire to last long but rather to facilitate transitions (Varvarousis and Kallis 2017; Varvarousis 2022).

Are all these concepts necessary for the promotion of a large-scale cultural shift towards a commons-based production and type of sociality? Are there any controversies in the adoption of this terminology? If so, of what type? Can we mitigate them and find the points of convergence instead of dwelling on their persistent points of conflict? These are some of the questions that this chapter explores.

POSITIONING AND FRAMING THE DEBATE

A comprehensive review of all the aforementioned concepts is beyond the scope of this chapter, since it is impossible to retrace in such a short space the history and current use of concepts that linger between so many disciplines and schools of thought. My intention is to focus on a particular aspect of the effort in order to juxtapose, clarify and eventually synthesize some parts of the incipient vocabulary of the commons and, more specifically, to examine the history, the intellectual usage, and the transformative potential of one of the most central and vivid debates that have emerged in the recent revival of the scholarship on the topic: the commons (plural) versus the common (singular).

The debate between the commons and the common is gaining new impetus now that commons are largely operating as a new beacon for imagining and framing a societal transformation towards what has been framed as ‘the communism of the commons’ (Hardt 2011). However, its origins go back a long way in intellectual history; in Aristotelian philosophy and the ancient Greeks on the ‘koine sympheron’,¹ the history of pre-capitalist England before the period of the enclosures, the rich philosophical debates between the philosophers of immanence such as Baruch Spinoza, Gilles Deleuze and Felix Guattari, and the philosophers of transcendence such as Immanuel Kant and Friedrich Hegel, as well as in the history of Roman Law and the institutionalization of the ‘res communis’.² In addition, I argue, the importance of the debate far exceeds the realm of pure linguistics and involves crucial stakes for critical environmental politics and societal transformations in general.

In the current burgeoning literature on the topic, we can find authors that use, almost invariably, ‘the commons’ in its plural form. Elinor Ostrom and her affiliates in the Institutional School, Massimo De Angelis, David Bollier and Silke Helfrich, Yochai Benkler, Michel Bauwens and Vasilis Kostakis, Silvia Federici and George Caffentzis belong to this first group of scholars. On the opposite side, Michel Hardt and Toni Negri, as well as Pierre Dardot

and Christian Laval, belong to the group that has employed ‘the common’ in its singular form instead. Stavros Stavrides and David Harvey use interchangeably the common and the commons in their work. However, it would be misleading to think that all the supporters of the plural form use the commons under the same reasoning and the same goes for the supporters of the singular. What follows is an attempt to describe and analyse these different conceptions grouped in three categories: the supporters of the plural form, the supporters of the singular form and those who make use of both forms interchangeably.

THE SUPPORTERS OF THE PLURAL FORM: THE COMMONS

For Ostrom (1990), the commons signify social systems exclusively preoccupied with the management of resources. That is, it is the resource itself that poses ‘the question of the common’ and hence the commons exist in their plural form because the resource systems are multiple and often separated from one another. Moreover, Ostrom did not try to invest the commons with any prefigurative or political function and she did not explore the potential of the commons in fostering social movements aimed at broader societal changes. In her theory, the commons are regarded as nested institutions that exist between and not against the private and the public, and typically require support and recognition from institutions at higher levels in order to operate and thrive (Steins and Edwards 1999). Her primarily economic view of the commons is hence more consistent with the use of the term in its plural form.

In her later work together with her colleagues in the Institutional School of economics, Ostrom shifted her focus to issues of scale (Burger et al. 2001). She claimed that ‘part of the reason the commons thinking of the past needs revisiting is that the scale of commons issues has expanded dramatically’ (Burger et al. 2001, p. 6). The ‘global commons’ for her, which include the oceans or the air, might include processes and governing apparatuses that involve the entire globe, nevertheless, they cannot be conceptualized under the concept of the ‘common’ in its singular form because they still belong to different resource systems that require different solutions and technological approaches (Ostrom et al. 1999).

De Angelis (2017) has developed one of the most elaborated conceptual and theoretical frameworks about the commons, focused on issues of generation, connection, multiplication and societal transformation. He understands the commons as an autopoietic³ social system, distinct and oppositional to the capital, which is also another distinct –currently dominant – autopoietic social system. Despite this holistic view about the commons, De Angelis maintains his use of the term in its plural form. This is a series of reasons: the commons might constitute an integrated social system but they are not a uniform abstract social form or an undifferentiated mode of production. Instead, this autopoietic system is divided into many molecular subsystems with each being capable of self-generating its own rules, values, measures and codes (De Angelis 2017, p. 103).

In his theory, he tries to capture both the micro and the macro scale. In his view of the reproduction of the commons as systems, he foresees two potential different types that this reproduction can take: the first type aims to enhance the autonomy of a unique subsystem (for example, vis-à-vis its surrounding capitalist ones) and the second aims to give rise to more commons systems. In his theoretical endeavor, a group of several micro-commons constitutes a ‘commons ecology’, which includes the environment in which these micro commons operate and connect. Commons ecologies are connected through a process that he terms ‘boundary

commoning' and the connection of these distinct social systems can take the form either of 'symbiosis'⁴ or 'metacommonality' (De Angelis 2017, p. 293). Finally, the commons as a distinct social system, when connected with social movements, which also constitute another distinct autopoietic social system different to the commons and the capital, can constitute what he calls a commons' movement: the ultimate form that the social system of the commons can take, capable of transforming society at large.

Bollier and Helfrich prefer to write of the commons in their plural form because they want to emphasize the plurality of the phenomenon as well as the multiple forms and relationships within a commons, sets of rules, and so on. That is, Bollier and Helfrich choose to speak of the commons and not the common as they want to highlight the multiple patterns that the phenomenon can take in different settings and under different circumstances (Bollier and Helfrich 2014, 2015). However, despite their insistence in the multiplicity of the patterns of commoning – a verb that they mistakenly conflate with the concept of the 'common' in its singular form as it has been introduced by Hardt and Negri (see Bollier and Helfrich 2019, p. 18) – and their focus on the local scale, they also believe that the commons, apart from being a very particular phenomenon, is also something bigger than a local social system of resource management. In their latest work, they characteristically mention that the commons also constitute 'a germinal vision for reimagining our future together and reinventing social organization, economics, infrastructure, politics, and state power itself' (Bollier and Helfrich 2019, p. 3) and that the commons operate as 'a general paradigm of governance, provisioning, and social practice – a worldview and ethic, one might say' (Bollier and Helfrich 2019, p. 19).

Federici and Caffentzis choose to write of the commons in plural mainly for two reasons. First, they want to emphasize the role of community in the creation and sustenance of the commons; 'no commons without community' they claim following Mies and Bennholdt-Thomsen (Federici 2019, p. 110). This is also why they argue against the concept of global commons, as it 'presumes the existence of a global collectivity' (Federici 2019, p. 94) and it downplays the power geometries that exist within this alleged global community and can operate as a source of justification of unjust policies that can impact poor and indigenous populations in the name of the 'common good' or the 'common heritage' and so on. A second, more philosophical, reason behind the choice of writing about the commons in its plural form, in the example of Federici and Caffentzis might be owing to their insistence on seeing the commons as something existing 'outside' the global capitalist system. In their joint article 'Commons against and beyond capitalism', they argue in favor of a type of commons that 'escapes' capitalist and market regulations, even though they maintain that this detachment is the goal of 'anti-capitalist commons' whereby they envisage to ultimate convergence in a 'planet of the commons' (Caffentzis and Federici 2014).

Things are slightly different in the realm of the digital commons and the work of the scholars that are primarily concerned with 'commons-based peer production' (Benkler 2006), since it is the mode of production here that plays the central role in the definition of the commons and not the integrated commons systems with their different membership, political aspirations, conflicts, rules and negotiations. In this scholarship, the plural form of the commons over the common is primarily employed to signify a multiplicity of outcomes, which still remain common property to all (and this is the main difference between commons-based peer production and simple peer-to-peer production). After Benkler, scholars Kostakis and Bauwens (2014) have attempted to expand their insights from digital commons to other areas, such as community-based manufacturing and the contemporary cooperative movement. Despite their

dedication to promoting the commons as a coherent mode of production that is antagonistic and even technically superior⁵ to the capitalist mode of production, they have maintained the use of the commons in its plural form. However, as I argue subsequently in this chapter, their view bears many similarities with Hardt and Negri when they refer to the ‘common’.

THE SUPPORTERS OF THE SINGULAR FORM: THE COMMON

On the other side of the debate, one finds, among others, two of the most prominent and controversial figures of contemporary political theory and philosophy: Hardt and Negri. In the final book of their trilogy that started with the *Empire* (Hardt and Negri 2000), continued with the *Multitude* (Hardt and Negri 2004) and concluded with the *Commonwealth* (Hardt and Negri 2009), they introduce the notion of ‘the common’ with which they attempt to describe and theorize a distinct mode of social relations that is developing through the cognitivization and informatization of production and does not simply take the form of a counterpower or resistance to capital but, instead, is immanent in the process of evolution of capitalism. Hardt and Negri’s ‘common’ includes almost everything that is part of the cognitive and immaterial production of our times: languages, codes, metropolitan ambiances, institutions, modes of sociality, and so on; that is, whatever is being collectively created by the multitude, remains open access and involves some sort of inclusive democratic management. More recently, they published another two books named *Declaration* (Hardt and Negri 2012) and *Assembly* (Hardt and Negri 2017), in which they try to push further their theory and move from an analysis of the present to the delineation of a political strategy for the transition towards what they call a ‘democracy of the multitude’.

Their analysis stems from a vast theoretical exploration of modernity, the anti-globalization and alter-globalization movements, the movement of the squares, the Arab Spring, and the new information technologies. Their main argument is as follows: a continuous expansion of the ‘common’ is inevitable and it happens anyway in the field of social production through the continuous mutation of the capitalist system and mode of production which is becoming increasingly immaterial and abstract, and leads to the creation of commonwealth that escapes the problem of defining rules of inclusion or exclusion (Hardt and Negri 2009; Federici 2019). What they argue is that, since an expansion of ‘the common’ is already at a very advanced level in the field of social production (that is, cooperatives, social networks, digital media, and so on), the multitude has already demonstrated its political capacity for self-government around the common. The main problem thus is not related to the development of more alternative networks, more autonomous self-organized spaces – that is, more commons – but to how to avoid the ‘corruption of the common’ by the market, the state’s ‘sovereign power’, the representative democracy and capital’s domination that are all founded on what they call ‘the republic of property’.

Dardot and Laval constitute another prominent intellectual pair that has written extensively in favor of the common in its singular form. Their book, *Commun*, first published in French in 2014 and translated into English in 2019, tries to become a novel point of reference in the study of revolutionary politics. Dardot and Laval’s common, in contrast to Hardt and Negri’s version, does not refer to an ontological creation concerning an existing expropriated commonwealth that should be reappropriated by the multitude but, instead, refers to a political principle and a call for reinstituting society on a different basis. The authors give to their

work an archaeological purpose; they try to understand the mutations of the concept over history starting from the works of Aristoteles, the Roman Law and others, in order to suggest a conception of the common that is founded on the contemporary quest for ‘real democracy’ as it was expressed in the contemporary social movements of ‘Occupy’ and the ‘Indignant Squares’.

Hence, the common in Dardot and Laval’s work is a fundamental political principle that should guide the creation of the commons in the plural. When they refer to the commons, Dardot and Laval (2019, p. 26) are referring to ‘a diverse array of objects or resources managed by the activities of individuals and collectives’ and thus they reserve for the common the role of a sort of ‘guiding spirit’ that drives this activity. In addition, they emphasize that the commons is an ‘older concept’ that was employed in the era of alter-globalization and ecological movements (see Chapter 35 in this volume), to trigger a defensive stance against a new round of enclosures. They contend that the passage from the commons to the common will be important for overcoming this defensive character and kickstarting a collective instituent process. Their overall focus is indeed on the creation of new institutions as well as a culture of collective experimentation with new rules, legal systems and new forms of use rights, to the extent that they try to replace the act of commoning with what they term an ‘instituent praxis’. This instituent praxis is another form of common doing – the same as commoning – which nevertheless seeks to emphasize the production of institutions and not the production of things or resources of any kind to be used in common.

Finally, in their effort to put the common at the forefront of their new language for political theory and economy, they try to disentangle their specific use of the term from other popular uses and connotations that it has gained over time. More specifically they refer to three traditions that still negatively shape our conception and use of the common: theological, juridical and philosophical. The theological identifies the goals of the religious and political institutions with the ‘common good’, the juridical associates the common with a specific type of goods (the air we breathe, the outer space, the sun, and so on), and the philosophical tends to connect the common with what we have in common, a universal set of attributes that define all humans.

DAVID HARVEY AND STAVROS STAVRIDES: THOSE WHO USE BOTH FORMS INTERCHANGEABLY

Apart from the previous authors and schools of thought that have an evident preference for one term over the other, there are a few authors that use both terms interchangeably in their writings without declaring a specific preference for either.

Harvey (2012), in his seminal work on the creation of the urban commons, uses a broad array of concepts interchangeably without providing substantial theoretical clarifications about their different uses. In his short text, Harvey refers to the commons, the common, the common good, commonality, common property, common land, common action, commoning, and more, to describe how different forms of the commonwealth are being produced. Most importantly, he does so in an effort to persuade his readership about the necessity of vertical and often hierarchical forms of management of the commons for an upscale future scenario. However, while Hardt and Negri’s or Dardot and Laval’s focus is on the political or institutional aspects of a commons-based societal transformation, Harvey’s focus is primarily on the more technical and organizational aspects of the organization of the commons in higher geo-

graphical scales. This is perhaps why he chooses to use the commons in the plural form when he deals with the separate social systems that should coordinate their actions and systems of management in a confederal system,⁶ and in its singular form when he deals with the production of common good, such as an urban center or a language. We can find specific similarities in the way that Harvey and Hardt and Negri define the common despite their intense and often conflictual intellectual debates on societal transformations.⁷

Stavrides's (2016) work on 'expanding commoning' is the final source of information for this chapter. Stavrides, similarly to Harvey, utilizes both forms interchangeably, albeit his focus is completely different. His work is primarily focused on the exploration of the emancipatory potential of commoning if seen as a set of practices with 'projective', 'expressive' and 'exemplary' function in contemporary societies (Stavrides 2016, p. 17). He juxtaposes the emancipatory and transformative character of the open and expanding commons against the claustrophobic and conservative function of the closed or steady commons. This view of the commons as systems that can be either open or closed renders the use of the commons in the plural as the most suitable concept for the execution of this theoretical distinction and juxtaposition. However, Stavrides's work is heavily influenced by the works of scholars such as Hardt and Negri or Rancière,⁸ who insist on referring to the common in its singular form. Hence, Stavrides makes various references in his work to the common, mainly when he wants to refer to the creation of a common world – a world that includes many commons – or when he wants to conceptualize the common as a more abstract creation on par with Hardt and Negri's conceptualization. Finally, he uses the common in its singular form as an adjective followed by a series of nouns, such as common code, common life, common values and common ground. In these examples, the common is used in its more stereotypical sense, simply indicating a series of shared properties held or recognized by all members of a particular group. However, Stavrides neither explains nor provides solid theoretical reasoning behind these multiple uses of the common and the commons in their two forms (plural/singular).

UNTANGLING THE DEBATE AND LOOKING FOR POTENTIAL CONVERGENCES

The final section of this chapter aims to shed some light on the most crucial aspects of the debate for future societal transformations and contemporary radical praxis and politics. To do this, I attempt to untangle the various assumptions that guide it, as well as to discuss comparatively its various aspects.

Each side in this debate provides important reasons for their decisions to utilize the common(s) in either its singular or plural form. Therefore, it is important to try to illuminate and systematize these different views and to seek points of convergence and synthesis. For instance, the supporters of the common in its singular form, despite their important divergences, try to overcome a potential fragmentation of the commons by offering a theoretical path that connects these diverse attempts in a strong and transformative political movement. Another common goal in both accounts is their effort to shift the discussion about the commons away from the field of economics, where the notions of common goods and the commons (meant as merely shared resources) prevail, towards a more social and processual path, which also includes instituent praxis that can lead to broader societal transformations.

However, the supporters of ‘the common’ ground their endeavors in different theoretical fields. Hardt and Negri’s struggle is mainly fought in the field of immanence, which presupposes the existence of no ‘outside’. Everything takes place here and now, and the tools for making the future should already exist in the present. The possibility of a society based on ‘the common’ belongs to the immanent capacity of the current society to produce it in horizontal and non-hierarchical ways. What remains to be done, is the full realization of this project in all its plurality of forms. Alternatively, for Dardot and Laval (2019), neoliberal capitalism is parasitic and external to their formulation of the common. Hence, their use of the common as a political principle that guides societal transformation belongs to the field of transcendence; the current form of production and organization that is defined by capital in an all-encompassing way should be changed totally through a series of instituent paths that should be guided by the principle of the common.

Despite these bold differences, the common in its singular form functions in both intellectual endeavors as a unifying element, which is capable of connecting all the dispersed and potentially fragmented commoning projects into a political movement, aimed at a profound and multilevel societal transformation. This is perhaps the most valuable dimension of framing the discussion on autonomous self-management and societal transformations around the common in its singular form. The common, if indeed taken as a guiding political principle and a prototype of social production already existing in the current society (albeit not as widespread and dominant as Hardt and Negri seem to suggest), can operate as a constant point of reference and inspiration for all the dispersed projects that seek to both reorganize their actions on a local level and demand broader institutional changes. That is, the level of abstraction of the common in its singular form can help all these projects use the concept as an alternative to the equally abstract use that the concept of ‘capital’ has in the current social organization.

However, even if I find this all-encompassing usage of the common compelling, I tend to believe that the commons in the plural can operate similarly well in the necessary abstract level but, also, can highlight and underline the necessary work and changes to be actioned in multiple levels for a transition to a commons-based society. One of the main criticisms that the supporters of the common articulate, when they defend their choice, is that the commons can be easily conflated with goods – mere things to be consumed or used in common by a group of people. This is true in the first place. Neoliberal economists, even since Hardin’s (1968) influential article on ‘The tragedy of the commons’, have systematically conflated the commons with mere goods that are ‘non-excludable’ and ‘rivalrous’. Ostrom’s common-pool resources might have changed the focus from overuse to the right use and might have shifted the conservation of the resources, but did not manage to fully disentangle the commons from their close association with the economic jargon. Yet, as previously seen in this chapter, in the past two decades we have witnessed the emergence of very important works, which have politicized the use of the commons in the plural. These works managed to sufficiently explain and showcase the manifold nature of the commons as social systems of self-management in various scales; as a prototype mode of production similar to Hardt and Negri’s view, as a vision for future societies, as an autopoietic system that contrasts capital, and as a political principle similar to Dardot and Laval’s conceptualization of the common.

In addition, the use of the term in the plural offers some crucial advantages over its singular version. The level of abstraction that the common in the singular implies, is perhaps useful if only seen as a guiding political principle, but renders the crucial issue of commons’ expansion as being external to the commons. More specifically, if we follow Hardt and Negri’s concep-

tion of the common as a mode of social relations that define the dominant apparatus of social production in the post-Fordist era, then the issue of its expansion is already resolved since it is immanent in the capital's continuous mutations. This increases too much the level of abstraction and I argue that this loose theorization, despite its appeal, prevents commoners from finding their place in the necessary task of creating, sustaining and expanding their commons. The use of the commons in the plural instead points to the production of concrete common worlds in which we can participate or not, look after resources or not, and create community bonds and live in common or not.

An analogy that can potentially explain this distinction between the immanent expansion of the common and the conscious collective expansion of the commons can be found in the realm of data creation (see Chapter 38 in this volume). The introduction of smartphones and the invention of social networks that followed the expansion of the Internet in past decades has created a huge amount of data that could potentially be framed, in Hardt and Negri's language, as another form that the immanent production the common is taking in contemporary societies. However, is this huge collection of data a real commons? Does it reveal the capacity of modern 'singularities' to autonomously organize what they produce? Also, is it convincing to argue that it is only a matter of political re-organization to turn this mass production and collection of data into something positive? Here we should perhaps look at Zuboff's (2019) work on 'surveillance capitalism', according to which such an immanent production and expansion of 'the common' is by default tied to the reproduction of the current predatory system and can hardly ever be transformed into something socially and environmentally positive. In contrast, we can find very promising examples of how real communities consciously share and create data commons. These can take the form of crowdsourcing libraries, online and offline museums, and political campaigns, which constitute forms of commoning that lead to the production of specific commons in which people can participate, set rules and sustain over time.

Finally, there are many instances in which the common in the singular (especially in the form of the common good) has been heavily utilized against the commons. Take for instance the case of neo-extractivism in South America and in other parts of the Global South (see Chapter 19 in this volume), where the commons of the indigenous people have been repeatedly threatened in favor of the broader common (good) that is largely defined by the national state – an abstract force in itself. Alternatively, we can look at how several concrete commoning ventures, such as social centers and occupied buildings, recently have been put against the common good of the 'people's health' in the context of the current pandemic. This is not to blame the formulations of the supporters of the common in the singular, but I think these instances necessarily constitute part of the overall debate.

To conclude the assessment this chapter put forward, I think the intellectual effort of the supporters of the common in the singular is very important since they tried to overcome the fragmentation and economization of the older discourse on public, private and common goods by linking the commons with a broader social, political and cultural shift and an emancipatory perspective. However, I do not think that the recent advancements of the theory of the commons in the plural lack theoretical depth or scope regarding the same issue. Furthermore, I drew attention to a couple of pitfalls residing in the use of common in the singular form. Using both concepts interchangeably, as Harvey or Stavrides do, seems a promising strategy, although some theoretical clarifications are needed to avoid overburdening the whole debate with unnecessary jargon.

NOTES

1. 'Common benefit'.
2. 'Common things' or 'things in common'.
3. An autopoietic system, according to Luhmann (2012), is a system that produces and reproduces its own elements as well as its own structures.
4. Borrowing the terms of symbiosis and metacommonality (meta-cellularity) from biology, De Angelis (2017, p. 292) conceptualizes the former as 'the inclusion of the boundaries of two (or more) commons into one unit' and the later as the 'recurring structural coupling among the commons units maintains each common's identity and internal commoning, while at the same time establishing a new systemic coherence among two or more commons' (De Angelis 2017, p. 293).
5. In that its flexibility and decentralized mode of expansion can better correspond to the today's mode of production and consumption.
6. Harvey here is inspired by Murray Bookchin's 'confederation of libertarian municipalities' as a model for the organization of higher administrative scales at the national or international level.
7. See, for instance, Hardt et al. (2009).
8. Although Rancière's work (for example, 1999, 2006) mostly deals with issues of policy/politics and not of commons/common.

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16. Disasters and catastrophes

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INTRODUCTION AND GENEALOGY

Since its emergence in the 1950s, disaster research has been concerned mainly with the development of operational tools for crises management and intervention, resulting in a prevalence of inductive approaches and a limited interest in more general theoretical issues (Calhoun 2004; Quarantelli 2005; Tierney 2007, p. 504). As a research field, disaster studies are still dominated by approaches (mostly North American) that scarcely dialogue with developments in social theory and critical theory. Moreover, little attention has been paid to the theoretical–empirical research on disasters produced in non-English-speaking countries in either the Global South or Europe.¹ Gaillard (2019) denounced the persistence of a form of hegemony from the Global North perspective in respect of both concepts and practices, despite the progressive centrality of the ‘vulnerability’ approach, which has sustained a critical turn in disaster research since it first appeared in the 1970s. In spite of this mixed picture, critical disasters research is currently a field of increasing relevance for understanding the socio-economic dynamics of the globalized world.

The notion of ‘disaster’ first emerged as a specific social sciences category in the United States in the historical conjuncture of the Cold War.² Research on disasters was strongly influenced in the early days by governmental and military needs connected in particular with nuclear issues. More specifically, disasters were conceived by public authorities as laboratories for studying social and organizational behaviour in stressful situations. Disasters were seen as ‘a duplication of war’ and human communities as ‘organized bodies that have to react organically against aggression’ (Gilbert 1998, p. 4). In this view, the causes of disasters are situated either on the outside in the form of an external aggression or (less often) on the inside as an internal threat, as in the case of social unrest. As noted by Perry (2018), authors during this ‘classic period’ of disaster research would define disasters as ‘rapid onset events’ in which the impact or threat of an agent causes social disruption that requires readjustments. Early disaster studies thus focused on organizational and emergent social behaviour during and immediately following such disruptive events.

Gilbert (1998) distinguished this ‘disasters as war’ paradigm from two successive frameworks in which the definition of disasters was gradually reframed as ‘social phenomena’ (Perry 2018). An important step in this direction was the ‘hazards–disaster tradition’, which paid increasing attention to the socio-ecological preconditions, or drivers, of disasters (Oliver-Smith 1986). An understanding of social systems is crucial when defining and studying disasters ‘since they (not the agent) are the real locus of disruption and vulnerability’ (Perry 2018, p. 10).

In the 1970s, there was a shift away from the ‘realist’ techno-engineering and natural sciences approaches when geographers and anthropologists began to study disaster situations, especially ‘natural catastrophes’, as political and cultural phenomena. In particular, critical perspectives from political ecology, environmental justice, feminism and postcolonial thought

were progressively included in their studies (see Wisner et al. 1977; Cutter 1996; Fordham 1998; Gaillard 2019).

This has been especially true of the ‘vulnerability approach’ to disasters, which holds that it is critical when discerning the nature of disasters to appreciate ‘the ways in which human systems place people at risk in relation to each other and to their environment – a relationship that can best be understood in terms of an individual’s, a household’s, a community’s or a society’s vulnerability’ (Hilhorst and Bankoff 2004, p. 2). This implies that disasters research should take into account a temporality that goes beyond that of the event.

Despite the existence of diverse theoretical and operative definitions of this ‘vulnerability’ notion, this approach to disasters implies that attention is paid to the observable variability in capacities to cope with damages (at the individual and collective levels) and to the sources of inequalities and social exclusion that heavily impair these capacities (Cutter et al. 2000). The vulnerability paradigm has also introduced an interest in ‘local knowledge’ and a critique of the coupling of development policies with top-down processes that increases the vulnerability of entire regions (Cuny 1983). However, it is also true that the notion of vulnerability, as we are going to discuss, has been progressively ‘emptied of its political and social essence’ (Gaillard 2019, p. 10).

The vulnerability approach usually maintains a link with a hazards perspective, but the idea that vulnerability is inherent in modes of social organization and their complexity has increasingly gained relevance. These developments have brought disaster research closer to the sociology of risk and collective crises, with an emphasis on the relationship between disasters and uncertainty (see Chapter 22 in this volume).³

In this third paradigm, disasters are defined as entirely social phenomena and are related to the shared perception of an inability to make sense of a situation that is otherwise seen as serious or worrying. Disasters are thus related to the loss of ‘key standpoints in common sense, and the difficulty of understanding reality through ordinary mental frameworks’ (Gilbert 1998, p. 9). This difficulty is considered to be generated by the growing complexity that characterizes the relationship, at the societal level, between human, ecological and technological systems. As shown by Perrow (1999), disasters are normal, unavoidable features of complex, highly connected technical systems.

The acceptance of non-anticipatable crises as inevitable features of complex societies explains the observable shift in disaster research from a discourse of prevention to one of resilience and preparedness. Also, an interpretation of disasters that incorporates sense-making activities emphasizes both ‘the intricate interaction between events, individual perceptions, media representations, political reactions, and government efforts at “meaning making”’ (Boin et al. 2018, p. 35) and an understanding of disasters as ‘windows of opportunity that competing interests can exploit for their advantage’ (Tierney 2007, p. 512).

This constructivist interpretation implies that the symbolisms of disasters and the diversity of social representations of risk and catastrophe need to be taken into account. It also calls for an investigation of the ‘social amplification of disasters and crises’ (Quarantelli et al. 2018, p. 73) and of the production of ‘disasters as spectacle’ relating to the development of media coverage (Alexander 2005). In addition, it invites the extension of the research on disasters beyond the temporality of the event to investigate ‘the decisions and actions of government, elites and their financial supporters, and global industries and financial institutions that make disasters inevitable’ (Tierney 2007, pp. 509–10), linking disaster research with political ecology.

During the 1990s, an increase in the number of disasters and emergencies was accompanied by the consolidation of an international field of activism and humanitarian organizations (see Calhoun 2004) and the professionalization of disaster planners and crisis managers. Influential scholars of the critical approach to disaster research (Wisner and Oliver Smith among others) were involved in the development of both these dynamics from their origins in the 1980s (Cabane and Revet 2015).

More recently, new types of disasters have emerged from the interplay between the dynamics of global capitalism, the rise of the information society, the proliferation of transboundary crises and the emergence of ecological threats at the planetary level. They include climate change, pandemics, financial collapses and, after the events of 9/11, terrorism. According to Quarantelli et al. (2018, p. 61), 'we are at another important historical juncture with the emergence of a new distinctive class of disasters and crises not often seen before', a phenomenon defined by the German sociologist Ulrich Beck as the 'world risk society' (Beck 1999, 2006).

Cabane and Revet (2015) noted that this juncture is marked by a return to centrality of technical solutions and approaches to disasters that are dominated by the natural sciences, especially climate science, and a side-lining of social sciences, which are confined to the study of local adaptation and resilience capacities. Moreover, recent debates on the Anthropocene (see Chapter 5 in this volume) have refuelled disaster scenarios that revolve around systemic collapse and global catastrophe, and promoted a 'climate catastrophism' whose political consequences are the object of critical discussions (Chollet and Felli 2015; Chapter 13 in this volume).

PROBLEM-FRAMING AND KEY CONCEPTS

As already mentioned, the notion of vulnerability emerged in the 1970s as a critical tool to counter the reductive understanding of disaster research that was focused exclusively on crisis management and disaster prevention. Methmann and Oels (2014) retraced the genealogy of this category. They highlighted three different interpretations of this concept in disaster research and disaster policies. According to the authors, the first use of the concept was the risk-hazard approach, where vulnerability is a quantifiable condition that requires prevention measures consisting mainly in defining emergency plans. This approach prioritizes the technical-infrastructure perspective over political and socio-economic perspectives. Policy measures inspired by this approach limit population participation and reinforce a form of 'environmental determinism'.

The second approach identified by Methmann and Oels (2014) was that of social vulnerability, which involves identifying groups that are 'at risk' (Blaikie et al. 2004) owing to socio-economic characteristics or other social determinants (age, gender and ethnicity) and reducing the gap that separates these vulnerable groups from the rest of the population. Crisis management measures are thus not sufficient to reduce social vulnerability, and structural interventions are needed. These interventions concern primarily the reduction of poverty and social exclusion, but there has been a progressive focus on gender issues in parallel with the development of feminist approaches to disaster research. According to Fordham (1998), disaster studies initially focused on women as invisible victims and then shifted towards issues of empowerment and empowerment policies (Fordham 1999). More recently, official

programmes (such as the Sendai Framework for Disaster Risk Reduction, 2015–30) have explicitly sustained female leadership in building resilience and coping with catastrophe.

The social vulnerability argument can also be used to justify top-down interventions that leave little room for participation, especially in countries in the Global South. The social vulnerability framework can thus sustain state interventionism, international development programmes and more recently ‘philanthrocapitalism’ initiatives (McGoey 2012). There is a form of continuity here, which is denounced, between the discourse of social vulnerability and the colonial gaze that inferiorizes the other either as an object of fear and a potential threat (and who therefore requires control) or as an object of compassion (who requires assistance) (see Giuliani 2017).

The third approach identified by Methmann and Oels (2014) is the most recent, having emerged around the 2000s. It links vulnerability and resilience and promotes a more active role of populations in disaster management, with a specific concern for gender minorities.⁴ The emphasis on resilience here leads to a focus on the specific characteristics of affected communities that help them respond positively to disasters. As in the instance of vulnerability, one of the main goals of disaster researchers in this approach has been to find a way to measure how resilient communities are and to design policy measures to increase resilience. When applied to disaster research, resilience is defined as ‘a system’s capacity to persist in its current state of functioning while facing disturbance and change, to adapt to future challenges, and to transform in ways that enhance its functioning’ (Keck and Sakdapolrak 2013, p. 8). Social capital and a variety of other ‘capitals’ (including community and economic capitals) and capacities (such as improvisation and infrastructure resources) have been identified as quantifiable ‘elements of resilience’ (Kendra et al. 2018). The defining and measuring of capacities to persist, adapt and transform has led to a proliferation of ‘recipes’ that are based on implicit normative assumptions concerning what should be considered positive ways of responding to disaster. Against the proliferation of recipes, the alternative approach of the anthropology of *dispositifs* (Revet and Langumier 2015; see also Revet 2020) analyses how resilience concretely becomes a dominant framework and how this framework is contested or diverted.

The notion of resilience has the merit of drawing attention to the need for an interdisciplinary approach to disasters that takes into account the systemic intermingling of ecological, technical, sociocultural and political factors at different scales. However, when approached from the perspective of social resilience, the community-based focus that this notion implicitly supports and the social morphology it encourages profoundly hinder its heuristic potential. The resilience framework has often been co-opted as a justification mobilized by neoliberal projects for withdrawing government support for universalistic welfare measures and more generally public infrastructure investments (Quenault 2016). Communities are then forced to compete for public, and increasingly private, funding to support resilience building. Consequently, the resilience framework in this form conceals the role of the structural factors that the social vulnerability approach had helped to highlight. For this reason, it has been defined as a ‘post-political’ framework (Swyngedouw 2010).

In post-Chernobyl Ukraine (Petryna 2013), post-Fukushima Japan (Hasegawa 2013) and post-Hurricane-Katrina New Orleans (Adams 2013), both the communities and individuals had to compete to prove that their victimized conditions justified state assistance or compensation and that they qualified for it by showing that they were learning to become resilient as a community of (acknowledged) victims. Each of these three cases shows how the social resilience framework (see also Hall and Lamont 2013) promotes a specific normativity that is

sustained by neoliberal policies and narratives and is based on individual and collective capacities to cope and creatively adapt to unavoidable catastrophes, which are seen as opportunities for change.

