POLÁNYI PUBLICATIONS

ATTILA SZIGETI

ANTHROPOCENE NARRATIVES AND THE ECOPOLITICS OF THE CLIMATE CRISIS

II.2021/WP01

iASK INSTITUTE OF ADVANCED STUDIES KŐSZEG

iASK WORKING PAPERS
2021

ABSTRACT

The Anthropocene is one of the most important multi-disciplinary research topics to have emerged in the last two decades, cutting across dichotomies between the human and the natural world, as well as the scientific disciplines built around them, and posing, therefore, unprecedented methodological, theoretical-conceptual and ethical-political challenges for both the natural and the social sciences. It is used to cover a whole range of contemporary environmental threats: anthropogenic climate change, loss of biodiversity, the sixth mass extinction, ocean acidification, disruption of the biogeochemical cycles of the earth, etc. This paper proposes another reproach against the dominant Anthropocene narrative called the "Capitalocene" which rather argues that the climate/environmental crisis is not caused by "human nature" but by historically specific relations of re/production and property, namely: by the exploitative and expropriative socio-economic relations of capitalist accumulation.

Key words: Anthropocene, "Capitalocene", capitalist accumulation, Degrowth, Green New Deal

Anthropocene Narratives and the Ecopolitics of the Climate Crisis

Attila Szigeti

The term "Anthropocene" was originally proposed, during the 2000s, in the natural sciences (in Geology and Earth System Sciences) to name the current geological epoch after humanity, since human influence has reached the level of a global „geophysical force" causing the disruption of planetary systems (Crutzen 2002; Steffen et al. 2007, 2011). During the last decade, the notion of the Anthropocene was adopted not just in the natural sciences, but also across the social sciences and the humanities (as well as in the public discourse). The notion now is used to cover a whole range of contemporary environmental threats: anthropogenic climate change, loss of biodiversity, the sixth mass extinction, ocean acidification, disruption of the biogeochemical cycles of the earth, etc. The Anthropocene is one of the most important multi-disciplinary research topics to have emerged in the last two decades, cutting across dichotomies between the human and the natural world, as well as the scientific disciplines built around them, and posing, therefore, unprecedented methodological, theoretical-conceptual and ethical-political challenges for both the natural and the social sciences.

Natural scientific narratives of the Anthropocene have been criticized from a social scientific perspective for *naturalizing* and *dehistoricizing* climate change.[1] Accordingly, the natural scientific discourse offers, on the one hand, a historical narrative of the Anthropocene, that starts with the Industrial Revolution and its economy based on burning fossil fuels; or, in another proposal: with the "Great Acceleration" of population-growth, industrialization and mineral and energy use started after WW II. At the same time, the Anthropocene appears in the same scientific narrative as the inevitable consequence of a *predetermined, teleological development*, leading from the discovery of fire straight to the steam engine and global warming, that is: necessarily ensuing from an essential, species-wide trait of humanity (a product of biological-cultural evolution, not of social history), like *the use of technology*.

Another reproach against the dominant Anthropocene narrative is that it treats *humanity as a homogenous, transhistorical agent*, thereby covering up the *historical and global differences and inequalities* between humans who have caused and those who are currently the victims of anthropogenic climate change or of the ecological crisis in general.

[1] It should go without saying, but let's state it clearly in order to avoid any misunderstandings: this criticism refers the socio-historical narrative of the Anthropocene proposed by natural scientists and by its popularizing versions, and not at all to the actual Earth Scientific demonstrations of the Anthropocene.

Alternative socio-historical narratives of the Anthropocene emphasize that the climate/ecological crisis should be understood not as a predetermined anthropogenic failing, but as a *sociogenic* phenomenon, emerging in a *historically contingent context of particular socio-economic relations*. In particular, in the last decade different scholars of environmental history and sociology, as well as of human ecology – belonging to the broadly conceived field of Marxian ecological thinking – have developed an influential counter-discourse on the so-called "Capitalocene". Authors of the Capitalocene discourse argue that climate/environmental crisis is not caused by "human nature" (humanity as a homogenous transhistorical agent), but by *historically specific relations of re/production and property*, namely: by the *exploitative and expropriative socio-economic relations of capitalist accumulation*.[2]

The premise of this working paper is that the adequate socio-historical and political-economical conceptualization of the relationship between society and nature in the Anthropocene is a necessary precondition for addressing the socio-economic-political issues posed by the current climate/environmental crisis. In the first part of the paper, I will argue that the most adequate socio-historical explanation of the ecological crisis is developed within the Capitalocene-discourse. Then, in the second part, based on the arguments elaborated in the first part, I will proceed to the normative evaluation of two current ecopolitical proposals for climate/environmental crisis mitigation: the "Green New Deal" and "degrowth".

1. The Capitalocene

The term Capitalocene (in which "capital" replaces "the human" from the Anthropocene) suggests that the current epoch of climate/ecological crisis is defined by the disruptive impact of capitalism (and not of all of humanity) upon planetary systems. To put it bluntly: nature is destroyed not by human nature, but by capitalism. But what does capitalism mean in the context of this political ecological thinking?

Capitalism is criticized within this discourse, first of all, as a self-contradictory system based on *the contradiction* between the *infinite accumulation of capital* (the continuous reinvestment of profit or surplus value in the economy) and the material substrate of this process, the *finite natural environment*. But there is more here than just a formal contradiction

[2] See especially the work of Andreas Malm and Jason W. Moore, which I will discuss in detail later, and also the work of authors related to the so-called "Metabolic Rift school": John Bellamy Foster (1999), Paul Burkett (1999) and others.

between finite and infinite: since the production of goods and services (addressing real social needs, in Marxian parlance: use values) in capitalism is subordinated to the accumulation of capital (exchange value), therefore the natural environment (the material and energy use required by the production process) is also subordinated to the infinite and continuously accelerated process of the accumulation of capital, to the imperative of endless economic growth. And finally (and importantly), capitalism should be understood as ”capitalism-in-nature”, as an originally environmentally embedded socio-economic process of capital accumulation, in which social relations of power and domination, like exploitative class relations, are always interrelated from the start with the expropriation of nature.

1.1. Fossil capital and carbon inequality

As Andreas Malm demonstrates in his book on *Fossil Capital* (Malm 2015), social relations of class antagonism structured the historical origin and the evolution of the fossil economy or fossil capitalism (i.e., the economy in which the fossil fuels became the necessary material substrate of capital accumulation). Thus, the reason for the transition from hydraulic to fossil energy (the steam engine based on the use of coal) in the British cotton industry in the late 18th century wasn't motivated by considerations of scarcity or technical efficiency (water was abundant, cheaper and technically equally efficient as coal), but by the requirements of exploiting wage-labor, which corresponded better to the "spatio-temporal" profile of the coal. Cotton capital needed a source of energy, which is portable, could be concentrated in space and was temporally continuous and accelerable: the "portability of coal" allowed capitalists to relocate production to towns plenty with supplies of exploitable labor power (the "industrial reserve army" of dispossessed and proletarized peasants) and the use of steam engines facilitated a more continuous and intensified exploitation of workers.

