

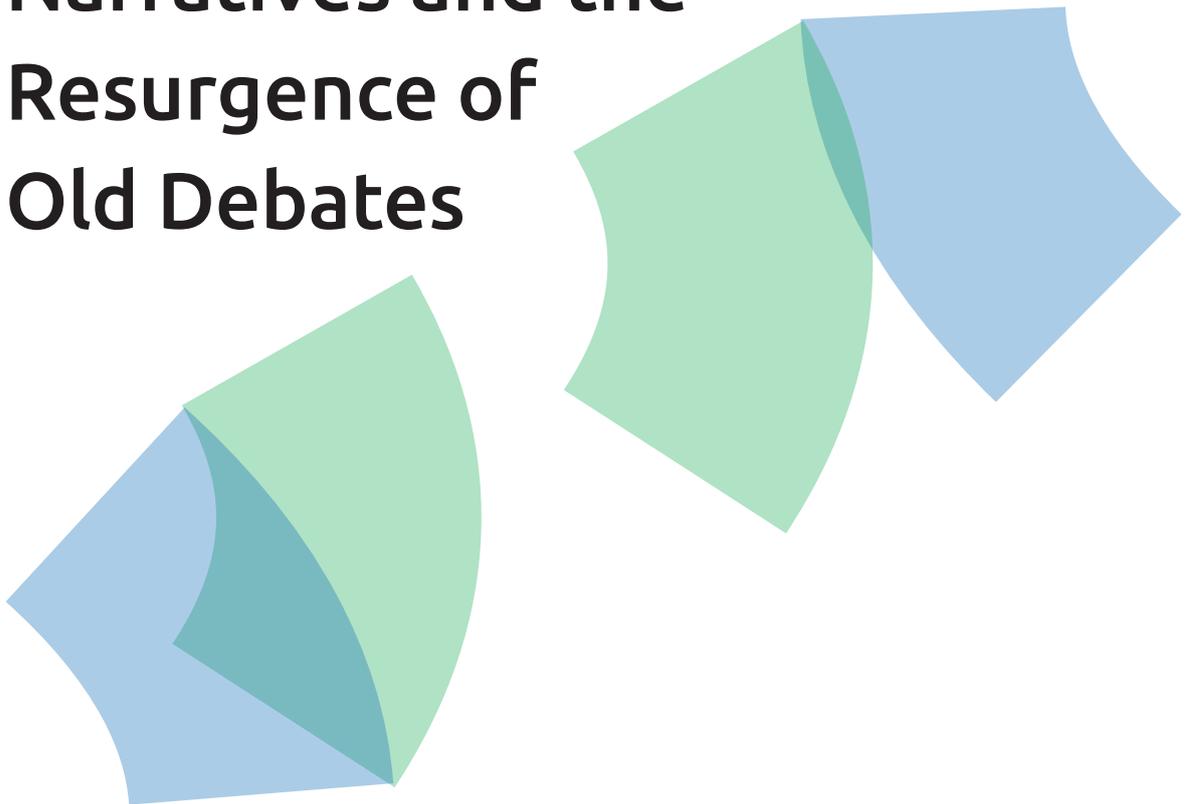


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Umberto Mario Sconfienza

The 'New' Environmental Narratives and the Resurgence of Old Debates





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The ‘New’ Environmental Narratives and the Resurgence of Old Debates

Umberto Mario Sconfienza

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Preface

We are pleased to present Global Cooperation Research Paper Nr. 27, entitled ‘The “New” Environmental Narratives and the Resurgence of Old Debates’, written by our former research fellow Dr Umberto Mario Sconfienza. In this paper, Umberto takes a critical look at the narrative of sustainable development which has been dominant in environmental politics for some decades but, as he argues, has recently been questioned due to its failure to deliver on its promises to develop the Global South and rein in environmental degradation. As protest movements like Fridays for Future or Extinction Rebellion have voiced time and again, it has increasingly become obvious that the climate crisis requires more radical changes which are not compatible with the status quo. Umberto draws attention to new narratives that have emerged with the waning of the sustainability narrative, such as ecomodernism, environmental authoritarianism and degrowth, which provide alternative problem-solving approaches to environmental governance. The paper subjects these alternative narratives to a critical analysis and explores what their resurgence means for environmental politics, showing that they have revived earlier debates over the limits to growth, technological innovations and democracy’s ability to deal with environmental problems. These recent developments do not necessarily herald the end of the sustainable development narrative; rather, it is likely that it will somehow be reinvented. In doing so, Umberto concludes, post-sustainability politics will not be able to avoid making difficult decisions over the identified normative disagreements between the different narratives.

Patricia Rinck (Editorial Board)

The ‘New’ Environmental Narratives and the Resurgence of Old Debates

1 Introduction

Until a few years ago, environmental politics was dominated by the narrative of sustainable development¹ which portrayed environmental governance as neo-liberal, growth-oriented, and optimistic about institutional capacity. Although political actors continue to pay lip-service to this vision of environmental politics, there are clear signs that sustainable development² is now a narrative which has exhausted its transformative potential (Foster 2008, 2014; Blühdorn 2016). By problematizing the role of the market in bringing environmental protection and questioning the extent to which the internal mechanisms of liberal democracy are fit to respond to the environmental challenge, three new narratives – degrowth, environmental authoritarianism, and ecomodernism – mark the end of the halcyon times of sustainable development. With the waning of the sustainability narrative, old debates and cleavages, which had effectively remained hidden from the mainstream environmental debate and relegated to a subset of academic journals, are resurfacing.