Moreover, the resilience approach has in some cases led to the use of a psychological approach to disaster relief in order to partially conceal larger socio-ecological implications.⁵ The mental health consequences of disasters are an important issue for a disaster research agenda as is the specific consideration of people with a mental disability caught up in disaster situations (Lovell 2013). However, as Ribault (2019, p. 98) noted on the subject of resilience narratives after the Fukushima catastrophe, the emphasis on training and psychologically assisting people ‘to act upon themselves hygienically [*sic*] to measure and mitigate radiation exposure after catastrophic levels of contamination’ highlights adaptability at the individual and psychological levels while also masking the radical transformations to forms of living and the irreparable damage from radiation that nuclear exposure brings from both a biological and an ecological perspective (see also Kimura 2017). In the same way, ‘nuclearists’ in Chernobyl have been promoting a ‘radiological culture’ (for example, the use of a Geiger counter on a daily basis to govern everyday activities in order to reduce exposure to radiation) aimed at turning radioactivity into an ordinary feature of the everyday life experience, *de facto* producing a form of collective ignorance (Topçu 2013).

Together with resilience, preparedness is now the dominant framework for dealing with disaster situations, as Revet (2020) discussed in her ethnography of ‘Disasterland’. These two frameworks reflect the increasing pervasiveness of the theme of catastrophe – considered as inevitable but also unpredictable and exceptional – that has accompanied the emergence of the ‘world risk society’. They sustain the aforementioned ongoing process of re-technicization and de-politicization in disaster research.

In line with Lakoff (2006, p. 1), ‘preparedness’ is ‘both an ethos and a set of techniques for reflecting about and intervening in an uncertain, potentially catastrophic future’. It is based on ‘simulations designed to identify points of vulnerability’ (Keck 2015, p. 60) but also on ‘stocks’ and ‘sentinels’ (Keck 2015; see also Keck 2020), and it points to a ‘new form of knowledge about collective life’ (Collier 2008, p. 231) that Collier (2008) defined as ‘enactment’. In a shift away from ‘the archival-statistical knowledge of social insurance’ that played a fundamental role in the development of a modern welfare culture, enactment ‘comes to “know” collective life not through the regular processes of population or society, but through the uncertain interaction of potential catastrophes with the existing elements of collective life’ (Collier 2008, p. 244). While they may be unpredictable, catastrophes are not ungovernable, and new forms of knowledge and assessment are developing. In particular, catastrophe insurance is turning into a key instrument in reshaping ‘our political and moral landscape’ (Collier 2014, p. 288).

CONTENTIOUS ISSUES AND STANDPOINTS

In 2007, the author, film-maker and climate activist Naomi Klein introduced the notion of ‘disaster capitalism’, which has since gained currency among critical disaster researchers and social movement activists (see Gunewardena and Schuller 2008; Fletcher 2012; Schuller and Maldonado 2016). Despite a growing number of international initiatives aimed at disaster risk reduction, including the International Decade for Natural Disaster Reduction (1990–1999) and

the Sendai Framework for Disaster Risk Reduction (2015), the number of catastrophes has been rising steeply over the past two decades. Also, there has been a worldwide increase in the number of people living in extreme poverty, which is a proven cause of vulnerability and an accelerator of risk and disaster (Oliver-Smith and Hoffman 2019).

Disaster capitalism is one way to explain this apparent contradiction. According to Klein, ‘shock’ is a *modus operandi* of ‘neoliberal capitalism’ and a key component of its ‘accumulation by dispossession’ strategy (see Harvey 2005). As discussed by Fletcher (2012, p. 102), ‘there are two distinct yet interrelated elements in Klein’s disaster capitalism concept: 1) the neoliberalization of structures for governing resources formerly within the public domain and/or creation of markets for trade in previously non-monetized commodities; and 2) the exploitation of disasters for financial gain’. Therefore, crises and post-disaster situations are exploited, on the one hand, to support political reforms that tend to increase social vulnerability through reducing public support for ‘reproductive labour’ (Bhattacharya 2017) and, on the other, to put the interests of powerful economic lobbies at the forefront of the recovery.

Although the analytical clarity of this ‘disaster capitalism’ category has been questioned (see Wisner 2009), Klein’s book had the merit of drawing attention to the instrumental use of catastrophes for ‘advancing the political, ideological, and economic interests of transnational capitalist elite groups’ (Schuller and Maldonado 2016, p. 62; see also Lowenstein 2017; Imperiale and Vanclay 2020). According to this perspective, there are multiple opportunities to capitalize on disasters, not just during the recovery phase but also in relation to the activities of ‘imagining and planning’ for future disasters. Future disasters are opportunities to orientate societies’ development in ways that often lie ‘outside political accountability’ (Fortun et al. 2017, p. 1011). In addition, the role played by new insurance schemes connected with financial instruments is also increasingly relevant (Keucheyan 2017).

According to Imperiale and Vanclay (2020, p. 2), it is important when researching disaster capitalism to pay attention to

- (i) the institutional mechanism by which states enable disaster capitalism to become implemented at the local level; (ii) the social risks that enable it to emerge at all levels of society; (iii) the worldview that accompanies it; and (iv) the consequences it has on local communities’ capacities to collectively learn, transform and build community resilience.

This means that disaster capitalism can have many faces and that cultural and institutional dimensions play a crucial role in explaining how it becomes possible to capitalize on disasters in ways that can vary considerably according to context. If we take on the power to automatically ensure the alignment of actors’ practices and ‘normative expectations’ (Dodier and Barbot 2016), there is the risk we may overlook any frictions or ignore their importance, both in the making and unmaking of hegemony (Tsing 2005, p. 6).

In their case study of the post-earthquake reconstruction efforts in L’Aquila (Italy), for example, Imperiale and Vanclay showed how disaster capitalism exploited institutional and financial strategies, which were interwoven with the ‘mechanisms’ that states usually mobilize in disaster situations, such as ‘the command-and-control approach, emergency powers and top-down planning’ (Imperiale and Vanclay 2020, p. 3).

In our view, research on disaster capitalism should be focused first and foremost on the long-term analysis of how upstream conditions of vulnerability can be related to the processes of exploitation that are the drivers of vulnerability. The emphasis on disasters and ‘shocks’ should not lead us to neglect other mechanisms that can, according to the local contexts of

occurrence, propel neoliberalism. For example, as discussed by Woods (2017) in the case of New Orleans, the Hurricane Katrina disaster revealed long-standing structures of domination related to the plantation economy (see also Villanueva and Cobián 2019). That is, even if the catastrophe capitalism ‘machine’ is increasingly globalized and intertwined with a humanitarian purpose (Fassin 2010), the context and its socio-economic history are important. As Villanueva and Cobián (2019, p. 1) wrote, disaster capitalism is in many instances only ‘the latest rendition of a long legacy of colonial capitalism’.

Second, it is important that the disaster management phase, which can last for years, is examined in order to show how, while ordinary channels of profit creation are suspended, others emerge that are made socially acceptable by the way in which the disaster event and its consequences have been framed. Particularly important in this respect are the processes of sense-making concerning liability. Social blaming, corruption and the inadequacy of structures are all examples of liability frameworks that contribute to determining the course of the recovery phase.

Finally, in the recovery phase, decisions are taken that heavily impact on future capacities to cope with disasters and that usually create lucrative opportunities, including for criminal groups. The ‘build back better’ (BBB) paradigm is now dominant in addressing reconstruction after disasters. This catchphrase was coined by the former US president Bill Clinton in the aftermath of the 2004 Indian Ocean earthquake and tsunami, and was developed into a list of 10 propositions conceived as operational guidelines for the humanitarian post-disaster intervention. As shown by Benadusi (2015, p. 93) for the case of Sri Lanka, however, the direct importation of this idea, with no public discussion of its assumptions and aim, can encourage the proliferation of conflicting interpretations of the slogan. The presumed neutral, technical nature of the BBB paradigm masks the normativity that is implicit in what ‘better’ means. As Fernandez and Iftekhhar (2019, p. 2) discussed, ‘better’ can have multiple interpretations: ‘more modern, more environment-friendly, more aesthetically appealing, more oriented towards livelihoods, more resistant to natural hazards, faster, stronger, more equitable, etc.’. There is therefore no point in trying to set generalized indicators to measure change in relation to BBB. Many researchers in the field of disasters, as well as working on measuring resilience capacity, are nevertheless preoccupied with creating just such a measure. The definition of what ‘better’ means is (or should be) a political choice made with the involvement of those directly concerned with the reconstruction process. This example reveals how concepts of failure and success, which are used as interpretative categories with a strong performative character, still heavily influence current academic research on disasters.

OPEN QUESTIONS AND TRANSFORMATIVE POTENTIAL

As we write, the world is facing the consequences of a pandemic disease known as COVID-19, which is caused by a new coronavirus (SARS-CoV-2), whose outbreak was first reported in the city of Wuhan in central China’s Hubei Province in December 2019.

Unprecedented measures, including approximately one-third of humanity confined to their homes, have been put in place to respond to the emergency. Our societies appear to have been ‘unprepared’ to face this global threat, which was nevertheless largely predictable and predicted (see Lakoff 2017). The global economy is heading towards a crisis of unprecedented

gravity. There is no doubt that the response to this crisis will mark a main turning point for the future of our societies and, indeed, our planet.

From the viewpoint of disaster research, the evidence is now overwhelming. Ecological degradation together with injustice and social exclusion are the issues that need to be urgently addressed for effective disaster risk reduction. Structural measures directed towards reducing social vulnerability must go hand in hand with a collective building of systemic resilience capacity, which is different from the moralizing use of the injunction to individual and community resilience.

The current situation highlights issues that remain open for further investigation in disaster research. First and foremost among them is the relationship between disasters and law. We owe to the Italian philosopher Giorgio Agamben (1998, p. 20) the idea that ‘in our age, the state of exception comes more and more to the foreground as the fundamental political structure and ultimately begins to become the rule’. This chapter is not the place for an in-depth discussion of Agamben’s concept of the state of exception (see Huysmans 2008; Goupy 2017), however, as noted by Illner and Holm (2016, p. 57), the generalized use of the state of exception ‘jargon’, especially after 9/11, to describe a world increasingly confronted with disasters can be problematic, since its ‘elevation’ to ‘a general social condition can also make it seem unspecific and inept at analysing specific disaster situations’. Following Goupy (2017), we should focus on the question of ‘exceptionality’ as an argument mobilized by a variety of actors in governments, administrative structures, the administration of justice and social movements to define different things (norms and political practices) for a variety of purposes while also questioning the reasons behind the centrality gained by this discourse.

Another important issue related to law and disasters is what Lauta (2016) termed the increasing, observable ‘juridification’ of disaster, that is, recourse to legal actions in order to claim reparation for disaster victims. The growing complexity of disaster torts that law is called on to redress requires innovative legal ideas (for example, ecocide). The same is true if we consider the increasing reliance on technology in disaster management and recovery. In both instances, there is the need for a critical investigation of the relationships among law, science and technology.

The growing interconnectedness between disaster and technological innovation is particularly clear in the way disaster risk reduction and disaster recovery are becoming an opportunity to radically transform the urban space in ways that are influenced by the ‘smart city’ paradigm (for a definition, see Kondepudi and Kondepudi 2015; see also Chapter 12 in this volume).

From the smart-city planning perspective, post-disaster reconstruction and disaster preparedness are conceived as opportunities to transform public spaces and services in order to create new market opportunities through technological solutions provided by private companies such as IBM, Cisco and Amazon. Case studies are needed in order to ascertain the degree to which the smart city, instead of providing a response to the risk of catastrophe, is the completion of a historical process of privatization and tertiarization of the urban space, which increases its vulnerability through sustaining the production and reproduction of inequalities. In particular, the smart-city model implies the assumption that the solution to social problems is mainly technical and that the regulation of ecosystems is based on the control of individual behaviours. Ecological concerns thus become the justification for control apparatuses that, in turn, become acceptable because of the need to implement efficient risk management tools. The impact of the ‘digital revolution’ on urban planning, as the technical fix for the ecological

crisis, is thus not just a research topic; it is also evidently a political problem when we consider the power already acquired by private companies in shaping urban life and space.

Even if disasters management continues to be seen by many as a technocratic issue, disaster mitigation, preparedness, response and recovery are highly political matters that call, among other things, for an increased reflexivity in the way we as researchers approach fieldwork. As Schuller and Maldonado (2016, p. 67) asked, ‘Are we “capitalizing on catastrophe”, like the entities that we analyse and sometimes critique?’ According to the anthropologist Mara Benadusi (2017, p. 40, translated from Italian), in order to contribute to the development of publicly relevant and politically aware disaster research, it is necessary to pay attention to the diversity of

languages, positions, actors and publics in the hope that this polymorphism ... will help to develop knowledge and practices that are useful to promote not only ... academic essays but also social interventions that are truly capable of ‘undoing’ the increasingly meaningless public decisions that are taken in the name of disasters.

In contrast to the ‘extractivist’ forms of research on disasters, there have been independent ‘public collective research’ initiatives to support social transformative processes and the self-organization of local communities.⁶ Moreover, the engagement of local researchers with direct experience of the disaster situation in question (see also Tomassi and Forino 2019) echoes Gaillard’s (2019, p. 9) invitation to ‘encourage local researchers who know best local contexts to study local disasters’.

Critical disaster researchers should also develop a stronger connection with social movements, given the importance acquired by the systemic collapse scenario in contemporary environmental movements, such as Extinction Rebellion and the collapsology movement in France.⁷ These transdisciplinary collaborations are of great importance in the effort to reclaim the positive and democratic significance of uncertainty and avoid the (scientifically unwarranted but interest-motivated) reduction of possibility to probability, where uncertainty becomes a calculable risk that is open to capitalist investment (see Chollet and Felli 2015). In a ‘ruined world’, we need disaster researchers to engage in the collective quest for liveable ways to ‘stay with the trouble’ (Haraway 2016), while ‘repairing’ (see Centemeri et al. 2022) injustices and socio-technical and ecological interdependencies.

NOTES

1. On the French case, see Revet and Langumier (2015).
2. For a more detailed reconstruction, see Tierney (2007), Cabane and Revet (2015), Dahlberg et al. (2016) and Fortun et al. (2017).
3. On the relation between disaster research and the ‘crisis approach’, see Boin et al. (2018). See also Gilbert (2002).
4. For a review of the now extensive literature on resilience, see Alexander (2013). For a discussion of the ‘genealogies of resilience’, see Walker and Cooper (2011).
5. On the interlinking of psychological and social dimensions in the thinking on welfare, see Stenner and Taylor (2008). On the category of trauma and its increasing centrality in crisis situations, see Fassin and Rechtman (2009).
6. See the case of the research group ‘Emidio di Treviri’, which was set up in the wake of the August 2016 Central Italy earthquake (Olori and Menghi 2019).
7. On the case of ‘collapsology’, see Allard et al. (2019). See also Centemeri (2019).

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17. Energy politics and energy transition

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INTRODUCTION

There is a general agreement that the history of the development of human societies is a history of the complex transition from one energy production system to another. However, the political issue of energy transition emerged overwhelmingly after the 1970s energy–environmental crises, together with critical reflections on the sustainability of the development model. In the past two decades, the sustainable energy transition also became one of the main issues of international climate change policies. This issue is part of political agendas that propose strategies to decouple economic growth from the degradation of nature.

Concepts such as ‘sustainable development’, ‘green economy’, ‘circular economy’ and, recently, the ‘green new deal’, despite their ambivalent definition, have offered discursive schemes to define transition policies. Also, social scientists have increasingly analysed the contradictions and complexities of the turn to a sustainable energy society.

By reporting some of the main theoretical reflections on energy transition, we aim to highlight the socio-political intricacy of this process. In the conclusion a brief description of energy policies is provided, highlighting assumptions and trends of the ongoing green transformation.

A SOCIAL HISTORY OF ENERGY TRANSITION

The Energetic Basis of Social Sciences between Evolutionism and Determinism

Interest in the social dimension of the energy transition has boosted in recent times. However, the initial steps towards convergence between reflection on society and the energy issue are to be found as early as at the beginning of the twentieth century. The first attempts to consider energy in the social sciences, instead of considering energy systems as objects, saw energy as a tool to understand the functioning of society. The attempt was to develop a general theory of society starting from the application of the laws of thermodynamics to social problems.

Herbert Spencer is among the key contributors to this perspective. In *Principles of Sociology* (Spencer 1896) he argues that the development of human societies can be measured starting from the degree to which the simple acquisition of energy is replaced by production, obtained primarily by manual force, then by animal force and, finally, by machines.

Among the first attempts to take into consideration the energy issue we also find the work of Wilhelm Ostwald. In his *Energetische Grundlagen der Kulturwissenschaft (Energetic Foundations of the Cultural Sciences)* (Ostwald 1909), he considers at the basis of all social changes a transformation of energy from raw energy to usable energy. The larger the coefficient of usable energy obtained in the conversion, the greater the social progress.

About 50 years later the interest in socio-energetics was taken up by Leslie White. In his book *The Science of Culture* White (1949) elaborates on a theoretical approach based on the

idea that culture is a thermodynamic system, which develops to the extent that increases the amount of energy absorbed per capita in a year.

The further development of socio-energetics ran aground for various reasons. First, it failed to consider fully the limits to the growth and exploitation of available energy imposed by the second law of thermodynamics. Furthermore, many of the theories attributable to it saw social evolution as a univocal and unilinear process and mostly adhered to the equation between evolution and progress. These factors have appeared increasingly critical.

The Issue of Energy in Environmental Sociology

The re-emergence of social sciences' attention to energy is closely linked to the birth of environmental sociology in the late 1960s (Gross and Mautz 2015). This branch of sociology was created in North America in the wake of a vast movement, which brought the environmental theme to the centre of public attention. The oil crisis of 1973–74, in particular, stimulated the debate on the theme of scarcity of resources and showed that environmental conditions can have direct social consequences. Environmental sociology addressed the issue of energy differently than socio-energetics. Some environmental sociologists began to argue that per-capita energy consumption should be considered not as an indicator of social evolution, but as a measure of the stress to which the carrying capacity of the earth is subjected. Moreover, energy began to be analysed not simply as a factor influencing the stages of social development, but also as a system in turn influenced by social and political variables.

In those years, the study of energy issues was first addressed through the analysis of public opinion (Rosa et al. 1988). Attention specifically focused on nuclear energy, which, following the oil crisis, became the fundamental option for most western powers to guarantee energy security. Moreover, especially in North America, growing attention was devoted to studies on local communities and on the expected and unexpected impacts produced by energy policies (Rosa et al. 1988).

The Analysis of Energy Transition

A new research strand has recently emerged aimed at analysing the dynamics, strategies and factors that influence – favouring or hindering – energy transition. Around the issue of energy transition, a variety of theoretical and empirical studies has flourished and new research networks (for example, the network Energy and Society of the European Sociological Association) and journals (for instance, *Energy Research and Social Sciences*) have been created.

As noted by Gross and Mautz (2015, p. 2), if the speed of this transition is uncertain, controversial and influenced by cultural frames (Osti 2012), there is however no doubt that the history of human development is a history of transitions from one energy production system to another. According to White (1949), humans initially used their muscles as a source of energy, integrating it with the breeding and use of animals. With the agricultural revolution and the end of nomadism the first human settlements were created based on the exploitation of the energy deriving from the cultivation of plants. In the next stage humanity learned to extract and use natural resources such as coal and oil. Given the exhaustion and rising costs of extracting fossil sources, it seems inevitable that the twenty-first century will bring with it a new energy system, which will be necessary if industrialized societies want to survive.

The socio-historical analyses of exponents of political ecology such as Podobnik (2006) also point out that today a third global energy shift towards a system of new energy technologies based mainly on natural gas and renewable sources is starting. A great deal of the debate on energy transition focuses on trying to demonstrate that renewable energies can be a quick solution to the energy problem (Giddens 2009; Urry 2013; Gross and Mautz 2015). Furthermore, it is increasingly evident that although renewable energy sources are distinguished from fossil fuels for the low greenhouse gas emissions during their life cycle (World Energy Council 2017), no transition path can be assumed without paying attention also to the issue of energy saving and fuel efficiency. The diversification of the energy mix in favour of a wider use of renewables, accompanied by the search for a reduction in consumption, appears increasingly necessary. These two aspects of the energy transition are now recognized also by European and national energy and climate policies as equally overriding and complementary.

The current sociological debate on energy, therefore, focuses on the development of empirical analyses and conceptual tools to study the socio-technical transformation process towards a low-carbon society, characterized, in large part, by a different type of energy production, from renewables as well as from the adoption of strategies and behaviours aimed at greater sustainability of consumption.

MAIN ANALYTICAL APPROACHES

Normative and Analytical Frameworks

A very general principle can be useful to explore and problematize how social critique has been introduced into the debate on energy transition. While there is a constant tension between normative and analytical postures, at the same time both try to display the current state of affairs, prefiguring how the process of socio-technical change would be or will be (Longhurst and Chilvers 2019).

The multilevel perspective (MLP) explains how the transition works (and should work). Since the late 1990s, it has emerged as a dominant approach to analyse the transition towards sustainability in general and the energy transition in particular (Gross and Mautz 2015). Derived from evolutionary economics (Geels 2002), it is based on a model of interaction among actors playing a role at different levels (micro/niches, meso/regimes, macro/landscape). Within this multilevel frame, social groups are interconnected with norms, beliefs, values, technologies and materiality (Markard et al. 2012, p. 956).

This approach was criticized because it tends to underestimate the agency informing everyday life (Shove and Walker 2014), as well as because it is too focused, at least in early works (Geels 2002), on niche-driven innovation (Smith et al. 2005). It was also criticized for its normativity since it aims at designing a model for energy transition. It was noted that the landscapes of transition represent something that has to be critically questioned more than considered as an analytical dimension of the process (Feola 2019). As a reaction to this approach, alternative approaches have emerged focusing, for example, on a multidimensional conceptualization of the roles of the public in the transition (Avelino and Wittmayer 2016; Chilvers and Longhurst 2016) and on the places in which it takes shape (Devine-Wright and Wiersma 2013).

A part of MLP studies is dedicated to discussing the technical and social innovations required to pursue the transition from local experiments up to the regime level (Hölsgens et al. 2018). The ideological side of the process has been neglected even if power, policies and politics are mentioned by scholars adhering to MLP (Geels 2011). The argument is about the poor critical potential that does not problematize the ideological translation of the ‘green society’ project emerging from the sustainable development discourse (Meadowcroft 2011). It has been stressed that researches on climate policies, including those fostering an energy transition, do not sufficiently consider the political framing in which policies arise. Also, when the crisis of the capitalist regime has been considered (Turnheim and Geels 2012; Geels 2013), critics have shown that this was taken into account as an external factor and that power relations and inequalities were not given due consideration (Newell and Mulvaney 2013). So, there is a request both for a more analytical approach, in respect of questioning what critics consider to be underestimated, and for a more critical sensitivity to unveil the social asymmetries featuring the paths of energy transition (Chapter 30 in this volume).

Pragmatic and Critical Understandings

A second distinction helps to classify the theoretical debate: the difference between the pragmatist and the critical approaches.

The pragmatist approach to energy transition (Shove and Walker 2014) focuses, first, on how the socio-material life of energy is as it is, and how it has changed over time. The multi-level argument is considered to miss the way actors ‘practice’ energy. The MLP leaves room for the contribution of social groups in the transition process even if the pivotal role is given to market and institutions. In broader terms, a more differentiated and flexible categorization of actors is required to recognize and understand the plurality of energy transitions, as well as of the opportunities to promote these processes in democratic terms (Meadowcroft 2011). The pragmatic perspective to energy transition appears quite different from a behavioural explanation or an application of methodological individualism. It consists in (and is named as) a social practice theory (SPT). Actors are not simply able (or unable) to adhere to a sustainable programme of action provided by eco-policies and eco-technological solutions. The crux of the matter is ‘what is energy for?’, an inquiry that cannot be adequately questioned, according to Shove and Walker (2014, p. 46), if society is intended as the consequence of something that is outside society itself: market, technology, institutions and policies. Shifting from the vertical interconnection of levels, the pragmatic perspective to energy transition looks to the horizontal dynamics in which users, those that practise energy in their ordinary activities, are intertwined (Shove 2012). Scholars adopting this perspective have underlined how difficult, even unrealistic, it can be to trace a linear cause–effect relationship between the implementation of sustainable energy policies and the impacts on people’s practical engagement in the use of energy (Butler et al. 2018; Strengers and Maller 2015). So, it seems worth investigating energy demand ‘beyond energy policy’ (Butler et al. 2018), focusing on social practices ‘that are enacted, reproduced and transformed in any one society, and understanding how material arrangements, including forms of energy, constitute dimensions of practice’ (Shove and Walker 2014, p. 48). The big picture appears complicated by the issue of where and when energy is provided and used. As SPT scholars underline, an abstract conceptualization of energy (and of its flows) seems ineffective in intercepting those situated practices it aims to change (Shove 2017).

This understanding of energy transition has been considered not particularly suitable for providing policy suggestions because of its grounded focus. These criticisms overlap with the ‘modest’ claim (Shove et al. 2012) of SPT scholars about orientating transition policies or individual behaviours. The main support for policy-makers consists in suggestions about how to re-craft the ordinary practices performing energy, assuming that policies have to be framed as programmes orientated to interact with practices (Spurling et al. 2013). The argument about power is expressed in terms of which socio-material configuration performing energy transition works effectively. Powerful actors are those that are effectively interconnected with the set of practices fostering energy transition. Walker and colleagues (Day et al. 2016) complicate this point, merging SPT with the capabilities approach (Sen 1999). That is, they look to the issue of social justice within the practices involved in the transition, where dynamics of recruitment or exclusion/defection can be observed. Socio-material obstacles affecting the accessibility to energy, hampering a fair, affordable, democratic inclusion of people to this fundamental service, are questioned.

This problematization of injustice leads us to shift the focus on the transition from the pragmatic ‘how it works’ to the political ‘why it is as it is’. This move reintroduces a normative yet critical posture. Here we can locate scholars and studies that express a politically engaged programme of research. This work argues that the energy transition is framed along the dominant neoliberal ideology, by actors pursuing different interests and holding different power positions. Indeed, energy transition, and its move towards renewable sources, cannot be detached from dynamics such as privatization and displacement that Castree (2003) enlists under the ‘commodification of nature’ conceptualization. Policies of transition to a low-carbon society have been designed often as an extension of the ordinary market-orientated approach, translating it from the fossil fuel sources to new green solutions. Similarly, large multinationals advocate their carbon-free strategies, investing in the supply of renewables and narrating the transition through the influential voice of their champions (Swaffield and Bell 2012).

A critical dimension concerns those mainstream arguments that have the power to legitimize the politics of the post-carbon economies (Mitchell 2011). An example can be seen in the smartness ideology that informs the political discourse based on the techno-scientific fix of individual and collective market behaviours of energy consumption.

Critical political ecology (Heynen et al. 2006) has contributed to this debate, aiming to unveil the apparent neutrality of the green economy fostered in the name of ‘the driving forces of capitalism (growth, efficiency, rationality, productivity)’ (Wilhite 2016, p. 78). As with SPT, neo-Marxist thinking also distances itself from a radical constructionist idea of the environment. Nature and its entities, energy included, are materialities that contribute to structuring reality. This ontological materialism (Swyngedouw 2006) is linked with the historical materialism that elaborates diachronically on the geographical development of societies and their ‘metabolic’ relations of production within the environment (Benton 1996; Harvey 1996; Chapter 4 in this volume). In this view, energy transition consists of new, different paths of transforming energy sources into commodities. At the global level, the social history of energy and the related socio-technologies of commodification or financialization highlight how green capitalism does not call into question its own accumulation logic, affecting the most vulnerable territories (Moore 2016, 2017). Some scholars write about a specific energetic metabolism (Giampietro and Mayumi 2000) coupled with land-grabbing strategies pursued by companies leading the transition. Studies adopting this perspective analyse the different interests at stake

in local conflicts originating from land occupation and exploitation in the name of transition (Podobnik 2006; Scheidel and Sorman 2012).

This picture represents a concise summary of the different theoretical variations developed in recent decades about energy transition. In the literature several works try to hybridize these perspectives, enhancing their critical salience. Some issues are debated across all the approaches mentioned previously, such as, for example, participation and collective action (Hendriks 2009). Contributions have focused on the forms of collective organization of consumers and civil society through the concept of community energy. Citizen involvement is addressed by scholars analysing how local institutional arrangements support a more sustainable way of energy provision and a commons/democratic ideology (Acosta et al. 2018; Seyfang et al. 2013).

ENERGY TRANSITION POLICIES

How is the complexity of energy transition, reported by the scientific debate, addressed by international policies? In this section, we elucidate the theoretical assumptions underlying green initiatives and the differences between various geopolitical areas. We find that policies set the market conditions for the green transition within a regulatory framework that refers to neoliberal ideology. Also, grassroots initiatives push for fairer energy production.

The Market Mechanisms of International Policies

From the 1990s, intergovernmental activities on energy have been closely associated with the sustainability issue (Rowkands 2005). In 1992, the UN adopted the Framework Convention on Climate Change (UNFCCC) to reduce greenhouse gas (GHG) emissions. The Kyoto Protocol was the first treaty that set, directly and indirectly, the international policy of energy transition. It defines mandatory GHG reduction targets for industrialized countries and non-binding measures for developing countries.¹ ‘Flexible mechanisms’ were defined to accomplish reduction targets and to support less developed nations in mitigation actions. Those mechanisms (International Emissions Trading, the Clean Development Mechanism and the Joint Implementation) define a specific carbon market to exchange carbon credit. Carbon credits can be obtained by reducing direct emissions or supporting green projects in developing nations like hydroelectric power plants. The Kyoto Protocol had non-negligible effects for signatories with mandatory targets (Shishlov et al. 2016), but data show that the global GHG emissions increased. At the end of 2012, when the first commitment period of the Kyoto Protocol expired, the global amount of GHG emissions recorded an increase of 46 per cent compared with 1990. In the period between the end of the Kyoto Protocol and the new international agreement (Doha Amendment, 2013–2020) carbon dioxide (CO₂) emissions continued to rise by 1.2 per cent per year (Crippa et al. 2019). Despite the growth of renewables and energy efficiency initiatives, in non-Organisation for Economic Co-operation and Development countries – particularly in China and India – energy demand has been primarily met by fossil fuels, contributing to this mass increase in emissions.

It seems that climate governance fails because it is characterized by negotiations among national states’ interests instead of a new conception of interstate relations based on cosmopolitan values. For this reason, the Kyoto Protocol has entered into application slowly and

some large countries, such as the US, have refused to join or have withdrawn from the treaty (Michaelowa et al. 2019). Global environmental governance has also been subordinated to an economic logic, failing to face the urgency of environmental challenges (Harris 2011; Dryzek 2016). In addition, market mechanisms have been environmentally ineffective, yet economically efficient (Lohmann 2011). Despite limited CO₂ reduction, the World Bank registers that the overall value of the global aggregated carbon markets has increased tenfold in the period 2005–11.² Financial success but concrete failure is inscribed in the belief that climate change can be solved only by marketization. Disembedding CO₂ from its social production defines GHG both as a new commodity and a financial object (Chapter 27 in this volume). Carbon credits are traded on the market; their value conditions the development of the energy sector, and related industrial technologies, determining significant economic flows worldwide. In view of that, what counts for companies and governments is more the process of obtaining CO₂ credits than their real effects on gas emissions (Spash 2011). As a consequence, the carbon market can promote forms of ‘green authoritarianism’ from national governments and ‘green colonialism’ from industrialized nations. On the one hand, governments try to favour renewable plants owing to their economic and job opportunities, even damaging local communities (for example, hydroelectric dams push indigenous peoples out of their territories). On the other hand, power plant developers come from countries with a good geopolitical influence. They wish to develop their facilities, often with their motherland governments’ support, for commercial and strategic interests, positioning themselves (and their nations) in the global energy market (Erlewein and Nüsser 2011).

The 2015 Paris Agreement aims to face global warming, and includes the higher GHG-emitting nations.³ Yet, this treaty does not design new international binding mechanisms to face climate change.

Renewables and Socio-Institutional Contexts

If the neoliberal market logic defines energy transition policies, internationally and intra-nationally, what influences the performance of different countries? According to the literature, differences seem related to the socio-institutional context in which market mechanisms are implemented. High performances in renewables are recorded in coordinated market economies, such as Germany, and in controlled market economies, namely China, but not in ‘liberal market economies’, like the US. If, on the one hand, energy transition is a political choice, on the other, in an institutional context where government and the main stakeholders (industry, finance, science and society) collaborate, market mechanisms promote the transition process more efficiently (Četković and Buzogány 2016; Li 2017). However, despite having forms of coordination, the European Union (EU) and China present very different institutional and socio-political contexts.

The EU sets mandatory targets for member states. The market mechanism of feed-in tariff prevails, providing higher cost-compensation in private investments in new energy technologies through long-term contracts. This approach seems successful: the EU over-achieved its Kyoto Protocol target.⁴ Moreover, the broad public consensus within the European civil society stimulates green initiatives.⁵ In Germany, for example, the prominence of the ecological issue is underlined by the relevance of the Green Party. In 2019, the Greens obtained 20.5 per cent votes in the European elections. Also, grassroots initiatives – such as the claim for the remunicipalization of energy grids and the promotion of energy cooperatives – push

for a greener, decentralized and participatory energy provision model, that is in contrast with private green business (Gailing and Moss 2016; Morris and Jungjohann 2016). This model seems partially endorsed by recent EU Directives (for example, 2018/2001/EU), that intend to promote renewables communities and the self-consumption of energy. Despite market logic is still prevailing in the EU (where the most extensive emission trading system, the EU ETS, is active), civil society pressures seem to drive Europe to a participative or democratic energy transition (Lopez et al. 2019).

China's effort towards green energy has been massive. In a short time, China became the foremost country in the world for renewables plants and jobs in the green energy sector.⁶ Its interest in climate governance and renewables can be explained according to strategic reasons, namely, energy security and the interest in becoming the leading country in green technologies (Clark and Li 2010; Li 2017; Chen et al. 2019). The energy transition is linked to economic supremacy, as clearly stated in the 13th Five-Year Energy Development Plan (2016–2020), which sets mandatory targets and state commitments in cutting coal's share. If the central Chinese government adopts top-down governance, it does not exclude complex interactions between central and local government levels in implementing policies. For example, until 2012 there were few photovoltaic projects, but some local administrations decided to promote them, and the solar industry developed with no central steering. The literature has highlighted how, in China, energy transition has taken place in a particular institutional context, where the relationship between the central state and its territorial articulations played a predominant role, while civil society was less relevant (Wang et al. 2017).