> […] the historical origins of anthropogenic climate change were predicated on highly inequitable global processes from the start", in the global context "of a largely depopulated New World, Afro-American slavery, the exploitation of British labour in factories and mines, and the global demand for inexpensive cotton cloth. Steam-engines were not adopted by some natural-born deputies of the human species: by the nature of the social order of things, they could only be installed by the owners of the means of production. […] Capitalists in a small corner of the Western world invested in steam, laying the foundation stone for the fossil economy: at no moment did the species vote for it either with feet or ballots, or march in mechanical unison, or exercise any sort of shared authority over its own destiny and that of the Earth System. (Malm and Hornborg 2014: 63-64)

So, the historical – and at that time, obviously involuntary – agent of the current climate crisis was, in historically contingent (and not evolutionarily predetermined) conditions, "an infinitesimal fraction of the population of *Homo sapiens* in the early 19th century" (Malm and Hornborg 2014: 63-64), not humanity in general. No narrative of the Anthropocene, which treats humanity as a homogenous natural agent, can do justice to the historical and global differences and inequalities (as well as the class and power relations, relations of violent domination, etc.) between, on the one hand, social groups who have historically – and from a certain point in history knowingly, thus voluntarily – predominantly caused and are currently causing anthropogenic climate change, and other groups and regions that are the victims of the climate/ecological crisis.

As for the current situation of climate inequality and responsibility, let's look at a few statistical facts regarding carbon emission inequality: just 10% of the world's population – the elites in both the Global North and the Global South – is responsible for around 50% of global emissions; the poorest half of the world's population – the majority of them living in countries who are the most exposed to the harmful consequences of climate change – account for only 10% of emissions and thus hardly contribute to climate change (Oxfam 2015); the wealthiest 1% of the world's population were responsible for the emission of more than twice as much carbon dioxide (15% of cumulative emissions) as the poorer half of the world (7% of cumulative emissions) from 1990 to 2015 (Oxfam 2020).

1.2. World-ecological theory

Jason W. Moore's historical narrative (Moore 2015) pushes back the origins of capitalism's environmentally destructive practice (of the environmental crisis in general, and not just of climate change) long before the industrial revolution and the exploitation of fossil fuels, to the civilizational strategy of the violent expropriation of the "unpaid work" provided by "cheap" human and extra-human natures (e.g., the exploitation of nature by slave work in the colonies). This expropriation of "cheap natures" started already in the early capitalist world-system of the "long 16th century" (1450-1648).

Moore's theoretical construction is based on the analogical extension of the motive of the unpaid work performed in the sphere of social reproduction to the sphere of nature[3]: the exploitation of wage work is always dependent on the expropriation of the unpaid work performed in a wider, not just social, but *socio-ecological sphere of reproduction*, a sphere which contains not just women's unpaid domestic labor (as theorized in *Social Reproduction Theory* [4]), but nature's unpaid "work/energy" too.

Moore's central idea is to conceive capitalist valorisation according to the "Law of Cheap Nature": the necessary condition of capital accumulation is the expropriation of the "unpaid" work or energy of the so-called "Four Cheaps": 1. cheap labour power (e. g., of women and slaves), 2. cheap food, 3. cheap energy, and 4. raw materials (or, to use the catch phrase of Maria Mies, frequently cited by Moore: the cheap or unpaid work of "women, nature, and colonies"; see Mies, 1986: 77). Capital accumulation works then through the trinity of: 1.) the economic moment of capital, the exploitation of labor-power within commodity production (abstract social labour), and the extra-economic processes of: 2.) capitalist power, the expropriation of the socio-ecological reproductive sphere, of the unpaid work/energy of cheap human and extra-human nature; and 3.) science (the creation of abstract social nature).

What we get here then is an *expanded conception of capitalism* (see Fraser 2014), in which *production through the exploitation of valued wage work* and the *expropriation of reproductive devalued unpaid work* are intertwined aspects of the capitalist world-system. The expropriation of the unpaid work/energy provided by different extra-economical spheres (like the social reproductive and ecological spheres, but also: by racialized labour and so on) is a structural feature of capitalism and a necessary background condition of exploitation. "Structural" here means that the often-violent expropriation and dispossession of the socio-

[3] This is a creative, although controversial reconceptualization, heavily influenced by the groundbreaking work of Maria Mies; see Mies 1986.

[4] The central claim of Social Reproduction Theory (SRT), which is adapted in Moore's world-ecological theory, is that *economic production is in a separation-cum-dependence relation with social reproductive work* (that is: child-raising, schooling and socializing, affective care, as well as domestic labour, etc.; all the work, performed essentially by women, which is necessary for the reproduction of labor-power). (For essential texts of contemporary SRT, see: Bhattacharya (ed.) 2017; Fraser 2016) Separation refers here to the separation between economic production (men's public wage-work) and social reproduction (women's invisible, unpaid domestic work), which is a historical, specifically capitalist institution. And dependence means that capitalist economic production was historically built and it is continually dependent on the expropriation of not just the reproductive, but also other forms of unpaid and invisible work (like subsistence and informal work for ex. in the semi-proletarian households, etc.), carried out in the global extra-economic sphere of social reproduction.

ecological sphere is not just a transitory (pre)capitalist moment (like that of the original accumulation), but a constant, structural feature of capitalism in all of its historical cycles.[5]

Moore's final theoretical ambition is to develop an ecology of the world-system (i.e., a world-ecology) which integrates the dimension of the expropriation of nature in the unequal international division of work and nature (of ecological resources) from the capitalist world-system. *Capital accumulation from the centre is always dependent on the expropriation of cheap work and nature from the semi-periphery and periphery*, in all of the hegemonic cycles of capital accumulation,[6] re-elaborated by Moore as the history of successive *ecological regimes of accumulation*, based on the expropriation of different historical cheap natures (like wood, coal, oil, etc.) One of Moore's catch phrases is: "Behind Manchester stands Mississippi", that well captures the ecological regime of the British cycle. Manchester's factories stood on the massive import of "cheap human and extra-human natures" from the periphery (the colonies), that is, on cheap materials like the cotton to feed the mills. This in turn cheapened the costs of textile production. Cheap food like sugar and tobacco produced by slave labour in the colonies cheapened the costs of the living for industrial workers, allowing capital to pay them lower wages and to obtain higher profits. At the same time, rising labour productivity in commodity production was conditioned also on the expropriation of unpaid work/energy performed by, on the one hand, human natures from the centre: domestic labour and the accumulated work of humans raised to adulthood outside the commodity system (dispossessed and then proletarized peasants), and on extra-human natures from the centre: the accumulated energy of fossil fuel formation (coal).