The aim of this research paper is to analyse these three narratives through a series of common categories and explore how they are redrawing the cleavages of the environmental debate in their wake. Throughout the paper, I refer to ecomodernism, degrowth, and environmental authoritarianism as three ‘narratives’. By doing so, I bring under the umbrella of a common category three different ‘paths’ or ‘governance approaches’ in environmental politics. I mostly refer to narratives in order to highlight both the implicit problem-solving nature of the three approaches and their partial nature (more on this below). A narrative always involves some temporal structure. According to a minimal definition of narrative given by Prince, a ‘narrative is the representation of at least two real or fictive events or situations in time sequence, neither of which presupposes or entails the other’ (Prince 1982: 4, emphasis

¹ For a reconstruction of the narrative of sustainable development, how it started from a radical environmental idea and has been progressively appropriated by actors profiting from the *status quo*, see Dryzek (2013: ch. 7); Tulloch (2013); and Purvis et al. (2018).

² Throughout the paper, I use ‘sustainable development’ to refer to the concept of sustainable development as crystallized by the Brundtland Report (World Commission on Environment and Development 1987). I use ‘sustainability narrative’ or ‘the narrative of sustainable development’ to refer to the narrative which came out from the neo-liberal, pro-growth operationalization of the concept of sustainable development in the 1990s (see note 1). In this paper, the rare use of ‘sustainability’ *tout court* – hence not part of the expression ‘sustainability narrative’ – refers to the general quality of a society which is able to persist through generations without undermining its support systems.

in the original). Every time there is a timeline (something that has happened before, something that has happened after or is currently taking place) and a 'because' clause connecting the two, it is possible to refer to this construction as a narrative. Here is an example: population growth (before); deforestation, land degradation, and the advancement of the agricultural frontier (now); an increased demand for agricultural and wood products (because). The narrative is as follows: population growth is pushing the agricultural frontier forward because there is an increasing demand for palm oil, soy, and wood products. In the environmental politics literature, there is also a second sense in which one could talk about narratives: when the temporal structure is implied by if-then clauses in future scenarios. If we employ a market-based forestry mechanism such as REDD³ to provide funding to counter the drivers of deforestation, environmental degradation and the agricultural frontier can be pushed back. This, too, is a narrative, albeit in a looser sense and this is how I use 'narrative' throughout the paper.

By linking disparate phenomena into a coherent account, narratives are framing devices which bring into the foreground some elements while overlooking others; in so doing, they are partial accounts of complex phenomena. In this way, they are not simply 'paths' or 'governance approaches' because such expressions do not highlight the fact that these paths depend on particular ways of framing the environment and specific stories about what the environment is and how it should be treated. The 'sustainability narrative', when intended as a neo-liberal, pro-growth path to environmental safety, is a similarly partial and coherent set of descriptions and prescriptions about the environment.

Degrowth, environmental authoritarianism, and ecomodernism are three new environmental narratives which promise to guide humanity through perilous environmental times.⁴ The degrowth approach to environmental governance departs from the conviction that ecological limits to growth compel humanity to do away with the neoliberal imperative of economic growth. Environmental authoritarianism proposes a model of environmental governance which is centralized and technocratic, representing a stark departure from the participatory thrust underpinning the sustainability narrative. The ecomodernist approach remains growth-oriented, rooted in the liberal-democratic institutions, and optimistic about the possibility that technology could solve the environmental problems. However, its scholars are sceptical that the market could deliver the social goods needed to tackle the environmental emergency and thus entrust the state with wide powers to drive the economy and lead in the search for technological solutions to decouple human needs from the environment.

³ REDD (Reducing Emissions from Deforestation and Forest Degradation) is a forestry climate mitigation instrument which rewards the sustainable management of forests and forest resources.

⁴ I will explain the ways in which three narratives are new in section 3.1.

In section 2, I explore the ways in which the new environmental narratives are at odds with the sustainability narrative in more detail. Section 3 takes the form of a literature review, where I compare the three narratives by following five categories. For each narrative I will (i) identify its main concern, (ii) explore whether the narrative discerns a global environmental crisis and, if so, I will show (iii) how the narrative explains the causes of the crisis, (iv) what impact of globalization on the environment it sees, and, finally, (v) what it outlines as the way forward to solve the environmental problem. I take these categories from Clapp and Dauvergne (2005); the reader acquainted with this foundational text in the literature will be able to appreciate how the new narratives compare with the more traditional paths to environmental protection analysed by the authors. The categories are meant to show what is specific about each narrative and how they frame environmental politics. ‘Impact of globalization’ is a proxy category to understand whether the politics of cooperation in tackling climate change organized around the narrative of sustainability is understood as something to be promoted and accelerated or rather hindered and halted. Then, in section 4, I focus specifically on each narrative’s core concern – limits to growth for degrowth, effective decision-making institutions for environmental authoritarianism, and technology for ecomodernism – and explore which old debates are being resurrected in each case and the new cleavages in environmental politics being formed in opposition to other narratives. A conclusion will follow in section 5, where I sketch the significance of the resurgence of the old debates for the governance of the environment.

2 The old narratives

The narrative of sustainable development emerged in the 1990s as the acceptable compromise between two different and initially incompatible environmental narratives. On the one hand, ecological modernization framed environmental degradation as a negative externality to be addressed through market-based mechanisms (Backstrand and Lovbrand 2006) and, relatedly, framed economic growth as ultimately beneficial for environmental protection. On the other, civic environmentalism brought to the fore the promise that stakeholder governance could keep in check the technocratic tendency of governing environmental problems through too narrow a focus on efficiency and market mechanisms (Backstrand and Lovbrand 2006) at the expense of other normative considerations. In later years, these two initially competing environmental narratives have been converging towards a shared understanding of environmental degradation as a problem nexus. Ecological modernization shifted the focus from legally binding emissions to low-carbon development opportunities, which could then be seized by different groups of

both private and public stakeholders; this process would, in turn, improve the legitimacy of the whole governance model (Backstrand and Lovbrand 2016).