Beeson (2016) considers China an interesting case study for comparison: its responses to climate change are overseen by an authoritarian government that has a higher capacity to implement potentially tricky reforms in the energy sector. Its 'environmental authoritarianism' is in stark contrast with the approach adopted in most countries around the world, such as in the EU. It remains to be seen which approach is more effective in addressing the environmental issue.

CONCLUSION: ALTERNATIVE PATHS?

Despite regional differences, (neoliberal) market mechanisms inform the international policies on energy transition, as stressed previously. However, some initiatives prefigure alternative strategies (Chapter 35 in this volume). In conclusion, we would like to underline the links between the policy proposals on the energy transition and the theoretical perspectives reported in the chapter. In this way, we briefly highlight the scope of action for the transition within a specific policy framework.

First, we consider the radical 'Green New Deal' proposed in 2019 by the US social movements, intellectuals and Democrat representatives, such as Alexandria Ocasio-Cortez. They addressed climate change as the most significant market failure and denounced market mechanisms as ineffective and unfair. In their opinion, the state should address the uncertainty of unprofitable investments in the short term to transform the national energy system into a sustainable system. Policies should go beyond interventions that change relative prices (carbon tax and subsidies) and impose strict emission limits, as well as environmental standards, such as banning petrol and diesel vehicles. According to this perspective, the decarbonization of the economic system can be facilitated by a socialization of energy through cooperatives and

local public agencies. Investments in renewables bring returns later than private companies expect, while cooperatives or municipal-owned companies can operate with lower profit requirements. In this way, the Green New Deal would not only allow coping with climate change, but it would also create new job opportunities and boost the economy. Eventually, the US Congress did not adopt this energy policy proposal, which remains an object of fierce debate owing to polarization in public opinion. In progressive policy proposals, such as the Green New Deal or the remunicipalization of energy grids, we can trace overlaps with critical scholars' considerations on the sustainable energy transition. In summary, these researchers identify the socio-environmental injustice and environmental failure of energy policies in the commodification of nature and the market. In this instance, state intervention or community initiatives represent the most appropriate solutions to energy and socio-environmental problems, and they offer the prospect of an alternative future for a radical democratic energy system (Brad et al., Chapter 29 in this volume).

A second policy example is the 'European Green Deal' to enforce the ongoing energy transition proposed in 2019 by the EU Commission President Ursula von der Leyen. The EU strategy contains several policy measures for the power sector (buildings, transport, and so on) and it plans investments for 1 trillion euros until 2030. However, unlike the US proposal, the European Green Deal counts on market mechanisms to reach its goals, and the role of energy communities seems to remain marginal, despite civil society pressures and the Directive 2019/9442, which encourages renewable energy communities. Recent valuable EU performances in the energy transition are evident, but the social costs of tackling the ecological crisis appear challenging to sustain in times of economic crisis. The protest of the *gilets jaunes* in France against environmental legislation is one example. Roughly, we can say that for reformist policies, such as the European or Chinese initiatives, MLP or SPT approaches seem to be the most direct reference. The MLP helps to identify the legislative and market mechanisms that enable transition and to indicate macro-policies promoting socio-technical change. However, it does not explicitly focus on the definition of an alternative social model of the energy system or the social injustice of the energy transition. Instead, SPT focuses on how energy works from a social viewpoint. For this reason, SPT can identify the asymmetries of power and resources that determine transition injustices. This approach shows how to mitigate market failures, but it does not focus on overcoming the market by favouring other, fairer, coordination mechanisms.

To summarize, policies for energy transition seem to be characterized by two main trends: one in favour of a massive public intervention and one focused on improving mechanisms to facilitate the green market transaction. The latter is prominent, but it varies among countries, from a pure market model (such as that in the US) to strong state coordination (for example, China). The energy provision model changes according to policies, from large centralized green facilities to small sustainable energy communities. Which model will prevail or what type of mixed system will be adopted seems to be a relevant question for the future.

NOTES

1. The economic development of BRIC countries, such China or India, contributed to reconsidering this distinction during the Twenty-First Conference of the Parties, in 2015.
2. World Bank, *State and Trends in the Carbon Market*, Washington, DC, various year editions.

3. On 4 November 2019, the US Trump administration notified the withdrawal from the Paris Agreement. However the Biden administration has joined it again.
4. European Commission, Progress towards achieving the Kyoto and EU 2020 objectives, Brussels, 9 October 2013.
5. According to the Eurobarometer opinion poll, the concern score for the environment, climate and energy issues have risen from 5 per cent in 2014 to 18 per cent in 2019, while other topics decrease or are stable. Special Eurobarometer 486, 'Europeans in 2019', March 2019, p. 7.
6. International Renewable Energy Agency (IRENA), *Renewable Capacity Statistics 2019*, Abu Dhabi; International Renewable Energy Agency (IRENA), *Renewable Energy and Jobs Annual Review 2019*, Abu Dhabi.

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18. Expertise, lay/local knowledge and the environment

Rolf Lidskog and Monika Berg

INTRODUCTION AND GENEALOGY

Scientific expertise pervades almost all environmental areas. Science measures and analyses the state of the environment and traces possible causes of environmental problems. Not only does it diagnose the environment, but often it also develops and proposes remedies. Owing to science's penetration of the environmental discourse, all proposals for environmental action must claim to be based on firm science – otherwise they will not be seen as relevant and legitimate. Environmental problems are science dependent, and science has not only spoken truth to power but has successfully marched through the corridors of power, pressing all actors to orientate themselves in relation to scientific understandings of environmental issues. This applies not only to natural sciences but to social sciences as well. In the face of severe environmental threats the social sciences are now increasingly being invited to provide knowledge on how to steer and transform societies. In many respects this can be depicted as a scientific success story.

It is possible to paint another picture, however, in which science is contested, questioned, downplayed and perhaps even ignored. Scientific experts quarrel about what is a correct diagnosis and a relevant remedy. Political leaders tout 'alternative facts' or ignore science altogether. Environmental organisations select environmental scientists who support their preconceived standpoints. Local communities find science to be irrelevant for their situation. Furthermore, scientists themselves experience that their views are simplified and misinterpreted, and that non-scientific actors are invited as experts in public debates. There are also cases, such as the climate change issue, where science has successfully influenced the environmental discourse but does not seem to have resulted in sufficient political action (Chapter 13 in this volume). Despite science continuously delivering strong messages about the severity of environmental threats – with some elites in research, business and politics even claiming that we need a planetary emergency plan (Gore 2006; Club of Rome 2019; Lenton et al. 2019) – the gap is growing between what needs to be done and what is being done. Thus, we live in a paradoxical situation where large segments of society are conscious of environmental threats, but concerted action is lacking.

Within the environmental area, we are experiencing a situation where the findings of science are needed, often listened to, but only rarely followed up by action. This raises crucial questions about science and its role in environmental action. Most people and organisations agree that science and expertise are crucial for modern society, not least when it comes to solving environmental problems. However, there are different views on what role it should play in policy and politics. What is the particular and unique contribution of experts, and how should they relate to other actors, not least political actors? There are also diverging claims on what expertise is. Where and on what grounds should we draw the boundary between experts and

non-experts? How the authority of expertise is constructed and maintained is contested (Berg and Lidskog 2018a). What is the basis for the epistemic authority and reliability of sources of knowledge and advice? These questions, and their various answers, are based on deeply held, fundamental and often implicit understandings of what knowledge is, how society works and how it should be governed.

Currently, voices within the academic debate claim that to avoid environmental disasters the democratic process must be superseded by the issuing of scientific and technocratic dictates, to prevent society from trespassing planetary boundaries (Chapter 8 in this volume). Other voices claim that the best way to better respond to environmental threats is to democratise science, opening it up for more input and influence from stakeholders and citizens (Chapter 24 in this volume). In addition to these positions, there is a chorus of multifaceted voices with different proposals for how expertise should be defined, what role it should play and how it should be performed. It is important to note that, regardless of the position taken, science is crucial; it is needed for the production of systematic knowledge about planetary conditions or about public considerations. Without this knowledge, decision-makers will not have sufficient situational awareness and will therefore have difficulty developing relevant responses. However, the role that science will play may differ (Berg and Lidskog 2018b).

A common definition of an expert is ‘someone who masters skills with recognized (indeed certified) competence which is called upon in decision-making processes’ (Callon et al. 2009, p. 228). This definition stresses that expertise is about more than possessing a particular level of competence; the competence has to be acknowledged and considered relevant by others than the expert community itself (Lidskog and Sundqvist 2018a). Experts need to be competent, in the sense of mastering specialist knowledge or practices. Their expertise needs to be recognised, by being known outside their own expert communities, not least their target groups, and it needs to be legitimate, by being considered trustworthy. This makes performing expertise a complex task that involves having to navigate a social landscape with conflicting interests and divergent beliefs about what knowledge is and how the world is constituted. Those who develop theories of expertise are also part of this landscape, which influences how they understand the conditions, characteristics and role of expertise.

In the current rhetoric about global crises requiring concerted action, in which expertise is often given a prominent role in defining and diagnosing environmental problems, as well as suggesting remedies, it is crucial to have a deeper understanding of what constitutes expertise and how to relate expertise to science and policy. This allows for a more critical understanding of environmental problems and politics. Environmental problems are not external to society, waiting to be discovered, but are actively constructed in a dynamic process involving ecosystem conditions, social impacts and knowledge production. What type of expertise is seen as legitimate and receives an opportunity to develop knowledge heavily influences how an environmental problem is understood and acted upon. Knowledge is inseparable from power; how an environmental problem is defined and how society is understood determine which solutions are proposed and seen as relevant and legitimate.

This chapter discusses the meaning of expertise and, not least, current challenges to its epistemic authority. The next section indicates two diverging trends: one leading toward a broad distribution of expertise in society, and another where specialised expertise is becoming increasingly separated from the wider society. The third section presents proposals developed in response to the situation of a plurality of expert advice and contestation of it. All these proposals declare the need to open up the category of expertise to include knowledge inputs

other than scientific inputs, that is, to re-draw the boundaries between experts and non-experts. They differ, however, in who, what, why and how to include non-scientific knowledge. The fourth and concluding section raises questions about the role of expertise in the current quest for social transformation.

PROBLEM-FRAMING AND KEY CONCEPTS

The development of modern society, not least its techno-scientific progress, have made most aspects of life dependent on expert systems. We have, as Jasanoff (2005) stresses, a scientific overflow in society, in which knowledge and products originally created by scientific communities reach society with increasing speed, extent and impact. As a consequence, almost all public issues have a scientific component. This has led to an increased demand among government agencies, corporations and interest organisations for expertise to assess risks and guide actions. As Beck (1992) and Giddens (1990) have stressed, such a scientisation of society implies that citizens have to trust science; without science, crucial knowledge about the state of the environment would not exist, nor would there be guidance on relevant ways for handling such environmental problems.

However, science does not influence society unilaterally. Instead, science and society are dynamically related. Technoscientific progress has evidently led to a scientisation of society, but science has also changed in the process. Nowotny et al.'s (2001) book *Re-thinking Science: Knowledge and the Public in an Age of Uncertainty* is one of the most well-known contributions presenting a case for this view. It claims that, owing to mass education, scientific thinking is distributed socially and spatially, and now exists 'everywhere' in society. Science was previously characterised by hierarchical structures, internal control systems and disciplinary boundaries (what Nowotny et al. term 'Mode-1 science'). The gradual increase in science–society interaction has brought about a situation where they now also strongly influence each other. Processes of dedifferentiation and hybridisation have made it hard to demarcate science as a discrete practice or distinct sphere; research is conducted in many institutional settings and in very different ways. A consequence of this is that general scientific competence and literacy have grown, and citizens are not only able to evaluate scientific work, but may also contribute to it.

A parallel, and diverging, trend is the extreme and ongoing specialisation of science (Lidskog and Sundqvist 2018b). Science consists of very specialised practices that are hard to understand not only by non-scientific actors, but also by researchers with other disciplinary assets. A great deal of current research takes place in spaces with restricted access, sometimes open only for the scientists involved. Genetically modified organisms (GMOs), new synthetic chemicals, and carbon capture and storage are all examples of scientific results that are debated in society, but whose development took place behind closed doors, such as in laboratories run by universities or corporations. Scientific activity is still separated from the wider society, and when it does go public – when its findings are presented and/or applied in society – it becomes debated and potentially contested.

Both these trends exist in regulatory work. Calls to open decision-making processes to external scrutiny and wider public involvement are a recurrent feature of political and public discussions of regulation, not least within the fields of health and the environment (Gouldson et al. 2007). These calls are not only directed towards political bodies and companies, but also

towards scientific communities. According to the European Commission (EC 2001), the solution to the problem of public distrust is increased transparency of expert work, that is, to make visible how experts are selected and used in assessments and policy support. The frequently used approach of risk governance goes beyond traditional methods of regulating risk, and stresses that there are many legitimate ways that stakeholders and the public can contribute to defining and evaluating risks (Chapter 22 in this volume; Renn 2008; Lidskog et al. 2010; van Asselt and Renn 2011). This approach implies that involved experts should be open to questioning the situation, should not conceal issues of uncertainty, should welcome pluralism (the existence of different legitimate understandings, evaluations and recommendations), and should be receptive to the input and participation of other stakeholders (van Asselt and Renn 2011). By being inclusive, regulatory bodies hope to achieve effective, robust, accountable and legitimate regulation.

However, a great deal of regulation takes place with few opportunities for wider input. Regulation often builds on one set of experts who establish the environmental risks in respect of the probability and magnitude of the hazards, and another set who evaluate the costs and benefits of various responses. The issue is then opened for wider input by stakeholders and the public. Scientific expertise is often regarded by the regulators as neutral, objective and apolitical, that is, separate from political values. Regarded as the supreme source of knowledge, scientific expertise should guide the understanding of what is at stake and play a unique and decisive role in the regulatory process.

Thus, both in theory and in practices, different normative ideals and roles are ascribed to scientific expertise. Regardless of whether it is broad and distributed or discrete and specialised, expertise is always based on a claim to possess specialised knowledge, competence or skill. Expertise is achieved by carving out and controlling a particular knowledge area and then asserting authority as the provider of relevant knowledge for problem-solving within this area (Gieryn 1999). Through this boundary work, a specific type of knowledge – expert knowledge – is accorded the legitimacy to define, describe and explain bounded domains of reality. This boundary work determines who has expertise, and thus also who does not. Expertise and non-expertise are co-constructed in processes of boundary-making. However, as stressed previously, in addition to possessing expert knowledge, an expert is also required to have epistemic authority, that is, to be considered a provider of relevant and valid knowledge. Achieving epistemic authority is, however, a complex task that is further complicated by current arrangements where expert knowledge flourishes in many institutional settings, and where different, and even divergent, advice is being given. In this context, while epistemic authority does to a limited degree derive from ascription, it is mainly achieved through active negotiations. As Nowotny et al. (2001, p. 210) put it, science has moved from a culture of autonomy to a culture of accountability.

CONTENTIOUS ISSUES AND STANDPOINTS

Several theoretical approaches have been developed to tackle the situation of contested scientific expertise and a plurality of expert advice, with different views on and implications for the boundaries between science and policy and between expertise and non-expertise. Most can be collected under the heading democratised science, and have varying epistemological and normative assumptions as well as implications (Lidskog 2008; Berg and Lidskog 2018b).

Some proposals hold that science should swim downstream and open itself up for public input when discussing the practical implications of its research. Others hold that the public should swim upstream and have a say in the definition of research problems and practices. Even if the proposals for how to democratise science differ, they all advocate strategies of inclusion, where citizens should be seen not as mere passive receivers of scientific knowledge, but as active partners in the production of knowledge, or in the evaluation and application of scientific contributions. Thus, a common concern has to do with how new relations between experts and citizens can be negotiated and designed.

We begin by presenting the standpoint that these proposals have emerged as a reaction to. An early response to public neglect of expert scientific advice was to interpret it as caused by public ignorance or misunderstanding of science. The suggested remedy for this was to better inform citizens, and sometimes even educate them, to help them correct their original misunderstanding and recognise the superiority of the scientific understanding of an issue. This solution, labelled the deficit model of public understanding of science, has been heavily criticised (Irwin and Wynne 2004). The basis of this criticism is that citizens often ignore expert claims not because they cannot comprehend them, but because they deliberately reject them. The reasons for the rejection may vary, but one of them is that on some occasions scientific findings have proven to be incorrect and have contributed to regulatory failures (Löfstedt 2005). Another reason is that the public may find that scientific experts frame an issue in an overly restricted way, excluding important aspects (Wynne 2005). A third reason is the existence of multiple, and often divergent, scientific recommendations about the causes as well as remedies of an environmental problem. A fourth reason is that the growing prevalence and awareness of uncertainty have made both the giving and the trusting of expert advice a much more complicated matter. As an alternative to the deficit model, a dialogical model has been developed, where public understandings are not simply subordinated to scientific understandings.

Within this model, various proposals flourish which differ in their inclusion of other perspectives and thus in how they draw the boundary between science and other fields. The dialogue that they advocate penetrates the scientific sphere to different degrees. One standpoint is that the complexity of environmental problems makes it necessary to complement scientific expertise with non-scientific expert knowledge. An example of this outlook is *post-normal science*, which asserts that science may have great validity and reliability in the laboratory, but real-world problems are far more complex, multifarious and highly uncertain (Funtowicz and Ravetz 1993). The notion of 'post-normal' is chosen to stress that 'normal science' in the Kuhnian sense – puzzle-solving within an implicit and unquestioned scientific paradigm – is no longer relevant for tackling many of today's environmental problems. Therefore, scientific knowledge needs to be enriched by other knowledge forms, not least local knowledge. The reason for this is that contextually generated knowledge about local circumstances is often more relevant to action than traditional, universal, abstract and context-independent scientific statements. Hence a bridge is built between the world of the laboratory and the world of society, which is needed when searching for viable solutions to environmental problems.

The environmental justice movement has been a promoter of the need to complement scientific expertise with other sources of knowledge. Bullard's (1990) seminal work *Dumping in Dixie: Race, Class and Environmental Quality* showed how in the 1960s the geographical pattern of siting noxious facilities (for example, waste-disposal sites) near highly segregated areas in the American South sparked a wave of protests against environmental racism, which brought together civil rights and environmental activists. As a consequence of this movement,

thousands of local, community-based groups that struggle to get their voices heard claimed that social justice also includes the right to live and work in a healthy environment (Szasz 1994). This movement was not critical of science per se, but claimed that powerful interests had brought in paid experts to convince local residents that proposed facilities did not constitute any environmental threat. By developing complementary expertise, even counter-expertise, activists spread knowledge about the detrimental effects of proposed facilities, and that people were living in endangered environments (Chapter 35 in this volume).

A far more radical view is that of epistemic diversity, which does not see other forms of knowledge as complements to science, but instead questions and relativises scientific knowledge itself. Not least within post-colonial thought, researchers have strongly emphasised the necessity to recognise not only the cultural and social diversity of the world, but also its epistemic diversity. This view territorialises disciplinary perspectives and epistemologies; what science presents as a universal gaze is in reality a provincial gaze, based on particular epistemic premises and historical experiences (Bhambra 2014; Bhambra and Santos 2017; see also Chapters 2 and 37 in this volume). Similar to Frankopan's (2015) criticism of making Europe the centre of gravity for world history, and thereby painting a selective and biased picture of world history, post-colonial thinkers stress that the social sciences have created a European epistemic singularity, thereby obscuring the existence of many other ways to understand and research the world and history. Some even claim that ways of being (ontology), ways of knowing (epistemology) and ways of advancing knowledge (methodology) are interconnected. This radical perspective means not only that different perspectives can be used to understand the world, but that there are different worlds that need to be understood and acknowledged. Santos (2014) highlights the need to allow oppressed social groups to represent the world as their own and on their own terms (what Santos terms 'epistemologies of the South'). By acknowledging and valuing knowledge produced by groups that have systematically suffered injustice and oppression, the false universalism of northern- or western-centric thinking is revealed. Currently, when theories from the Global South are acknowledged, they tend to be framed as provincial, in contrast to the pretended universal character of western social science theories. This is nothing other than an exercise of power, acknowledging some forms of knowledge while silencing others (Chapter 33 in this volume). The solution, as put forward by Bhambra and Santos (2017), is to recognise the epistemic and cultural diversity of the world and to provincialise the epistemic and cultural premises of what is seen as universal scientific knowledge.

A similar, though less far-reaching, perspective is provided by research strands within the field of science and technology studies that claim that science (often referring to the natural sciences and engineering) provides an overly restricted understanding of environmental issues, and that other means of framing and understanding issues are important if we are to grasp their full complexity. According to this perspective, the reason for including other perspectives is not that people have contextual or specialised knowledge that complements (or questions) science, but that members of the public may contribute important knowledge about public concerns (Marres 2007; Wynne 2005), as well as social practices and norms of relevance to the problem. Thus, scientific expertise does not provide a false, but instead an overly restricted, view of a matter. Scientific framings tend to ignore (or omit) the underlying causes of environmental problems, as well as the broader social implications of proposed solutions (Jasanoff 2005; Wynne 2005). Involving a broader set of scientific disciplines (such as history, sociology, anthropology and ethics), and letting people other than scientific experts provide

knowledge and perspectives on an issue, creates broader and more relevant knowledge. That makes it possible for everyone, including scientists, to generate more inclusive and reflexive framing processes around an issue (Wynne 2005; Hulme 2010). Thus, according to this perspective, while science is still an important provider of environmental knowledge and an important foundation for handling environmental problems, it is not a sufficient foundation; science always needs interpretation and support by non-scientific actors, for the sake of its accuracy as well as legitimacy.

Expertise is a social position for delivering valid, relevant and trusted knowledge. All the approaches presented above concern what should be counted as expertise. They differ in their views on where to draw the border between expertise and non-expertise, and whether and how to include other non-scientific actors in the position of experts.

Knowledge: What Should Be Included?

Expertise is a matter of knowledge, but not of all types of knowledge, only those that are specialised. Expertise is always elitist; it concerns a competence that is unique and requested (Collins and Evans 2007). However, as soon as scientific knowledge is to be transferred from its original context to another, it must be translated, taking into account the context in which it will be applied. This is one of the main reasons behind claims that expertise needs to include forms of knowledge other than scientific forms – that important specialist knowledge exists outside science.

A central issue in allowing for a broader knowledge base for expertise is how non-scientific knowledge should be related to scientific knowledge. That knowledge can arise from non-scientific practices is largely uncontested, as is that contextual aspects should be considered when giving expert advice. What is contested, however, is the character and status of non-scientific knowledge. The proposals range from claiming that it only complements science to claiming that it challenges science; that science is not superior to other knowledge forms but is tied to a specific socio-cultural context. Some proposals also claim that science can include knowledge about contextual aspects (including public concerns) and that there is therefore no need to broaden the scope of expertise to include non-scientific knowledge. It is through science that knowledge is systematised and validated to enable it to give relevant and robust expert advice. Also, warnings are raised that scientific representation of other forms of knowledge always transforms this knowledge into something other than its original content (Callon et al. 2009, p. 111). This raises the question of who should represent non-scientific expert knowledge.

Actors: Who Is a Knowledge Holder?

The social position of being an expert is often attached to the professional role of being a scientist. Professions are traditionally defined as being based on licence (exclusive permission to perform and implement specific tasks) and mandate (to prescribe how others must act) (Hughes 1958 [1981]). The limits of professional authority, mandate and legitimate scope of action are established through jurisdiction (which states who has a monopoly and control over a set of tasks) (Abbott 1988). In addition, to become part of a profession, a candidate must prove that he or she has acquired specific knowledge relevant for the profession (in most instances through an educational programme at university level) (Pfadenhauer 2006). When

expertise is broadened to include other forms of knowledge than scientific forms, it becomes harder to demarcate it. Prefixes such as ‘lay’, ‘local’ or ‘popular’ are used to signal a form of expertise that is not based on certified competence or a formal mandate. This makes the ‘problem of extension’ – where to draw the border between expert and non-expert – more present and urgent (Collins and Evans 2007). Experience-based expertise raises questions about what types of experiences and social practices lead to expert knowledge and how to evaluate this knowledge.

An apposite example is indigenous knowledge. Historically, indigenous people have been a neglected group in society. They have often been seen as a hindrance for economic growth or, even, as representing the opposite of modern development. When they have received attention, they have often been viewed as rights holders, that is, as constituting a political reality that must be taken into consideration (Chapter 6 in this volume). More recently, indigenous people have also been regarded as knowledge holders, most clearly in the international expert organisation the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) which was designed to bridge different knowledge systems, in particular the divide between scientific knowledge and indigenous and local knowledge (Díaz et al. 2015). However, studies have shown that bridging different knowledge systems is anything but unproblematic. Thus, the question of who to include leads to how to include; by which methods should non-scientific knowledge be included in expert knowledge and expert advice?

Methods: How Should We Include Non-Scientific Knowledge as Expertise?

Stating who are experts and what types of contribution they will provide is not sufficient. It is also necessary to find organisational forms for these knowledge contributions. Callon et al. (2009, p. 109) have even formulated the imperative that anyone who silences and dismisses those who should speak is obligated to organise ways for them to express their views.

On a local level, numerous social experiments and methods – for example, consensus conferences, citizen panels, hybrid forums, public inquiries and focus groups – have been developed to support broader knowledge inclusion (Callon et al. 2009; Irwin and Michael 2003; Chilvers and Kearnes 2016). On an international level, the most well-known and ambitious effort to achieve broader knowledge inclusion was undertaken by the IPBES, whose conceptual framework gives indigenous and local knowledge the same status as scientific knowledge (Díaz et al. 2015). Studies have noted, however, that despite these ambitions and intentions, there is a significant risk of non-scientific knowledge being constantly subordinated to scientific knowledge. An example is when, to be understood and heard, other forms of knowledge articulate themselves in a scientifically understandable way, but the original meaning and contribution of the non-scientific knowledge changes in the process of translation. This is visible, for example, when those selected to represent indigenous knowledge are also trained scientists (Löfmarck and Lidskog 2017). There is also a risk that these methods for broader knowledge inclusion will further alienate other knowledge holders within the public. These methods increase professionalisation, create new forms of professional expertise (on communication and inclusion), and unintentionally generate an extra layer of scientisation and bureaucratisation. Hence, contrary to that which they aim for, these methods may put further obstacles in the way of those whose voices they strive to represent (Soneryd and Amelung 2016).

Another way of furthering knowledge inclusion is to make non-scientific knowledge an object of scientific analysis. Using different scientific methods, indigenous, local and popular

knowledge can be gathered, systematised and communicated to scientific experts, and thereby be included as scientific facts. This way of including non-scientific knowledge is contested, since form and content are always interrelated. Therefore, some researchers propose more context-sensitive approaches (such as ethnography) rather than surveys or structured interviews, to do better justice to non-scientific knowledge (Irwin and Michael 2003).

Warnings have been raised, however, that all types of knowledge translation – even using context-sensitive methods – always transform the original knowledge. Arguing for direct representation – that non-scientific-knowledge holders should personally be included – does not necessarily solve this problem. It is rare to find a symmetrical exchange between scientific and non-scientific knowledge; instead, non-scientific knowledge is included and made use of to the extent that it is in line with scientific thought. The implication of this is that non-scientific actors' voices will be, if not silenced, at least distorted in processes of knowledge inclusion.

Reasons: The Wider Function of Public Inclusion

The quest for knowledge inclusion and a broadening of expertise is part of a more general trend in society (Power 2007). Calls to open up decision-making processes to external scrutiny, stakeholder dialogue and wider public involvement are a recurrent feature of political and public discussions of environmental risk (Irwin 2006). The quest for broader expertise is thus part of a more general trend towards new ways of governing subjects in which inclusion means that those included can not only provide knowledge and perspectives, but also affect the participating groups and individuals and possibly change their understanding.

The inclusion or exclusion of non-scientific actors may have an implicit strategic function. It can be a tool for co-opting oppositional groups, resulting in an uneven process where, in the end, expert knowledge and expert advice mainly reflect the views of the most powerful or vocal actors. Inclusion strategies can spread accountability to broader groups, but without giving them real opportunities to influence decisions. Some even claim that knowledge inclusion is largely a form of stage management (Hilgartner 2000) where inclusive processes are placed front of stage, making a public display of openness to different voices and forms of knowledge, whereas backstage techno-scientific development continues unabated. Citizens and stakeholders are frequently invited to take part in different kinds of public consultations, such as environmental impact assessments and public panels on controversial issues (as in the example of GMOs and nuclear waste disposal). In these settings, citizens are given the opportunity to evaluate proposals and articulate standpoints. However, even when they speak back to science through these forums, it is doubtful that they are listened to and have any effect on research agendas, knowledge production and decision-making.

Inclusive strategies also have deeper effects irrespective of an actor's intention. Participatory methods do not merely serve to include knowledge holders other than scientific ones in knowledge production and decision-making. They can also affect the identities of the included groups and may even create new categories of actors. Abstract actor categories such as 'the public', 'indigenous people' and 'local people' need to be further defined in order to specify concrete groups of people to invite. The knowledge holder is not only included, but also defined, through the participatory method used. When a strategy for knowledge inclusion is developed, it always involves an implicit idea of who should be included, what knowledge they hold, and what role they should play in knowledge-gathering and decision-making (Soneryd and Amelung 2016). That is, the non-scientific expertise, the issue at stake and the

inclusive strategies are all co-produced (Chilvers and Kearnes 2020). It is therefore important to reflect on and anticipate the effects that inclusive strategies will have on both the issue at stake and the actors involved.

Reflecting on the wider function of broader knowledge inclusion should not be reduced to serving an instrumental function of improving effectiveness in regulation and retaining credibility for expertise. Environmental problems are complex, and an important part of the regulatory process is to consider not only environmental aspects, but also what people value and how they are likely to respond to decisions.

OPEN QUESTIONS AND TRANSFORMATIVE POTENTIAL

It is increasingly recognised that addressing the ongoing problems of unsustainability and the exceeding of planetary boundaries requires not only scientific and technological advances, but also profound and enduring social and cultural changes. There is an emergent call – from political bodies and scientific communities – for social transformation, that is, for alteration of the fundamental social structures of modern societies (Deacon 2016; Boström et al. 2018). The work towards transformative change requests and needs expert guidance, and we therefore conclude by highlighting important aspects to consider regarding the role of scientific expertise in guiding social transformation.

First, it is important to critically investigate what type of expertise is asked for and shaped. The call for social transformation puts society at the centre, which is why representatives of the social sciences are increasingly being invited to, and included in, expert bodies (ISSC 2013). There is, however, a tendency for them to receive a restricted role, either giving advice on procedural aspects (such as how to involve stakeholders in decisional processes, or how to handle different views and standpoints in a deliberative way) or handling downstream issues and end-of-pipe solutions (facilitating implementation of technically framed solutions) (Beck 2011; Jasanoff 2012). In order to facilitate and guide social transformations, however, it is important that social scientific expertise is given (and tackles) the more fundamental role of examining the social causes of environmental problems and exploring how ingrained, unsustainable social and institutional structures are reproduced, and how they can be transformed (see, for example, Chapter 9 in this volume; Blühdorn and Welsh 2013; Hausknost 2020).

Secondly, it is important to critically investigate how social transformations challenge current institutional structures and power relations. Social transformations will affect the distribution of wealth and power, and create winners and losers. Individual actors and even whole sectors will therefore oppose transformative changes and develop social strategies to counteract, hinder or redirect social transformation. When social transformation becomes part of a scientific, political and popular discourse, there is always a risk of it becoming de-radicalised. It may even be converted into a type of technical fix, which can be used rhetorically to delay or hinder transformative changes, for example, by referring to how a process of change is under way but needs to be developed a further to become viable. It is therefore important to consider how social transformation affects power relations, both to avoid unwanted consequences and to prepare for the conflicts and power struggles that accompany the work for social transformation.

Thirdly, it is important to critically investigate the wider implications of proposed social transformations. The current emphasis on global environmental threats may serve a depoliti-

cising function by highlighting the urgent need for action and change while poorly recognising the social complexity of this task (Hulme 2015). Environmental threats are often pictured as universal and global, as though all people faced the same problems regardless of social and geographical belongings. There is a need to act, and to act rapidly, but without losing sight of the very different ways in which people understand and are impacted by global environmental change. People have to handle different local and regional issues, and draw on a diversity of knowledge and experience when framing and acting upon environmental challenges (Lidskog and Lockie 2020). To develop viable and relevant proposals and policies, is important to grasp what the problem is and entails for people with different positions, values and life-courses. In this process the dialogical model, with its emphasis on inclusiveness, is essential but, as noted previously, it must always be borne in mind that marginalised voices are often silenced or, when included, are often transformed and distorted.

Fourthly, it is important to critically investigate what futures that expertise constructs. Scientific expertise has developed an array of technical, conceptual and institutional tools for predicting the future: showing trends, estimating risks, identifying opportunities, mobilising resources, coordinating actions and shaping outcomes (Callon et al. 2009; Hulme 2010). The aim of these is to understand the future, but this future is also shaped by how it is measured and predicted. Taking this measuring and modelling for granted leads to seeing particular futures as natural or inevitable, independent of cultural, political or geographical context. Social science has an important role to play in exploring whose interests are reflected in particular constructions of the future (Lidskog and Lockie 2020). It also plays an important role in identifying implicit assumptions and normative commitments that lie behind these constructed futures, as well as in critically investigating to what extent they are based on valid views of how society works and how institutional, organisational and behavioural changes occur (Jasanoff 2015; Wynne 2005).

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19. Extractivism and neo-extractivism

Maristella Svampa

INTRODUCTION

Neo-extractivism is an analytical category born in Latin America that has a great descriptive and explanatory power, as well as a denunciatory character and a strong mobilizing power. It would be impossible to synthesize the contributions and characterizations, linked a profusion of articles and books produced in the past decade, which also encompass those of the affected actors and social movements. In this first section, I provide an account of some readings that point to the multidimensionality and multiscaleness of the extractivist phenomenon.