---

[5] Moore's concept of expropriation (or appropriation, the term he actually uses) is indebted to a theoretical tradition initiated by Rosa Luxemburg who famously argued (and later, influenced by her, several other authors also, like Hannah Arendt, Maria Mies, David Harvey) that original accumulation (the violent extra-economical process of the dispossession and proletarization of the peasantry described by Marx) should be conceived not as a pre-capitalist, transitional historical moment, but as an ongoing, that is: a constant, structural feature of capitalism. (Luxemburg 2015) Capital accumulation – according to Luxemburg – is always in "a process of metabolism" with its "milieu" of "non-capitalist social formations" and "non-capitalist forms of production" (e.g., of peasants, colonies and the imperial system). This "non-capitalist" milieu, in contemporary reinterpretations of the ongoing original accumulation thesis becomes a "non-economic", but nevertheless capitalistic milieu: capitalist exploitation of commodified labour-power cannot work except through the continuous expropriation of certain non-commodified zones (like the socio-ecological reproductive sphere, racialized labour, but also democratic politics, different types of commons, etc.) which function as the necessary background conditions of the capitalist economy.

[6] The Genoese-Iberic, the Dutch, the British and the American (see: Arrighi 1994).

To sum up the analysis of the Capitalocene narrative, a summary follows of the results so far.

First, regarding the debate and the possible interdisciplinary interaction between natural scientific and social and human scientific narratives of the Anthropocene, we saw that the Anthropocene cannot be adequately understood by natural science alone. The social metabolism of humanity with nature, the material and energy throughput of human activity and its ecological effects are inextricably linked to the historically specific socio-economic and political relationships that structure the social metabolism. The climate/ecological crisis should be understood not as an "anthropogenic", but as a "sociogenic" or, more precisely, as a "capitalogenic" phenomenon: i.e., social relations of power and domination, like exploitative class relations, are always interrelated with the expropriation of nature. The human agency behind the climate/environmental crisis is a deeply heterogenous agent, permeated by historical and global carbon/environmental inequalities between those who have contributed to and are still contributing to the climate/ecological crisis and those who are the victims of the crisis.

Second, the cause of the current climate/ecological crisis is the capitalist expropriation of the "Cheap Nature". The accumulation of capital is dependent on the continuous expropriation of nature's cheap inputs (material and energy resources), as well as on the use of nature's cheap outputs (as a cheap sink for environmental pollution, e.g., the atmosphere as a sink for carbon and GHG emissions). The global ecological crisis (the disruption of planetary systems) means that today nature as a cheap input and output for capitalist production, in fact, capitalism's entire "Cheap Nature" strategy, is coming to an end.

Third, against naturalistic-deterministic explanations of the ecological breakdown (which depoliticise its origins and hinders possible political-normative responses to it, leading to socio-political catastrophism or defeatism), the Capitalocene narrative insists that the climate/ecological crisis emerged in the historically contingent context of particular socio-economic relations. This also means that these particular capitalistic socio-economic relations are not irrevocable natural facts, and thus they can be changed.

2. Ecopolitical proposals: The Green New Deal and degrowth

In the second part of this paper, I will proceed to the normative evaluation of two current ecopolitical proposals for climate/environmental crisis mitigation: the "Green New Deal" and "degrowth". I deliberately leave out of the discussion the still dominant "green capitalist" or "ecomodernist" policy which claims that capitalist socio-economic relations and infinite

economic growth are compatible with ecological sustainability because – as we saw in the previous section – those are precisely the main causes of the current ecological crisis. Therefore, I only discuss here those policy proposals that at least propose to transform (if not to transcend altogether) capitalism's systemic dynamic by addressing climate/environmental mitigation together with all the interrelated socio-economic systemic issues, like social and environmental inequalities, the problem of growth, the expropriation of cheap natures in the periphery, etc.

2.1. The Green New Deal

The Green New Deal (from now on: GND) is a public policy platform that proposes to combat two crises at the same time: *climate change* and *social injustice*. GND therefore intends, on the one hand, to boost employment (and therefore demand) by greening/decarbonizing (in more progressive versions: de-commodifying and democratizing) energy production and distribution, public housing and transportation, agriculture and food-production, etc. On the other hand, it would implement employment guarantees, and expand the welfare state by providing rights to free health care, affordable housing, etc. The GND is about changes brought about by state and political actors, and not by the private sector. It is about structural and not individual behavioural changes, changes at the level of production, and not at that of consumption, involving an interventionist economic approach to decarbonization through public investments and industrial policies. Several GND policy programmes were proposed lately in the US, the UK and in the European Union. In the following I will give a brief historical and analytical summary of them.[7]

The first major Green New Deal proposals emerged initially in the wake of the global financial crisis. Let me briefly mention just the most elaborated one here. In July 2008, the "Green New Deal Group" – a think tank of UK progressives, including Larry Elliott, Economics Editor of *The Guardian*, economist Ann Pettifor and others – published their report entitled "A Green New Deal" (Elliott et al. 2008), in which they proposed a joint program to tackle the "triple crunch" of the credit crisis, accelerating climate change and soaring energy and oil prices, and demanded, on the one hand, the re-introduction of tighter capital controls, the restructuring of the banking and taxation systems and, on the other hand, a state-sponsored

[7] Many important book-length publications on the GND have also appeared since 2019, including: Ajl (2021), Aronoff et al. (2019), Klein (2019), Pettifor (2019).

investment program to build a low-carbon economy, energy system and transport infrastructure. Around the same time, the GND concept was also adopted by international organisations and governments. The most well-known example, published in a study from 2009 by the United Nations Environment Programme (UNEP), proposed a framework for the different national economic stimulus programmes launched around the world at that time.[8]

The GND discourse reappeared in the American political debates after 2018, the year of intense climate protests, articulated mostly by a coalition of grassroots movements (Sunrise Movement, Justice Democrats, and Democratic Socialists of America) and progressive politicians (most notably, Congresswoman Alexandria Ocasio-Cortez, Bernie Sanders, but also the US Green Party).

In March 2019, Congresswoman Alexandria Ocasio-Cortez and Senator Ed Markey presented the "House Resolution 109 in the U.S. House of Representatives" (from now on: HR 109), calling for a GND – a massive public investment to get the US economy to net zero carbon by the 2030s. (Ocasio-Cortez, et al. 2019)[9]. The preamble establishes that the GND should address two interlinked crises at the same time: a climate crisis and an economic one consisting of wage stagnation and growing income inequality (including a racial wealth divide and gender earning gaps). The five "Green New Deal goals" proposed in the document are:

1. to achieve net-zero greenhouse gas emissions through a fair and just transition for all communities and workers;
2. to create millions of high-wage jobs;
3. to invest in the infrastructure and industry necessary for a green transition;
4. to secure access to clean air and water, healthy food, nature and a sustainable environment;
5. to promote justice and equity for "frontline and vulnerable communities".[10]

These goals should be attained by the following policy measures, among others:

1. decarbonizing the transportation, agriculture, manufacturing, and infrastructure sectors;

[8] Available at: https://www.unep.org/resources/report/global-green-new-deal-policy-brief-march-2009.