In recent years, these two narratives have been shaken by both science and politics. The dire warnings of the latest IPCC reports – and in particular the special report on the 1.5° C target of global warming (IPCC 2018) – make abundantly clear that the recipe of marginal efficiency increases in the management of natural resources along the model of ecological modernization will not solve the environmental problem quickly enough. Even if the Environmental Kuznets Curve (Grossman and Krueger 1991) were a proven phenomenon beyond any reasonable doubt – which it is not (Stern 2004) – it would still take time for the whole world to cover the entire cycle which starts with economic growth, goes through the greening of consumer preferences and ends with effective environmental protection. Not to mention that business actors sitting on potentially stranded assets have all sort of tools to delay action in a capitalist democracy and have not shied away from using them (Oreskes and Conway 2010; Wright and Nyberg 2015; Supran and Oreskes 2017).

As per the idea of civic environmentalism – that a procedurally just, open, and decentralized decision-making process would translate into progressive environmental legislation capable of overcoming the barriers placed by actors with vested interests through strategies which are both more efficient and more acceptable to the public and private sector – this narrative of progress seems just a little less credible today. The problem with this model of governance is that not only do vested interests *frame* the debate through the techniques mentioned above and *move* it by showing up to the various democratic fora through both licit and illicit means, such as astroturfing (Keane 2012), but they also *suppress* the debate through the cultural polarization afforded by a new fragmented media landscape (Dale and Di Paola 2018: 417).

Over the years, the allocative nature of the ecological modernization soul and the procedural nature of the civic environmentalism soul of sustainable development have contributed to shifting the environmental debate from confrontational issues to more distributional ones, where deliberation, the exploration of synergies, and compromise positions are both possible and encouraged (Sconfienza 2017). At the beginning of the 1970s, the *Limits to Growth* report of the Club of Rome (Meadows et al. 1972) catalysed the attention around the issue of ecological limits for a few years, but that debate had been effectively sidelined by the growing sustainability narrative, which promised both economic growth and environmental protection. In the same period, audacious concept-building work questioned the role of democracy in solving environmental problems (Ophuls 1977). This debate, too, had been progressively forgotten when, while trying to better characterise the Environmental Kuznets Curve hypothesis, a series of studies positively correlated environmental performances with not only economic growth but also

liberal-democratic institutions (Panayatou 1997; Norton 2002). In the early 1970s, Nicholas Georgescu-Roegen questioned the limits of technological innovation within a new understanding of the economic process, grounded on the principles of thermodynamics (Georgescu-Roegen 1971). The following decades have been characterized by a cautiously optimistic attitude towards technology according to which the market and the price mechanism alone would guide technological innovation and find substitutes to scarce resources (Lomborg 2012). In this context, the approach taken by Georgescu-Roegen, nicknamed ‘entropy pessimism’, found a suitable home in a subdomain of economic theory, far and away from the limelight of mainstream environmentalism. A debate on ‘appropriate technology’ (Schumacher 1973) was taking place in that same period before declining at the end of the last century (Polak 2010).

While it can be argued that the narrative of sustainable development still warms the hearts of the many who profit from the *status quo* to the point that it is now at the core of the UN development agenda, one cannot be oblivious to the fact that it has not delivered on its promise to develop the South (Hickel 2017a: ch. 1, 2) nor reined in environmental degradation. With the waning of the sustainable development narrative, old debates are being resumed: whether limits to growth exist, whether current liberal democracies have the resources to tackle environmental problems compared to autocracies, and whether technological innovations could ever deliver on the promise of decoupling human beings from the environment. While environmental problems framed through the narrative of sustainable development enabled diplomatic convergences, the old debates show a more dualistic confrontation between positions where no compromise is possible. Ecological limits to growth either do or do not exist. Existing liberal democracies can be reformed and made more responsive to environmental challenges. However, whether they are better adapted compared to a governance model which is in many ways antithetical is, again, a black or white matter. Whether there are physical and social limits to technological innovations ultimately depends on an appeal to faith argument about the limits of human ingenuity, the still-unknown existence of always newer substitutive resources, and our normative makeup. I will come back to this at the end of the paper to explore how the resurgence of old debates open up new cleavages.

3 The new narratives

3.1 Degrowth

The three narratives analysed in this article are new in the limited sense that they seem better adapted to provide guidance in a political context which, today, is more distrustful of market-based mechanisms and more pessimistic about the prospect that citizens could gather the means to build institutional capacity and implement needed environmental policy. However, in the world of ideas, seldom is something really new. Alfred North Whitehead's famous claim that 'the European philosophical tradition [...] consists of a series of footnotes to Plato' (2010 [1979]: 39) is more than just a quip. A host of current debates in environmental politics concerning the most appropriate form of governance are reminiscent precisely of the arguments marshalled by Plato in the *Republic*.⁵

In other words, while the three narratives seem better adapted to today's political circumstances, they are not necessarily the product of recent scholarship. Degrowth approaches, in particular, draw on a rich literature which harks back to the 1960s and 1970s (Muraca 2013). The 'degrowth' label, on the other hand, is relatively new and due to the work of Giorgos Kallis, who translated Serge Latouche's French concept of *décroissance* into English. As a label, 'degrowth' has often been accused of being so accurate in describing the main thrust of the theory it represents that it damages the common cause of its supporters (Dean and Kallis 2017; Raworth and Kallis 2017). Degrowth is about the negation of growth. Such a clear message is allegedly damaging because the positive associations between growth and social and personal well-being are too many, too pervasive, and have now been impressed on everyone's consciousness through at least half a century of liberal and neo-liberal indoctrination.