As regards the ‘accumulation model’, all the authors recognize the historical roots of extractivism: it is a form ‘of accumulation that started to be established on a massive scale 500 years ago’ (Acosta 2013, p. 62). In this regard, extractivism is not one more phase of capitalism nor a problem of underdeveloped economies, but constitutes ‘a structural feature of capitalism as a world-economy’, ‘a historical-geopolitical product of the differentiation – the original hierarchization between colonial territories and imperial metropolises; the ones thought as mere spaces of looting and plundering done for the provisioning of the others’ (Machado Araújo 2013, p. 131).

From my perspective, contemporary neo-extractivism refers to a way of appropriating nature and a development model based on the overexploitation of natural goods, largely non-renewable, characterized by its large scale and its orientation towards exports, as well as by the vertiginous expansion of the borders of exploitation towards new territories, which were previously considered unproductive or not valued by capital. Consequently, it designates and expands on the activities traditionally considered as extractive. This ranges from open-pit mega-mining, the expansion of the oil and energy frontier, the construction of large hydroelectric dams, and other infrastructure works – waterways, ports, oceanic passes, and so on – to the expansion of different forms of monocultures or mono-production, the generalization of the agribusiness model (soya and palm leaf, among others) and overexploitation of fisheries or forest monocultures (Svampa 2019a).

Coinciding with the previous definitions, extractivism has a long history with a historical-structural dimension. Since the time of the conquest, Latin American territories have been subject to destruction and looting. Rich in natural resources, the region was reconfigured again and again in the heat of successive economic cycles, imposed by the dynamics of capital and the international division of labor, through the expansion of the borders of goods. At a local level this has entailed great contrasts between extraordinary profitability and extreme poverty, as well as a great loss of human lives and degradation of territories, converted into zones of sacrifice. Potosí, in Bolivia, marked the birth of a means of appropriation of nature on a large scale and of a mode of accumulation, characterized by the export of raw materials and by a scheme of subordinate insertion in the world economy. Internal specialization and external dependence consolidated what the Venezuelan anthropologist Fernando Coronil (2002) rightly names ‘nature-exporting societies’.

However, the history of extractivism in the region is not linear, as it is traversed by successive economic cycles, dependent on the demands of the world market, as well as by the processes of affirmation of the nation state, especially in the middle of the twentieth century. During that century it was characterized by national control of extraordinary income, especially in sectors such as mining and oil. The possibility of income capture by the state would also feed a particular social narrative about Latin American nature and its benefits. In the heat of the successive booms of the commodities, an '*eldoradista*' vision of Latin America as a place of fabulous riches is usually reproduced, which expresses the idea that, owing to the convergence between the abundance of resources and opportunities offered by the international markets, it would be possible to achieve development, similar to core countries.

At the beginning of the twenty-first century, extractivism was loaded with new dimensions. In this context, where it is possible to register continuities and ruptures, the concept of extractivism reappeared as neo-extractivism. Continuities are seen because, during successive economic cycles, the extractivist DNA which European capital marked the region's long-term memory with was also contributing to a specific social conception about nature and its benefits. As a consequence, extractivism was associated not only with dispossession and the large-scale looting of natural resources, but also with the comparative advantages and economic opportunities that emerged at the same time as the different economic cycles and the new role of an interventionist state. Not by chance, neo-extractivism, following the coming to power of the new progressive governments in Latin America,¹ reinvigorated the developmentalist illusion expressed in the idea that, thanks to the opportunities offered by the new commodities boom and even more by the active role of the state, it would be possible to achieve development.

Ruptures are seen when the new phase of capital accumulation, characterized by the strong pressure put on natural goods and territories, and even more by the dizzying expansion of the commodities frontier, opened up new political, social and ecological disputes, and social resistance against the dominant developmentalist imaginary. New forms of collective action such as socio-environmental movements, community conflicts and the new impetus of indigenous organizations questioned the developmentalist illusion while denouncing the consolidation of a single-commodity model that destroys biodiversity and entails land-grabbing, the destruction of pre-existing forces of development and the degradation of both the environment and territories used for production and sustainable rural livelihoods.

In order to understand what characterizes neo-extractivism, I analyze it at two levels: first, in the second section, I deal with the topic from a more general viewpoint, as a privileged window to grasp the different dimensions of the current crisis; then, in the third section, I identify different phases of neo-extractivism, making visible the struggles' recurring dynamics.

NEO-EXTRACTIVISM AS A PRIVILEGED WINDOW

Far from being a flat category, neo-extractivism, in the form it has assumed over the past 15 years in Latin America, constitutes a complicated concept that provides a privileged window for viewing the complexities and different levels of the multifaceted crisis that contemporary societies are experiencing.

First, neo-extractivism is at the center of diverse contemporary accumulation dynamics. Hand in hand with the World Trade Organization (WTO), in the past 30 years the consolidation of neoliberal capitalism has resulted in a greater expansion of the commodity frontier.²

The consumption model associated with advanced capitalism requires a greater amount of raw materials and energy for its maintenance, which promotes the increase of the social metabolism and brings with it a greater pressure on the natural goods and territories (Martínez-Alier 2009). This dynamic of capital introduces the phenomena of recolonization of nature and of dispossession, visible in the process of land grabbing, the destruction of territories and the displacement of populations.

Thus, for example, the pressure and demand of mining resources globally has made companies look for minerals wherever they can be found:

mining does not respect protected areas, archaeological or sacred sites, human settlements, glaciers, springs of water, headwaters of basins or fragile ecosystems. Mining has even begun to be exploited under the sea and various samples that have been obtained off-shore are analyzed in the hope of finding exploitable materials beyond the land boundaries. (Padilla, 2012, p. 38)

After 2002, the mining sector experienced an unprecedented boom in the Latin American region, owing to the growing increase in the international price of metals and the liberalization of regulatory frameworks, carried out during the 1990s, which granted enormous exemptions to the sector and benefited the large mining companies. According to data from Comisión Económica para América Latina y el Caribe (CEPAL, the Economic Commission for Latin America and the Caribbean), 13 Latin American countries are ranked among the top 15 places as global producers of minerals (CEPAL 2013). If the 1990–2010 period is analyzed, Latin America almost doubled its share of world gold production (from 10.3 percent to 19.2 percent), molybdenum (from 15.8 percent to 31.8 percent) and copper (from 24.9 percent to 45.4 percent). The regional mining production remained stable despite the drop in the price of minerals experienced during 2008–09. In 2010, Brazil, Chile, Peru and Mexico were among the main destination countries, whereas 10 years previously there were only Chile and Peru. This phenomenon is complemented currently by the lithium fever, which covers northern Chile and Argentina, and part of Bolivia, countries that concentrate 60 percent of the reserves of this strategic mineral for the energy transition of the global economy.

Similarly, the desire to maintain an energy matrix linked to fossil fuels led to an expansion of the technological frontier. The extraction of unconventional fuels, whose economic cost is greater and whose energetic performance is much lower than that of conventional fuels, has serious and burdensome environmental, social and health impacts. The United States actively promoted fracking, which not only reconfigured the global energy agenda but also generated a new conflict cartography, which made Latin America a focal point, more particularly Brazil, Mexico, Colombia, and Argentina – the beach-head for fracking.

A similar phenomenon occurred involving large infrastructure projects. In the South American region, the IIRSA/COSIPLAN infrastructure projects portfolio³ was signed in 2000, which covers transport (waterways, ports and oceanic corridors, among others), energy (large hydroelectric dams) and communications. Between 2004 and 2014, these grew exponentially, from 335 projects to a portfolio of 579 projects (Carpio 2017, p. 130). In this context, the fervor caused by mega-dams increased, placing the Latin American region, together with Southeast Asia, at the epicenter of investments. While Brazil is at the head of the ranking with 256 large dams built or in the planning phase, the trend is expanding to other Latin American countries: of the 412 dams under construction, built or proposed in 2015 in the Amazon basin, 77 are in Peru, 55 in Ecuador, 14 in Bolivia, six in Venezuela and two in Guyana (Vidal 2017).

Another exacerbated element involves the territorial dynamics, which have a tendency to undergo intensive occupation of the territory and the hoarding of lands, through methods linked to monoculture or single-source (mono) production. For example, in several countries of South America, the expansion of the soybean front led to a reconfiguration of the rural world:

Between 2000 and 2014, soybean plantations in South America expanded by 29 million hectares, comparable to the size of Ecuador. Brazil and Argentina centralize nearly 90 percent of regional production, although the fastest expansion has occurred in Uruguay, and Paraguay is the country where soybean occupies the largest area in relation to other crops: 67 percent of the total agricultural area. (Oxfam 2016, p. 30)

All this redefined the land dispute: according to the Oxfam report (with data from the agricultural censuses of 15 countries), ‘As a whole (in the region), 1% of the larger farms concentrated more than half of the agricultural surface. In other words, 1% of farms hold more land than the remaining 99%’ (Oxfam 2016, p. 9). Colombia is the most unequal country in the distribution of land, where 0.4 percent of agricultural holdings dominate 68 percent of the country’s land. It is followed by Peru, where 77 percent of the farms are in the hands of 1 percent; then Chile (74 percent), Paraguay (71 percent), Bolivia (66 percent), Mexico (56 percent), Brazil (44 percent), and Argentina (36 percent).

The large scale of the ventures warns us about the size of the investments, which requires capital-intensive mega-enterprises, such as large transnational corporations – although national mega-companies are not excluded, such as Petrobras, the Venezuelan PDVSA and, even, the Argentine YPF, among others. Simultaneously these mega-projects are not labor-intensive, given that they generate few direct jobs. For example, in the example of large-scale mining, for every 1 million dollars invested, only between 0.5 and 2 direct jobs are created (Colectivo Voces de Alerta et al. 2011). In Peru, a country par excellence of transnational mega-mining, it occupies barely 2 percent of the economically active population, compared with 23 percent in agriculture, 16 percent in commerce and almost 10 percent in manufacturing (Svampa 2019a, p. 10).

Secondly, neo-extractivism illuminates the current socio-ecological crisis, and more generally the crisis of the project of modernity. Certainly, the imminence that we are witnessing of significant anthropogenic and sociogenic changes on a planetary scale that endanger life (the Anthropocene) has led to a questioning of the current dynamics of development linked to unlimited expansion of the commercialization frontier, as well as the dualist vision associated with modernity. These dangers have been amplified by the current dynamics of development, a product of the burning of fossil fuels, the advance of deforestation and the loss of biodiversity, among other problems. As a consequence, it is possible to establish a relationship between neo-extractivism (as a dynamic of dominant development) and the Anthropocene (as a diagnosis of the global scope of the socio-ecological crisis), when examining these consequences on a planetary scale.

In 2020, the COVID-19 pandemic made visible the close link between socio-ecological crisis, models of maldevelopment and human health. Among the structural causes of the pandemic is the problem of deforestation, that is, the destruction of ecosystems that expel wild animals from their natural environments and release zoonotic viruses that were isolated for millennia, putting them in contact with other animals and humans in more urban environments, thus enabling interspecies jumping. Thus, the revealing element is that the advance of

capitalism on the territories has the capacity to release a large quantity of zoonotic viruses, which are highly contagious and mutate rapidly, and for which we have no cure or vaccine.

The pandemic showed the extent to which discussing the Anthropocene or Capitalocene is not only a matter of climate change and global warming, but also of globalization and mal-development models. Thus, other aspects of the climate emergency stand out, not exclusively linked to the increase in the use of fossil fuels, but also to changes in land use, deforestation and the expansion of intensive livestock, all of these sources of potential pandemics. Consequently, the ecological crisis thus appears intrinsically linked to the crisis of modernity. Escobar (2005) in this regard urges us to think of alternatives to modernity, other paradigms that place the reproduction of life at the center of analysis and point to the need to view and re-create the link between humans and non-humans from a critical non-dualistic perspective.

In recent decades, Latin American governments have set the social and the economic against the environmental and the ecological. For example, progressive governments justified neo-extractivism and environmental destruction in the name of development and the reduction of inequalities, which created a paradoxical situation, based on the installation of a selective rights agenda, which denied and/or dismissed socio-environmental demands, and a large part of indigenous claims for land and territory. Today we know that an important part of the economic growth that occurred in Latin America during the commodities boom was captured by the richest sectors of society. Data from *Forbes* magazine show that the wealth of Latin American billionaires (with fortunes of over US\$1 billion) grew at an annual rate of 21 percent between 2002 and 2015, an increase six times higher than that of the region's gross domestic product (GDP) (3.5 percent annually). In 2013–14, according to Oxfam, 10 percent of the richest people in the region kept 37 percent of the income; but if wealth was considered, these data rose overwhelmingly, showing that the richest 10 percent accumulated 71 percent of the wealth; while the most privileged 1 percent kept 41 percent (Kessler and Benza 2020). Even now the social is still set against the environmental, as if there were a contradiction between the two, dismissing that those who suffer the most environmental damage are the most vulnerable sectors, as they live in areas exposed to highly polluting sources, and lack the necessary economic and human means to face the consequences and resist the onslaught of neo-extractivism, and cope with the impacts of climate change (floods, droughts and storms). The conclusion is that, notwithstanding that the facts call into question this developmental perspective, for most Latin American governments neo-extractivism continues to be seen as a lifeline in the middle of the crisis.

Third, neo-extractivism also connects us with the global economic crisis insofar as the current model of accumulation is associated with the reforms carried out by neoliberal and financial capitalism from the 1990s onward as well as the propensity towards crisis reflected in the global financial crisis of 2008. On the one hand, financial capital plays a fundamental role in the extraction of raw materials, in the organization of the logistics of their circulation and in determining increases and decreases in the prices of commodities in international markets. On the other hand, the crisis has accentuated social inequalities, following the implementation of economic adjustment policy to combat the recession that extended to the central countries and made economic models that more intensely commodify nature attractive. In this way, the green economy model based on inclusion (inclusive growth and sustainable development) is being promoted by a mainstream development perspective. This model extends the financial format of the carbon market to other elements of nature, such as air, water, and processes

and functions of the environment (Svampa and Viale 2020) (see Chapters 27 and 41 in this volume).

Fourth, neo-extractivism provides a privileged window that allows us to read the development of capital(ism) in geopolitical terms, from the relative decline of the United States and the rise of China as a global power. This situation of hegemonic transition is interpreted as entry into a period characterized by conflicting polycentrism and plurality in cultural-civilizational terms, the consequences of which are still to be defined. From the globalized peripheries, in Latin America, Africa and some regions of Asia, the hegemonic transition brought as a correlate the intensification of exports of raw materials, which is reflected in the consolidation of increasingly unequal economic and socio-ecological links to economies at the center and especially the Republic of China. That is, in the current geopolitical context, which indicates the great Asian country as a new global power, neo-extractivism allows us to read the process of global reconfiguration, which from the perspective of peripheral capitalism implicates the expansion of the extractive frontier and a dizzying refocusing peripheral economies on the production of primary products.

Circa 2000, China did not hold a relevant position as a destination for exports or origin of imports for the countries of the Latin American region. However, in 2013 it had become the first source of imports for Brazil, Paraguay and Uruguay; the second in the case of Argentina, Chile, Colombia, Costa Rica, Ecuador, Honduras, Mexico, Panama, Peru and Venezuela; and the third for Bolivia, Nicaragua, El Salvador and Guatemala. The exchange is, however, asymmetric. While 84 percent of exports from Latin American countries to China are commodities; 63.4 percent of Chinese exports to the region are manufactures. To mention a few cases: Argentina exports soybeans, oleaginous fruits and vegetable oils; Chile, copper; Brazil, soybean and iron ore; Venezuela and Ecuador, oil; and Peru, iron ore and other minerals. Similarly, Chinese investments are mainly established in extractive activities (mining, oil, agribusiness and megastores), which reinforces the reprimarization effect that Latin American economies experience under the Commodity Consensus. In some instances, they are orientated towards the tertiary sector to support the primary sectors. This shift implies a threat to the clusters made up of small and medium-sized companies (SMEs), whether owing to environmental contamination or the possibility of exporting directly to China products that were processed previously by local SMEs. Thus, what is most notable from this scenario, is not the linkage of the Latin American region – inevitable and necessary – with China, but the way in which it has been operating, through the massive export of commodities and the accentuation of unequal exchange. All this was enhancing neo-extractivism and the reprimarization effect in Latin American economies.

Last but not least, neo-extractivism provides a privileged window for reading the development process in respect of the crisis of democracy (see Chapter 24 in this volume), that is, the relationship between political regime, democracy and respect for human rights. The association between neo-extractivism and the weakening of democracy is indisputable: without social license, without consultation of the population, without environmental controls and without the scarce presence of the state, or even with it, the trend is towards the manipulation of forms of popular participation in order to control collective decision-making. However, the increase in state and parastatal violence raises a question about the always tense links between extractivism and human rights. The Global Witness report released in September 2021 shows that 227 lethal attacks were recorded throughout the world, exceeding historical figures for the second year in a row. Three-quarters of the murders of environmental activists

recorded in 2020 occurred in Latin America (165 persons). Colombia was once again the most affected country in the world, with 65 recorded killings, and Nicaragua, with 12 deaths, was the deadliest place for environmental champions on a per capita basis (Global Witness 2021). The criminalization of socio-environmental protests and the increasing murders of environmental activists throughout the world, particularly in Latin America, points to a dangerous slip towards political closure, showing the perverse equation ‘more Extractivism, less Democracy’ (Svampa 2019b, p. 8).

Given its characteristics (social fragmentation, displacements of other forms of economy, verticality of decisions, strong impact on ecosystems), instead of its consequence, conflict can be seen as largely inherent to neo-extractivism, even though this is not an automatic relationship, as it is conditional on the emergence of explicit social resistance. Over the years, and in the heat of new forms of expansion of the capital frontier, with conflicts multiplied, such social resistance became more active and organized. Consequently, an increase in social conflict occurred. Throughout Latin America and the geography of South American countries, where the number of extractive projects and the territorial areas intervened have expanded, the socio-environmental conflicts have continued to grow. An example of this is large-scale mining. The causes of socio-environmental conflicts generated by mining projects is extensive and highly complex to address in exhaustive terms. Each mining project triggers, in and of itself, a conflictual process that begins with exploration activities and that does not cease even when it is momentarily paralyzed, or when the life cycle of the deposit has been exhausted.

Currently, there are no Latin American countries with mining projects that do not involve socio-environmental conflicts confronting communities with mining companies and the government. These include Mexico, Guatemala, El Salvador, Honduras, Costa Rica, Panama, Ecuador, Peru, Colombia, Brazil, Argentina and Chile. There are numerous collective spaces devoted to the problem of mega-mining, among them, the Latin American Observatory of Environmental Conflicts (OLCA), created in 1991, with headquarters in Chile, the Observatory of Mining Conflicts in Latin America (OCMAL), which has been in operation since 1997 and articulates more than 40 organizations. Thus, in relation to mining, according to the OCMAL, in 2010 there were 120 conflicts that affected 150 communities; in 2012, this increased to 161 conflicts, which included 173 projects and 212 affected communities. In February 2014, the number of conflicts was 198, with 297 affected communities and 207 projects involved. In January 2020, there were 284 conflicts, 5 cross-border, involving 301 projects, 263 cases of criminalization and 39 inquiries. The countries with the greatest number of conflicts are Peru (46); Mexico (58), Chile (49); Argentina (28), Brazil (26), Bolivia (10), Colombia (16) and Ecuador (9).⁴

On the other hand, from 2003 the socio-environmental struggle laid the foundations of a common language of valuation⁵ of territoriality, what I have termed the ecoterritorial turn (Svampa 2019a), which is manifest in the convergence of different matrices and languages and an innovative crossing between the peasant-Indigenous and autonomist narratives, bound by an environmental thread, which by the end of the progressive cycle had also added a feminist thread. As a consequence, a common narrative emerged that focused on the defense of land and territory and sought to account for the way in which current socio-environmental struggles are thought of and represented. The ecoterritorial turn refers to the construction of various frames of collective action that also function as structures of meaning and schemes of alternative interpretation. These collective frameworks tend to develop an important mobilizing capacity, and establish new themes, languages and slogans in societal debates while

orienting the interactive dynamic towards the production of a common subjectivity in spaces of resistance. Within the ecoterritorial turn, the growing role of women in the struggles stands out. This growing association between feminisms and environmentalisms is expressed by the emergence of popular and/or territorial feminisms that place care for life and territories at the center.

A PERIODIZATION OF NEO-EXTRACTIVISM

It is possible to distinguish different phases of neo-extractivism, linked to conflict and political processes. We can distinguish a first phase of positivity, between 2003 and 2008. Certainly, at the beginning of the new era, in the heat of the commodity price boom, the extractivist turn was interpreted in respect of comparative advantages, as a ‘new developmentalism’, instead of by the differences between progressive or conservative governments. I highlight that it was an optimistic phase, since the increase in social spending and its impact on poverty reduction as well as the growing role of the state and the broadening of the participation of the population, generated great political expectations in society. Let us not forget that between 2002 and 2011, in the region, poverty fell from 44 percent to 31.4 percent, while extreme poverty fell from 19.4 percent to 12.3 percent (CEPAL 2012). Most countries expanded with an array of conditional transfer programs (bonds or social plans), which would reach 19 percent of the population (CEPAL 2013); which is about 120 million people under plans.

Alternatively, in some countries this first phase was characterized by the expansion of the borders of the law, visible in the constitutionalizing of new rights (individual and collective). The state-run narrative coexisted, with its articulations and tensions, with the indigenous and ecologist narrative. This is exemplified in Bolivia and Ecuador, beyond the growing hegemony of the state–populist matrix and its articulation with the new national political leaderships. This period of economic boom, of reformulation of the role of the state, is also an opaque period. As non-recognition of the conflicts became associated with extractive dynamics, this continued until approximately 2008, a period of time during which different governments renewed their presidential terms.

The second phase, between 2008 and 2013, corresponds to the proliferation of mega-projects, as well as an increase in social resistances. As regards the former, this is reflected in the National Development Plans submitted by the different governments, which demonstrated an explicit intention to increase the different extractive activities. Depending on the specialization of the country, the extraction would be of minerals, petroleum, construction of hydroelectric power plants and/or the expansion of transgenic crops. In Brazil, the extraction followed the Growth Acceleration Plan (PAC), launched in 2007, which proposed the construction of a large number of dams in the Amazon, in addition to the realization of energy mega-projects linked to the exploitation of oil and gas. In Bolivia, the promise of the Great Industrial Leap emerged, based on projects for the extraction of gas, lithium, iron and the expansion of agribusiness, among others. In Ecuador, they started open-pit mega-mining and expanded the oil frontier; while in Colombia, from 2010, a set of extractive projects were launched under the slogan ‘the energetic-mining locomotive’. In Venezuela, there was the Strategic Plan for oil production, which involved an advance of the exploitation frontier in the Orinoco belt; while in Argentina, the 2010–2020 Agrifood Strategic Plan promised an increase of 60 percent in

grain production, to which was added (in 2012) the commitment to the exploitation of unconventional hydrocarbons through fracking.

The desire to increase mega-projects was also expressed through the Initiative for the Integration of Regional Infrastructure in South America (IIRSA), later renamed COSIPLAN. This program was agreed upon in 2000, by several Latin American governments, whose main objective was to facilitate the extraction and export of these products to their ports of destination. From 2007, the IIRSA came under the purview of the Union of South American Nations (UNASUR), and was renamed COSIPLAN (which has already been cited), and this led to an intensification of regional trade and investment by the National Bank for Economic Development (BND) in infrastructure works. However, in various regions, the IIRSA-Cosiplan projects were questioned and resisted, because despite the Latin Americanist discourse that stressed the need to weave new relationships between peoples and state communities (Carpio 2017) the infrastructure integration of the IIRSA had evident market objectives.

In the fervor of the different territorial and environmental conflicts and their recursive dynamics, the Latin American governments ended up taking on a belligerently developmentalist discourse in defense of neo-extractivism. This coherence between discourse and practice which occurred even in countries such as Ecuador and Bolivia that had aroused the highest political expectation of change including promises of *Buen Vivir* – emphasizing care for nature and recognition of the role of indigenous peoples – illustrate the evolution of progressive governments towards models of more traditional domination (in many instances, linked to the classic populist or national-state model). It also demonstrates the forced recognition of a new phase of shrinking of the democratic sphere, visible in the intolerance towards dissidence and the criminalization of resistance.

Finally, in line with the second phase, from 2013 to date, including the time of the COVID-19 pandemic, we are witnessing an exacerbated phase of neo-extractivism. One of the relevant elements that explains this type of aggravated continuity, refers to the fall in the prices of raw materials, which prompted Latin American governments to exponentially increase the number of extractive projects, through the expansion of the boundaries of commodities (Moore 2011; Svampa and Teran Mantovani 2019). In view of this, not only were the majority of Latin American governments unprepared for the fall in commodity prices – dramatically so in Venezuela – but consequences would quickly arise with the tendency to increase the trade deficit (Martínez Allier 2015) and the recession. In addition to this, the progressive/populist hegemony declined and the progressive cycle ended, which will have a strong impact on the reconfiguration of the regional political map of the future.

During 2020, some celebrated that, on a global level, the paralysis of different economic activities brought about a reduction in the emission of greenhouse gases. However, even though the emergency brake was activated, neo-extractivism did not stop. Furthermore, in Latin America, the public policies of the different governments did not aim to strengthen environmental demands. The extractive activities (such as mining) were declared essential, clearing and deforestation advanced, and with these so did the fires. During the pandemic, the murders of environmental activists continued, reaffirming that Latin America – particularly countries such as Colombia, Brazil and Mexico – is still the most dangerous area in the world for environmental defenders.

Likewise, neo-extractivist politics continues to overflow any ideological divisions. In 2020, the ‘fire lobby’ again unleashed its fury. For example, the Brazilian Pantanal, the largest continental wetland on the planet that covers a large part of the states of Mato Grosso and Mato

Grosso do Sul, registered 16 000 fires, making 2020 the year most punished by fire according to data from the National Institute for Space Research.⁶ For several months, Argentina was ranked second globally for the number of fire sources, which affected wetlands and native forests, in different provinces (in 2020 more than 1 million hectares were burned), largely intentional fires behind which are the soybean and mining lobbies and that of large real estate agents (gated communities). In Mexico, in September 2020, Victor Toledo, one of the most important referents of political ecology in Latin America, had to resign from his position in the Ministry of the Environment and Natural Resources (Semarnat). Under his mandate, Toledo promoted the prohibition of glyphosate and criticized the project of the Mayan Train,⁷ one of the emblems of the ‘development’ of the Lopez Obrador government, which tramples the rights of ancestral communities. His resignation exposed, once again, the limits of selective Latin American progressivism. Finally, while the fight against the development of fracking continues in Colombia, in Ecuador and Argentina, mining has further advanced, despite the lack of a social license and citizens’ mobilization of available institutional actions (public consultations, in Cuenca, Ecuador, and citizen initiatives, in Chubut, Argentina), which are denied or held back by the authorities.

CONCLUSION

Extractivism is part of the long history of the continent and its struggles, and it defines an appropriation of nature and a pattern of colonial accumulation associated with the birth of modern capitalism. However, in its updated form in the twenty-first century, it brings new dimensions at different levels: global (hegemonic transition, expansion of the commodity frontier, depletion of non-renewable natural resources and a socio-ecological crisis of planetary scope), regional and national (the relationship among the extractive-export model, the nation-state and the capture of extraordinary income), territorial (intensive occupation of land and ecoterritorial struggles with the participation of different collective actors) and, finally, policies (the emergence of a new, contentious political grammar and an increase in state and parastatal violence). Within the framework of the continent’s anti-extractive struggles, one of the great contributions of the eco-territorial and popular feminisms of the south, together with the indigenous peoples, is the recognition of other languages – of valuation, relational narratives, other possible links between society and nature, which place care and sustaining life at their center (Svampa 2021).

NOTES

1. At beginning of this millennium there has been a shift towards left-wing governments in Latin American democracies, which has been welcomed as a new progressive politics as it aimed to move away from the neoliberal economic model of the early twenty-first century. Among these governments were those led by Hugo Chávez in Venezuela, Evo Morales in Bolivia (the country’s first indigenous president), Luiz Inácio da Silva (Lula) leader of the Workers’ Party in Brazil, Néstor Kirchner in Argentina, Rafael Correa in Ecuador, Fernando Lugo in Paraguay and Mauricio Funes of the FMLN (Farabundo Martí National Liberation Front) in El Salvador).
2. First proposed by Moore (2000), the idea of commodity frontier emerges from the debates on world-systems theory prompted by Wallerstein and his related notion of the commodity chain. Commodity frontiers account for global capitalist economy expansions into specific places and

- sites for the provisions and extraction of raw material and the subsequent process of incorporation of territories into the expanding capitalist world.
3. Inaugurated in 2009 by the Union of South American Nations, the COSIPLAN project portfolio incorporates the former Initiative for the Integration of Regional Infrastructure in South America (IIRSA) and consists of several transportation, energy, and communications integration projects spread throughout the entire South American territory (see <https://iirsa.org/en/Page/Detail?menuItemId=32>, accessed 17 May 2022).
 4. Source: OCMAL, accessed 8 May 2022 at https://mapa.conflictosmineros.net/ocmal_db-v2/.
 5. For a short definition of the concept of 'language of valuation', see <http://www.ejolt.org/2012/12/languages-of-valuation/> (accessed 8 February 2021).
 6. <https://www.bbc.com/mundo/noticias-54124696> (accessed 8 February 2021).
 7. The *Tren Maya* is a 1525 kilometer-long railway project that will interconnect the major cities and tourist regions of the Yucatán Peninsula in Mexico.

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23. The values of Nature

Clive L. Spash and Tone Smith

INTRODUCTION

The differential values of Nature become evident in the divisions between three positions: (1) respecting and leaving room for autonomous Nature (for example, wilderness, rewilding and flourishing); (2) using, but living in symbiotic relationships with, natural processes through traditional management (for example, aboriginal fire ecology, or forms of organic agriculture and permaculture); and (3) attempted domination over Nature in modernity via invasive technologies. The first and third positions can be seen as opposite extremes, where Nature is either dominant over or dominated by humans. The middle ground of the second position confronts rather than dismisses the tension between Nature and culture, human and non-human values. These three positions summarise society–Nature relations and the surrounding debates. They encapsulate something of the ongoing conflicts over the concept and values of Nature, and as such aid reflection on how we understand Nature.

The first position may be seen as looking back to hunter-gatherer societies, a time before widespread human population expansion, and no or low impact land-use change. In this position, Nature as provider is associated with lifestyles of sufficiency (Chapter 34 in this volume). These ideas crossover into the second position, as reflected in regarding indigenous cultures as being closer to Nature and natural processes. Similarly, the Romantic rural idyll is an idealised picture of humans living in harmony with Nature. Strong positions on value in Nature may be involved and in more recent times have been associated with deep ecology, and, often very loosely defined, concepts of ‘intrinsic value’ in non-human entities. Ideas of living from and within Nature, meeting needs, sufficiency and harmonious living are evident in modern environmental movements, such as degrowth.

One set of counter arguments, to the idea of a benevolent Nature as provider, emphasises that life can be hard and Nature cruel. This appears as justification for increasing human management of natural processes (the third position). The struggle of ‘man’ against Nature is then employed to justify taming or eradicating wild animals, controlling the wilderness and making ‘wastelands’ productive. Such arguments have been cited by feminist literature as the imposition of a patriarchal social order. Thus, the domination of Nature as female is connected to the exploitation and suppression of the feminine and women (Merchant 1980; Seager 1993).

A somewhat different reaction against appeals to Nature, and naturalness, warns of the naturalisation of human social norms, practices and behaviours. More specifically, a range of social structures and mechanisms are seen as having been naturalised – elitist class relations, patriarchy, sexual oppression, heterosexuality, ethnic/racial discrimination and eating meat. Thus, imposed norms of a dominant social group may be legitimised as natural in a form of social Darwinism. Reaction against this may include criticising the imperialist imposition of concepts and value systems. An explicitly subjective and cultural basis for values then appears as an alternative, where claims to objectivity are dismissed, and may be replaced by conven-

tionalism (that is, values are merely social conventions), cultural relativism of knowledge and plural perspectives as equally valid.

This counter to naturalisation is often presumed to be politically progressive on the assumption that it is politically tolerant. However, the move to cultural determination has also led to social constructionist arguments for the dissolution of Nature (Pollini 2013). These fail to account for the presence of Nature as a concept across time and space in human society and dismiss out-of-hand non-human values. Opening the door to the legitimisation of all positions as equally valid undermines knowledge claims and undermines the ability to determine what (if anything) is wrong with modernity. As a consequence, the currently hegemonic modernist position of domination over Nature can actually gain support from this postmodernist critique of Nature. As noted, this goes to the opposite extreme from the first position. It proposes an anti-non-human approach, and is typically allied with technological optimism, supporting economic growth as human progress, relying on anthropocentric, consequentialist arguments and utilitarian values.

All three positions concern how Nature should be conceptualised, humans regard themselves, moral actions should be conducted and value conflicts addressed. Modernist-centred human-value positions envision man, or rather, (patriarchal) men, as in control of everything, with the ability to choose what is to be valued and what not. Postmodernists similarly place humans at the centre by dissolving Nature into the human and making it a social construct. Nature, if it is accepted that it exists at all, is only a hybrid, an artefact, of human making. The zeitgeist phrase of the early twenty-first century became 'we are living in the Anthropocene', a new geological era (Chapter 5 in this volume). This conflates global human impact with control while engaging in a Promethean discourse (Baskin 2015). Humans are described as both limited, facing catastrophe, and unlimited in their potentiality; that is, possessing the ability to make the world anew using geoengineering, genetic modification and the latest computing and communications technologies. The contrasting perspective is that modern human society has lost some basic understanding of the values of Nature that go beyond functionally fulfilling humans' desires. In this view, humanity is out of control and subject to ultimate domination by the very structures it claims to have made irrelevant.