[9] For media reports, see: Roberts 2019; Battistoni and Cohen 2019.

[10] Communities disproportionally affected by the systemic racial, regional, social, environmental, and economic injustices exacerbated by the climate/environmental crisis: indigenous peoples, communities of color, migrant communities, deindustrialized communities, depopulated rural communities, the poor, low-income workers, women, the elderly, the unhoused, people with disabilities, and youth.

2. removing greenhouse gases from the atmosphere through land preservation and reforestation;
3. creating high-quality union jobs;
4. expanding the welfare state by providing free health care and affordable housing to all citizens, and fostering environmental justice.

Another Democrat, the presidential candidate Senator Bernie Sanders, published a GND plan during the 2020 Democratic Party presidential primaries (Sanders 2020)[11], in which he proposed decarbonizing energy and transit by 2030, and full decarbonization by 2050. Besides some similarities with HR 109, Sander's plan also contained more radical and innovative elements like:

1. direct restriction of the extraction and distribution of fossil fuels, that is: a ban on imports and exports of oil and gas, a ban on mountaintop mining and fracking, and a moratorium on permits to drill on public lands;
2. rejection of geo-engineering and nuclear power;
3. a global climate justice objective: exceeding the U.S. fair share of global emissions reductions in order to at least partly compensate for the standing climate debt that the U.S. has with the Global South;
4. democratizing and de-commodifying energy production and distribution by bringing private, investor-owned energy under public, democratic and community control, e.g., by "creating new agencies to produce and distribute publicly owned clean power" and by encouraging the formation of "municipally and cooperatively-owned utilities with democratic, public ownership";
5. dismantling the deep connection between fossil fuel capitalism and militarism: a substantial amount of the GND's funding ($1.215 trillion) should come from "scaling back military spending on protecting the global oil supply".

As for GND proposals coming from the EU, the European Commission's European Green Deal's blueprint[12] was presented Ursula von der Leyen in December 2019. Several critics argued that it is essentially a watered-down version of previous GND's, or even more: that it is *not* a GND (Pettifor et al. 2019), essentially for the following reasons: 1.) it doesn't match

[11] For a "pro and contra" report, see: Ajl 2019.
[12] https://ec.europa.eu/info/sites/default/files/european-green-deal-communication_en.pdf.

the necessary climate targets (Greenpeace 2019)[13]; 2.) it is still growth-centred and doesn't address social inequality;[14] 3.) its (public) funding is insufficient: some of the announced €260 billion in annual investment is to come from the private sector, while some is to be generated through budget reallocations, therefore the actual sum is well below 1% of the EU's GDP.

Finally, we have to mention the "Green New Deal for Europe" (GNDE) proposed by the pan-European political movement DIEM 25 (Democracy in Europe Movement 2025), and its report "A Blueprint for Europe's Just Transition" (2019).[15] Basic proposals of this GNDE include: public investment and asset ownership in the energy sector; policies for a just transition, including a job guarantee; decommodification and universal access to basic services; resource caps and policies to reduce resource use; environmental justice for resource-providing communities; *explicit social and economic policies to manage without growth*.

1.2. Degrowth

Degrowth is not a policy platform, but more like an "umbrella-term" for a variety of academic and grassroot eco-activist movements, with no mainstream policy impact or political-economical endorsement yet (the first policy proposal elaborated with the participation of academics involved in the degrowth movement was DIEM 25's GNDE which I just mentioned).[16]

---

[13] The European GND proposes that the EU's greenhouse gas emission reductions target for 2030 to at least 50% and towards 55%." In a critical report, Greenpeace argued that: "Global greenhouse gas emissions need to halve by 2030, and reach net-zero by 2050 […]. To limit global warming to 1.5°C, the Commission should propose a reduction of at least 65% by 2030." Available at: https://www.greenpeace.org/eu-unit/issues/climate-energy/2517/european-green-deal-misses-the-mark/?fbclid=IwAR3qEdn7mkQxoul1jb8e93KHq589AA9pirsvi-TDe2-RRR17zGVWRVGfEZw.

[14] For a critical media report, see the piece published by main degrowth authors: Mastini et al. 2019. According to them, Von der Leyen's policies reaffirm Europe's commitment to fiscal austerity (of cutting non-growth sectors like education and healthcare), and an economic model that prizes GDP growth over ecological limits.

[15] Available at: https://report.gndforeurope.com/cms/wp-content/uploads/2020/01/Blueprint-for-Europes-Just-Transition-2nd-Ed.pdf.

[16] Prominent authors of the degrowth movement include Serge Latouche, Giorgos Kallis, Jason Hickel, Giacomo D'Alisa, Frederico Demaria, Stefania Barca, and others. Research in ecological and post-growth economics – the seminal work of Nicholas Georgescu-Rogen, as well as of Herman Daly, Juan Martinez-Alier, Tim Jackson – and in ecofeminist political economy are also related. For an overview of essential concepts and arguments of degrowth, see, for example, D'Alisa, Demaria and Kallis (2015) and Kallis (2018).

Degrowth is a proposal to move towards a society where the social metabolism (i.e., how societies organize their interaction with flows of materials and energy) is downscaled and organized differently. It is a proposal for an equitable and democratically controlled reduction of the materials and energy that a society extracts, processes, and disposes of as waste. The scientific premise of this proposal comes from ecological economics, which basically argues that there are natural, biophysical limits to growth, and therefore continued economic growth and ecological sustainability are irreconcilable.

On the plan of the socio-economical superstructure of the social metabolism, degrowth starts from a criticism of growth and capitalism (as a system of infinite growth that is structured by the systemic logic of endless capital accumulation), as well as of GDP as indicator of progress. It envisions a post-capitalist society with a *post-growth economy*, with *GDP abolished*, where *progress in well-being, ecological sustainability and social equity would be possible without economic growth*.

Although the term "degrowth" may be misunderstood as negative GDP growth, degrowth is not about negative growth in the sense of economic "recession" or "depression". "Sustainable degrowth" (Schneider et al. 2010) refers to a trajectory where the "throughput" (energy, materials and waste flows), and hypothetically, as a consequence, the output of an economy decreases, while societal welfare or well-being improves. "Sustainable degrowth will involve a decrease in GDP as currently measured, because of a reduction in the largescale, resource-intensive productive and consumptive activities that constitute a big portion of GDP." At the same time: "Qualitative differences, typically not captured in GDP, could even permit socio-environmental improvements while GDP falls. […] GDP can go down and nevertheless other dimensions of life can improve" (Schneider et al. 2010). To synthetize here, the degrowth hypothesis, as formulated by Giorgos Kallis (2018: 112), is the following: "[…] subject to a radical and egalitarian social transformation, it is *possible* to sustain well-being and improve living and ecological conditions in an economy that unavoidably will contract."