Yet, behind the clear label and the activists' slogan of moving past our growth addiction, it remains difficult to pigeonhole this environmental governance approach to any specific and clear policy. The array of policies envisaged by degrowth theorists is too wide-ranging for this. Degrowth is about scaling down society's throughput, i.e. the materials and energy extracted, processed, transported and distributed within the economy which are then consumed and returned back to the environment as waste (Daly 1996). Gross Domestic Product (GDP) will decline as a consequence. According to the degrowth theorists, the resulting distributional tensions can be managed by redistribut-

⁵ *Plato's revenge*, by William Ophuls, is the title of a 2011 book, according to which environmental governance should be handed over to technocrats because laypeople cannot be tasked with such important, delicate, and complex decisions. The title refers to Plato's theory that only philosopher kings should run the government of the polis.

ing work, leisure, wealth, and natural resources. Reduction in working hours, the introduction of basic universal income, the provision of generous services such as health and education afforded by redistributive taxations and a more punitive legislation on tax havens would increase social welfare and make the transition to a degrowth society acceptable for the worst off. Even if incomplete, this wide-ranging list of policies well underlines that degrowth scholars envision a complete overhaul of our society. They take issue with the market economy in its totality and argue that there is a systemic crisis centred on the capitalist imperative of growth which has several ramifications: inequality, political capture, a crisis of meaning, and environmental degradation, among others. Over the course of the last two centuries, liberal and neoliberal policies have continuously sought to move the barrier of commodification forward to newer domains, to the point that entities as disparate as a right to kill an endangered animal or that to emit a quantity of greenhouse gases in the atmosphere can now be freely bought and sold on the market. Degrowth theorists provide a critique of this understanding of the economy where growth is made possible by an ever-increasing number of disparate goods which find their way on the market and wish to progressively de-commodify it.

According to degrowth theorists, the global environmental crisis is a real and serious problem and its causes are remarkably simple: infinite growth in a closed system is not possible; continuous growth will provoke a cascade of social and environmental problems – from the dispossession and depletion of natural resources and sinks to species extinction, desertification, and climate change – which will ultimately lead to the collapse of society (Bendell 2018). Degrowth theorists argue that there is a causal relationship between economic activity and the transgression of ecological limits (e.g. O’Neill et al. 2018) and, thus, want to address the latter by reducing the former.

Globalization is neither a cause of nor a solution to the environmental problem but part of a bigger issue. It is a phenomenon that, through more efficient communication, transportation and market deregulation, has worsened the local patterns of inequality, commodification, exploitation, and environmental degradation and transported them onto the global scale. Globalization has opened new opportunities for already existing unsustainable and unjust practices.

3.2 Environmental authoritarianism

The scholarship on environmental authoritarianism is relatively recent and the product of a reflection on how the Chinese government is addressing and should address the environmental challenge in the future, both at home and through multilateral institutions (Beeson 2010; Gilley 2012). These reflections

have since been extended to the Singaporean case (Han 2016). Environmental policy in authoritarian regimes is not a new phenomenon, albeit one that has only recently caught the attention of researchers (Brain and Pal 2018).

Environmentalism as we understand it today – i.e. the political and philosophical idea that the integrity of the environment should be a matter of social concern – is a novel phenomenon usually dated around the 1960s in Western countries. The hidden assumption of this story is that environmentalism is the child of an open society, one in which citizens, journalists, and researchers have the right to access information about the quality of the environment, protest and build the institutional capacity to bring about change. Environmental authoritarianism is a governance approach which, first and foremost, questions the role of democracy and public participation in the achievement of environmental protection.

The complexity of environmental problems makes bureaucrats and expert administrators crucially important in the solution of environmental problems. In the context of the environmental authoritarianism narrative, they are responsible for choosing both the policy objectives and the most appropriate ways to implement proposed solutions. The narrative does not deny that these various stages of policymaking involve grappling with ethical values, which are plural and, at times, conflicting. Yet, experts and bureaucrats of an authoritarian developing country work under the reasonable assumption that poverty alleviation and, concomitantly, economic growth are the normative goals which should guide all policy, including environmental policy.

The more a country modernises and grows, both in complexity and economically, the more it becomes contentious that value issues could be settled by bureaucrats in government offices and away from the population, especially when news and images about social inequality travel fast through new media. For example, China is already witnessing social unrest over pollution, especially in cities where more affluent people live (Haas 2016). This creates a legitimacy problem of environmental policy that liberal-democratic systems address by opening up the decision-making process to public participation. China, apart from the occasional protest, remains insulated from major problems of legitimacy for the time being. The government still enjoys both performance and political legitimacy. As per the former – performance legitimacy – the economy is strong and the environment is now on the government's agenda. Since the early 2000s, China has rapidly passed comprehensive legislation in an attempt to curb carbon emissions and promoting energy efficiency measures. Although effective implementation of legislative outputs remains chequered, especially because local administrators do not always have the right incentives to implement environmental policy at the expenses of economic growth (Gilley 2012), some important results have been achieved. China reached peak coal in 2013 (Qi et al. 2016) by improving its energy mix. As per the latter – political legitimacy – Chinese citizens belong

to a culture which accepts that political leaders are chosen through a process involving tests, academic achievements, and seniority instead of country-wide democratic elections (Bell 2015). Furthermore, they place emphasis on the stability of the system rather than on its responsiveness from citizens inputs, which might produce a fragmenting effect (Jacques 2012).

The environmental crisis is a local concern and a global phenomenon. As per the former, the environmental crisis jeopardises further efforts towards poverty alleviation and economic development and, thus, requires to be addressed swiftly and effectively. As such, local administrators are tasked with meeting environmental targets (Mol and Carter 2006) and have a wide mandate to implement innovative policies (Economy 2006), and, if necessary, draconian measures (Watts 2010). These measures often contribute to the increase of restrictions in already repressive countries and help the state to further other agendas, such as citizen surveillance and geopolitical influence (Sconfienza 2019; Li and Shapiro 2020). As a global phenomenon, the environmental crisis represents an opportunity to project soft power and export a possibly successful Chinese or Singaporean model in addressing complex issues.