The aim here is to explore the underlying values behind these positions on Nature. We start by clarifying what is understood by the concept 'Nature' and introducing the main value theories in Western philosophy (that is, rights, utility and virtues). On this basis, we explore the moral debate over how humans should value non-human reality and the entities of which it is constituted. Ethics and morality are taken as synonymous, and as rational means of guiding action. This refers to right/wrong/permissible behaviour with regard to basic values and a common concern across ethical theories for the alleviation of suffering and promotion of well-being (Pojman 1989). When considering the values of Nature, core concerns arise as to moral standing and considerability of non-humans, subjective versus objective values, plural values and incommensurability. In the penultimate section, we turn to the hegemonic policy discourse on environmental values that places them within price-making market systems and a neoliberal ideology. This involves the ongoing struggle to counter, transform and move beyond the reduction of all values of Nature to a single metric, namely, money.

CONCEPTUALISING NATURE AND VALUE

What Is Nature?

Most fundamentally we must ask what is understood by the concept 'Nature', not least because of a postmodernist trend in denial of even its existence (Pollini 2013). Nature is generally taken as 'other' than human. However, humans are simultaneously part of Nature, not least as physical, chemical and biological entities. Their interaction and impact on the natural world around them is self-evident. Confusion then arises as to what the concept means. Defining Nature also requires clarifying different uses of the term (see Soper 1995, esp. ch.5).

As an applied philosophical concept Nature stands in contrast to human (for example, society, culture and artefact). It represents a means of understanding the ways in which humans and their activities are distinct. That something is distinct from other entities should not be confused with being separate from other things. For example, your hand is distinct from the rest of your body but connected to (not separate from) your body of which it is a part. Clearly, humans are part of a greater whole and part of Nature, but remain distinct entities. A great deal of confusion comes from equating the terms 'separate' and 'distinct' and treating them as synonymous. The values of Nature are, then, about recognition of similarity and difference involving debates in environmental ethics over human–Nature relations and the status of non-humans.

A second use of the term 'Nature' is ontological and concerns the fundamental aspects of reality that humans live within, that is the natural structures to which all are subject, metaphorically referred to as the Laws of Nature. Science has enabled humanity to harness Nature's causal powers while remaining subject to its law-like conditions and constraints. A confusion here is to equate advances in human understanding of the structure and functioning of Nature with ability to determine and dominate everything, with the ultimate aim of creating reality in man's image. While humans impact on the bio-physical world, which is why there is an ecological crisis, they do not determine the structure, mechanisms and causal powers of Nature. Contra some commentators' opinions (most notably Merchant 1980, 2006), early pioneers of modern scientific approaches, such as Francis Bacon (1620 [1889]), understood that Nature, to be commanded, must be obeyed, meaning humans do not determine the rules of the game but have to learn them and play by the rules as set down by Nature. That there are real structures outside human control is exactly why ignoring biophysical limits results in ecosystems collapse, species going extinct, humans dying from pollutants, and so on. Values here take the form of absolutes with associated concepts of thresholds, constraints and tipping points.

A third meaning of 'Nature' is that found in policy discussions, public debates and lay discourses. Here Nature is a quality of the otherness of the non-human. This can be seen as a dialectical concept with the human on one end and the natural on the other. In this context humans experience the outcome of their interactions and the changes this involves. What constitutes the 'natural' is judged by the quality of the environment, the extent of biodiversity and the proximity of what is produced to its non-human state, for example, regarding a wooden chair as more natural than a metal one. Nature is then commonly regarded as degraded through human actions, as empirically observed in events, for example, the spread of domesticated animals, contamination of soil, air and water, manipulation of forests and extent of urbanisation. Here human intervention and management has qualitative impacts with aesthetic consequences, and creates forms of Nature that are actualised in landscapes and the occur-

rence, or lack, of species. This third meaning is the main preoccupation of policy discourses, conservation, environmental activism, Green politics and popular debate. Despite the policy relevance, there has been a lack of clarity as to how naturalness should be understood and its philosophical basis (for an informed clarification of the meaning, see Deckers 2021).

Nature, the non-human other, must then be understood as combining these different elements: an object in relation to humanity as subject which is distinct but not separate; a deep structure beyond human control that sets a range of limits (which humans ignore at their peril); and the quality of actualised interactions humans have in changing – creating, destroying and manipulating – their surrounding environment and its constituent parts. How these aspects of Nature are comprehended is reflected in our formalisation and expression of values.

Environmental Values

The various categories identified entail different understandings of what is at stake in defining the values of Nature. Philosophers and ethicists are concerned with comprehending the meaning of otherness and its moral implications for humans in their relationships with non-humans. Natural sciences seek to understand the structure and mechanisms of Nature to achieve specific consequences (for example, to overcome gravity and fly using one set of mechanisms to counter another). Ecologists are also concerned with structure and functioning, not least because modernity has entailed dramatic ecosystem decline and collapse. Environmental politics and Green movements (Chapter 35 in this volume) tend to operate at the contextually changing surface layer in which pandemics come and go, nuclear power stations melt down, climate-change driven wild fires devastate large regions, and corporations pollute, extract resources and destroy habitat impacting humans and non-humans alike. Preoccupation with different aspects of Nature entails recognition of different values.

That Nature is associated with different values for different people is unsurprising. As O'Neill et al. (2007) stated, humans live both from, in and with the environment. Living from Nature means most fundamentally that humans depend on functioning ecosystems and natural resources for their survival. Nature has value in being useful and is instrumental for human ends. However, humans are more than physical beings with physical needs. Humans live in Nature with others, both human and non-human, in specific places at specific times, and this entails values relating to a sense of place as known locations and set within a given historical and social context. We also live with Nature as one set of living organisms that can experience the wonder of life in a world that existed before hominids arose and is autonomous from humans (that is, the ability of non-humans to survive and flourish without us). Interpreting these different relationships has been contentious, involving challenges to traditional anthropocentric ethics with propositions of the need for a new approach, an environmental ethics.

Ethics concerns how we decide what constitutes a good or bad action, valid principles for acting and their relationships. In Western philosophy there are three main ethical theories: utilitarianism, deontology and virtues. The first is a specific form of consequentialism and associated with Jeremy Bentham's philosophy of judging what is best on the basis of achieving the greatest good for the greatest number of morally considerable individuals. This has been adapted by mainstream economists into preference utilitarianism, where what individuals express as being preferred is deemed a choice that is equated to an expression of value. Under systems of utilitarianism there is intrinsic value in utility (which may be equated to well-being or welfare). Typically, utility is restricted to those consequences that affect humans, which

may include their concerns over others, for example, feeling bad about animal suffering. In theory, the consequences which affect the interests of non-humans could also be directly taken into account, regardless of whether those consequences have any effect on human well-being, by extending the community of morally considerable beings to non-humans.

The second ethical system is derived from the philosophy of Immanuel Kant and regards an individual undertaking the right action as good in itself, so that conformity to principles of right action is intrinsically valuable. Deontology is typically associated with obligations to act in certain ways and rights-based approaches. In modernity this forms the moral basis for legal systems, although ethics are distinct from the law and operate without the need for legislation or judicial sanctions, that is, the motivation is intrinsic to the individual. Some deontologists postulate the existence of moral absolutes, such as Kant's (2012) categorical imperative or Rawls' (1972) contractualism. Right action means a moral agent is someone who, of their own volition (that is, internal conscience), undertakes duties, fulfils obligations, follows moral codes of conduct or holds to ethical principles.

The third ethical system derives from Aristotle and resurfaced as part of the doctrines of the Roman Catholic Church in medieval Europe, but has declined since the Enlightenment as the other two ethical systems became dominant. Virtue ethicists focus on being over doing. It is who you are, which character traits you express through your actions, which is valued. The right actions express virtuous character traits. The theory is based in a specific understanding of the human being and of the purpose, or greater meaning, of life. Hence, for Aristotle, virtue was fundamentally linked to human *eudaimonia*, often interpreted as flourishing, leading a good, happy and meaningful life. Moral absolutes and objective values in claims about the purpose of human life, or what constitutes the good life for humans, tend to be controversial, but can link to an ethics emphasising the importance of care, and relations to others, as in feminist theories.

A key tension in environmental debates, explored below, is that between utilitarian and rights-based approaches. However, the focus on these theories has also been criticised as Western ethnocentrism that neglects alternatives (for example, indigenous knowledge). That the three main value theories are limited in their ability to address the non-human world stimulated the development of environmental ethics. Thus, during the rise of the environmental movement, Routley ([1973] 2009) argued that a new – an environmental ethics – is necessary to address the failures of modernity with respect to human–Nature relations. Industrial modernity justified modes of thought that were anthropocentric, placing humans, primarily men, above all else, either by attributing to them superior rights or by prioritising consequences for humans. Traditional (pre-industrial) human societies regulated their coexistence with and behaviour toward the non-human world via conventions, rituals, norms, traditions, rules and taboos. Capitalism entailed the deliberate eradication of customs in the drive to create a commodified world of exchange values (Thompson 1993). A new, environmental, ethics would therefore imply new modes of economic conduct and challenging modernity.

Social structure, unlike the structure of Nature, can be changed, even if this tends to happen slowly over generations. That means, values, customs, practices and habits can change. However, these changes do not necessarily mean improvement; for example, the rise of capitalism or fascism. There is then ongoing social transformation and conflict.

The phrase 'natural value' or 'value of Nature' has become embedded in the current hegemonic economic thinking that regards value as only existing in the marketplace, where one thing is traded for another and everything has a price. Producing money numbers to represent

ecosystems services, converting Nature into capital and generally placing ecological entities into a financial discourse is how capitalism has addressed environmental problems. It has now become the dominant way of arguing in public policy debates even for the environmental movement itself. However, simultaneously, empirical studies reveal that people hold conflicting plural values and values that are incommensurable, under-cutting the entire approach. This is evident in actions such as refusals to trade, regardless of the price paid in compensation, and people risking, or sacrificing, their lives to protect places, landscapes and non-humans. The basis for these acts runs against the belief in purely anthropocentric values and in favour of an extension of moral considerability to non-human Nature.

MORAL CONSIDERABILITY OF NON-HUMANS: UTILITY AND RIGHTS

A key distinction made in Western value theory is between the valuing agent (for whom things are of value and who evaluates) and the object/entity of valuation (the valuable, that which has value). This leads to some controversy over which entities are valuable in themselves (that is, intrinsic value) as opposed to being solely valued for their usefulness in achieving the ends of a valuing agent (that is, instrumental and contributory value). A key element of dispute over the values of Nature concerns who has moral standing (that is, counts as a moral agent) and who is morally considerable (that is, has interests that moral agents must treat as important). The question then arises: do only humans matter morally (anthropocentric perspective), or are there grounds for including non-human entities as moral agents or morally considerable (eco-centric perspective)? What is the basis for answering this question and drawing equivalences? Western ethical theories then aim to identify what is valuable, those for whom value matters, grounds for attributing moral standing or considerability, and how moral agents should act as a consequence.

Typically, humans are regarded as the moral agents, that is, those doing the valuing, or the subject for whom the valuable is desirable and influences their action. If value is given by the choices of the valuing agent then it is regarded as being subjective. An example where this proves problematic is mainstream economists' assumption that individuals give value to things they prefer and the value of those things is indicated by the strength of individual preferences. If people like pandas and not spiders, then the former have value and latter do not (Spash 2008c). The valued and the valuable are equated. Under such an approach, that valuing agents may get things wrong is inexplicable because what is preferred/chosen is by definition what is valuable/good. Accepting that valuing agents do get things wrong requires distinguishing what is valuable from what might (mistakenly) be held to have value. More generally, value may be regarded as something to be sought, for example, seeking to live a good life or conducting the right acts. From this perspective, value appears objective (that is, constitutive of the good) and acts as a guide to moral action.

The moral standing of humans might be regarded as value inherent in humans that is outside of how humans, as subjects, value. What is the value of a human qua human? Your value is not given to you by other humans or their values, nor by yourself. This may be expressed as humans having intrinsic value or being inherently of value because they can produce intrinsic value (that is, utility, righteous action or virtue). However, the question of 'what is the value of Nature?' asks us to reflect upon how values might extend beyond humans and whether

‘others’ might have either moral standing (for example, inherent value) or qualify for moral considerability.

For example, wildlife conservationists have increasingly centred their concerns on entire species, the consequences of species extinction and the reduction of global biodiversity for ecosystems and ultimately the planet. There is then a distinction required between whether the health of ecosystems, or the planet (for example, personified as Gaia), is to be taken as of value in itself, or because this would adversely affect human quality of life. Similarly, the view that extinction of species (or death of individual animals) is bad in itself, regardless of the consequences, contrasts with the view that the negativity of such an outcome derives from its consequences – judged in relation to violating an ethical (for example, deontological, utilitarian or virtue) principle. The range of possible consequences and principles to be invoked will depend upon the entities that are deemed to enter into direct moral consideration and the moral standing attributed to them.

Consider some endangered species of elephant. The extinction of each individual elephant may be held to be of moral concern, or only the extinction of the entire species, or only the impact that the loss of elephants (individually or as a whole) has on the ecosystem and its functions. Our answer to the question tends to depend on a prior question: whether the elephants matter only insofar as their survival affects the interests of humans, or whether the elephants themselves are held to have morally considerable interests. That is, are humans the only morally considerable creatures or are non-humans (for example, elephants) also morally considerable? The ecosystem services literature makes the implicit assumption that what matters is provision of value for human ends and nothing else. The role of elephants, or anything else, can be replaced if the value is maintained.

Norman Myers, in his book *The Sinking Ark* (Myers 1979) argues that whether a species should be saved (that is, scarce resources should be used to save them) depends on their relative usefulness. He rejects saving species come what may. The issue is about whose ends (among those with moral standing) are served by the conservation of species, and how does saving a species enhance the long-term welfare of humans (assumed to be the only entities with moral standing). This, in turn, implies prioritising species in order of potential for extinction. This type of approach is instrumental, consequential and anthropocentric.

If only humans are morally considerable, then the argument arises that specific species should be preserved only to the extent that a desire for this is reflected in human preferences. This has led environmental economists to argue for optimal extinction as an economically valid approach (for example, Swanson 1994). Traditionally wildlife conservation has sought to preserve key iconic species, for example, lions, tigers, elephants, rhinoceros and pandas, at the expense of others. This vertebrate-centred ethics limits the morally considerable community to a small number of higher mammals. Yet, the basis for such a restricted approach is challenged by recognising the moral considerability of all those creatures who, in some meaningful sense, have the capacity to suffer.

Historically the most influential version of consequentialism has been utilitarianism. Utilitarianism is egalitarian in that it considers equally the interests of all morally considerable beings affected by an action, for example, the abilities of all beings to suffer. As Bentham ([1789] 1823, pp. 235–6, original emphasis) mentioned in a footnote: ‘The day *may* come when the rest of the animal creation may acquire those rights which never could have been withholden from them but by the hand of tyranny. ... the question is not, Can they *reason*? nor Can they *talk*? but Can they *suffer*?’ However, Bentham did not pursue the matter. His

own utilitarian approach aimed for the greatest good for the greatest number of humans, and so allowed the sacrifice of the individual (and their well-being) for the greater good. This approach became encapsulated in the idea that the best action is that which generates the greatest net welfare for humans. However, recognition of animal suffering later led others to campaign to prevent cruelty to animals and protect animal welfare.

This welfarist approach can be equated to using drugs to prevent pain rather than stopping the causes of pain and suffering. It can be seen as operative in the provision of minimal animal husbandry conditions imposed on industrial farming practices based on the grounds that animal suffering is then avoided. This is also the logic of humane killing. It exemplifies how moral considerability is different from having moral standing (that is, in this case, animal welfare versus humans as the moral agents). Human experimentation on animals can also be justified on the basis that either they feel no pain (that is, drugs may be used) or that the greater good is served (that is, humans will benefit more than the animal suffers). Welfare is often equated with value as 'utility', but pinning down the meaning of these terms is far from straightforward. Hence utility can cover a variety of positives, including obtaining preference satisfaction, pleasure (hedonism) and happiness, or avoiding negatives, such as frustration, pain, suffering and loss. Animal welfare as a form of utilitarian argument for avoiding negatives contrasts with recognising the ability of, and allowing for, 'others' (that is, non-humans) to flourish and live meaningful lives in their own terms.

Mainstream economists have adopted a specific form of utilitarian ethics where they define utility as preference satisfaction, or more precisely value is defined (objectively) as utility that requires assessing welfare of humans based on their preference satisfaction (McShane 2017). In his book *Practical Ethics* Peter Singer (1979) presents a utilitarian defence of the value of animals that evaluates consequences in terms of the extent to which they satisfy the preferences of the agents granted moral considerability. Following Bentham's suggestion, this is defined to be all creatures with the capacity to suffer, raising the evaluative problem of assessing preference satisfaction of non-humans, and so not such a practical ethics after all. Economists have struggled to even make sense of assessing human preferences as indicators of value (Spash 2008c).

The main alternative to valuing Nature in utilitarian terms has been the Kantian deontological approach. A common example of the extension of rights is the 'abolishment' of slavery, where non-white humans were upgraded, from treatment as non-human animals with no moral considerability, to inclusion among those with moral standing (that is, moral agents). Although, in practice, racial discrimination was never removed (as the Black Lives Matter movement made evident) and the slave trade has continued illegally (Chapter 2 in this volume). Crucially, under deontology, rights-bearers possess equal standing and rights apply equally. The classic problem is what to do where conflicts arise between rights. The extension of moral standing to 'others' by the environmental movement has mostly been conducted in terms of attributing animals rights, but in recent times has also appeared in more general terms.

An example is the 'rights of Nature' that came to prominence due to national legislation giving legal and sometimes constitutional recognition to Nature as a subject with inalienable rights. Legal provisions now exist in Brazil, Bolivia, Colombia, Ecuador, India, Mexico, New Zealand and the USA (Kauffman and Martin 2018). In particular, the struggle of indigenous communities for protection of territory (Chapter 33 in this volume) became associated with making Nature a subject and giving it standing in law (that is, supposed protection via legal sanction not ethical motivation). This is a recognition of interests that tends to relate to humans

rather than non-humans. Hence, ‘rights of Nature’ appear more of a political tool than a moral philosophical struggle to recognise Nature’s value as found in indigenous culture (Tanasescu 2015). Institutional differences arise in defining the Nature that bears rights, the rights recognised, who can speak for Nature, whether anyone is responsible for protecting Nature’s rights and, if so, how. In Ecuador, these rights have been mixed with nationalist feelings underpinning a critique of neoliberalism, and aspirations for legal protection among indigenous communities and the decolonisation of society (Espinosa 2019). However, Nature’s rights have paradoxically also been used to promote mega-mining projects in Ecuador – claiming Nature is protected, will be restored or can be compensated – revealing their limitations under neoliberal governance and institutions (Valladares and Boelens 2019). In Brazil such rights also seem to have been ineffective; destruction of the Amazon has accelerated, rather than declined, under the Bolsonaro government.

GOING BEYOND NATURE’S VALUE UNDER NEOLIBERAL PUBLIC POLICY

The rise of neoliberalism has seen environmental policy become increasingly dominated by economic approaches and a discourse claiming that making the value of Nature to humans visible in monetary terms will mean it is ‘taken into account’, or more precisely and quite literally, the accounts of firms, banks and nations. The claim is that if Nature has value then it should be empirically measurable. Pavan Sukdev, head of a major United Nations (UN) backed project on the economics of ecosystems and biodiversity (TEEB 2010) and, later, president of the World Wildlife Fund, has claimed that if something cannot be measured it cannot be managed. More recently, the same logic has been pushed forward by *The Dasgupta Review*, which converts everything, both human and non-human, into forms of financial capital (Dasgupta 2021).

Apart from the very specific form value then takes, the destruction of the environment is reduced to an information problem. An implicit claim is that demonstrating the monetary benefits will incentivise – inherently self-interested materialistic – humans, including politicians and business men and women, to take better care of Nature. Ecologists and conservationists have joined with economists to classify and enumerate ecosystem services that can then be ‘valued’ (Chapter 41 in this volume). The value of Nature becomes a matter of subjective human preference, similar to choosing a flavour of ice cream: if you like it then it has value and if you don’t it has none. Protecting Nature then makes the leap of logic to giving Nature a price in the marketplace, leading to the rhetoric of ‘getting the prices right’. The consequences of these market values has long been evident in capitalist modernity, where the primary aim is to commensurate and trade. Prices and monetary values are purely means of facilitating market exchange and creating opportunities for financial returns, and have nothing to do with protecting Nature. For example, biodiversity offsets are justified on the basis of an economic logic where ecosystems and species can be treated as commensurable across time and space, and therefore traded (see Chapter 27 in this volume). The outcome is not protection of biodiversity but instead its destruction justified by the financial value of ‘development’ projects (Spash 2015; Spash and Hache 2021).

Framing the value of Nature in this way employs a range of contested assumptions. First, the utilitarian ethic employed is restricted to what is useful for humans (that is, anthropocentric).

Second, the object of value (that is, Nature) is assumed to be a discrete and definable entity (such as a physical commodity) and something that humans can express preferences about. Third, the market is erroneously assumed to automatically protect that which is given a price. Fourth, demonstrating that Nature has a money value is meant to create political action, but there is no theory of politics in the approach nor any specification as to why this should be so. Fifth, the approach assumes there is an information deficit that can be filled by monetary values. In contrast, actors in competitive markets are engaged in a structure that rewards deliberate cost-shifting in full awareness of the destruction and harm involved.

Despite these failings, this approach to valuing Nature has become a core aspect of public policy discourses on the environment. Environmental economists have expanded their categories of value together with their methods of valuation. Moving from values reflected in actual markets, designated as ‘use values’, they started in the 1970s hypothesising option, bequest and existence values, as a form of ‘non-use value’, but still within a preference utilitarian philosophy. Some equated existence values with ‘intrinsic values’ in an attempt to claim that all forms of value had now been captured in their ‘total value’ approach. While intrinsic value has several interpretations, they are all contradicted by assuming intrinsic values is given by one agent to another entity. Intrinsic value is an inherent quality of an entity and has nothing to do with preferences. There is also no relationship between existence of an entity and the preference value claims of economists (McShane 2017).

Among the tools developed, the contingent valuation method (CVM) became popular and a rare source of primary data in economics. However, CVM has been dogged by controversy (for example, valuation studies undertaken after the Exxon Valdez oil spill in 1989), and its claim to produce monetary values, that are definitive of species and ecosystems worth, lack credibility, both in practice and theory. Concerns include: treatment of protest bids and bid exclusion, use of ‘willingness to pay’ rather than ‘willingness to accept’ compensation for damages, treating respondents holding rights-based beliefs as preference utilitarians and values simply reflecting a scale of psychological attitudes (Ryan and Spash 2011; Spash 2008a). There are wider issues in economic valuation as well, including discounting, assuming marginal analysis is relevant, assuming reversibility, failing to account for preference construction and the role of information (Gowdy and Olsen 1994; Spash 2002). Economists using these techniques produce numbers appearing precise and objective, when they are, in fact, precisely wrong in what they claim to measure.

These issues have not dissuaded environmentalists from advocating use of the resulting numbers on the basis that money is the ‘language’ of policy (Smith 2017). The move has been supported by the focus on market-based instruments (so-called ‘solutions’) under neo-liberalism, which advocates rational choice that is reduced to weighing-up costs and benefits. Conventional economic cost–benefit analysis can then be employed using extended methods to appraise individuals’ revealed and stated preferences. What goes unnoticed, or unremarked, is how Nature is being conceptualised as an exchangeable item that can be treated as if a commodity, that is, made commensurable and traded. Ecosystems’ functions become ‘ecosystem services’ and natural structure becomes ‘natural capital’. Very particular forms of values are then expressed and expressible via the associated institutional arrangements. Unwittingly, under the guise of being pragmatic, the advocates of equating Nature’s value to a monetary equivalent deny the existence of value pluralism and incommensurability, and downplay the role of scientific knowledge in defining key attributes of Nature (Spash 2009, 2013). Ecologists and conservation biologists have not been immune to changing their concepts and

language to conform to the mainstream environmental economic approach, and as a result have undermined their own traditional research (Spash and Aslaksen 2015).

Ecologists have long tried to understand interactions and interdependencies within natural ecosystems, including how ecosystems function, and how different species are linked together and depend upon each other as living beings in community. Similar to others in the web of life, humans interact with and are dependent upon other species and the functioning of ecosystems. Societies and economies are embedded in biological, chemical and physical structures upon which they are dependent. This does not mean that all human actions are determined by these structures, but they are certainly constrained by them. Properly functioning natural systems are essential to human survival, and the quality of these systems is a determining factor in human well-being. Therefore, Nature has instrumental value and there are consequences from its destruction.

However, this does not mean the concept of intrinsic value can be dismissed as irrelevant. As was noted when introducing the three meta-ethical systems of Western philosophy, forms of intrinsic value exist as a fundamental concept in any value system and cannot be captured by being redefined as use value, as attempted in mainstream economics. Humans can be regarded as having (or creating) intrinsic value in economic theory, since this theory assumes all value derives from humans, but humans themselves do not derive their own value from this system. In other words, humans have an unexplained moral standing for mainstream economists, which is why human preferences count and those of other animals do not. While the concept of intrinsic value has often been used loosely and interpreted differently by many authors (McShane 2017; O'Neill 1992), it addresses an important understanding of what constitutes environmental values (McShane 2007). Empirical research also shows that people do actually relate to Nature in terms of intrinsic value (Butler and Acott 2007).

That there are plural values (intrinsic, instrumental and consequential) taking different forms (subjective or objective/absolute), and posing fundamental incommensurabilities, has remained a central problem for those seeking simple means of taking Nature into account, as well as those trying to include all values in some summary form. There are then questions over the relative merits of different value articulating institutions (Vatn 2005, ch. 12). Considering the values of Nature reveals the inability of the typically individualised preference approaches to address the values that are expressed in group participation and deliberation (Spash 2008b). As outlined previously, environmental cost-benefit analysis has become overextended and divorced from its theoretical basis. More than that, it could never address plural incommensurable values because it claims a monistic value and universal commensurability. Attempts to bring the plural values of Nature into decision-making processes then point towards inclusive, deliberative and participatory methods. While facing their own limitations and problems, these methods offer the potential for improving the democratic legitimacy of the environmental decision-making process (Chapter 24 in this volume).

Concerns over the restrictive perspectives on the values of Nature imposed in public policy have also been related to the exclusion of indigenous peoples and local communities (IPLC). These IPLCs challenge the hegemonic discourse of market value and economic growth, and represent non-Western forms of non-instrumental reasoning. Along these lines, the concept of 'relational values' has recently been adopted by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) under an approach named 'Nature's contribution to people' (Díaz et al. 2018). Relational values are supposed to fill a perceived

gap between instrumental and intrinsic value. They have been described as building from interpersonal relations and involving reasons for loving and caring that create meaningfulness.

Neuteleers (2020) identifies four characteristics as constitutive of relational values: mutual creation, identity dependence, motivation dependence and a shared final end that is 'good in itself'. However, the idea of being good/valuable in itself would seem to be a form of intrinsic value, even though the idea was to go beyond this in some way. An important additional aspect appears to be the role of identifying with the object of value in what appears to be a self-constituting form of psychological relationship, that is, feeling connected, feeling something is a part of yourself. However, as Neuteleers notes, the self-motivation to act in a particular way towards an object is not a duty/obligation (that is, deontology). Overall, there seems to be a close proximity between relational values and the Aristotelian concepts of eudaemonism, virtues, flourishing and the good life. Also, the relational values literature can be criticised for using vague and broad definitions of eudaemonic values, being unclear about the relationship between Nature and the good life, and between eudaemonic values and other values, and, finally, for risking reducing eudaemonic value to instrumental value. Even though relational values seem to suffer from vagueness, complex definitions and potentially having confusing overlaps with instrumental and intrinsic values, they are an important expression of the discontent with current policies and of the ongoing struggle to (conceptually) capture the complex relationships humans have with Nature.

CONCLUSION

Attempts to remove the concept of Nature, because it is blamed for having naturalised unethical, exploitative and discriminatory social behaviour, have been misdirected and failed to account for fundamental aspects of the concept, with respect to both biophysical structures beyond human control and what is 'other' than human in the universe. That attempts are made repeatedly, by economists and others (Dasgupta 2021, Pearce and Moran 1994, TEEB 2010, UNEP 2019), to make Nature into an economic commodity form, value it as capital and/or make it into a hybrid artefact, is an indication of the conflict existing today between (past, present and post) modernity, capital accumulating economies and the non-human world. The non-human is then to be squeezed out if it cannot be made to conform to the dominant existing anthropocentric value systems. Where, then, is the place for non-humans and their interrelationships? The attempt to value nothing but that which matters for humans appears to miss out a major aspect of reality (Vetlesen 2015). That Nature has multiple values, which are not easily defined, challenges those seeking simple solutions to complex social ecological crises.

The ongoing mass extinction of species, human-induced climate change and the myriad of other ecological problems are hardly surprising outcomes when living in a system that treats Nature as either contributing a luxury consumer product, an optional extra in the marketplace, or a producer input cost, something that can be bought and paid for, a price worth paying for 'development' and profits. That the values of Nature have been central to human society, and remain so, is undeniable. That they are contested intensely today, more than ever, is a sign of their importance.

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25. Environmental violence

Gloria Pessina

INTRODUCTION: DIFFERENT FORMS OF ENVIRONMENTAL VIOLENCE

In 2019, while most European cities and several main urban areas of the Global North saw the rise of non-violent environmental movements led by younger generations (Pellizzoni 2019a, 2019b), other parts of the world, such as Colombia and the Philippines, were plagued by worryingly high numbers of environmental activists' killings (Global Witness 2020). Two-thirds of the overall 2019 environment-related assassinations took place in Latin America, where the majority of the targeted activists used to fight against mining, oil and gas, energy, agribusiness and logging industries. Direct violence against environmental defenders (EDs) is a longstanding phenomenon, widely documented in the field of environmental conflicts research (Bohle and Füngfeld 2007; Conde and Le Billon 2017; Escobar 2006; Homer-Dixon 1999; Navas et al. 2018), covered by political ecology, as well as peace and conflict studies (Le Billon and Duffy 2018).

The international interest in direct violence against EDs was sparked by some traumatic events between the end of the 1980s and the early 1990s, such as the assassination of the Brazilian trade unionist, environmental activist and politician Chico Mendes (in 1988). Even though this issue was of no interest to academics for many years, the occurrence of direct violence related to environmental protection has been recorded since the mid-1990s by non-governmental organisations (NGOs), such as Global Witness, and more recently by activist-researchers' platforms, such as the Global Atlas of Environmental Justice (EJAtlas) (Temper et al. 2015). Among the most common forms of direct violence, EJAtlas includes 'selective assassinations of environmental defenders', 'unsubstantiated accusations of environmental defenders to demobilize them from their campaign', 'massive coercion in a social protest' and 'direct attack aiming to cause physical and psychological damage', including 'death threats' (Navas et al. 2018, p. 653). In particular, the most recent analyses of the EJAtlas data warn about the ways in which numerous violent crimes against women EDs tend to be overlooked both by official investigations and by academic research (Tran et al. 2020). Violent acts targeting the 'first line of defense against the causes and impact of climate breakdown' (Global Witness 2020, p. 6) have been mentioned since the early studies on the 'curse of resources' (Sachs and Warner 2001) and on 'addictive economies' (Freudenburg 1992) in mining regions, but gained importance in more recent and detailed studies on the social and territorial impact of mining (Bebbington et al. 2018; Orihuela 2018), oil and gas (Bridge 2009; Watts 2015) and other extractive industries (Tsing 2011).

Despite the brutality against EDs as the most visible form of environmental violence, several authors have been investigating other facets of the same concept, highlighting the existing overlap among them (Davies 2019; Navas et al. 2018; Nixon 2011; Scheidel et al. 2020). One of the most recent definitions of violence describes it as 'a concept constantly oscillating between the physical and the structural, the visible and the invisible, the natural

and the social, the institutional and the criminal' (Pavoni and Tulumello 2020, p. 49). Even though social sciences are still struggling with the multidimensionality of this concept (Kilby 2013; Springer and Le Billon 2016), the socio-political dimensions of violence have been put under the spotlight, as violence is 'deeply rooted in local histories and social relations but also connected to transitional processes of material change, political power relations and historical conjuncture' (Peluso and Watts 2001, pp. 29–30).

This chapter focuses on forms of environmental violence other than direct violent acts, through the presentation of concepts elaborated by scholars and activists, such as 'structural violence', 'slow violence', 'environmental racism', 'biocide' and 'infrastructural violence'. In the second section of the chapter such concepts are investigated in their relationship with social and territorial inequalities. The third section presents some experiences of resistance against environmental violence in a variety of marginal and fragile territories. The chapter concludes with a reflection on the evolution of the concept of environmental violence and on future research paths.

SLOW VIOLENCE AND SOCIAL INEQUALITIES IN MARGINAL TERRITORIES

A large part of the existing scholarship on environmental violence has been influenced by the work of the Norwegian sociologist Johan Galtung, founder of the Peace Research Institute Oslo (PRIO) and initiator of the peace and conflict studies discipline. According to Galtung, direct violence is perpetrated by humans through brutal acts, while structural violence cannot be related to a single event, as it entails a socio-political process that results in unequal opportunities for discriminated social groups (Galtung 1969). In Galtung's words, structural violence 'is present when human beings are being influenced so that their actual somatic and mental realizations are below their potential' (Galtung 1969, p. 168). This form of violence is particularly severe for women and minorities, as more recent studies have demonstrated (Mukherjee et al. 2011). A further typology of violence, of the cultural sort, completes Galtung's view on the topic, consisting in the use of ideologies and religious beliefs to promote and justify violence (Galtung 1990).

Among the different forms of violence identified by Galtung, structural violence has been of particular interest to scholars of critical environmental justice (CEJ) studies (Pellow 2016; Velicu 2019; Scheidel et al. 2020). Environmental violence is hence structural when it is the outcome of discriminations and inequalities produced by specific social, economic and political structures (Scheidel et al. 2020). Critical environmental justice scholars underline that structural violence can take the form of hazards or development projects deeply impacting marginal populations and ecosystems, which are considered expendable by dominant power structures (Pellow 2016). Humans and more-than-humans are impacted differently by structural forms of injustice and environmental violence, according to race, class (Bullard 1990, 1994, 2004) and other categories of difference, such as gender, sexuality, ability, age and species (Pellow 2016). Structural violence can also take the form of 'prospective environmental injustice' (Velicu 2019), when local populations are hardly affected by the perception of future harmful developments.