The degrowth vision of an ecologically sustainable and socially equitable society can be defined, according to Kallis (2018, 118-127), by the following nine principles:

1. *Ending exploitation*, and creating an "egalitarian, classless society": "[...] downscaling of throughput will be socially sustainable only if it comes with more equality and sharing, and vice versa: a more equal society will have smaller surpluses and hence slow down output and throughput" (Kallis 2018: 118).

2. *Direct democracy*: the creation of *citizen assemblies* at different – local, regional, national – scales regarding productive and administrative processes, for substituting or complementing conventional forms of delegation and representation (Kallis 2018: 119).
3. *Localized production* and shorter production–trade–consumption circuits;
4. *Sharing or "reclaiming the commons*": "[...] core resources, goods and infrastructures, such as health, education, water and energy, will be governed and shared as commons, with egalitarian direct democratic processes." (Kallis 2018: 120).
5. *Relational goods.*
6. The elimination of the productive reinvestment of *surplus*[17]and its replacement by a *collective and egalitarian expenditure of surplus*.
7. *Revaluation and redistribution of care*: a gender redistribution of the care work performed predominantly by women in the private sphere, and its public, collective sharing.
8. Diverse *degrowth economy*, with *zero-accumulation* (i.e., involving only reproductive investment): the production for profit and accumulation radically reduced, the production for market exchange significantly decreased, and these modes of production replaced mainly by *production in democratically controlled not-for-profit cooperatives*; the *valuation of unpaid care work*;
9. *Decommodification of land, labour and value*.

As for the actual measures required in order to realize the degrowth society in accordance with these principles, degrowthers propose a broad range of *ecosocial policies* (i.e., policies that simultaneously advance the goals of environmental sustainability and social equity) regarding *work, fiscal and monetary reform,* and *environmental limits*: work-sharing and reduction of working hours to create employment in the absence of growth; basic and maximum income; abolishing the use of GDP as an indicator of progress and its substitution with other indicators of human and ecological well-being; financial and legal support for the social and solidarity economy; participatory planning and budgeting; redistributive taxation and maximum caps on income and wealth; to stop subsidies and public investment for polluting activities; different environmental limits and taxes; reducing advertisement, etc.

[17] The term „surplus" in degrowther parliance is related more to Bataille-ian „dépense" (expenditure), not to surplus value in the Marxian sense, and it refers to the excess production of a society above what is necessary for its reproduction.

3. GND vs. degrowth

In the following I will attempt to develop a comparative analysis of GND and degrowth narratives both by highlighting the main differences and points of dissension, and also the similarities and possible points of convergence and cooperation between GND and degrowth proposals.[18]

3.1. The problem of growth: decoupled or decreased?

As one might expect, the major tension between GND and degrowth proposals comes from GND's central premise of continued economic growth[19]: the result of boosting green employment in order to decarbonize the economy increases demand which leads to continued consumption growth. But from the degrowth paradigm's point of view any type of long-term economic growth is incompatible with the ecological limits of growth. Increases in the scale of economic activity (in GDP) necessitate increases in the throughput of energy and materials, and these increases have always involved increased carbon and greenhouse gas (GHG) emissions (resulting primarily from the extraction and combustion of fossil fuels).

Anticipating this counter-argument, GND proposals promise to *decouple* GDP growth from carbon and GHG emissions, as well as from material and energy use. But economic growth has never been absolutely decoupled on a global scale from growth in material and energy use (Parrique 2019; Ward et al. 2016). There is no such thing as "Green growth". (Hickel and Kallis 2018). Even if it can be argued that the economic activity in the Global North has been effectively decoupled, this has been possible only by shifting manufacturing and thereby outsourcing the problems of carbon emissions and environmental pollution to the Global South.

As for decoupling carbon emission, while it is theoretically possible to decouple GDP growth from carbon emission, this is unlikely to happen fast enough to maintain a carbon budget in line with a 1.5°C to 2°C rise in global temperatures (Hickel and Kallis 2018). Finally, the suitability of renewable energy to fuel economic growth is also questionable for several

[18] For useful "compare and contrast" articles on GND and degrowth, see Vansintjan (2019) and Dale (2019).
[19] For criticism of GND's growth premise see Cox (2019) and Kallis (2019).

reasons: the intermittency of solar and wind energy, the problem of the emissions involved in fuelling a renewable energy transition, and – perhaps above all – the scarcity of the minerals needed for producing renewable energy (lithium, cobalt, etc.).[20]

To conclude, if, according to the two core hypothesis of degrowth: 1.) that the decoupling of global GDP growth from energy/materials use is impossible at the scale needed to reduce resource use in line with planetary boundaries (even if we transition to renewable energy), and 2.) that it is not feasible to reduce emissions fast enough to respect the carbon budgets for 1.5 °C and 2 °C, then the only solution is that the global energy/materials use, consumption, and as a likely consequence, GDP, will also need to degrow.

Finally, the contradiction between economic growth and degrowth is not absolute. Several authors from both the GND and degrowth camps (Ajl 2021; Pollin 2018; Burton and Summerville 2018) argue for a kind of combined solution in order to arrive at a decarbonized economy. Some economic sectors need to grow massively, and fast such as the production and distribution of clean energy, agroecological food production, public housing and transport, primary healthcare, etc., and other sectors like the military industry, non-renewable energy production (e.g., fossil fuel industry), chemical fertilizers, etc. need to degrow, and finally to be shut down and dismantled.

3.2. Agents and structures: the problems of state-centrism (GND) vs. localism (degrowth)

There are obvious differences between the two ecopolitical narratives, also in terms of the key actors and of the degree of structural change needed. While the GND puts in the centre the *top-down actions* of an *interventionist state,* the degrowth movement emphasizes *bottom-up* prefigurative *community-led activism* performed by grassroot movements, and aims to build an international "movement of movements". As for structural change, degrowth envisions a *post-capitalist society* (with a post-growth economy, which abolishes GDP), while the GND – at least in its more moderate, let's say green Keynesian or social-democrat versions – tries *to reform capitalism from within.*

[20] For example, lithium-ion batteries for electric vehicles will require up to 43% of the world's cobalt production and 50% of its lithium production by 2020. In a 2050 scenario of 100% renewable transition with no alteration of current patterns of energy consumption, lithium demand would exceed 280% of known lithium reserves. See here: https://earthworksold.wpengine.com/publications/responsible-minerals-sourcing-for-renewable-energy/.