As a problem-solving narrative, environmental authoritarianism takes as given the understanding of the relationship between human and nature which is already present in society. The Chinese government articulates the causes of and the solutions to environmental degradation in terms of another narrative, namely that of ecological civilization. As argued by Schmitt (2016), the narrative of ecological civilization is an attempt by the Communist Party to place the concept of sustainable development within a more culturally salient environmental ideology. It does so by integrating the sustainability framework with Marxist ideology, Confucian thought and foundational concepts of Chinese political ideology, such as the Three Represents.

The general traits of the two narratives – sustainability and ecological civilization – are similar: both understand the relationship between nature and society in terms of a possible harmony and neither see economic development, if done well, as a threat to the environment. However, the most participatory aspects of the narrative of sustainability are lost in ecological civilization which focuses on educating the citizens in doing their part in looking after the environment instead.

3.3 *Ecomodernism*

Ecomodernism is the new narrative which is most in continuity with the narrative of sustainability. For this reason, unsurprisingly, it has been widely criticized by those environmentalists who were already disillusioned with the politics of sustainability (see e.g. the special commentary on the Ecomodern-

ist Manifesto on *Environmental Humanities* vol. 7 (1) 2016). For example, George Monbiot, from the columns of *The Guardian*, argued that ecomodernism is old-fashioned because it dresses old ideas that have been proven disastrous, both for the social and the natural world, in new clothes (Monbiot 2015). His criticism, however, partially misses the point. As a whole package, ecomodernism is truly a novel proposal. However, it contains a mix and match of well-known positions in the environmental debate which previously pertained to competing theories of environmental politics. Its ascendancy to the scholarly stage is mainly due to the California-based think tank Breakthrough Institute. The institute was founded in 2007 by Michael Shellenberg and Ted Nordhaus to give a wider audience and political clout to their thesis, first expressed in their 2004 essay *The death of environmentalism*, that conventional environmental thinking and tactics were not going to solve climate change.

According to the ecomodernist manifesto (Asafu-Adjaye et al. 2015), breakthrough innovations will guarantee that the civilization could continue growing to the point that developing countries can finally achieve OECD-levels of affluence. Instead of going back to nature, humanity should strive to separate itself even more from nature, so that our needs do not have an impact on the environment. Nuclear fusion or innovations in nuclear fission could provide clean and abundant energy (they could even power mass desalination plants and solve water scarcity) whereas nanotechnologies could provide sustainable food and eradicate world hunger. A humanity fully decoupled from nature could then even witness a reversal of land-use trends, as described by the forest transition theory (Mather 1992).

There is a global crisis but, for the most part, it is already under control. The picture painted by ecomodernists shows a developed world which is already marching towards a future liberated from environmental preoccupations. According to the data presented in the manifesto, the growth rate of human population has already peaked; population growth today is mainly driven by longer life spans, the amount of water needed for the average diet has declined, and the amount of nitrogen per unit of production is diminishing in developed nations. To effectively address the global environmental problem, it is sufficient to only extend the best practices that already put Western countries on the path to sustainability and environmental protection to developing countries. Inasmuch as globalization enables a quicker transfer of knowledge, technology, capitals and best practices between developed and developing countries, it is a force for good and should be promoted.

The main culprit for environmental degradation is land-intensive, technologically outdated economic development. The more human livelihoods depend on the environment for food and fuel, the more the environment will be negatively impacted, especially considering that the global population is still expected to grow for a while.

Although globalization will democratise the solutions already employed or still in the advancement in developed countries to developing countries, more needs to be done to, first, tackle environmental problems and, second, realise the vision of a peaceful, affluent, and high-energy planet (Karlsson 2017). The encouraging trends displayed by affluent Western countries should be consciously accelerated. Ecomodernists are not confident that the market mechanism will solve the environmental problem while ‘raising all the boats’ on its own. According to Symons and Karlsson (2018), market capitalism has brought developed Western states onto the path of sustainability, yet this has been a long and chequered process. Whereas, on the one side, neoliberal policies have enabled strong economic growth and, following Inglehart’s theory (1977), the development of post-materialist values and sentiments of care towards the environment, on the other, they have also brought insecurity and the possibility of rapidly losing these hard-won post-materialist attitudes. In order to speed up and export sustainable practices and technological solutions to developing countries, the state should, thus, step up and assume the role of promotor of innovative technology and, in general, widely intervene in the markets.

Ecomodernist theory, thus, cuts through the traditional cleavages of environmental thinking: its reliance on economic growth and on the development of technological solutions does not translate into a right-wing worldview in which market actors are best left alone. Furthermore, thanks to expanding economic and technological opportunities, its social democratic vision of equal and universal rights to a modern lifestyle for everyone does not need to be met by redistributive policies and a global ethic of restraint.

4 The old debates

The three narratives all move from the disenchantment with some of the fundamental aspects of the sustainability narrative, yet they do not share a common worldview. The degrowth narrative departs from the recognition that ecological limits to growth are real and that society should be built to respect the embeddedness of human beings into the natural world, not the other way around. Its focus is on ecological limits. Environmental authoritarianism focuses on political solutions implemented by a technocratic elite. Its emphasis is on effective decision-making processes and institutions. Ecomodernism remains the narrative most anchored to that 1990s consensus according to which environmental protection should be compatible with economic growth and a liberal-democratic system, yet it rejects that the technological solutions needed to tackle the environmental problems will come from the distributed actions of business actors. Instead, it entrusts the state to orient the search and

implementation of innovative solutions. The main focus of ecomodernism is on innovation and technology.

Globalization is part of the problem for degrowth scholars – but not the primary cause of environmental degradation – and part of the solution for the ecomodernist ones. While the former argue that globalization worsens local patterns of environmental degradation and human exploitation, the latter claim that globalization is necessary to create a society in which technological solutions can move freely and quickly. Environmental authoritarianism is mostly a problem-solving narrative and, as a consequence, it does not make sense to ask how it frames globalization. Or how it understands the causes of and solutions to the environmental problems of our time. These are taken as given in society and reflected in the specific actions and policies implemented by the technocratic elites; in China, for example, the causes, solutions, and the impacts of globalization are articulated in terms of the home-grown narrative of ecological civilization.