Elaborating on the concept of structural violence and its relation to environmental injustice as proposed by CEJ studies, several scholars from a variety of disciplines (for example, litera-

ture, anthropology, development studies, human geography, political ecology, environmental history, ecological economics and law) have been working on the notion of slow violence (Barca 2014; Davies 2019; Navas et al. 2018; Scheidel et al. 2020). Slow violence represents one of the products of dominant social, economic and political structures, considering marginal communities and territories as disposable. Beyond the structural dimension of violence, this concept introduces time as a fundamental element in the display of power and in the production of environmental injustices, as can be seen in the seminal work by the American writer and scholar Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Nixon 2011).

Making direct reference to a milestone of the political ecology and ecological economics literature – *The Environmentalism of the Poor* by the Catalan economist Joan Martínez-Alier (2002) – Nixon focuses on the uneven impacts of less visible forms of environmental violence. In his words, slow violence can be understood as a process ‘that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all’ (Nixon 2011, p. 2). The topic of slow but steady processes of environmental degradation has gained momentum with the increasing debate about climate change, but the phenomenon of slow violence has been studied in the past, under different names, with respect to the use of chemical herbicides (Carson 1962; Zierler 2011), air pollution (Narain 2017), soil/water contamination by petro-chemicals (Allen 2003; Davies 2019; Lerner 2004), toxic waste (De Rosa 2018), mining (Holterman 2014) and other forms of ecological destruction (Peluso and Watts 2001).

Even though we know that ‘there’s no such thing as a natural disaster’ (Smith 2006) and that structural dimensions of violence accompany earthquakes, floods, fires and further effects of climate change (Sorón 2007) in the planetary urbanisation (Brenner and Schmid 2012; Swyngedouw 2014) of the capitalocene (Moore 2015), it is worth emphasising that these sudden catastrophic events are covered by the media and often treated by police as ‘emergencies’ (Anderson et al. 2019). On the contrary, slow violence is ‘spectacle deficient’ (Nixon 2011, p. 47) and tends to go unnoticed until its effects start to be perceived through biodiversity loss, pollution (Watts 2001; Zierler 2011) and the occurrence of illness (Auyero and Swistun 2009; Iengo and Armiero 2017). The delayed destruction of the environment and the human health, as well as the geographical distance of transnational companies often causing the degradation, both contribute to ‘legal procrastination’ (Nixon 2011, p. 51) and postponed acknowledgment of the issue’s gravity by governing bodies. Space and time hence play a crucial role in the different perceptions of slow violence, ranging from the lack of recognition of the issue by those who are far from the polluted sites and/or not properly informed by media to those who are exposed to contamination in their daily life (Armiero and De Rosa 2016; Wiebe 2016).

Personal experience triggered the research by the American biologist and zoologist Rachel Carson, who published her ground-breaking book *Silent Spring* in 1962, after several years spent observing the effects of agro-chemicals (DDT) on the fauna of rural areas. Carson demonstrated that the chemicals harming the fauna were having detrimental effects on entire ecosystems, including humans. Despite Carson’s pioneering study being based on solid data, petrochemical companies tried for long to de-legitimise her work with an allegation of feminine irrationality (Barca 2014). Nevertheless, her research survived these denigrating attempts and contributed to consolidate new concepts such as ‘biocide’ (instead of ‘pesticide’) and ‘bioaccumulation’ of persistent organic pollutants (POPs) in soil, water and, ultimately, food

chains. Studies on the effects of DDT continued in other parts of the world (Hall 2010), but Carson's legacy was not limited to them.

Nixon (2011) drew extensively on Carson's research for his work on slow violence, including not only petrochemicals, but also mining, nuclear waste, megaprojects, deforestation and climate change among the causes of slow and invisible environmental degradation (Barca 2014). Moreover, he specifically focused on the uneven effects of slow violence on the poorest strata of the population and on other marginal subjectivities. Drawing on Nixon's work, Barca (2014) observed the common historical roots of social inequality and environmental degradation, through corporate and/or administrative policies based on the existence of 'sacrifice zones' (Lerner 2010) and disposable bodies (Karim 2014). As already recalled by environmental historians, violent acts against the environment, including the discharge of POPs, have been reiterating the oppression and control of marginal territories (Messerli et al. 2015) and of (part of) their population (Barca 2014). Therefore, slow violence represents a form of injustice (Bullard et al. 1997) and racism (Bullard 1990, 1994), as it affects people differently according to income, gender, race, education, age, ability, species and so on (Pellow 2016). As observed by Bullard in his studies on environmental injustice in the United States, a vast majority of highly polluting industrial plants and dumpsites have been concentrating in areas inhabited mostly by low-income communities of colour, progressively affecting their health. In line with Bullard's studies, several instances of slow violence and environmental injustice have been researched in a variety of marginal territories around the world (for example, Ako and Olawui 2017; Auyero and Swistun 2009; Basu 2018; Lerner 2004; Pellow 2007).

While in many of these examples local environmental legislations are permissive with polluting and exploitative companies, low-income and impoverished local populations face the alternative (Pignarre and Stengers 2005 [2011]) between work and environment (Barca 2019). It is in this context that the 'working-class ecology' approach (Barca and Leonardi 2018; Cristiano 2018; Leonardi 2017) investigates the system of relations between a working-class community and its environment, strongly characterised by the presence of the industry (Barca 2019). This approach explores the existing contradiction between industrial production and socio-environmental reproduction within capitalist economies, while highlighting possible ways to overcome it (Chapter 4 in this volume). Beyond the daily bioaccumulation of pollutants in marginal bodies and territories (Banzhaf et al. 2019; Bullard et al. 1997; Davies 2019; Iengo and Armiero 2017), slow environmental violence unfolds through and is strengthened by narratives, including those about the creation of new jobs for the working class, despite their environmental impact (Barca and Leonardi 2018). Narrative violence (Barca 2014) hence entails the establishment of hegemonic ideas of development by those in power (Bates 1975), and through the suppression of fundamental information around environmental damage.

Narrative violence relates to the conceptualisation of cultural violence by Galtung (1990), since dominant ideologies about development are among the cultural elements used to legitimise structural violence and environmental injustices (Scheidel et al. 2020). Further elements of cultural violence include religion, political ideologies and techno-managerial beliefs. Cultural violence has been displayed in the environmental domain and through the production of several examples of 'infrastructural violence' (Rodgers and O'Neill 2012), such as large-scale infrastructural projects aimed at reducing scarcity or excess of resources (for example, water), while structurally marginalising and segregating particular populations and territories, as well as according to political and religious beliefs (Luxion 2017; Mahadevia 2007; Mehta 2005; Pessina 2018; Swyngedouw 2015; Vélez Torres 2012). Moreover, the

ecofeminist critique (Mies and Shiva 1993; Salleh 1995, 2003, 2017) suggests that environmental and, more specifically, infrastructural violence is also a product of patriarchal cultural elements. Patriarchal power and the narration sustaining it – comprising several elements, including the need for control and subjugation of bodies and ecosystems – hence intersect with other forms of violence, such as colonialism, exploitation, destruction of the biosphere (Rivera Cusicanqui 1997) and imposition of male-centred cultural development models materializing in violent infrastructural projects (Luxion 2017).

Contributing to the debate about narrative violence, Zimmerer (2014, p. 275) argues that ‘resource scarcity – real or perceived – could serve as a cause as well as part of an ideology, whereby ideology becomes the means by which allegedly superfluous human beings are identified’. In urban areas, ideology (and the related narrative violence) can take the form of sustainable eco-technological urban developments (Swyngedouw 2014), leading to the dispossession of local inhabitants from their resources (Heynen et al. 2006), including housing (Desai 2018; Pain 2019; Portelli 2017; Zuc and Chapple 2016). As critically highlighted by the Belgian political ecologist Erik Swyngedouw (2014, p. 1), ‘[t]his techno-managerial disposition has now been consensually established at the frontier of architectural, planning, and design theory and practice, presumably capable of saving both city and planet’. A new urban technocracy (Raco and Savini 2019) would hence be on the rise, especially in relation to urban environmental issues.

Nevertheless, this ‘technocratic depoliticisation of governance’ (Swyngedouw 2011; Chapter 32 in this volume) is contested by a number of critical geographers and planners dealing with urban (and suburban) environmental justice (Basta 2016; Bulkeley et al. 2015; Coppola et al. 2021b; Gandy 2018; Hodson and Marvin 2009; Kaika 2017; Keil 2020; Satterthwaite and Dodman 2013; Soja 2010). Moreover, sociologists have been highlighting the controversial role of experts in the process of depoliticisation of territorial and environmental governance (Caselli 2020; Chesta 2021; Pellizzoni 2011; Chapter 18 in this volume). Given that expertise is strongly bound to knowledge production about the material reality (Pellizzoni 2015), communication and narration are crucial dimensions to it. As shown by several instances around the world, experts (for example, state officials, doctors, and technicians from polluting firms) can exert a form of narrative violence through unclear and contradictory communications, amplifying the uncertainty about the real situation in which the affected populations are living in. This form of narrative violence has been the object of deep ethnographic research in some cases and has been defined as a labour of confusion (Auyero and Swistun 2009) promoted by experts, leading the affected population to deep uncertainty and scepticism towards collective action (Swistun 2015).

In the effort to counter narrative violence and technocratic depoliticisation of governance, a variety of experiences of resistance and reclamation ‘from below’ (De Rosa 2017) oppose different forms of non-direct environmental violence also through the production of knowledge, as we will see in the next section.

FORMS AND SITES OF RESISTANCE TO ENVIRONMENTAL VIOLENCE

Environmental violence takes different forms, crosses multiple geographical scales and affects territories and populations differently. Therefore, a wide range of experiences of resistance

have been elaborated by local inhabitants, activists, scholars and institutions in past decades (Chapters 33, 35 and 36 in this volume).

The threat or killings of environmental defenders in many contexts, especially in Latin America, has been generating waves of local, national and transnational activism (White 2009–10). It has not only taken the form of demonstrations and campaigns but has also triggered the collection and mapping of data about direct environmental violence through activists-researchers outputs, such as the annual Global Witness reports or the Environmental Justice Atlas (Navas et al. 2018; Tran et al. 2020). International organisations for human rights have also been recognising the issue of direct environmental violence in recent years, as shown by the landmark resolution to protect environmental defenders, adopted on 21 March 2019 by the United Nations Human Rights Council.

Against less visible forms of environmental violence, other methods of resistance have been developed by local inhabitants, activists and researchers. In this context, scholars are indicating the necessity to reclaim ‘slow emergencies’ (Anderson et al. 2019), occurring through systemic environmental and racial injustices (Bullard 2004). Moreover, slow observations (Davies 2019) through the employment of visual and ethnographic methods can make slow violence visible to policy-makers and the general public. Forms of slow observation have been introduced by local inhabitants and scholar-activists in some particularly polluted areas, such as the petrochemical area along the Mississippi in Louisiana, branded by many as ‘Cancer Alley’ (Allen 2003; Davies 2019), the territory between Naples and Caserta (Italy) also known as ‘Land of Fires’ owing to the presence of illegally dumped and burnt toxic waste (Armiero and De Rosa 2016; Iengo and Armiero 2017).

Slow observations resulting in visual/sensorial representations of polluted territories can be considered part of emerging practices of ‘citizen science’ (Davies and Mah 2020). In the more advanced experiences, local inhabitants not only contribute to the collection of data on polluted territories, but also collaborate with the researchers in the interpretation of numbers and figures (Allen 2020). The inclusion of the most marginalised and less-educated members of the local communities is one of the main concerns of those who are experimenting with forms of inclusive citizen science to resist slow violence across the world (de Albuquerque and de Almeida 2020; Hoover 2020). These forms of ‘grassroots public politics’ (Paba 2009) aim at liberating marginalised communities and territories ‘from indifference and social invisibility through active inclusion practices’ (Paba 2010, pp. 104–5).

As recent empirical and theoretical studies are demonstrating, forms of resistance to slow violence are taking place increasingly also within working-class communities whose livelihood depends on polluting industrial activities (Barca 2019). While during the 1960s–1970s several struggles for health and safety took place within the factories in large part of the industrialised countries (Davigo 2017), the following de-industrialisation processes increased environmental consciousness also outside the plants. Even though the struggles within and outside the factories might still be disconnected in many cases (Barca 2019), the workers and inhabitants of some mono-industrial towns affected by high levels of pollution and significant unemployment rates show how this link could be possible. For example, this occurred in the steel-town of Taranto, in southern Italy, which has been undergoing a deep economic and occupational crisis because of its changing role in the contemporary context of global value chains (Greco and Di Fabbio 2014). Through an in-depth study, Barca and Leonardi (2018) show how local environmental movements in Taranto have interacted with union politics since

the early 2000s, thus leading to some common labour and environmental struggles centred on the crucial role of reproduction (Barca 2020).

Although the international literature on slow violence and environmental justice shows an increasing number of cases in which collective action was started by local inhabitants (especially women), after they observed the existing connection between their living place, toxic hazards and illness, some in-depth ethnographic accounts reveal that this is not so for all the marginal territories. For example, Flammable, a Buenos Aires slum surrounded by one of the largest petrochemical areas in Argentina, suffers from extremely high levels of soil, air and water contamination (Auyero and Swistun 2009). In this example, the situation did not lead to protests, but on the contrary to doubts, disagreement and fear of collective action, fuelled by a 'labour of confusion' by those in power and their experts (Auyero and Swistun 2009). Therefore, researchers investigated the local perception of risks and engaged in a participatory action research with the local population to raise their awareness about the hazards. In other examples, looking for a clearly identifiable conflict could be misleading and could prevent scholars from recognising a range of controversies and a variety of less visible forms of opposition to environmental violence, as occurred, for example, with a large-scale water infrastructure in Western India (Pessina 2018) or in the aftermath of a chemical disaster in Northern Italy (Centemeri 2006). The call to repoliticise sustainability (Asara et al. 2015) in the face of techno-managerial depoliticisation (Raco and Savini 2019; Swyngedouw 2011) should hence take into account the different socio-territorial contexts affected by slow violence, infrastructural violence and other forms of environmental injustice, considering a variety of actions in urban, peri-urban and more marginal (rural, industrial, mining, forest, and so on) territories.

Eventually, grassroots initiatives against slow and infrastructural violence can be supported and/or paralleled by urban and territorial planning tools, as well as by legislative innovations. Drawing on a consolidated tradition of participatory planning processes (Bryant 1995; Forester 1999), urban and territorial planners are exploring ways to promote more inclusive and sustainable development models through 'urban transition labs' (Nevens et al. 2013). More radically, some scholars are experimenting with forms of environmental and community mapping in urban, peri-urban and marginal territories by which to learn from practice and promote participatory action research in planning (Saija et al. 2017). In a similar vein, law scholars are empowering the partnership among different local actors to achieve environmental justice through community-based participatory action research (Bacon et al. 2013). Even though these collaborative approaches to environmental justice are constantly developing in new and promising ways, especially in the legal domain, as we will see in the following paragraph, scholars of CEJ remind us of the inner contradictions of this perspective, given the relationship between environmental and structural violence. As Pellow (2016, p. 224) wrote, looking 'to the state and capital to accommodate demands via legislation, institutional reforms, and other policy concessions ... leaves intact the very power structures that produced environmental injustice in the first place'. Therefore, CEJ calls for a broad anti-authoritarian perspective and hence for direct action and knowledge production.

Even though not always explicitly, the CEJ perspective has been informing some critiques of legal innovations introduced after various waves of grassroots and planning initiatives for environmental justice. Beyond the already mentioned resolution to protect environmental defenders, several national laws have been designed to punish illegal polluting acts. Despite their strong symbolic value, these laws have been welcomed in contrasting ways in a variety of contexts owing to their limited scope and effectiveness (Lucchini and Membretti 2016).

Therefore, transnational environmental law scholars are advocating new legal instruments going beyond the human-centred approach of the ‘right to environment’ to a different attitude, based on the ‘right of nature’ (Borràs 2016). As evidence-based research is showing, the creation of right of nature tribunals in a variety of national contexts (for example, Ecuador, Bolivia, India and New Zealand) is a promising legal innovation which plays ‘an important role in confirming and materializing the new values of deep ecology that are slowly growing within society’ (Cano Pecharroman 2018). Despite the uncertainties still related to this new legal instrument, research is showing that it is leading to more effective local environmental laws (Borràs 2016).

A further step against environmental violence is represented by the ongoing debate around the introduction of the ‘ecocide’ crime (Higgins 2010). Considering the inadequacy of the legal framework to contrast environmental violence in multiple territorial contexts and the presence of powerful laws protecting the interests of large polluting corporations, law scholars are proposing to consider the damage to the environment as a crime, punishable by international tribunals. The struggle for the recognition of ecocide is promoted both by scholar-activists (Crook et al. 2018; Dunlap 2020) and by transnational organisations such as the Stop Ecocide campaign, founded in 2017 by Polly Higgins and Jojo Mehta. According to the most recent definitions of the campaigners, ecocide could be considered as a ‘mass damage and destruction of ecosystems ... committed repeatedly over decades’ and responsible for ‘the climate and ecological emergency that we now face’ (www.stopecocide.earth, accessed 20 July 2021). The legal sanctioning of ecocide would break the vicious relationship between powerful polluting industries, finance and governments, and would help put in perspective the individual contribution of ordinary citizens to climate change. Therefore, the Stop Ecocide campaigners are lobbying for an amendment of the Rome Statute of the International Criminal Court (ICC), adding ecocide to the four existing international crimes (genocide, crimes against humanity, war crimes and crimes of aggression).

CONCLUDING REMARKS

The issue of environmental violence has been explored by a variety of disciplines in the past decades, including literature, anthropology, peace and conflict studies, human geography, political ecology, philosophy of science, law, environmental history, chemistry, ecology and climate science. In order to navigate across the multiple perspectives on environmental violence, it is still useful to go back to the classification of violence proposed by the Norwegian sociologist Johan Galtung (1969, 1990), that is, direct violence, structural violence and cultural violence. These categories help us recognise different forms of environmental violence (Navas et al. 2018), such as direct violent acts against environmental defenders (Global Witness 2020; Tran et al. 2020) and less visible forms of violence, which are the main focus of this chapter: slow violence owing to contamination in marginal territories and communities (Davies 2019; Lerner 2004; Nixon 2011), infrastructural violence through the creation of large-scale projects with high socio-environmental impacts (Rodgers and O’Neill 2012) and narrative violence (Barca 2014). The interplay between theories, definitions and real territories, bodies and stories in different parts of the world leads to more complex views on the topic, hopefully pushing scholars and activists to be ready to rethink their approach and

research methods in the course of the analyses, while fine-tuning them to real socio-political and territorial specificities.

While the analysis of environmental violence phenomena highlights common injustices, inequalities and forms of racism (Bullard 1990, 1994), especially against the poorest and most marginalised strata of the population (Nixon 2011), different forms of resistance have been experimented with in a variety of territorial contexts, ranging from the metamorphosis of local inhabitants (especially women) into activists (Iengo and Armiero 2017) to converging struggles for work and environmental protection in working-class communities (Barca and Leonardi 2018) and forms of inclusive citizen science in highly polluted territories (Davies and Mah 2020). Even if not directly addressed, the eradication of environmental violence has been also the object of some critical planning experimentations through participatory action research (Saija et al. 2017). The most radical experiences to counter environmental violence have been influenced by the CEJ approach, pushing for analyses and actions informed by a broad anti-authoritarian perspective (Pellow 2016).

Despite an increasing number of cases of local mobilisation against slow and/or infrastructural violence, in some contexts it is hard to identify collective actions against injustices, owing to various factors, including the successful labour of confusion by governing bodies and the related experts (Auyero and Swistun 2009). While dealing with environmental violence, expertise hence emerges as a contentious field in relation with politics, activism and grassroots environmentalism (Chesta 2021; Pellizzoni 2011). As observed by the Italian sociologist Luigi Pellizzoni (2015), in his book *Ontological Politics in a Disposable World: The New Mastery of Nature*, the evolving production of knowledge on material reality is paralleled by new social scientific interpretations of human–nature relationships. While these accounts have been contributing to the establishment of the idea that our age would be characterised by ontological uncertainty, new economies have been taking advantage of it, through the use of technosciences allowing the expansion of the limits of nature's exploitation, thus making the world even more disposable. Social science's focus on ontological uncertainty, despite being apparently critical, would reveal a deep complicity with the current neoliberal economy based on technoscience. In this context, Pellizzoni suggests the need for new critical theories able to refuse violent narratives of domination, possession and exploitation of nature, while promoting a reconciliation between humans and nature (Chapter 41 in this volume), also through degrowth (Leonardi 2017).

The most recent legal innovations aimed at contrasting environmental violence seem to move towards this reconciliation and of the reduction of uncertainty, through the establishment of right of nature tribunals (Borràs 2016; Chapter 6 in this volume) and the advocacy for the recognition of the ecocide crime (Higgins 2010). In the geography and territorial planning domain, further efforts are ongoing to contrast the technocratic depoliticisation of governance (Swyngedouw 2011) and the related environmental violence. These efforts are taking the form of in-depth territorial analyses able to grasp the specificities of the various (urban, peri-urban, intermediate, rural and marginal) contexts (Keil 2020) and to highlight forms of spatial injustice (Soja 2010). Moreover, some planners are elaborating interdisciplinary proposals aimed at achieving space-sensitive, politically viable and financially sustainable forms of contrast to inequalities and environmental degradation (Coppola et al. 2021b), as a means by which to critically produce knowledge and act in the context of increasing international programmes for ecological transition. The considerable amount of funds related to those programmes and the exceptionality of their implementation processes could materialize in unnecessary and

harmful development projects sustained by a rapidly expanding technocratic governance, as has occurred in the past (for example, the final decade of the Cassa per il Mezzogiorno development programme in Southern Italy) (Coppola et al. 2021a). Therefore, planners are worrying about the spatial impact of the ecological transition and its possible contribution to the production of further environmental violence.

Future research on environmental violence will benefit from unambiguous definitions of the multiple facets of the topic, strong theoretical frameworks and in-depth investigations of real territorial contexts, explored at multiple scales in their socio-political, spatial and environmental specificities. In this context, social scientists will be called to elaborate critical thoughts able to reconcile the relationship between humans and nature, as well as to facilitate the dialogue between lay people and experts and across disciplines, for the common objective of eradicating environmental violence.

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30. Just transition: a conflict transformation approach

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INTRODUCTION

The planned retreat from a carbon-based economy is an essential component of addressing the root causes of climate breakdown. Nevertheless, how just, inclusive and equitable this transition might be is not guaranteed. With its origins in the trade union movement, the just transition stands as an energy transition pathway that can challenge head on dominant and comfortingly narratives on ‘win-win’ and ‘greening business as usual’. The reality is that moving to a low-carbon or post-carbon economy and society means the end of the fossil fuel energy system. This throws up a host of complex issues ranging from the role of the state (national and local) in managing or coordinating the transition, issues of democratic voice and procedure, reframing fossil fuels as ‘carbon resources’, to divestment and reinvestment energy strategies.

Central to all these, and under-acknowledged in the literature, is to recognise that conflict and conflict transformation will frame and characterise the low-carbon energy transition. Therefore, lessons arising from the application of conflict transformation within the Liberal Peace paradigm will have to be recognised and radically reimagined if an emancipatory just energy transition is to be realised. This paradigm, arising after the Cold War, promoted the concept that liberal states were peacefully inclined yet advanced a neoliberal marketisation methodology that sustained levels of structural violence to exacerbate conflict and maximise profitability (Newman et al. 2009, p.12). While the potential for a just transition can lead to a net benefit for society as a whole, any transition will inevitably produce winners and losers in the process. Hence, the shift from one energy system to another is not as simple as switching from one fuel or source to another. The losers, particularly affected workers and communities, will have to be accommodated if the transition is to be considered just.

For example, the dominant carbon-based energy system must be considered as forming a deep-seated ‘petroculture’ (Wilson et al. 2017). Awareness of culture formation is to be cognisant that any energy-climate transition is a political and political economy transition, and that as well as producing winners and losers, given the fundamental importance of the energy system to any social order, there will always be a ‘dirty politics’ of any ‘clean energy transition’ (Healy and Barry 2017, p. 453). As understood here, a just transition is the transition to a low-carbon economy and society explicitly orientated to ensure sustainability and climate action goals as well as the achievement of public health, worthwhile work, social inclusion and poverty eradication objectives. The chapter begins by tracing the origins of the just transition concept within the trade union movement in the 1970s to the most recent international instantiation in the Silesia Declaration and the inclusion of just transition in the preamble of the 2015 Paris Climate Agreement (UNFCCC 2015). In the following section, we continue this trade union (and broader labour movement) focus on policy implementation, the

state and (constrained) trade union agency. The fourth section offers a constestatory account of the just transition which problematises the domesticating and consensus generating and compromising logic of social dialogue and the green growth frame which is at the heart of most official just transition strategies. Following this, we develop this constestatory analysis further by directly critiquing social dialogue within official (state, business and trade union) understandings of just transition and suggest that what is needed is a more agonistic conflict transformation framework. We seek to move just transition processes beyond the consociational model of elite, top-down decision-making and agreement, and suggest that conflict transformative perspectives require social mobilisations and contestation outside any formal and state-centred just transition process. The final section examines some strategies for these extra-official forms of agonistic and localised opposition ranging from protests to boycotts and tax/rate strikes.

The chapter suggests that the development of current structures to manage and implement a just energy transition are, while welcome, also woefully inadequate both to the planetary emergency we face and to the positive societal transformative opportunities presented by responding to that planetary crisis. What is urgently required is a far more confrontational narrative and the construction of self-emancipated spaces for dissent to challenge the uneven distribution of power within the negotiating arenas for just transition.

ORIGINS AND GENEALOGY OF JUST TRANSITION: TOWARDS THE SILESIA DECLARATION AND BEYOND

The origins of just transition are in trade union campaigns to protect workers and communities during the environmental and social damage of the Industrial Revolution, securing health and safety at work, freedom from disease (such as miner's black lung) and better living and environmental conditions for workers and their families. The phrase 'just transition' itself was coined in the US trade union movement by Tony Mazzocchi, leader of the Oil, Chemical, and Atomic Workers union (OCAW), who worked to bring trade unionists into the 'ban-the-bomb' peace movement, together with a campaign to protect atomic workers in the transition to nuclear disarmament (Roessler 2016, p. 6). Mazzocchi developed the idea to reconcile ecological and social concerns about jobs that were either unsafe or unsustainable and therefore needed to be retired or eliminated, but in a just and democratic manner (Stavis et al. 2020, p. 10). In the ensuing decades, the transformative possibilities of just transition were picked up and augmented by other unions, most notably the Spanish Comisiones Obreras that formed SustianLabour. During the course of SustianLabour's existence it 'played a critical role in the diffusion of labour environmentalism at the global level and around the world' (Stavis and Felli 2020, p. 2).

Nevertheless, it was the establishment of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and the first Conference of the Parties (COP) in 1995 which created the institutional, policy and political space that facilitated the development of an international just transition policy. Having defined and developed the concept of just transition as a comprehensive opportunity to address interrelated social, economic and environmental issues (Galgóczi 2020), the international trade union movement set about strategically engaging with the 'social partners' in global business and through supranational government structures since the 1990s to establish a 'common narrative' (Rosemberg 2020, p. 36). From this,

a set of principles that both governments and business would adhere to emerged, regarding industrial development and transition planning. Over the past decade the role of global unions and the International Trade Union Confederation (ITUC) then sought to secure conditions for a transition that was fair to workers and sufficiently ambitious to realise the decent and well paid job creation potential of a low-carbon future (Sweeney and Treat 2018). This original intention was reflected by the ITUC at its second congress in 2010 in its resolution to combat climate change, which stated:

Congress is committed to promoting an integrated approach to sustainable development through a just transition where social progress, environmental protection and economic needs are brought into a framework of democratic governance, where labour and other human needs are respected and gender equality achieved. (ITUC 2010, p. 1)

The wider societal aspiration and ambition of this statement is evident, utilising a just transition as a catalyst to tackle other long-standing injustices within a framework of democratic control, beyond financialised neoliberal markets and top-down policy reforms. The trade unions' journey with this just transition project is decades old: the slogan of ITUC 'No Jobs on a Dead Planet' has become synonymous with the global movement for climate justice, and underpins union's attempts to reconcile the need to protect the interests of vulnerable workers, a stable climate and a habitable planet. Set against the backdrop of complex international negotiations, an ideological rapprochement between jobs and the environment was hard fought for by the ITUC. As regards the common acceptance of a just transition, Anabella Rosenberg, former Environment Policy Officer for the ITUC, rightfully questions 'Would it have been possible to imagine such a trade union slogan, anchored on social justice, but also on environmental protection, only a few decades ago?' (Rosenberg 2013, p. 19). Probably not, and despite its limitations at the negotiating table, without the efforts of the international trade union movement using the science, the notion of a globally recognised framework for a just energy transition might never have got started.

The inclusion of 'just transition' in the Paris Agreement, the International Labour Organization (ILO)'s adoption of a just transition agenda in 2013 and publication of its guidelines (ILO 2015) have all contributed to enshrining the concept in international and national policy domains. As the preamble of the Paris Climate Agreement states, the imperative is 'of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities' (UNFCCC 2015, p. 2). However, the most significant development to date in the *Just Transition* international policy is the 'Solidarity and Just Transition Silesia Declaration' (2018) agreed at COP24 in Katowice, Poland. This declaration adopted by 37 countries and the European Union (EU) builds upon the explicit acknowledgement of a just transition in the Paris Agreement. The Silesia Declaration not only outlined provisos to protect vulnerable workers but also announced:

the intrinsic relationship that climate change actions, responses and impacts have with equitable access to sustainable development and eradication of poverty; Recognizing [*sic*] the specific needs and special circumstances of developing countries, especially those that are particularly vulnerable to the adverse effects of climate change. (Solidarity and Just Transition Silesia Declaration, COP 24 2018, p. 1)

Here we see a clear diversification of the just transition concept and the influence of the ITUC in its efforts to remediate, ‘the ethical obscenity of the most vulnerable in world suffering most from actually existing unsustainability’ (Barry 2013, p. 228). This recognition of the interaction among climate change, inequity, poverty and the needs of developing countries outlined in the declaration is undeniably significant, and an unambiguous recognition that a just transition is not simply about climate or energy.

The Silesia Declaration also highlights the challenges faced by ‘sectors, cities and regions in transition’, emphasising the ‘importance of a participatory and representative process of social dialogue... when developing nationally determined contributions’ Solidarity and Just Transition Silesia Declaration, COP 24 2018, p. 2). The inclusion of sectoral and place-based references and an implementation imperative premised upon participatory social dialogue speaks directly to the need for a different and more emancipatory type of industrial planning for just energy transitions.

PROBLEM-FRAMING AND KEY CONCEPTS: POLICY IMPLEMENTATION, THE NATION STATE AND TRADE UNION AGENCY

The potential of current just transition planning was unpacked further in a report entitled ‘Implementing just transition after COP 24’. The report outlined a ‘multi-scalar and multi-stakeholder’ approach that required ‘collaboration between the state, local communities and trade unions’ with the ‘centre of these discussions ... positioned at the national level’ (Jenkins 2019, p. 9). In addition, the international fora are designated as arenas for the ‘dissemination of information, exchange of experience, drawing of comparisons’ (Jenkins 2019, p. 9). This is an important distinction since it provides clarity on the types of information and initiative expected from each layer of social dialogue. Furthermore, in the report, we glimpse the intention of the international labour movement to create a supplementary conceptual space which also gently challenges the economic status quo and current modes of production, stating:

Stakeholders should define the scope and nature of change during the process of coalition-building and policy design and pressingly, policy coordination and integration, considering whether it is transitional or transformative. Transitional change continues with the current economic model, whereas transformative change is more radical, moving towards a broader conception of communities and more collaborative energy production and ownership. (Jenkins 2019, p. 11)

While the report is meant as a vigilant policy briefing, immediately after the Silesia Declaration at COP24, it does highlight the evolving scope of ambition and the practical limitations of international trade union movement negotiating positions. There remains a ‘distinct gap between international decisions and domestic positions’ (ITUC 2017, p. 8). Individual nation states are not moving fast enough.

In all of this it important to note that the units for innovation and participation to promote a just transition are the signatory nation states (see Chapter 29 in this volume). The recognition of this reality has critical implications for the types of social solidarity and coalition-building required to deliver sufficient levels of industrial planning, premised upon the understanding that the current and future trajectory of a just transition is nothing without the ‘emancipation of workers’ (Steviss et al. 2020, p. 21). Therefore, the emancipation of workers requires

a deeper appreciation of the inequities of climate breakdown and how these are intertwined with pre-existing and long-standing economic, democratic, gender and class injustices within workplace relations (Shantz 2002). So, this conception of a just transition is resolutely not the decarbonisation of capitalism with trade union input. Instead, it is a much more politically radical and opposition strategy for a transformation beyond capitalism, based on the transition beyond carbon energy. Thus, the just transition debate potentially puts domestic corporate green capital on the spot, pinning the hypermobility of finance and forcing business to ‘clarify its story’ (Moussu 2020, p. 71).

In this regard, there is also no reason why national and regionally delineated trade-union led campaigns cannot become more challenging and ‘primarily concerned with tackling and reducing unsustainability, inequality and harm, full stop, rather than feeling forced (as much of the green movement has) to also develop a costed, evidence based, policy ready alternative sustainability model’ (Barry 2013, p. 229). This logic provides a self-determining prerogative for the trade union movement and allows it to consider radical proposals with depth and ambition regarding, ‘a fresh narrative, one that is deeply ecological and capable of connecting workers’ needs to a vision for a truly sustainable society’ (Sweeney 2012, p. 13). It also repositions the contribution of trade unions as part of a wider socio-political and ecological dialogue together with other groups and allies. The call for additional alliance-building between trade unionism and other progressive social movements as a prerequisite to create the necessary socio-economic conditions for a deeper just transition is a common theme among many scholars and activists of labour environmentalism and left-green or eco-socialist political economy. This popular position also implies that it is not wise to assume that an ecologically sustainable world can simply be engineered through the normal policy reform process. Extra-parliamentary popular movements and mobilisations (such as Extinction Rebellion, general strikes and Youth Strike for Climate) will be needed beyond the confines of any formal social dialogue, adding deliberate conflict exacerbation as a necessary element of any conflict transformative energy and climate transition process (see Chapter 13 in this volume).