One of the strongest points of the GND is that it moves away from previous neoliberal assumptions (climate- and nature-damaging activities can be regulated by market-based instruments, e.g., through emission trading schemes), and puts the state not the market at the centre of the green transition. It is also obvious that in order to implement radical structural changes, like dismantling the fossil-fuel industry, decarbonizing the energy, transportation, housing, agricultural etc. sectors, you need a strong, interventionist state. Nevertheless, this state-centrism of GND proposals also entails some major problems.

First, GND projects would have to work with the same existing capitalist state, which, instead of being an autonomous political actor, should be seen more like a functional subsystem of the capitalist economy. Thea Riofrancos (2019) synthetises the possible implications of a GND implemented by a capitalist state, in a straightforward way:

> There is the charge that the Green New Deal, like the old New Deal, amounts to the state, qua executive committee of the bourgeoisie, rescuing capitalism from the planetary crisis it has created. In this rendering, rather than empowering "frontline and vulnerable" communities, as the resolution claims, the policy framework will amount to a corporate welfare windfall of investment opportunities lubricated with tax breaks and subsidies; public-private partnerships; infrastructure outlays that will stimulate real estate development; and, a jobs guarantee that will stimulate consumption – a win-win for the state and capital, but, by leaving the underlying, growth-addicted, model of accumulation untouched, a loss for the planet and the communities most vulnerable to climate crisis and eco-apartheid.

Secondly, we shouldn't underestimate the danger of an authoritarian-repressive turn of the state, which in case of an ecological/climate emergency could strengthen its surveillance, disciplining and repression capacities in the name of an "ecological state of exception". The deeply ambivalent return of the state brought by the COVID pandemic should be a warning in this respect: on the one hand, we witnessed a kind of post-neoliberal return of the welfare state,[21] but at the same time, the pandemic crisis also represented an opportunity to turn a public-health emergency into an occasion for a greater use of state's repressive powers (medical policing, the militarisation of everyday life, etc.) and political-juridical resources, a situation described by Italian philosopher Giorgio Agamben (2021) as the new political paradigm of "biosecurity", a state of exception in the name of public health.

[21] I refer here mainly to the state interventions in the economy brought up by the pandemic situation, like interventions in the public health system dismantled by neoliberal austerity, wage-compensations, even some nationalizations, etc.

As for degrowth's relation to the state, one of the main challenges is the problem of scaling up its eco-regional level of implementation, implying minimal trade and localized production, to questions of national and global economic infrastructures: public transport and energy infrastructures, but also public housing, for example, that cannot be produced on a decentralised, local level. There is also an inherent contradiction between emphasizing bottom-up, extra-parliamentary mobilization and the ecosocial policies proposed by degrowthers, which are requiring intervention by states and international organizations.

3.3. The problems of "green colonialism" and global climate/environmental (in)justice

Another critical charge formulated against GND-proposals is that of "green economic nationalism" or "green colonialism" (Rehman 2019): green energy and clean tech in the Global North would still rely on *the expropriation (ongoing original accumulation) of the Cheap Nature* (Moore 2015) of the Global South, e.g., on the cheap work and cheap raw materials (mainly: lithium, cobalt and nickel for solar panels, electric batteries, electric cars) necessary to the transition to renewable energy. There is also the related problem of global climate (in)justice. While industrialised countries have been, and still are, responsible for a substantial proportion of emissions, the consequences of climate change are already most serious for those regions of the world that have contributed least to this problem.

As for the expropriation of cheap minerals, the majority of the worlds reserves of cobalt (58%) are found in the Democratic Republic of Congo, where mining is associated with ongoing conflict, child labour, human rights violations, land grabs and environmental pollution. The supply chains of solar panels have a similar pattern of association with exploitation and oppression – land grabs from indigenous and other communities, toxic chemical poisoning of workers and communities, poverty wages, union busting, and forced and child labour (Taylor and Paul 2019). Paraphrasing Moore's catchline "Behind Manchester stands Mississippi" one could say that behind every "Silicon Valley", or, what is even worst, behind every "GND clean tech" "stands Congo", which means that high-tech or "clean tech" capitalism's profit doesn't stand only on the exploitation of the "immaterial work" of the "infotariat" or of the "green workers" in decarbonized industry, but depends on the cheap materials necessary for laptops, mobile phones, electric batteries and cars, etc., as well as on the cheap or unpaid work of child slave labor in Congo.

Is it possible to enact a global, "decolonialized" GND? Or, to put it in other terms: is it possible to expand the intra-national justice dimension of GND-proposals to an international

(global environmental and climate) justice level? An "international GND"[22] would have to implement the following measures, among others: massive finance and technology transfers from the North to the South, "fair share" of cutting emissions (in accordance with the principles of climate debt and global climate justice) (Tanki 2019)[23], and "equitable production chains" (Aronoff et al. 2019).

But a global, decolonialized GND would also need something more radical, according to the degrowth movement: the global North must degrow so that the South may develop. This would mean ending the North's "imperial mode of living" (Brand and Wissen 2021), that is, a dramatic reduction in material standards in high-income, overdeveloped countries. In the formulation of Gareth Dale (2019): "For the rich, much much less, while for the billions who lack the basics: more good food, better housing, abundant clean water, efficient sanitation, excellent public transport, quality public amenities available freely to all. For the Global North: drastically reduced consumption of beef, SUVs, aviation, but better public transport, insulated homes, cleaner air, more self-governed time, less hierarchy."

3.4. Conclusion: A GND without growth?

To conclude, we have to address the question of the possible interaction or convergence between the two ecopolitical narratives. Is it at all possible to attune two ecopolitical economical projects that seem to be radically opposed to each other on several points: a participatory, low tech, low-consumption, degrowth economy, de-centralized in eco-regions

[22] In an article in *The Guardian* (Varoufakis and Adler 2019), Yanis Varoufakis and David Adler suggest formalising an "International Green New Deal" cooperation by establishing an "Organisation for Emergency Environmental Cooperation", which would be funded – $8tn, 5% of global GDP each year – through a minimum corporate tax rate and issuing green bonds, in order to organise the transition to renewable energy and to provide climate protections "on the basis of countries needs, rather than their means" and along the principle of "reparation" of the historical global inequalities in environmental pollution.

[23] Both AOC's and Sanders's GND proposals (AOC 2019 and Sanders 2019) argues for US's "fair share" of reducing emissions, because of its much higher historical level of emissions. The proposal for the UK put forward by the Green New Deal Group (2008) calls for free technology transfer for countries of the Global South, while the GNDE suggests the establishment of an environmental justice commission to ensure that all Green New Deal measures are taken "along the dimensions of international, intersectional and intergenerational justice".

with minimal trade envisioned by degrowthers, and the still growth-based and state-centrist, green industrial economy, with emphasis on technology, big infrastructures and financial investment, and on jobs and salaries proposed by the GND?