According to the narrative of degrowth, the causes of environmental problems are to be searched in a mode of development which pursues un-economic growth (Daly 2012) at the expense of human well-being and the integrity of the environment. Ecomodernism places the blame on technologically outdated economic development and the slow pace of innovation. Thus, degrowth proposes to slow down the economy in an orderly manner – a planned degrowth, not an economic recession – by redistributing time, space, and money. Ecomodernists claim that only a rapid modernization will bring forth the promise of a humanity which is truly separate from the environment and no longer has any negative impact on it.

In the remainder of the paper, I focus on each narrative's core concern – limits to growth for degrowth, effective decision-making institutions for environmental authoritarianism, and technology for ecomodernism – and explore how old debates about the limits to growth, the merits of democracy, and appropriate technology are being revived by the new cleavages in environmental politics created by the new narratives.

4.1 *Ecological limits*

This is possibly one of the oldest and most enduring debates in environmental politics; it pits Prometheans and Survivalists against each other (Dryzek 2013) and, in the context of this paper, ecomodernism and degrowth. As a problem-solving narrative, environmental authoritarianism has little to say about the existence and characteristics of ecological limits. Given its reliance on economic growth, it is reasonable to think that ecological civilization, the Chinese narrative for the human-nature relationship, would frame the debate

on ecological limits in terms similar to ecomodernism. This debate continues to remain a central ‘feature’ of environmentalism because the idea of ecological limits fundamentally shapes how different approaches to environmental governance understand the role of human beings on the planet.

Everyone believes that there are ecological limits, including ecomodernists. Otherwise, why write about technological breakthroughs and speed up the pace of innovation to solve environmental problems at all, if all is well and good? This is often a source of confusion between ecomodernist and degrowth scholars (see Kallis 2017a: 53); the former argue that there are ecological limits to pollution but not growth, whereas the latter argue that there are ecological limits to both pollution and growth. These two go together if one believes that growth cannot be immaterial, i.e. it cannot be decoupled from certain impacts on the environment. This might look like a very factual issue, to be settled with supporting and opposing empirical evidence. But it is not because it hinges on whether growth *can* be decoupled, not whether it is right now. Additionally, the evidence marshalled by the opposing camps further makes the debate like ships passing in the night.

Ecomodernists weave together a narrative of innovation which relies on empirical evidence, trend extrapolation, and a few assumptions. Blomqvist et al. (2015) argue that while the total amount of farmland area, cropland plus pasture, has increased in absolute terms (+13% and +9%, respectively) thanks to agricultural productivity improvements, it has actually decreased on a per-capita basis since 1961. A similar story can be told for global consumption of wood and water. Climate change, the defining problem of our age, does not yet show such encouraging trends: greenhouse gas emissions are tethered to economic development and have increased both in absolute terms and on a per capita basis. For ecomodernists, the lesson coming from the data is clear: if we factor population growth in our analysis of material consumption, relative decoupling shows that there is a trend towards increasing immateriality of economic growth. This is the result of improvements in land efficiency (intensification) and outdated technologies being replaced by newer ones which are less impactful on the environment (substitution).

Degrowth scholars deny that more and more relative decoupling could eventually translate into absolute decoupling. They argue this by, first, noticing that scale and efficiency are not independent: greater efficiency can only be obtained at a greater scale (Kallis 2017a: 53). Second, by resorting to research conducted by Georgescu-Roegen in the 1970s, they argue that no silver bullet technology is capable of making immaterial an increase in (material) standards of living. This can only happen if desires and expectations change, which is exactly the point that degrowth supporters want to make. Paradoxically, even a massive switch onto renewable energy such as wind and solar – or other ostensibly clean technologies such as electric vehicles – would, sooner or later, become unsustainable without a reduction of material demand. Third,

they bolster their argument with empirical studies designed to model economic and population growth under best-case scenarios of technological innovation, efficient resource use, and strong government support for environmental policy. No major study has so far demonstrated that it is possible to achieve absolute decoupling, even under very idealized conditions and circumstances (Jackson 2009; Dittrich et al. 2012; Ward et al. 2016; Schandl et al. 2016).

4.2 *Effective decision-making institutions* (liberal democracy on trial)

The notion that democracy is better than other systems of government in dealing with environmental issues remained unchallenged until around the turn of the millennium, when China started to get serious about environmental protection. In the literature, several studies prove that democracies perform better than autocracies on a number of environmental variables (Li and Reuveny 2006; Shandra 2007 Buitenzorgy and Mol 2011; Fredriksson and Neumayer 2013). Scholarship has also built a case for a democratic governance of the environment by stacking anecdotal evidence of widespread environmental wrongdoings against autocracies, especially China and Russia (Smil 1984; Feshbach and Friendly 1992; Shapiro 2001; Tilt 2009; Marks 2011). Nevertheless, it remains debatable whether democracy has the resources to implement the *transformative* actions required to solve the environmental problems of our age (Sconfienza 2019). However, when China rapidly passed important environmental legislation, some scholars started to debate the distinctive features of the Chinese approach to environmental governance as opposed to democracy and to explain why other countries, especially if already prone to authoritarianism, might imitate the Chinese model (Beeson 2010; Gilley 2012).

Gilley (2012) observes that environmental authoritarianism is usually explained by a specific set of claims about environmental issues. These are characterized by the presence of veto players (e.g. expert commissions, supreme courts, veto power of monarchs and presidents, etc.) who delay action, the need for a rapid response, the assumption that voters are epistemologically impaired on complex matters related to the governance of the environment and the fact that democratically elected decision-makers are often not competent, as the skills needed to get elected are different from those needed to govern. As reported by Bell (2015) by means of an interesting anecdote in his book about China's decision-making model, this structural feature, and possible failure, of democracy is well-internalized in China's internal political debate. In 2013, a video went viral in China depicting the rise to power of both Barack Obama and Xi Jinping, the former through a fast meteoric rise aided by campaign financing and the latter through a series of competitive

examinations and rise through the ranks over decades from a township to the leading position in the Standing Committee of the Politburo. The message of the video was that the Chinese model is a legitimate process of selecting the leaders which does not fall into the structural problems of democracy. Conversely, environmental democracy is better explained when a different set of environmental features are brought into view. According to this frame, environmental issues are wicked problems characterized by high uncertainty and value conflicts. Thus, their governance requires a degree of legitimacy which only public participation could ensure.