CONTENTIOUS ISSUES AND STANDPOINTS: WINNERS, LOSERS AND LIMITS OF SOCIAL DIALOGUE IN THE ECO-MODERNIST FRAME

A key feature that defines a genuine approach to a just transition is the honest recognition that responding to climate breakdown and creating a low-carbon green economy means there will be winners and losers. The ‘win-win’ logic dominant in mainstream discourses around energy and climate (especially within techno-optimist variants) appear neither valid nor honest. The shift from a carbon-based economy does mean that some industries, such as the fossil fuel sector, will lose out and will have to be retired, quickly. Hence, it is important to ensure, as far as possible, that no one is left behind in the energy transition or that the costs and burdens of the transition fall disproportionately on one section of the community or the economy (Barry 2019).

We can envisage the difficult, but we would suggest necessary, strategy of balancing the deliberate delegitimisation of fossil fuel extraction and use, while simultaneously valorising and not demonising fossil fuel workers and communities (Healy and Barry 2017); hating the sin but loving the sinner as it were. On the one hand, there is a need to undermine the social

legitimacy (or social licence to operate) of the carbon energy system, including the economic and cultural practices and values associated with it. On the other, as part of the necessity for developing working-class environmental consciousness, the alienated fossil fuel workers and communities cannot be portrayed as climate criminals or positioned as disempowered recipients of exploitative green capitalist enterprise. The views of former Irish President and former UN High Commissioner for Refugees, Mary Robinson, are important (and eloquently align with a worker-focused view of the just transition) when she stresses that:

as we make the transition to clean energy, we must remember the millions of fossil fuel workers around the world who spend their lives extracting the fuel that has fed our economies. They too are victims of climate change and deserve to be treated with dignity. Their story is part of the struggle to climate justice. Others working in energy intensive industries – steel, iron, aluminium, power generation, and road transportation – will also be affected by carbon reduction and elimination. (Robinson, M. 2018, pp. 113–14)

The most important conclusion the trade union movement can draw from the stark reality we face is this: the transition to a low-carbon, sustainable future cannot be left to the investor class, chief executive officers (CEOs) of multinational companies, or governments that refuse to break with the current capitalist, carbon and endless growth economic paradigm. Therefore, can social dialogue as a diplomatic mechanism really deliver or is something additional required to move the ground? The answer to this question depends upon your interpretation of the just transition. Hampton (2015) notes that there is plasticity in the concept of just transition that allows for a more radical interpretation. On this issue, ecosocialist/feminist Jacklyn Cock also outlines this alternative position which ‘views the climate crisis as a catalysing force for massive transformative change with totally different forms of producing and consuming, perhaps even moving towards socialism, but a new kind of socialism which is democratic, ethical and ecological’ (Cock 2018, p. 222).

In this regard, largely, the international trade union movement paradoxically embraces the discourse of eco-modernism and a green growth paradigm which continues to put economic activity on a collision course with planetary limits (Barry 2013; Cock 2018; Sweeney and Treat 2018). Critical voices, such as Trade Unions for Energy Democracy (TUED), take issue with the ITUC and the ILO for not challenging the economic status quo more robustly. Sweeney and Treat of the TUED are unambiguous in their analysis:

Those in charge of the transition to a resilient low-carbon future have failed. What we have witnessed is more than two decades of talk with nothing like the sort of action necessary to back it up. *This is not a problem of ‘political will’; it is a problem of the capitalist political economy and the imperatives of perpetual expansion on which it is based.* (Sweeney and Treat 2018, p. 18, emphasis added)

It is perhaps unfair to dismiss the protracted and serious efforts of the ITUC as a failure but a just transition that genuinely protects workers, communities and the planet necessitates a deeper reflection on what needs to be done. Just transition policy-making at an international level has been fully appropriated by dominant discourses, eco-modernisation and neo-classical economics, as evidenced in the provisos of the Silesia Declaration which calls for a ‘paradigm shift’ in energy use and consumption but also, in the same sentence, seeks ‘high growth’ (Solidarity and Just Transition Silesia Declaration, COP 24 2018, p. 1). At the heart of this green growth perspective lies a fundamental contradiction, first, if the accumulation imperative of capitalism is the root cause of climate breakdown, then it seems strange to rely on the

capitalist mode of production for solutions and an illusionary response to the ecological crisis (Fremaux 2019, p. 168). Sweeney and Treat (2018) suggest that a just transition is not inevitable, indeed it is not even likely without a radical shift in policy, away from a green capitalist paradigm towards public and social ownership models with more democratic control of key economic sectors such as energy (see Chapter 17 in this volume).

Therefore, the clamour to enforce one definition of a just transition over another could create a ‘false binary decision, a distinction which fails to distinguish between the long-term and short-term interests of labour’ (Cock 2018, p. 222). Therefore, perhaps, the long-term interests of labour can be met with a more radical approach that pursues a deep restructuring of the global economy but where the short-term needs of vulnerable workers in extractive industries can be addressed as a matter of urgency. However, the short-term and long-term interests of labour, society and nature will not be best expressed or even heard within a formal process of social dialogue which is underpinned and dominated by an economic paradigm that is also the root cause of climate breakdown (Sweeney and Treat 2018). While the mechanism of social dialogue is designated to sort out short-term and long-term issues for a just energy transformation, it is simply not equipped to do so because it ‘rejects any serious challenge to current arrangements of power, ownership and profit, opting instead to draw comfort from an uncritical endorsement of “win-win” solutions and “green growth” for all’ (Sweeney and Treat 2018, p. 3). Arguably then, the internationally agreed frameworks for a ‘just transition’ are nothing more than, ‘spectacular reassurance strategies’ (Gunderson 2020, p. 260) that are not designed to challenge the status quo; but tactical ploys that mitigate environmental concern with the public while simultaneously maintaining or accelerating the social-structural causes of environmental harm, weaponising financial capital with new green markets to exploit (see Blühdorn, this volume). Similarly, with a mixture of seriousness and humour Stevenson determines this type of illusionary discourse as, ‘the concept of bullshit’ which ‘captures the mistruths and inconsistencies we observe in global climate governance’ but also ‘draws our attention to the insidious effects of deceit and helps us grasp the type of reform needed’ (Stevenson 2021, p. 87). The problem with the carefully constructed spaces for social dialogue is the distribution of power and the premise of consensus among unequals (Ruser and Machin 2017). There are currently no official vents for dissent, conflict and confrontation to counter the ‘bullshit’ and we are running out of time.

OPEN QUESTIONS AND TRANSFORMATIVE POTENTIAL: BEYOND SOCIAL DIALOGUE TOWARDS AN AGONISTIC CONFLICT TRANSFORMATION FRAMEWORK

A conflict transformation framework develops a ‘*prescriptive* direction’ to reorient people from destructive and unstable relationships towards cooperative ones. It does this by first analysing the ‘root causes’ of conflict then engaging ‘top leadership’, ‘middle-range leadership’ and ‘grassroots leadership’ to help them move collectively from ‘issues to systems’ through grassroots training, problem-solving workshops and high-level negotiations that produce sustainable solutions beneficial to all (Lederach 1998, p. 39).

The opportunity for social dialogue as expressed in an international just transition policy, such as the Silesia Declaration, upholds the fallacy of win-win-win (accumulative growth, workers’ rights and ecological sustainability). Just transition needs to be appropriated and

reconfigured into an explicitly agonistic framework that allows conflict to be brought out into the open, debated, possibly democratically resolved, and provisional agreement and action created. It is a strong position among scholars and activists that a deeper just transition will only be possible if it is driven by a broad, democratic and progressive counter-movement outside official decision-making systems. This could create conditions on the ground for a more ambitious programme of radical reform that sits in opposition to the growth imperative of greening capitalist business-as-usual (Barry 2012b, 2013, 2019; Shantz 2002, 2012; Sweeney 2012; Cock and Lambert 2013; Felli 2014; Hampton 2015; Cock 2018; Stevis et al. 2018; Sweeney and Treat 2018; Barca 2019; Bell 2020; Goods 2020).

There are now several counter-theories that challenge the green growth imperative. The matter of conjoining steady state/degrowth/post-growth theories and just transition, in whatever configuration, is complicated by the current position of institutional trade unionism that is tied to a growth paradigm within the eco-modernist turn. In this regard, Barca (2019) outlines an inescapable truth that just transition will lead to massive layoffs of workers within the extractive fossil economy and industrial agriculture, therefore any ecologically sustainable transition policy must include concrete recommendations for socially and economically sustaining livelihoods and communities in the transition process. Furthermore, sustainability transition politics, such as degrowth, 'will remain politically weak unless it manages to enter into dialogue with a broadly defined global working class – including both wage labour and the myriad forms of work that support it – and its organizations' (Barca 2019, p. 214). Both degrowth and just transition must be seen as converging aspects of the same struggle (see Chapter 7 in this volume).

Barry (2012b, p. 141) concludes that 'post-growth critique must necessarily lead to a post-capitalist alternative and related political and ideological struggle'. Thus, the critical intersection of just transition and degrowth/post-growth economic planning directs us towards a deepening culture of decommodification, work not growth and the development of functional abundance within planetary limits. In this manner, a radical just transition cast within a degrowth/post-growth model is explicitly oppositional to neoliberal, financialised capitalism, exacerbates tension and initiates conflict, even as it is also concerned with democratically resolving those conflicts.

This provocative, agential opposition of an unjust transition links to what Martínez-Alier (2002) terms the 'environmentalism of the poor'; those movements, mostly in the Global South, that resist extractivist, exploitative fossil capitalism (see Chapter 33 in this volume). In so doing, this opposition, whether against extractivism or corporate or state 'unjust transitions', can contribute to a larger political purpose. This explicit opposition and the deliberate creation of political and ideological tensions, can open up the space for debate on how communities and societies can develop coping mechanisms, if not solutions, to localised instances of 'actually existing unsustainability' (Barry 2012a). Part of this oppositional agonistic politics of a just transition (which will, and should, involve non-violent direct action, in our view) is about the inclusion of non-energy and non-sustainability issues and problems, such as poverty reduction, tackling socio-economic inequality and wealth disparities, as suggested above.

As a veteran of the Northern Ireland peace process, former First Minister Peter Robinson has noted of his experience of peace negotiations, 'when a problem cannot be solved, it needs to be enlarged. [We] need to broaden the agenda and open up more scope for trade-offs and hopefully the inclusion of other issues upon which common ground might be found' (Robinson, P. 2018). Therefore, to expand the common ground for the common good neces-

sitates the inclusion of social and environmental inequalities, constituted by the relations of domination and exploitation that maintain capitalism. Theoretically, the conflation of social and environmental inequities to the debate for a just energy transition can be viewed as green republican approaches, in which contestation is seen as important (if not more important) as consensus (Barry 2019; Barry and Ellis 2010), based on an account of democracy as non-violent disagreement (Barry and Keller 2014). As well as foregrounding the common good, a green republican perspective on the just transition would highlight the importance of contestation over consensus for example, thus disrupting the compromise for consensus logic of social dialogue in orthodox and official processes of just transition. Also, in valuing active citizenship (both instrumentally and intrinsically), a green republican approach to just transition necessarily requires a focus on grassroots mobilisation. This is in opposition (or an agonistic complement) to the elite, technocratic, top-down and often consociational model observed in consensus-based and state-centric just transition strategies. Sociologically and strategically, this could manifest itself as a coalition of social movement mobilisations outside any formal just transition mechanism.

Social movements of this scale and range would also imply significant contestation with the eco-modernist turn, challenging the existing arrangements of ownership and power within just transition policy and planning spaces, regionally, nationally and internationally. The climate/conflict narrative for just transition, in respect of problem and solution, is informed by an understanding that the exploitation of workers' relations and nature are inextricably linked to the capitalist mode of production. As Silverman (2004, p. 133) explains, 'exploitation is the unifying term, which makes the common enemy common; both kinds of exploitation result from one process. ... This interconnection allows a unified approach to workers' problems and the environment's needs. It encourages a common solution and offers a profound basis for alliance with environmentalists around the world'.

Untangling the influence of capitalism as the dominant economic means of production in the push for a just transition will probably be a very complex, protracted and conflict-generating process (see Chapter 4 in this volume). A meaningful just transition will require more than social dialogue, with a deep conflict transformation process that could create sustainable structural and cultural changes, allowing new institutions and practices to emerge that address the outstanding issues of moving from a carbon to post carbon society.

However, this will inevitably create tension, disagreement, suspicion and resistance, especially from those who will be, or see themselves, as losers from this energy transition. Therefore, the dynamism of a radical conflict transformation process, sustainability itself, can become more about developing political coping mechanisms that enable demonstrable change to emerge that is beneficial to affected workers and communities. This stands in stark contrast to the unrealistic and utopian technological 'solutions' currently based on 'managing the planet', which can be observed in proposals for 'earth systems management', such as geoengineering and large-scale carbon capture and sequestration (Fremaux 2019, p. 70).

CONFLICT, CREATIVITY AND DEMOCRATISED AND LOCALISED AGONISTIC CONTESTATION AND CO-CREATION

A challenge in transforming conflict within any just transition is how, *inter alia*, activists, business, environmentalists and policy-makers can be moved from a rigid rationalist approach

towards a more ‘combined linear and process-driven’ methodology that addresses unforeseen changes or conflicts as the transition evolves that is truly democratic, emancipatory and open to amendment rather than ignored. This would mean that it can be modified as the process develops insights on how to sustain both attitudinal and structural transformations (Rupesinghe 1995, p. 76). This processual approach suggests that for a just transition conflict transformation process to succeed, it needs to move beyond macro state or corporate needs, to find mutually compatible goals at the local level, particularly where local actors can have a voice in the design and management of multi-scalar and multi-stakeholder collaborations. Hence, the centrality of localised, bespoke, inclusive, participatory and institutionalised practices aimed at radical and transformative just transition processes. In addition, at the same time there need to be agonistic, oppositional and contestatory social mobilisation processes outside those institutionalised democratised dialogue and decision-making processes (see Chapter 24 in this volume).

Lessons from liberal approaches to peace-making demonstrate that for conflict transformation to be successful all participants need to have the ‘moral imagination’ to ‘sustain the change processes engendered by an accord’ (Lederach 1998, p. 47). This is why, ideally, a shared and agreed transition vision is important in energy and climate politics. A shared vision can only emerge from open dialogue, contestation and deliberation, not technocratically from the top-down or from the centre of political power to the conflicted periphery. The latter, especially in relation to fossil fuel extraction (notably coal, oil and fracked gas) is often ecologically and public health-wise deemed a ‘sacrifice zone’, even as it is also a place of jobs and orthodox, unevenly distributed, economic development (Scott and Smith 2017). Therefore, any just transition needs to be agonistically transformed with the active participation of those deemed losers from the transition away from fossil fuel extraction. This is so, not least, to enable affected communities to be both compensated and their creative energies enabled to co-create sustainable, workable and localised solutions within participatory processes, that go well beyond elite level social dialogue, as applies to official just transition positions.

What transformative just transition processes require are ‘post-liberal’ green political approaches that move beyond the capitalist, growth-oriented ‘neoliberal development model’ (Richmond 2011, p. 35), which is ecologically and socially unsustainable, that is, ecocidal and unjust. These radical, post-liberal approaches ‘confront direct, structural, or governmental power at the international and state levels or local elite power’ (Richmond 2016, p. 33) and create opportunities for new employment opportunities for those deemed collateral damage in a sacrifice zone. Therefore, if a radical, eco-socialist political economy is to advance a just transition worthy of the name, it needs to learn lessons from neoliberal attempts to promote conflict transformation as a technology to transition politics from war to a structurally violent peace. Moreover, just as non- or extra-democratic technological-technocratic approaches to ‘solving’ the planetary crisis are deeply flawed (Barry 2012a), so are neoliberal technologies of conflict transformation (Brennan 2017).

Within this context, while the theoretical framework for conflict transformation is valid, any future transitional activities, and policies arising, within a green political economy need to shift the language away from condoning the neoliberalism and structural violence of sacrifice zones towards an emancipatory low-carbon cooperative future which is rooted in the communities it seeks to transform. These actions need to transform individuals and social systems so they can develop strategies and practices that transition politics beyond carbon, and beyond capitalism. In following established conflict transformation theory, this will require a vision,

with short- and long-term objectives that are based on achieving basic human needs and rights, and ensuring human well-being for all, for ever (Gough 2017).

These objectives will require a new green economy, including a new conceptualisation of 'economics' (Barry 2012a, 2012b) that tackles the root causes of our growing planetary emergency through an integrated framework, inclusive of connected and networked local, national and international actors and actions to tackle the root causes of climate violence. One that is co-produced by engaged grassroots leaderships in processing and progressing just transitions at the local level. These transformative processes need to address both the relational dimensions and structural dimensions to help envision and identify those leaders skilled and knowledgeable in transitioning people, place and planet into a low-carbon economy. They also need to build the capacity, and develop the potential, of grassroots leaders to design and advocate for an emancipatory just transition within the administrative and governmental processes that manage politics at the everyday level. Being rooted in the grassroots of an emancipatory green political economy, these localised transitions may then produce the sustainable transformation required to address both the episode and epicentre of the planetary crisis. This may be realised by radically reforming the personal, relational, structural and cultural norms that inform and shape the governance of a polity and its political economy, especially its energy system. This inclusive, participatory decision-making is required to produce and enact the imagination and local creativity required to move populations through a just transition towards the construction of relations that prevent a relapse into climate extinction.

These transformative objectives will require, as indicated previously, large-scale social mobilisations by different groups ranging from students, environmentalists, trade unions, workers and faith communities. To realise these outcomes, grassroots leaders and environmental activists need to utilise and promote a form of *Métis*, forms of practical cunning and strategy, tactics and ways of operating that can enable grassroots communities to produce 'victories of the "weak" over the "strong"' (de Certeau 1988, p. xix). It can also include acknowledge that sometimes 'you have to pick a fight to win it' as Martínez-Alier (2002) suggests in his analysis of the 'environmentalism of the poor'. For de Certeau,

Métis is a type of intelligence and thought ... It implies a complex but very coherent body of mental attitudes and intellectual behavior which combine flair, wisdom, forethought, subtlety of mind, deception, resourcefulness, vigilance, opportunism, various skills, and experience acquired over the years. It is applied to situations which are transient, shifting, disconcerting and ambiguous, situations which do not lend themselves to precise measurement, exact calculation, or rigorous logic. (de Certeau, 1988, p. 3)

In many respects, *Métis* could be viewed as 'virtues' of social mobilisation and agonistic contestation. That is, dispositions, character traits and learned and inherited and invented strategies of grassroots opposition, rooted in place and time as opposed to some grand or universal theory of change. Practices of *Métis* can be protests, parades or planning objections to climate extinction practices or unjust energy transitions. In utilising their microphysics of power, through this form of 'antidiscipline', where these communities oppose policies and macro planning objectives or utilise their purchasing power to withdraw support from businesses damaging their communities, such leaders and activists may then self-generate a transformative outcome from their own actions. This focus on the consumer and household is important for a number of reasons pertinent to transformative accounts of just transitions. First, it calls attention to the importance of the consumer/consumption dimensions of just energy transitions to balance the

predominant focus on primary energy resource extraction and energy production and industrial use in most accounts of just transition analysis (this is logical given the trade unions origins of the concept of course). Focusing on the consumer means widening and deepening the just transition focus to ensure that, for example, higher renewable energy prices should not be the outcome, since this would unfairly and disproportionately hurt low-income and vulnerable populations. Linking back both to the oppositional and green republican insights, a just transition, as we understand it, should mean ‘no carbon taxation without participation and agitation’ (Barry 2019). Secondly, this focus on the consumer highlights the strategic and disruptive opportunities of tactics such as consumer boycotts and withholding payment for energy services, including withholding taxes or rates owed to the local or national government, as part of localised, context-specific grassroots activism. This organised and sustained activism could result in the institutions of the state (including the local state), as well as multinational carbon energy and related industrial organisations, changing policies and practices in a more transformative and less ‘business as usual’ direction.

CONCLUSION

The transformation of the energy system in addressing climate breakdown could and should fundamentally change society, the economy, culture and politics for the better. However, for these multiple benefits to be achieved, the urgent and rapid transition to low-carbon energy has to be achieved in a manner that is open, democratic, inclusive and, most importantly, just and fair. Moreover, this just transition requires the honest recognition that we should avoid the lure of a ‘win-win’ policy-reform or techno-optimistic logics and/or top-down solutions. Instead, a just transition acknowledges that while there will be multiple benefits, there will also be downsides, losers and adjustment burdens, and therefore conflict and disagreement. Hence the need for conflict transformation processes and insights to be integrated within thinking and planning for a just energy transition.

Also, this conception of a just transition requires we move decisively beyond perceiving the energy transition as the greening of business as usual or the decarbonising of capitalism. These approaches may achieve the latter, and this is the reason why such mainstream political and policy approaches to addressing the climate/energy crisis are dominated by such status quo-reinforcing reformism. However, the acceptance and encouragement of non-violent conflict, contestation and agonistic disagreement around any energy transition (the green republican position) creates the space and, we would argue, necessity for moving beyond neoliberal capitalism objectives and business as usual outcomes. The vision of a just transition, outlined previously, can be captured in paraphrasing the Scottish novelist, Alasdair Gray: ‘Let us transition as if we are in the early days of building a better society’, or as the spark that lit the youth strike for climate movement, Greta Thunberg, has put it,

Avoiding climate breakdown will require cathedral thinking. We must lay the foundation while we may not know exactly how to build the ceiling. Sometimes we just simply have to find a way. The moment we decide to fulfil something, we can do anything. And I’m sure that the moment we start behaving as if we were in an emergency, we can avoid climate and ecological catastrophe. Humans are very adaptable: we can still fix this. But the opportunity to do so will not last for long. We must start today. We have no more excuses. (Thunberg 2019, p. 67)

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35. Environmental movements

Viviana Asara

INTRODUCTION

Environmental activism is a kaleidoscope concept that has taken manifold shapes, hybridised with different claims and generated diverse varieties of environmentalism. For this reason the chapter takes a broad definition of environmental movements, as ‘networks of informal interactions that may include, as well as individuals and groups who have no organizational affiliation, organizations of varying degrees of formality (including even political parties, especially Green parties) that are engaged in collective action motivated by shared identity or concern about environmental issues’ (Rootes and Brulle 2013). Environmental movements have been referred to also as a ‘very broad church’ (Berny and Rootes 2018, p. 947),

a phenomenon that is highly diverse in its forms of organization and action, from the radical, but sometimes covert direct action of the ‘green’ movement (Doherty 2002) through demonstrative public protest, to the often publicly invisible actions of bureaucratised formal organizations that lobby governments or work in concert with governments and /or corporations to achieve desired environmental outcomes. (Rootes and Nulman 2015)

How to do justice to this broad field of study and phenomena is a challenging endeavour and it is impossible to be exhaustive. A critical approach to the topic of environmental movements entails, first, recognising that ‘mainstream’ debates have mostly been conducted and steered through a Western gaze, and they have privileged the study of a particular type of environmentalism, which is not much concerned with livelihoods, bodies and issues of social justice (see the Introduction and Chapters 2 and 37 in this volume). As discussed in the following sections, this has practically meant, aside from a few important exceptions (for example, Martínez-Alier 2002), an invisibilisation of non-Western environmentalisms, and often a consideration of Western movements that were giving centre stage to the entanglements of social and environmental concerns as not reaching the high ranks of environmentalism, as they were supposedly not pure enough. Relatedly, a Northern environmentalism has been held to differ in substance from a Southern environmentalism. While non-Western, Southern environmental activism is discussed in another chapter of this handbook (Chapter 33 in this volume), I reflect on and problematise this general bias and, in juxtaposition to that approach, look more specifically at how the environmental movements’ struggles for environmental sustainability in Western countries have overlapped with social concerns and – beyond a single-issue approach – consider their implications for democracy and transformation concerns. By so doing, I follow the conceptualisation of a strand of studies that have placed a democratic quest at the core of their understanding of environmental movements. This is particularly so for what I refer to as socio-environmental movements, that is, those movements whose expression of ecological concerns went hand in hand with broader socio-political claims that are perceived as intimately connected to ecological issues. This comprises many different movements that have often been attributed different names (for example, environmental justice movement, political

ecology groups, green movements and LULUs movements) or diversely identified (and often overlooked or not recognised) in different sociocultural contexts, but share some fundamental traits across borders.

This chapter more particularly scrutinises the prism environment-democracy by looking at two dimensions: varieties of environmentalism and environmental movements (and evolution thereof), and the institutionalised versus grassroots dimension of environmental movements. The environmental justice movement will be used as an example of a socio-environmental movement to illustrate some of the debates. The final section concludes with reflections on the transformative potential of environmental movements.

VARIETIES OF ENVIRONMENTALISM AND ENVIRONMENTAL MOVEMENTS

According to several authors, the collective identity of (some strands of) environmental movements cannot prescind from a democratic quest as well as from a broader link to wider socio-political challenges. For example, for Diani and Rambaldo (2007, p. 780), 'the environment as a political issue can hardly be detached from grassroots, participatory politics'. Doherty (2002) identifies (and focuses on) a subset of the broader environmental movements on the basis of its democratic bent, what he terms a 'green movement', whose collective identity includes a commitment to non-hierarchical styles of organisation and acceptance of the value of changing our lifestyle to be consistent with political principles. This means, for Doherty, overriding 'all those EMOs [Environmental Movement Organisations] that do not challenge the existing political or social system' such as single-issue pressure groups (Doherty 2002, pp. 12, 14) or that merely argue for policy change without challenging 'some feature of dominant cultural codes or social and political values' (Doherty and Doyle 2006, p. 703).

According to Doherty, the reason why a particular anti-authoritarian and pro-egalitarian form characterised the green movement since its inception, including an engagement with questions of power and social justice in contraposition to a Malthusian or eco-survivalist tendency (for example, featuring in 1970s authors such as Paul Ehrlich and Garrett Hardin), stemmed from the influence the New Left exerted upon it. As noted by Doherty (2002, p. 33), 'as the first major critic of the certainties of post-war politics', the New Left's radical democratic ideas acted

as the basis of an alternative politics which challenged the limits of representative democracy and inspired the green commitment to grassroots forms of democracy. Also, while ecological themes were not central to the New Left, they were present, and it is possible to establish links between the ecological dimensions of parts of the New Left and contemporary green politics.

The environmental movements that emerged in many Western countries in the 1960s borrowed several themes from the New Left movement, from the radical democratic project and the expressive and convivial dimension of politics to the quest for change from below, for example, through protest and the creation of alternative communities (Doherty 2002). This wave of environmental movements (part of the broader cycle of new social movements) is also depicted as the second wave of environmentalism, following the first wave of the early conservation movement at the turn of the twentieth century, and preceding a third wave brought

about by the efforts of the institutionalised movement to shape environmental legislation in the late 1980s and 1990s.

Conceptions over varieties of environmentalism are intertwined with the articulation of different types of environmental groups, and these have been changing with the evolution of environmental movements. Doherty explicitly links his conceptualisation to Dobson's (1990 [2007]) famous distinction between environmentalism and ecologism: while the former argues for a managerial approach to environmental problems without fundamental changes in present values or patterns of production, ecologism holds that a sustainable and fulfilling existence presupposes radical changes both in relationship to the non-human natural world, and in our mode of social and political life. Dobson's distinction reflected broader discussions ongoing since the 1970s within the nascent environmental movement that characterised the second wave of environmentalism and closely followed similar distinctions previously outlined by both political ecologists and social movement scholars. More particularly, his distinction recalls the one previously made by Gorz (1978, p. 24). For this founding figure of political ecology, while environmentalism only imposes new constraints to capitalist economic rationality without questioning the bottom tendency of the system, ecologism implies a change of paradigm, questioning the reasoning of techniques, production and consumption, and is aimed at reducing economic rationality and market exchanges for the benefit of societal and cultural goals at the service of individuals' flourishing.

In his seminal study on Italian environmental movements in the 1970s and 1980s, Mario Diani (Diani 1988; 1995, p. 26; Diani and Lodi 1988) elaborated a threefold diachronic typology of ecology movements in Milan that would be extensively relied upon. This distinction is interesting for the role he attributes to democratic concerns as a criteria for distinguishing a specific type of environmentalism, that is, political ecology. Based on interpretations of environmental problems as well as on their social and political roots (socio-demographic traits, political background and patterns of recruitment), Diani's typology first pitted the new political ecology groups against more traditional conservation groups, and later identified a third current that emerged in the late 1970s (Diani 1988). Conservationists represented the only active form of ecological action in Italy until the 1960s. Many of their constituents holding no previous political activism, they envisaged defending the environment as understood largely in relation to natural heritage (parks, coasts, fauna, and so on) and in aesthetic and ethical terms, and attributed the cause of environmental degradation to irrational human behaviour and short-sighted utilitarianism (Diani 1988). Conservationists thus sought its remediation through the transformation of individual behaviour by engaging in moderate and reactive actions, such as consciousness-raising and education campaigns. This conservationist current has been singled out also by several other authors. Martínez-Alier (2002, p. 1) famously referred to it as the 'cult of wilderness' movement, dominating at the international level together with the other mainstream variety, the 'gospel of eco-efficiency'.¹ Concerned with the preservation of pristine nature by setting natural areas aside from human use, Martínez-Alier charged the cult of wilderness with excluding local people who have a stake and local lay knowledge of sustainable natural management, while being increasingly drawn into an economic language through the alliance with the gospel of eco-efficiency (Anguelovski and Martínez-Alier 2014).

Instead, Diani named 'political ecologists' those new groups, that emerged in the early 1970s, that held diverse social and cultural roots and tightly linked environmental concerns with a democratic quest. Many of these groups originated in the discussions following the publication of the 1973 Limits to growth report (Meadows et al. 1972) – and previously, Rachel

Carson's (1962) landmark book – and the turmoil this generated in public as well as academic debates, challenging widespread assumptions in mainstream economic thinking regarding the viability of perpetual economic growth (Gómez-Baggethun and Naredo 2015). Diani identified other roots of the political ecology groups in forms of class conflict developed both within and outside the factories. On the one hand, the organised opposition to industrial pollution and degrading quality of life in segregated deprived neighbourhoods, and, on the other, the concern of workers over health and safety issues in factories and the demands of wider control over the production cycle. Furthermore, an environmental counterculture spread out in diverse groups, such as youth subcultures, libertarian currents and free spaces, where alternative practices diffused. Created as 'a new approach to environmental issues, emphasising their political and social implications' (Diani 1995, p. 25), the political ecology variety blamed the capitalist mode of production for the exploitation of both nature and the labour force, envisioning a change of the goals of social production, coinciding during its first phase with mobilisations against nuclear power plants. This approach also entailed the mobilisation of a different notion of environment, which was not restricted to natural resources, but expanded to incorporate the social environment and urban areas. Unlike the reactive approach of conservationists, the democratic quest of political ecology groups entailed struggles for wider social change, grassroots democracy and direct control by the citizen of industrial production and of energy and economic policies. Furthermore, their members were involved in diverse political groups, which also was unlike the conservationists (Diani and Lodi 1988). This variety would overlap, at least in part, with what was referred to as the 'environmental justice movement', first in the USA and then in many other countries, and as urban environmental movements.

Finally, Diani also identified a third component of the ecology movement to have emerged later in the 1970s, that is, environmentalism, with eclectic frames drawn from diverse traditions of ecologist thought and collective action, mixing reactive and proactive action through a pragmatic orientation and a weaker ideological coherence, and inclusive, more single-issue, and short-term patterns of participation. For Giugni and Grasso (2015, p. 341) environmentalists are thus characterised by more concrete campaigns, more specific issues and the combination of conventional and unconventional forms of action. Political ecology groups and, to a lesser extent, environmentalists were considered to be part of the new social movements (Diani and Lodi 1988).

New social movements are a cluster of movements including the student, environmental, peace and second-wave feminism movements which were seen as products of post-industrial society, transcending class as the main social cleavage, focused on cultural and symbolic concerns linked to issues of identity and everyday life, and developing decentralised organisation and radical mobilisation tactics (Johnston et al. 1994; Buechler 1995). One central element that distinguished new social movements from old social movements was notoriously identified by Inglehart (1977) to lie in the development of post-materialist values following the transition from scarcity to relative affluence typical of post-industrial societies. For Inglehart, new social movements differed from the traditional labour movement in that they were less centred on material satisfaction and re-distributional issues and more on quality of life, democracy and environmental values, and were typically a middle-class phenomenon. Inglehart's 'silent revolution', drawing upon Maslow's hierarchy of needs and suggesting that humans develop higher, post-materialistic needs (such as self-expression and environmental concerns) only after having satisfied survival needs, had great influence upon the most important new social movements theorists (for example, Habermas 1981, p. 33; Melucci 1989, pp. 177–8; Dalton

and Kuechler 1990). While other new social movement theorists, such as Melucci (1989) or Touraine (1989), underlined the fundamental challenge posed by environmental movements to contemporary democracies, for Inglehart environmentalism was a result of the successes of capitalist development.

However, his theories were contested by several studies. Martínez-Alier (1995, p. 2) charged Inglehart with holding a ‘metaphysical view of economic growth’ oblivious of ‘the environmental conditions and consequences of affluence’. The ‘environmentalism of the rich’, rather than sprouting, as Inglehart postulated, from an affluence-induced liberation from survival needs which would have enabled the appreciation of environmental amenities, was instead linked, Martínez-Alier (1995, p. 2) noted, to ‘the effluents of affluence’, that is to increasing environmental pollution and depletion of natural resources in Northern countries, from acid rain and industrial contamination, to nuclear accidents and the increase of greenhouse gas emissions. Furthermore, Inglehart was disregarding the environmentalism of the poor, that is, of those who have a material interest in the environment as a source and a requirement for livelihood (Martínez-Alier 1995, 2002). This was also backed and further supported by the study of several environmental sociologists showing that affluence does not make people more concerned about the environment (Brechtin and Kempton 1994; Dunlap and York 2008; Givens and Jorgenson 2011; Fairbrother 2013).