In a recent article, degrowthers Mastini, Kallis and Hickel argue for the possibility of such a convergence, and they name it a "Green New Deal without growth" (Mastini et al. 2021) They see the two ecopolitical narratives converging on the following points: the importance of *public investments for financing the energy transition*; *industrial policies for the decarbonisation of the economy*; *socializing the energy sector*; *expanding the welfare state*; *Just Transition* and *Job Guarantee programmes*. We could also add another important overlap between the two movements, around the (eco)feminist ethics and economics of *care*, which opposes the capitalist expropriation of the sphere of socio-ecological reproduction (Moore 2015), and argues for an *economy of care* centred around an extended, *socio-ecological concept of care*, i.e., to move the focus of income and welfare creation from industrial production to *social and environmental reproduction* – the maintenance, recycling, repair and restoration of environmental, infrastructural and social resources, as well as education, culture and care – in short, to *the work of care both for people and for the non-human environment* (Barca 2021; see also, from the GND movement: Battistoni 2017; Bhattacharya 2019).

Finally, a "GND without growth" would have to place at is centre the reduction of energy demand (and of material throughput) in order to facilitate a rapid decarbonisation of the economy and to avoid further extractivism in the Global South; and it should not be financed from GDP growth, but from the reallocation of public expenditures from socially and environmentally-harmful sectors (those previously mentioned, that would have to degrow: fossil fuel and military industry), progressive taxation, and public issuance of sovereign money. (Mastini et al. 2021).[24]

Bibliography

Agamben, Giorgio (2021): *Where Are We Now? The Epidemic as Politics*. Lanham, MA: Rowman & Littlefield.

[24] There are some actual examples of such "GND without growth" policy proposals: see the previously mentioned Green New Deal for Europe proposed by DiEM25, which proposes explicit socio-economic policies to manage without growth; Ann Pettifor, a co-author of the 2008 Green New Deal proposal for the UK, argues in her more recent GND proposal (Pettifor 2019) for a "steady-state economy", i.e., an economy that does not grow, but remains stable within defined ecological limits.

Ajl, Max (2019): Report card on Bernie Sanders' Green New Deal A hot take from an eco-socialist. In: Uneven Earth, 27August. Available at: https://unevenearth.org/2019/08/report-card-on-bernie-sanders-green-new-deal/

Ajl, Max (2021): *A People's Green New Deal.* London, Pluto.

Arrighi, Giovanni (1994): *The Long Twentieth Century.* London, Verso.

Aronoff, Kate, Battistoni, Alyssa, Cohen, Daniel Aldana, Riofrancos, Thea (2019): *A Planet to Win. Why We Need a Green New Deal.* London, Verso.

Barca, Stefania (2020): Within and Beyond the Pandemic: Demanding a Care Income and a Feminist Green New Deal for Europe. In: *Undisciplined Environments*, 7 April. Available at: https://undisciplinedenvironments.org/2020/04/07/ within-and-beyond-the-pandemic-demanding-a-care-income-and-a-feminist-green-new-deal-for-europe (15. Sept. 2021).

Battistoni, Alyssa (2017): Living, not just surviving, In: *Jacobin*, 15 August. Available at: https://jacobinmag.com/2017/08/living-not-just-surviving (15. Sept. 2021).

Battistoni, Alyssa, Cohen, Daniel Aldana (2019): AOC's Green New Deal Starts Strong. In: *Jacobin*, 02 July. Available at: https://jacobinmag.com/2019/02/aoc-green-new-deal-pelosi-democrats-climate (15 Sept. 2021)

Bhattacharya, Tithi (ed.) (2017): *Social Reproduction Theory: Remapping Class, Recentering Oppression*. London, Pluto.

Bhattacharya, Tithi (2019): Three Ways a Green New Deal Can Promote Life Over Capital. In: *Jacobin*. 10 June. Available at: www.jacobinmag.com/2019/06/green-new-deal-social-care-work (15. Sept. 2021).

Burkett, Paul (1999): *Marx and Nature. A Red and Green Perspective*. St. Martin's Press.

Burton, M., Somerville, P. (2019): Degrowth: a defence. *New Left Review.* 1115: 95–104.

Brand, Ulrich, Wissen, Markus (2021): *The Imperial Mode of Living. Everyday Life and the Ecological Crisis of Capitalism.* London, Verso.

Crutzen PJ, Stoermer EF (2000): The Anthropocene. *IGBP Global Change Newsletter* 41: 17–18.

Crutzen, Paul J. (2002): Geology of mankind. In: *Nature*. Vol. 415, No. 3: 23.

Dale, Gareth (2019): Degrowth and the Green New Deal, In: *The Ecologist*, 28 October. Available at: https://theecologist.org/2019/oct/28/degrowth-and-green-new-deal (15 Sept. 2021)

D'Alisa, Giacomo, Demaria, Federico, Kallis, Giorgos (eds.) (2015): *Degrowth: A Vocabulary for a New Era.* Abingdon / New York, Routledge.

Elliott, L., Hines, C., Juniper, T., Leggett, J., Lucas, C., Murphy, R., Pettifor, A., Secrett, C., Simms, C., 2008. *A Green New Deal*. New Economics Foundation. London. Available at: https://neweconomics.org/uploads/files/8f737ea195fe56db2f_xbm6ihwb1.pdf (15 Sept. 2021)

Foster, John Bellamy (1999): Marx's theory of metabolic rift: classical foundation for environmental sociology. In: *American Journal of Sociology*, Vol. 105, No. 2.: 366–405.

Fraser, Nancy (2014): Behind Marx's Hidden Abode. For an Expanded Conception of Capitalism. In: *New Left Review*, No. 86.: 55–72.

Fraser, Nancy (2016): Contradictions of Capital and Care. *New Left Review* No. 100: 99–117.

Hickel, Jason, Kallis, Giorgos (2019). Is green growth possible? *New Political Economy*, 1–18.

Kallis, Giorgos (2018): *Degrowth.* Agenda Publishing, Newcastle upon Tyne, UK.

Klein, Naomi (2014): *This Changes Everything. Capitalism vs. the Climat*e. Penguin Random House.

Klein, Naomi (2019): *On Fire. The (Burning) Case for a Green New Deal.* London, Allen Lane.

Luxemburg, Rosa (2015): *The accumulation of capital*. In: Hudis, Peter – Le Blanc, Paul (eds.): *The Complete Works of Rosa Luxemburg. Volume II. Economic Writings 2*. Verso.

Malm, Andreas (2015): *Fossil Capital: The Rise of Steam-Power and the Roots of Global Warming*. Verso.