Degrowth and ecomodernism narratives have liberal Western roots and the respective scholars never argue that their recipes for long-lasting sustainability should depend on the suspension of some of the standard features of liberal democracy. That being said, the autocracy versus democracy debate is not entirely tangential to the other two narratives. Hickel, for example, is quite optimistic about the possibility of implementing degrowth policies democratically. On the basis of a recent poll, he argues that British people already have a preference for policies which maximise happiness (81% of the respondents) compared to ones which maximise wealth (13%). He reckons that this data is compatible with a democratic transition to degrowth, if the rationale and impact of degrowth policies were allowed to be well-explained and correctly framed in the media (Hickel 2017b). Yet, this is exactly the problem. The current socio-economic-political system is judged to be too impenetrable to *anti-status quo* influences to be amendable through democratic pressures. This brings the critics of degrowth to accuse its supporters of putting forward nothing more than an empty slogan without any real and implementable blueprints for change (van den Bergh 2014) or, alternatively, of hiding an authoritarian disposition behind a democratic façade (Karlsson 2013). Others still argue that it is unfathomable how an economic and political system, which is built on consumerism, desires for material possession, growth and credit, could be effectively scrapped (Milanovic 2017). Trainer (2012), writing from a position sympathetic to degrowth, agrees. Building on this type of argument supports the claim that a democratic transition to degrowth will only be possible if and when ecological limits make it inevitable: a peaceful democratic transition to degrowth prior to that moment is desirable but unlikely (Sconfienza 2019).

Ecomodernist scholars run into similar concerns regarding a transition towards their vision of the future but not the same paradoxes concerning the compatibility with the current political model. Economic growth, technological innovation and increased globalization are all compatible with the basic tenets of Western liberal democracy. State-sponsored ecological innovation would only represent a new, green spin to the old Entrepreneurial State idea that brought the United States to the cusp of technological innovation (Mazucato 2013). In the past, state-directed innovation had been promoted in the interests of national security (GPS, internet, and radar technology) and then

opened up to private companies which could profit from these developments; now, ecomodernists argue, the same should happen with innovations in environmental protection. These are not controversial ideas and have been recently taken up by a group of democrats in the United States Congress, most notably by Alexandria Ocasio-Cortez and Bernie Sanders, who argue that a ‘Green New Deal’ would both save the planet and spur economic growth. However, this is only half of the ecomodernist’s recipe for a sustainable future. Land intensification, urbanization, rewilding, or widespread adoption of synthetic products might run against deep-seated cultural values. The success of ecomodernism hinges on the possibility of scaling up these practices and developments to an even wider sector of the population. Barring a complete convergence and homogenization on ecomodernist values, the issue to be raised, once again, is how a democratic transition to the ecomodernist imaginary could be realized. Ecomodernism is a recent research programme: there is little literature dealing with transition issues. Most accounts stress the need to accelerate the promising trends of developed countries but say little about the problems for democratic theory that such acceleration might encounter.

4.3 *Technology*

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The theme of technology has always been central to the environmental debate. Chemical products such as synthetic pesticides were among the first technological innovations to be put under an environmental magnifying glass and concerns over their use contributed to awake the environmental consciousness (Carson 1962). Over the years, many technologies have been proposed to counteract environmental problems: from filters and scrubbers on top of smokestacks, to radio controlled collars to track endangered animals and satellite technology to monitor forests. More recent additions to this list are blockchain technology to increase the transparency and sustainability of supply chains and climate engineering to artificially lower the surface temperature of the Earth or reduce the amount of CO₂ in the atmosphere.

As we have seen in section 2, by drawing on the cultural critique literature of the 1960s, the 1970s witnessed the emergence of a debate questioning the limits of technology, both social and physical: whether they exist and what they should be. Degrowth positions in today’s debate articulate some of these old ideas and apply them to today’s challenges and technologies.

Are there *physical* limits to technology? Muraca and Neuber (2018) draw on Georgescu-Roegen’s work to argue that any climate engineering technology should be viable. This argument can be extended to other technologies as well. According to Georgescu-Roegen, viable means that the technology does not rely on other economic processes for the production of maintenance

flows necessary to run it. Thus, solar or wind energy are viable technologies, if used according to their regeneration time and capacity. For example, if the life cycle of solar panels was so short that after a few years we would experience a disposal problem, or the resources employed to manufacture them would run out, then a renewable technology like solar would not be viable. Without a parasitic way of producing maintenance flows, viable technologies tend to approximate a steady-state economy and do not grow any further. The viability of a technology is better understood as a hybrid physical-social limit because it is neither a hard barrier nor, strictly speaking, a *physical* limit: introducing a non-viable technology means accelerating the depletion of terrestrial resources, which might eventually bring human beings closer to the collapse of society. However, while the depletion of resources is an observable phenomenon, its undesirability is not and depends on the values of society.

Ecomodernists adopt a more piecemeal approach to technology development: new technologies should be introduced independently of their long-term viability as long as they enable an efficiency improvement. As technology continues to undergo the cycle of development and improvement, this – they reason – will eventually enable absolute decoupling, which is viable by definition. They further argue that viable technologies might be already in sight. Energy from a closed thorium fuel-cycle could power the Earth for centuries, they argue (Asafu-Adjaye et al. 2015).