The objective problems–subjective values (OPSV) hypothesis later introduced by Inglehart (1995) attempted to correct that bias, accounting for environmental concerns in less developed countries when environmental degradation directly affects people (Brechtin 1999). However, this contributed to the still dominant idea of two different types of environmentalisms: in the South derived from citizens directly experiencing pollution and environmental problems (objective problems), and in the North from subjective, post-materialistic values (Dunlap and York 2008; Givens and Jorgenson 2011). This dichotomy of objective conditions and subjective values, between the material and the symbolic, is however problematic as material conditions are experienced and understood through values, and further inform them (Asara 2016; Schlosberg 2019). As stated by Schlosberg (2019, p. 4), ‘the postmaterialist thesis implies that objective material environmental harms in “developed” countries are sufficiently minimal that they do not distract much of the populace from the pursuit of “higher” values, and that only such “higher values” stimulate environmentalist action’.

This type of dual conceptualisation can be found in, and has supposedly influenced, several social movement studies, whereby a Northern environmentalism is held to differ from a Southern environmentalism in both content and movement constituency. For example, Doherty and Doyle (2006) identify three types of environmentalisms: post-material, focused on the largely non-anthropocentric concerns of nature conservation in the New World; post-industrial, in Western Europe, characterised by a political ecology approach which alongside nature conservation issues wrestles with questions of social inequalities and structural change; and post-colonial, in the global South, where green concerns are cast in the light of the coloniser versus the colonised through a structural lens, and with an orientation towards issues of environmental security involving the rights of people to gain access to the fundamental resources for survival (see also Doyle 2004). In a similar fashion, a few studies have noted that, while Northern environmentalism is focused on more standard green concerns, Southern environmentalism is focused on brown concerns, such as protection from environmental hazards and pollution. This (by far, dominant) conception accordingly sees new environmental movements in Western countries as a predominantly new middle-class phenomenon, consist-

ing of highly educated individuals employed in teaching, creative, cultural or social services, and some of the young administrative specialists in public service (Offe 1985; Kriesi 1989; Kriesi et al. 1995). Brown concerns in the Global South have instead been found to hold a more heterogenous social constituency (Pakulski and Crook 1998; Giugni and Grasso 2015). Here, environmental movements' entanglement with broader socio-political issues is sometimes even considered to diminish their environmentalism. For example, Rootes and Brulle (2013) write that 'in the Global South, however, environmental campaigns are usually so bound up with campaigns for human, democratic and economic rights that they often do not take the form of environmental movements' (see also Diani and Rambaldo 2007, pp. 782–3; Giugni and Grasso 2015). Other studies have indicated two different types of environmentalisms even within Europe, with the South suffering a Mediterranean syndrome of environmental backwardness (see, for a rebuttal, Kousis et al. 2008; Lekakis and Forno 2019).

However, note that, similar to the distinction between material concerns and environmental values, brown and green concerns are not always easily distinguishable as they can be intertwined in activists' motivations. Furthermore, they can both be found in countries of the Global North and Global South. For example, Scheidel et al. (2020) have found that what differentiates Global North and Global South, instead of green versus brown concerns, is (staying with the colours) the type of brown. While environmental conflicts occur across all income groups, the relative presence of conflict type changes with economic development: conflicts over conservation, biomass and land, and water management constitute the bulk of conflicts in low-income countries but only a small share in high-income countries, while the reverse happens for conflicts over waste management, tourism, nuclear power, industrial zones and other infrastructure projects. Even this distinction of conflict types may increasingly be called into question by the far-reaching consequences of climate change.

Furthermore, according to Doherty and Doyle (2006, p. 706), 'the South can exist within the North' and the reverse. Alternatively, by adopting a political ecology lens, 'the interstitial South is the otherness within the North ... the poor are everywhere, even within the rich societies of the so-called developed countries. The urban space reproduces segregation and social stratification, creating the interstitial South of ghettos' (Armiero 2014). An example is the environmental justice movement, which originated in the USA 'in deliberate juxtaposition of what it perceived as the white elite environmental movement' (Doherty and Doyle 2006).

Relatedly, a few recent studies have contested a representation of environmental movements as having a middle-class basis, showing instead that they have a much broader and diverse constituency (Mertig and Dunlap 2001; Norton 2003; Botetzagias and van Schuur 2012). Recently, an increasing number of studies have re-discovered or emphasised how labour environmentalism (Stavis et al. 2018) or working-class environmentalism (Barca and Leonardi 2018) has played an important, though undervalued, role in both the first and the second waves of environmentalism.² In some countries, at least since the 1960s, struggles for industrial and public health within and outside factories were waged through an alliance between militant scientists, workers and environmentalists, and have contributed to a great extent to the politicisation of the environmental movement combining ecological with social justice claims (Barca 2012; Armiero et al. 2013; Baracca 2020). Militant scientists and health professionals were coming from the ranks of new social movements (student, environmental, feminist and radical left) and, together with organised workers, they questioned the neutrality and objectivity of science by denouncing its collusion with corporate and state power.³ This was part of a broader trend of new social movements in many countries, which came

to practice alternative approaches to science and technology, critiquing technoscience, its exploitative approach to nature and its relationship to the military-industrial system (Jamison 2006). Eyerman and Jamison (1991) refer to a cognitive praxis undertaken by environmental movements, characterised by knowledge-making activity, combining ‘new worldview or cosmological assumptions with alternative organisational forms and technological criteria’ (Jamison 2006, p. 56). This bottom-up knowledge production is later transformed into various types of expertise, institutionalised in public and private sectors, partly incorporated as part of the political culture, and affecting the policy domain (Jamison 2006).

In the USA, the occupational health movement and the work of union leaders such as Anthony Mazzocchi played an important role in the passage of environmental reforms, such as the Clean Air Act and the Clear Water Act, while the United Farm Workers of Cesar Chavez raised, in the early 1960s, the issue of pesticide poisoning as a health struggle uniting both workers and consumers (Barca 2012). According to Barca (2012), in Italy, compared with the US experience, there was a stronger link between environmentalists and the labour movement, often backed by the role of the Communist Party (Armiero 2013, p. 34). Struggles for the recognition and regulation of industrial hazards gave shape to new methodologies of research on occupational health, based on the direct production of knowledge on the part of workers, to claims for the direct, democratic control over the work environment on the part of workers and to the development of a popular epidemiology. These advances were instrumental to the passage of important social reforms such the Labour Statute (1970) and the Public Health System (1978) (Baracca 2020; Ruzzenenti 2020). According to environmental historians Poggio and Ruzzenenti (2020, p. 40), this ‘labour model of intervention for the decontamination of work environments’ anticipated, in the 1960s, several features of the ecological culture that were to develop in the following decade: the subjective experience and active participation of those directly involved as a necessary requisite for risk prevention and environmental decontamination; the priority given to prevention, refusing the logics of compensation; and the non-delegation to science and technicians, whose role turns into one of counselling and support for workers, depositaries of the right to control and verification. In the 1970s this working-class environmentalism raised the issue of social justice because noxious environment was not harming social groups in a homogenous manner in the factory and in the urban fabric, and contributed to the debate over not only ‘how to produce, but also what to produce and for which goals, for which development model’ (Ruzzenenti 2020). This has led some to speak, *ex post*, of an environmental justice movement or environmentalism of the poor *ante litteram* (Armiero 2013; Ruzzenenti 2020).

In general, research on environmental practices and engagements of the labour movement ‘is still comparatively scarce’ (Stavis et al. 2018, p. 441) and there is great potential to be reaped out of cross-contamination between the fields of environmental labour studies and social movement studies.

The environmental justice movement is a paradigmatic example of what I broadly refer to as a socio-environmental movement, that is, a movement where concerns for the environment are deeply intertwined with socio-political claims, such a social justice, through the formation of hybrids with a multi-issue focus. While, according to some authors (for example, Benford 2005) this can create an overextension of frames, a defuse conceptualisation and even subordination to socio-political issues, or a reduced or impure environmentalism (see above), according to other social movements scholars, intertwining socio-political with ecological claims can reap several benefits, such as the capability to reach a more heterogeneous con-

stituency (Heaney and Rojas 2014) and an enhanced transformative potential (Asara 2020; Gottlieb 2005).

In the next section I consider in more detail the origin and evolution of the environmental justice movement as a paradigmatic example of a socio-environmental movement putting centre stage the linkage between ecology and democracy claims.

THE ENVIRONMENTAL JUSTICE MOVEMENT AS A SOCIO-ENVIRONMENTAL MOVEMENT

According to Pellow's (2016, p. 222) definition, the environmental justice (EJ) movement 'is composed of people from communities of colour, indigenous communities, and working-class communities who are focused on combating environmental injustice – the disproportionate burden of environmental harm facing these populations'. For the EJ movement, social justice is inseparable from environmental protection. While in the early 1970s researchers in the USA had found strong correlations between social class and air quality, the first mobilisation achieving national visibility only took place in 1982 in Warren County, North Carolina, when 414 demonstrators were arrested during a protest against the siting of a toxic waste facility in a black and low-income neighbourhood (Agyeman et al. 2016).

The environmental justice movement challenged the 'cult of wilderness' and a post-material environmentalism detached from the needs of people (Sicotte and Brulle, 2017). Emerging from a critique of bureaucratic 'reform' environmentalism (Brulle 2000; Gottlieb 2005), at least in its origins, the EJ movement contested 'mainstream' and formalised environmental movement organisations. In the late 1970s and early 1980s, when the environmental justice movement started in the USA, in many countries the mainstream environmental movement had already started to experience a process of institutionalisation. Since its early history, the movement also involved a critique of the limitation of conceiving the environment as wilderness, and a quixotic elsewhere, broadening its notion to include the places where we live, work, and play, that is, the environmental conditions in which people are immersed in their everyday lives, thus reframing environmental issues as injustice issues. The environmental justice movement champions the environmentalism of the poor (Anguelovski and Martínez-Alier 2014) and, as an example of a socio-environmental movement, shares some common ground with Diani's political ecology movement for its contamination with wider socio-political issues and for its embedding in a web of other social movements, such as movements for racial equality and the rights of Indigenous people and the poor, farmers, workers and movements for urban hygiene, and occupational and public health (Sicotte and Brulle 2017).

While the term 'environmental justice' was originally coined in the USA as linked to the inequitable exposure of racial/ethnic, minority communities to environmental 'bads' in urban settings, the concept and its application progressively experienced a substantial expansion. I partly borrow from Schlosberg's (2013) identification of three main expansions of the environmental justice concept. First, a horizontal expansion involved the inclusion of a broader range of issues: from so-called environmental 'bads', such as the unequal exposure to toxics and dumps, to environmental 'goods', such as access to green space, to issues linked to land use, transportation, water quality and distribution, energy development and jobs, brownfield refurbishment and food justice. Furthermore, the environmental justice discourse evolved from a primary focus on distribution of hazards or vulnerability to an increasing demand for

participation/procedural justice by, and recognition of, those most affected by environmental injustice (Schlosberg 2013; Vanderheiden 2016). Recognition increasingly involved the consideration of other categories of difference, from race and class to gender and sexuality, and the way they are entangled in the production of environmental injustice through an intersectionality lens (Di Chiro 2008; Pellow 2016; Asara 2020). Procedural justice has involved movements denouncing the lack of transparency and democracy in decision-making processes, and sometimes succeeding in establishing new structures of accountability and the inclusion of participatory procedures and environmental regulations and rights through, for instance, environmental impact assessment mechanisms for mining projects approval (Barnett and Scott 2007; Urkidi and Walter 2011).

Secondly, a vertical expansion entailed the use of the discourse of EJ in an increasing number of countries as well as the examination of the globalised and transnational nature of environmental justice movements and patterns of responsibility through the combination of a political economy lens (Pellow 2007; Schlosberg 2013). An example is the climate justice movement, which emerged at the COP6 climate negotiations in 2000 when the EJ movement and the UK-based grassroots group Rising Tide combined the emphasis on the inequity between North and South (calling for the repayment of ecological debt) and the heightened vulnerability of the poor towards climate impacts with a demand to phase down and divest from fossil fuels and tackle the climate crisis at its root, that is, seeing climate change as deeply linked with (and caused by) social and economic inequality (Ciplet et al. 2015; Sicotte and Brulle 2017; Ciplet and Harrison 2020) and rejecting market-based solutions. The climate justice movement would constitute the radical flank of the climate movement at the COP negotiations, in dialogic antagonism to the Climate Action Network (see the Introduction to this volume).

Finally, a third expansion for Schlosberg (2013, p. 44) relates to the concern for the relationship with the non-human world, namely, a shift of emphasis ‘from environmental conditions as an example or manifestation of social injustice to one where justice is applied to the treatment of the environment itself’. This cultural dimension has been traditionally missing from environmental justice debates, where an anthropocentric approach has been dominating conceptions of justice. An outgrowth of this field, however, has recently investigated new materialist movements, foregrounding human practices and material flows that do not undermine environmental processes and systems (Schlosberg and Coles 2016), and looked at the type of ontological politics performed in everyday practices (Centemeri and Asara 2020; Chapter 34 in this volume).

According to Pellow (2016), expansion of the EJ discourse has corresponded with the shift from a first-generation, primarily focused on documenting environmental inequality on the base of race and class, to a second-generation study, referred to as critical environmental justice studies (see also Pellow and Brulle 2005) which intend to address several limitations and tensions within EJ studies. One of these involves an understanding of the entrenched and embedded character of social inequality, and of the ways marginalised human populations are treated as inferior and less valuable, or as expendable (Pellow 2016), or even as invisible (Velicu and Kaika 2017). For example, Velicu (2020) has looked at how socio-economic and political inequalities determine a prospective environmental injustice, that is anticipated, as it occurs even before a formal decision is taken as regards the development of mining projects. These bring about land-grabbing, slow community disappearance and marginalisation, daily psychological damage, disavowal of alternatives and disqualification as political subjects. Others have also argued that the EJ movement is often side-lined by the rest of the environ-

mental movement (Dauvergne 2016) and left to face increasing violence, especially in the Global South. An Environmental Justice Atlas⁴ study, including more than 2700 cases of environmental conflicts, has shown the degree of systemic violence, whereby 21 per cent of the conflicts provoke displacement, 20 per cent criminalisation of dissent, 18 per cent physical violence and 13 per cent assassinations, a percentage rising to 19 per cent when Indigenous people are involved (Scheidel et al. 2020).

The environmental justice frame, or livelihood-orientated concerns, have increasingly been included in the agenda of more conservationist EMOs (Di Gregorio 2012; Rootes and Brulle 2013) and even in official United Nations Framework Convention on Climate Change (UNFCCC) documents, such as the Paris Agreement.⁵ This has often occurred, however, by means of a resignification of the meaning of environmental justice, emptying it of its more radical bent. Furthermore, alliances between environmental justice and conservationist EMOs entailing communication and resource exchanges have taken place in both the Global North and the Global South based on some distinct but compatible values (Di Gregorio 2012). Finally, according to some (Della Porta and Diani 2004), a stronger divide now may not be between conservationist and political ecology/environmental justice groups, but between grassroots and big, institutionalised EMOs, whose debate I address in the next section.

INSTITUTIONALISED VERSUS GRASSROOTS MOVEMENTS

Internal democracy is another dimension of the democratic quest of environmental movements, and of their commitment to grassroots forms of democracy.

While EMOs (mostly focused on nature preservation) have existed since the late nineteenth century (first wave of environmentalism), it is during the second wave that an increasing number of EMOs (for example Friends of the Earth and Greenpeace) started to organise at the transnational level, following increasing recognition of the global nature of environmental problems. This second wave was also characterised by a deep process of institutionalisation unfolding at two levels (Berny and Rootes 2018). External institutionalisation involved the role of environmental non-governmental organisations (ENGOS) as authoritative and reliable sources of expertise for governments, their integration into policy networks, their provision of services to government and, in some countries, their reception of financial support from governments. Internal institutionalisation involved, especially in the 1980s, a process of formalisation, bureaucratisation and professionalisation following their organisational growth in respect of membership and financial resources through contributions from members and sympathisers, and through government subsidies (Kriesi 1996; Gottlieb 2005; Giugni and Grasso 2015; Berny and Rootes 2018).

The type of relation between, on the one hand, formalisation, professionalisation and institutionalisation, and on the other, transformative and democratic potential has long been debated. While Piven and Cloward's (1979) seminal work argued that formal organisations undermined movements' disruptive capacity, resource mobilisation scholars have stated that larger and formalised organisations are more effective in engendering mobilisations because they are more capable of mobilising other types of resources, such as money and labour (Edwards and McCarthy 2004). Political opportunity studies have underlined that a movement's institutionalisation is a sign of its strength, whereas the movement uses more disruptive repertoires of actions when political opportunities are closed and the movement is weaker (Caruso 2015;

Rootes and Nulman 2015; Della Porta et al. 2019). For some, organisational size, formalisation and professionalisation are even associated with politicisation (Giugni and Grasso 2018).

However, the third wave of environmentalism accentuated these institutionalisation trends, giving rise to two phenomena. First was the birth of green parties in the 1970s – often as an outcome of anti-nuclear campaigns – in particular prospering and winning seats in some European legislatures since the 1980s (Rootes and Brulle 2013). The literature has emphasised their double identity as ‘movement-parties’ and difficulty to combine grassroots democracy principles (what Kitschelt 1986 termed ‘the logics of constituency representation’) with traditional strategies required by parliamentary systems, thus veering gradually towards the ‘logics of party competition’, where choices of organisational form, programme, recruitment and strategy depend on patterns of electoral competition (Bomberg 1998; Kitschelt 1986, 2006).

Secondly, EMOs were accused of having turned into ‘protest businesses’ (Jordan and Maloney 1997), that is centrally managed corporate entities competing for recruiting members and engendering commercialisation, with an increasing provision of paid services to its members (Kriesi 1996; Dauvergne 2016). Furthermore, EMOs were blamed of being dominated by salaried professional staff whereby members had no democratic voice but only served to fund organisational activities (Jordan and Maloney 1997). Similarly, according to Brulle (2000), external funding from foundations (the second largest source of funding after membership) and the institutionalisation and the involvement of EMOs in the legal and technocratic policy process, which drew EMOs into networks of economic and political power, led to the development of centralised and oligarchic organisations. He highlights that these are dominated by professional staffs and bureaucratic structures (with self-selecting boards) and deprived of internal, participatory democracy, thus contributing to a moderation of their political goals and the adoption of conventional political tactics: ‘instead of being governed by democratic and rational discourse, movement organizations become subordinated and controlled by market institutions’ (Brulle 2000, p. 274).

Several studies have analysed how, for many EMOs, institutionalisation turned into co-optation (Dowie 1995; Dauvergne 2016). Especially after the Agenda 21 forged at the 1992 Rio Earth Summit (Doyle 1998), the focus increasingly shifted from public regulation to private initiatives in the belief that growth and environmental concerns can be reconciled through the promotion of market-based instruments (Gomez and Naredo 2015), turning EMOs into mediators between the state and the market, involved in stakeholder participation, partnering with business to set up eco-labelling and ecocertification (Dauvergne 2016; Doyle 1998) or acting as service providers (Osti 1998). As noted by Dauvergne (2016, p. 14), ‘embracing the discourses of sustainable development, eco-business, stakeholder partnerships, and eco-consumerism opens up many opportunities for NGOs to access new resources, money, and corridors of power’, but it ends up ‘turning to consumers as sources and forces of change, urging them to be “consumer activists”’. With neoliberal environmental governance, EMOs institutionalise and participate in policy networks with governments and business through new practices of responsabilisation, whereby civil society and business get involved in political responsibilities previously associated with the state by expanding the public role of private actors, potentially leading to a depoliticisation of environmental issues ‘through a moral discourse and a technocratic practice that suppresses social conflict through consensus building’ (Thörn and Svenberg 2016, p. 593). The increasing trend towards political consumerism is seen as part of this new governance replacing political obligations with private autonomies (Pellizzoni 2012).

However, the institutionalisation of environmental movements is not a homogeneous phenomenon, and organisational consolidation does not 'inexorably lead to bureaucratic and professionalised organisational models' and to the abandonment of contentious forms of politics (Jiménez 2007, p. 363). Several authors have pitted the institutionalised and co-opted conservationist and mainstream EMOs – acting more like interest groups – against the more grassroots and radical environmental justice movements (Gottlieb 2005; Dauvergne 2016). Such a simple dichotomy has been countered by few others. For example, Brulle and Essoka's study (2005) on the EJ movement, which has traditionally been considered a paradigmatic case of a grassroots movement, has challenged its very uniqueness. Their analysis of 140 EJ organisations has argued that rather than being a grassroots movement with decentralised structures based on multiple local community groups, its preponderant organisational structure is of an oligarchic type, similar to preservationist or reform environmentalism EMOs. Hence, for the authors, this casts doubt on the EJ movement's legitimacy as representative of community concerns.

Recognising the persisting vitality of local protest action and activism despite the trend of institutionalisation, Diani and Donati (1999) have offered a more complex picture than the dichotomy 'institutionalisation versus radicalisation' or 'grassroots versus professional'. They have identified two dimensions of differentiation – professional versus participatory organisational models, and disruptive versus conventional forms of pressure – producing four types of movement organisations: the public interest lobby, the participatory protest organisation, the professional protest organisation and the participatory pressure group. However, note that in the conventional repertoires of action are included many different types of action, from lobbying techniques and petitioning campaigns to green shareholding, voluntary action in favour of the environment, educational campaigns and sponsoring commercial products.

More recently Diani and Rambaldo (2007) have suggested that a new, important divide exists between movement groups mostly orientated towards protest and pressure repertoires and those foregrounding voluntary work and community service. Similarly, focusing more particularly on urban environmental movements between the late 1980s and the 1990s, Della Porta and Diani (2004) showed that besides the institutionalisation of the largest EMOs, and behind the less visible forms of action at the national level, rested the vitality of local movements, divided into protest-orientated and quality-of-life orientated forms of action of citizen committees in urban settings, and the service-orientated forms of action of the local environmental associations. Both, but especially the former, can mobilise against locally unwanted land uses (LULUs), thus constituting the backbone of what are known as LULUs movements – a specific type of, and often used as a synonym for, environmental justice movement outside of the USA.

Despite the trends towards professionalisation in recent decades, recurring waves of protest have been revamping environmental movements. In general, grassroots environmental activism is considered to be a source of revitalisation of the environmental movement, because it represents 'an important means of social learning about environmental issues, a school for participation generally, and an entry point for new activists and new issues' (Rootes and Brulle 2013). Many of these instances of revamped environmental collective action have taken place at the local level, such as the British anti-roads protests of the 1990s and the many other LULUs/environmental justice movements in both urban, suburban or rural settings that have been (re)gaining media visibility or even increasing in mobilisation capacity in recent years, such as the Notre-dame-des Landes ZAD,⁶ the Ende Gelände blockades in Germany against

lignite mining, the movement against the expansion of the Vienna airport, and the NO-TAP movement in the South of Italy against the TAP gas pipeline. In the literature at the crossroads between political ecology and ecological economics, the growth in global social metabolism is perceived as an important cause of the increase of global and local environmental conflicts (Muradian et al. 2012), or what in ecological economics are called ‘ecological distribution conflicts’ (Martínez-Alier et al. 2016).

While these movements have been too easily depicted as Not In My Back Yard (NIMBY), they are often against a development model that sacrifices territories and communities for the sake of corporate (and colluded state) interests; thus, EJ movements often counterpose NIMBY with different slogans: Not in Anyone’s Backyard (NIAB), or Not On the Planet Earth (NOPE). Instead of simply representing selfish interests, EJ movements are often ‘the exercise of active citizenship, expressions of resistance to projects which seek to mask their own particularistic interests as broader causes for the ‘common good’ (della Porta and Piazza 2007, p. 866). Behind environmental conflicts there is a struggle over different values and conceptions of the common good. While these conflicts often arise from both environmental and health/safety concerns, and for this reason have sometimes been depicted as struggles for quality of life (Gould et al. 1996; Andretta et al. 2015), the democratic potential of LULUs movements also lies in that ‘it is through the expression of local concerns that we come to understand the “common good” for a diverse political community’ (McAvoy 1998, p. 288). The politicisation of expertise is an important component of environmental conflicts and it involves opening up a public space of discussion, releasing issues from necessity and duty and confronting the different positions in the public arena (Pellizzoni 2011).

A few authors have located the recent increase and radicalisation of environmental justice/LULUs movements in the closing of political opportunities at local, national or supra-national levels, owing to interconnected factors such as neoliberal forms of governance, the increasing role of global and corporate actors, the collusion between corporate and state interests, the gradual weakening of the intermediary role of political parties between society and the government, and the de-nationalisation of political authority (Caruso 2015; Della Porta et al. 2019). For this reason, some have argued that it is not enough to talk about the closing or opening of political opportunities as limited to the state level or to the political-institutional field, in order to understand the emergence, forms of action and transformative potential of environmental justice movements (Pellow 2001; Caruso 2015). For example, an important factor for successful remediation in environmental conflicts is the absence of counter-mobilisation by industry (Hess and Satcher 2019): industry actors can leverage political and economic ties and power to garner the backing from state institutions, community members or the media, or simply conceal essential information about environmental risks. A thorough understanding of these dynamics would thus require, at centre stage, an analysis of corporate power and the way powerful players can act as a serious hindrance for movements’ transformative capacity.

In addition to grassroots environmental movements, global cycles of protests such as the 2019 environmental upsurge have been revamping environmental movements. This latest wave, which included different mobilisations, some more transnational such as Fridays for Future (FFF) and Extinction Rebellion (XR), and others more nationally based, such as the Gilets Jaunes in France and the US-based Sunrise movement, has been unprecedented in scale and coordination, bringing over 7 million protesters onto the streets in 185 countries during the third global climate strike in September (de Moor et al. 2020b). While this ‘new’ climate activism shares several elements of continuity with previous climate movements, a few

distinguishing elements mark this last wave (de Moor et al. 2020a). In addition to the capability to mobilise people without previous activism – especially many youngsters and school students for the FFF – these new movements display a powerful return to state-addressing forms of political claims, despite the low confidence in governments' ability to address the climate issue (de Moor et al. 2020a). This is achieved by employing innovative repertoires of action, more disruptive (street blockades for XR) or less so (school/climate strike for FFF). Furthermore, while the FFF strives to pressure politicians to listen to the 'united science' to look for solutions – a position accused of scientisation – and the XR uses a morally charged discourse, both movements present a narrative with apocalyptic tones (Pellizzoni 2019; de Moor et al. 2020a). Also, while XR does not address issues of justice and inequalities, FFF inherited justice frames from the climate justice movement – though more emphasis is placed on intergenerational justice – combining these with a critique of the development model (Doherty et al. 2018; Leonardi 2020). Their stance towards international agreements and the United Nations (UN) system to deal with the climate crisis differs, with the FFF asking to follow the Paris Agreement and XR denouncing its ineffectiveness (Pellizzoni 2019; de Moor et al. 2020b, p. 26). However, as highlighted in the introductory chapter of this volume, there is a rising distrust in the UNFCCC process, which set in after the failure of COP 15 in Copenhagen to reach an agreement (de Moor and Wahlström 2019) and heightened after COP 24 in 2018, as an efficacious venue for dealing with the climate crisis – Greta Thunberg's 'blah blah blah' speech is an example (see the Introduction to this volume). This has in many respects contributed to a relative unification of the climate movement, by moving the reformist strand closer to the more radical strand (de Moor 2018). Also, it has gradually led to an increasing focus on decentralised actions and organising in the climate movement (de Moor 2018, 2020), as in the Transition Towns and the Climate Justice Action movements (Kenis 2019).

While the pandemic situation has implied a halt to street protests, there seems to be an ongoing politicisation process in the environmental and climate movement sectors, with the cross-fertilisation of new movements with older climate justice and LULUs movements, as well as with the movement for workers' health, and the feminist movement (see, for instance, Imperatore and Leonardi 2021). This underlines how the current pandemic crisis is not only closely linked with the ecological crisis, but has differently affected socio-economic strata, exposing to a greatest extent those holding jobs considered as 'essential' (for example, in the care and health sector) but undervalued, low-paying and precarious (see, for example, Workers Inquiry Network 2020).

Finally, another important type of grassroots urban socio-environmental movement⁷ can be discerned in movements mainly devoted to the creation of interstitial 'alternatives', centred on the collective organisation and enactment of actions alternative to and aimed at transforming dominant socio-economic and cultural practices and structures – instead of focusing on state-addressing or contentious repertoires of action – through their prefiguration and institutionalisation of different modes of being and relating to human and non-human world (Asara 2022; Asara and Kallis forthcoming).

These forms of action have been relatively less investigated in social movement studies, owing to a general 'bias towards adversarial social movement mobilisation and highly visible social conflict' (Yates 2015, p. 237). However, there has recently been a blossoming of studies (Forno and Graziano 2014; Bosi and Zamponi 2015; Yates 2015; Zamponi and Bosi 2018; Varvarousis et al. 2021) investigating what appears to be an increasing trend towards everyday forms of political action. Similarly to LULUs movements, this rise has been associated with

a waning trust in the responsiveness of representative institutions to citizens' demands for socio-environmental concerns, thus shifting political action 'from traditional political processes and towards material practice' (Schlosberg 2019, p. 6). The global economic crisis and the implementation of austerity regimes (Hayes 2017), have represented a significant spur to these forms of action, catalysed by the movement of the squares, cycle of protest (Varvarousis et al. 2021). From sustainable community movements (Forno and Graziano 2014) to alternative action organisations (Giugni and Grasso 2018; Zamponi and Bosi 2018), from alternative forms of resilience (D'Alisa et al. 2015; Kousis 2017) to the new materialist movements (Schlosberg 2019; Schlosberg and Coles 2016), a panoply of concepts have been forged to make sense of these alternative forms of collective consumption, production and reproduction created by social movements.

Agro-ecological food networks, repair and recycle activities, eco-production and do-it-yourself (DIY), permaculture experimentation, and so on, are some examples of movement attempts to build different society–nature relationships. By enacting alternative forms of needs satisfaction in different spheres (housing, health, childcare, food provisioning, education, energy, and so on) and different ways of being and acting in common in the everyday – from decommodification of exchanges and consumption, to sharing resources and egalitarianism in decision-making and work relations (Yates 2015; Varvarousis et al. 2021) – these alternatives can contribute to a 'counter-neoliberal urban transformation', while often making a difference in the lives of ordinary people (Certomà and Tornaghi 2015, p. 1123; MacGregor 2021). Their ecological prefiguration can visibilise a potential ontological alternative by developing alternative value practices – those social actions through which people define what is valuable in a given situation and act accordingly to attain and maintain the condition deemed valuable (Centemeri and Asara 2020).

CONCLUDING REMARKS

Since their emergence, environmental movements have been perceived as key actors for social and political change (Touraine 1978). This chapter has argued that their transformative and democratic potential is related to a great extent to their capability to combine 'green' demands with broader socio-political claims following the recognition that the locus of environmental problems (and solutions thereof) lie in social and political patterns. I referred to this broad category as socio-environmental movements – a term that can be thought to encompass what other authors have called 'ecologist', 'green' and 'political ecology' movements, as well environmental justice movements and other types of (urban) radical environmental activism. Socio-environmental movements put forth a fundamental critique of the way societies are structured and organised, questioning the bottom tendency of the system (for example, economic growth), the reasoning of techniques, the goals and modes of production and consumption and the relationship with non-human beings, and further combine this with an ontological critique where alternative modes of valuation and imagining life are developed. By taking a critical approach to the subject, I have highlighted a general bias within movement studies against a type of environmentalism tightly linking social and livelihoods concerns with environmental claims. I have looked at what environmental movements' foregrounding of democracy claims has meant for their struggles, focusing more particularly on the environmental justice movement. Furthermore, scrutinising the debate over movements' institutionalisation,

I have reflected on how their action has not been free from contradictions and ambiguities linked to forms of actions, types of strategies and organisational modes.

Recently, some analysts have depicted environmental movements as fundamentally co-opted and have noted their ultimate failure to bring about the fundamental changes required to reverse the climate and ecological crisis (Dauvergne 2016; Blühdorn and Welsh 2007; Spash 2019). Some of these debates resonate with those of a few decades back around the fourth wave of environmentalism (Douwie 1995). While these analyses are correct in underlining the limits and challenges of movement action, often these movements' failures are linked to the entrenched character of power inequalities and the way these are diffused and reproduced throughout various institutions and cultural meanings, as highlighted by critical EJ studies. A critical approach to social movement studies should thus seek to unravel the causes and dynamics of their successes and failures, as well as the broader cultural effects of their ontological critique, beyond some idealistic vision of an abstract and disembedded movement actor.

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NOTES

1. With this expression Martínez-Alier meant the defence of a wise use of natural resources, market mechanisms and technological improvements without considering the unavoidable environmental and health impacts of rapid industrialisation. This is paradigmatic in concepts such as sustainable development, smart cities, ecological modernisation or ecosystem services.
2. The 'environmentalism of the working class' has been conceptualised as 'the day-to-day struggles that workers at the bottom of the agriculture, industry and service sectors lead, both individually and in organized form, to defend the integrity and safety of their working environment and of the environment where their families and communities live' (Barca 2012, p. 66).
3. In some countries, the occupational health movement has however older roots dating back to the beginning of the nineteenth century. In the USA for example, the independent physician and public health crusader, Alice Hamilton, between the 1910s and World War II broke new ground in the areas of worker and community health, exploring the environmental consequences of industrial activity (Gottlieb 2005).
4. The EJ Atlas is the largest global inventory of environmental conflicts, currently including more than 3600 cases (see <https://ejatlas.org/>).
5. The Paris Agreement refers to 'climate justice' in its annex.
6. The Notre-dame-des Landes ZAD (*zone à défendre*) is a resistance and social experimentation area lying on a 1600-hectare field, created in opposition to the Grand Ouest airport project in Notre-Dame-des-Landes. Started more than 10 years ago, it continued even after the airport plans were abandoned.
7. 'Urban movements', refers to all those movements trying to achieve some control over the urban environment. This can include disparate but connected issues, such as the built environment, the social fabric of the city, issues related to collective consumption, urban planning and infrastructural policies, and the local political process (Pruitt 2007; Andretta et al. 2015).

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