Malm, Andreas, Hornborg, Alf (2014): The Geology of Mankind? A critique of the Anthropocene narrative. *The Anthropocene Review*, Vol. 1, No. 1.: 62–69.

Mastini, Riccardo, Kallis, Giorgos, Hickel, Jason (2020) Europe's Green Deal is a trepid response to the climate crisis. *New Statesman*, December 3.

Mastini, Riccardo, Kallis, Giorgos Kallis and Hickel, Jason (2021): A Green New Deal without growth? *Ecological Economics*, 2021, vol. 179, issue C.

Mies, Maria (1986): *Patriarchy and Accumulation on a World Scale. Women in the International Division of Labour*. Zed Books.

Moore, Jason (2015): *Capitalism in the Web of Life. Ecology and the Accumulation of Capital*. Verso.

Ocasio-Cortez, Alexandria (et al.) (2019): H. Res. 109 – Recognizing the duty of the Federal Government to create a Green New Deal. House of Representatives of the United States, 116th Congress 1st Session. Available at: www.congress.gov/bill/116th-congress/house-resolution/109/text (15 Feb. 2021).

Oxfam (2020): Confronting carbon inequality. Putting climate justice at the heart of the COVID-19 recovery (Oxfam Media Briefing). Available at: https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621052/mb-confronting-carbon-inequality-210920-en.pdf;jsessionid=6A1FC66E53092E42BB2C15B532CC7DBF?sequence=1 (15 Sept. 2021)

Oxfam (2020): Confronting carbon inequality. Putting climate justice at the heart of the COVID-19 recovery (Oxfam Media Briefing). Available at: https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621052/mb-confronting-carbon-inequality-210920-en.pdf;jsessionid=6A1FC66E53092E42BB2C15B532CC7DBF?sequence=1 (15 Sept. 2021)

Parrique, Timothée (2019): Decoupling is dead, long live degrowth. Available at: https://www.resilience.org/stories/2019-07-26/decoupling-is-dead-long-live-degrowth/ (15 Sept. 2021)

Pettifor, Ann (2019): *The Case for the Green New Deal*. London, Verso.

Pettifor, Ann / Hickel, Jason / Galbraith, James K. / McKibben, Bill / Badia, Eloi / de Masi, Fabio / Aubry, Manon / Lalucq, Aurore / Macfarlane, Laurie / de Sutter, Laurent / Gabor, Daniela / Aronoff, Kate / Lawrence, Mathew / Blakeley, Grace / Standing, Guy / McGaughey, Ewan / Varoufakis, Yanis / Adler, David / Wargan, Pawel / Kallis, Giorgos et al. (2019). We need a true Green New Deal – Open Letter to the European Commission's President by economists, intellectuals and MEPs, in: *International Democracy Watch, s.d.* Available at: www.internationaldemocracywatch.org/index.php/component/content/article/636-we-need-a-true-green-new-deal-open-letter-to-the-european-commissions-president-by-economists-intellectuals-and-meps (15. Sept. 2021).

Pollin, Robert (2018): De-growth vs a green new Deal. *New Left Review* 112, 5–25.

Rehman, Asad: (2019): The „green new deal" supported by Ocasio-Cortez and Corbyn is just a new form of colonialism. In: *The Independent.* 04 May. Available at:

https://www.independent.co.uk/voices/green-new-deal-alexandria-ocasio-cortez-corbyn-colonialism-climate-change-a8899876.html (15 Sept. 2021)

Riofrancos, Thea (2019): Plan, Mood, Battlefield - Reflections on the Green New Deal. In: *Viewpoint Magazine*. 16 May. Available at: https://viewpointmag.com/2019/05/16/plan-mood-battlefield-reflections-on-the-green-new-deal/ (15 Sept. 2021)

Roberts, David (2019): There's now an official Green New Deal. Here's what's in it. In: *Vox*, 07. February. Available at: https://www.vox.com/energy-and-environment/2019/2/7/18211709/green-new-deal-resolution-alexandria-ocasio-cortez-markey (15 Sept. 2021)

Sanders, Bernie (2020): Manifesto for the 2020 presidential election, Green New Deal. Available at: https://berniesanders.com/issues/green-new-deal/

Schneider, François, Kallis, Giorgos, Martinez-Alier, J. (2010): "Crisis or Opportunity? Economic Degrowth for Social Equity and Ecological Sustainability". *Journal of Cleaner Production* 18(6): 511–18.

Steffen, Will, Crutzen, Paul, McNeill, John (2007): The Anthropocene: Are humans now overwhelming the great forces of nature? *Ambio* 36: 614–621.

Steffen, Will, Grinevald, Jacques, Crutzen, Paul, McNeill, John (2011): The Anthropocene: Conceptual and historical perspectives. *Philosophical Transactions of the Royal Society A* 369: 842–867.

Tanki, Nathaniel (2019): A new chance for climate justice? In: *Open Democracy*. 12 April. Available at: https://www.opendemocracy.net/en/opendemocracyuk/new-chance-climate-justice/?fbclid=IwAR3yyrq_uXpV-VJxKj3yQ-UoxrNHWiLwIYLrebVlFNUy2bO4FoHN2WQrWu0

Taylor, Andrew, Paul, Harpreet Kaur (2019): A Green New Deal needs to be global, not local. In: *Open Democracy*. 30 May. Availabel at: https://www.opendemocracy.net/en/opendemocracyuk/a-green-new-deal-needs-to-be-global-not-local/ (15 Sept. 2021)

Vansintjan, Aaron (2019): Degrowth vs. the Green New Deal. In: *Briarpatch*. 29 April. Available at: https://briarpatchmagazine.com/articles/view/degrowth-vs.-the-green-new-deal. (15 Sept. 2021)

Varoufakis, Yanis, Adler, David (2019): It's time for nations to unite around an International Green New Deal. In: *The Guardian*. 23 April. Available at: https://www.theguardian.com/commentisfree/2019/apr/23/international-green-new-deal-climate-change-global-response

Ward JD, Sutton PC, Werner AD, Costanza R, Mohr SH, Simmons CT (2016): Is Decoupling GDP Growth from Environmental Impact Possible? *PLoS O*NE 11(10).

ABOUT THE AUTHOR

Attila Szigeti (Romania) holds a Joint PhD in Philosophy from the Paris XII – Val de Marne University and Babes-Bolyai University, Cluj. He is Assistant Professor at the Hungarian Department of Philosophy, Babeş-Bolyai University, where he teaches Modern and Contemporary Philosophy and is also coordinator of the Critical Theory and Multicultural Studies MA Program. His main research areas are: Contemporary Continental Philosophy, French Phenomenology, Critical Theory, Critical Environmental Philosophy, Philosophy of Mind and Cognitive Science. He has published one book and several articles in these fields, and has been visiting researcher in Paris, Copenhagen, Budapest etc.