Are there *social* limits to technology? In the same article referenced above, Muraca and Neuber (2018) also respond to this question. This time they draw on the work of Illich (1973) to argue that technological innovations should be convivial. The technological tools used in society carry meanings and reflect power relations. A person who masters technological tools is able to ‘invest the world with his meaning’ whereas a person who does not have the same skills is shaped by the tool, ‘the tool determines his self-image’ (Illich 1973: 34). We can appreciate this dynamic in today’s use of social media, where people who can code or are aware of how algorithms work are better able to discern how our online experience is shaped. The power of technology to determine the political, institutional, and ethical fabric of society compels Illich to argue that the development, meanings, and limits of a technology should be agreed upon through a participatory process. A convivial technology is, thus, democratically controllable, subordinated to the values of the community and accessible in terms of knowledge and affordability. If too complex, the technology will be appropriated by an elite of experts. If too expensive, it will be appropriated by a business or financial elite. On the basis of this argument, Muraca and Neuber (2018) conclude that climate engineering technologies such as Solar Radiation Management will not be convivial and, thus, incompatible with a degrowth future (Muraca and Neuber 2018).

Ecomodernist scholars embrace the development of technology, even if it is complex, centralized, or expensive. They contend that modern democra-

cies have devised systems to bring the experts responsible for running these technologies under democratic control: experts can function as advisers or be democratically accountable when they are appointed to make decisions. Modern societies are built on the differentiation on labour. Therefore – they argue – we should not preclude ourselves the opportunity to devise and implement saviour technologies simply because the investment in time and education to get to grips with them is too big for the layman to make.

Environmental authoritarianism remains slightly tangential to this debate mainly because there is not a group of self-styled environmental authoritarianism scholars who clearly articulate their positions in opposition to competing theoretical frameworks in the debate.⁶ However, from the extant literature on environmental authoritarianism, it is nonetheless possible to identify a number of attitudes towards technological innovations for environmental governance. First, technological solutions which enable to achieve strategic objectives without endangering social or economic change are viewed favourably. China, for example, is already testing with carbon capture and storage technology on a small scale. This technology, if appropriately scaled up, could enable China not to distance itself from its current and successful model of economic development and might insulate it from a political challenge from below. Second, technological solutions which require expert-based governance could lock-in the hierarchical and centralized structure of governance. Finally, there might be environmental reasons to employ technology to monitor citizens' behaviour, which could, in turn, facilitate the government's continuous grip on power. Widespread facial recognition cameras and algorithmic surveillance are already being used to prevent what the CCP deems anti-social behaviour; these technologies could be scaled-up under the pretence that monitoring environmental behaviour (e.g. proper recycling, correct setting of home temperature, or, even, appropriate dressing) could improve environmental outcomes.

5 Conclusion

The resurgence of the old debates over the limits to growth and technological innovations as well as democracy's transformative potential marks an important development in environmental politics. As we have seen, these debates are less susceptible to be settled through compromise positions. Unlike the protest marches and the side events at the annual COPs, characterized by demands over better redistribution of funds and more representative political procedures, 2019's Fridays for Future and Extinction Rebellion voiced

⁶ Unlike the 'ecomodernism versus degrowth' debate, which occasionally even emerges in the form of 'twitter-wars' (Kallis 2017b: 59).

radical demands which have been perceived as impossible to accommodate with the *status quo* or Western lifestyle for that matter (see, e.g. Caldwell 2019; Barklund 2019). If the narrative of sustainability as we know it is not injected with a new lease of life, the confrontational protests and disruption which characterized 2019 are likely to become the new normal in climate politics. Another important finding of the paper which is worth exploring in future research: there seems to be a potential convergence towards an increasingly illiberal governance of the environment. This is not only a structural feature of environmental authoritarianism, but also a possible deviation of both ecomodernism and degrowth. While ostensibly liberal environmental approaches, ecomodernism and degrowth still need to solve the puzzle of how their visions of a green future could be achieved by means of a peaceful democratic transition.

On the other hand, the resurgence of old debates will not simply consign sustainable development to the dustbin of politics. It has become too recognizable a 'brand' for being disposed of already. New meanings will be attached to the sustainable development label, which will mark the second time this happens, after it was born as a radical idea associated with the Club of Rome and, then, progressively appropriated by powerful actors. If and when the narrative of sustainability is reinvented, it will likely align with ecomodernism – the narrative most in continuity with it among the new narratives surveyed here. However, where sustainability in the 1990s managed to defuse those confrontational debates through the impression that environmental problems could be managed in terms of quantifiable and incontrovertible data, such as carrying capacity, ecological footprint, material flows (Blühdorn 2016), the genie is now out of the bottle. Post-sustainability politics, having finally grown out of its enchantment for the idea that hard sciences could solve soft-value questions, will require making difficult choices over the normative disagreements which have resurrected these old debates.

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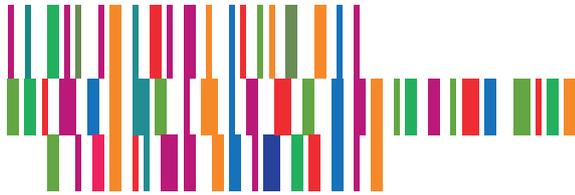
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Abstract

The paper takes a critical view of the narrative of sustainable development and argues that three different environmental narratives – ecomodernism, environmental authoritarianism, and degrowth – are now providing alternative problem-solving accounts of environmental governance. The paper analyses the three narratives according to a common set of categories. Furthermore, it argues that these three narratives are bringing again to scholarly attention debates – over the limits to growth, the limits to technological innovation, and the potential limits of democracy in guiding environmental politics – which, at the end of the last century, had been effectively defused by the hegemonic sustainable development narrative. Finally, the paper explores the significance of the resurgence of these debates for environmental politics.

Key words: *degrowth; environmental authoritarianism; ecomodernism; sustainable development; geoengineering.*

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