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The political economy of ecopolitical projects: Green growth and degrowth compared

1. Introduction

The first couple of years following the 2007-2009 Great Financial Crisis saw a slew of analyses bemoaning the dearth of political debate about fundamental institutional change (e.g. Crouch 2011; Schmidt and Thatcher 2013; Helleiner 2014). More recently, we have witnessed how ‘radical’ questions have become a mainstay of political debate. These concern not only *whether* (Wallerstein et al. 2013) but also *how* capitalism (Streeck 2016; Gamble 2014) and democracy (Runciman 2018) will end. Such massive issues in various ways relate to an even more consequential matter, namely that of how to maintain human livelihood on Planet Earth amidst massive biodiversity loss and a rapidly escalating climate breakdown. Against the backdrop of these existential threats, it is recognized with increasing fervor that one of the most salient questions of our times is not whether but how fundamentally we have to change our way of living in modern societies (Gough 2017; Raworth 2017). In this context, it is a key task of the social sciences to develop concepts and analytical frameworks enabling evaluation of the potential of competing ecopolitical projects to address the escalating climate crisis.

In response, a plethora of literatures have emerged that allow for fine-grained, interdisciplinary analysis of the dynamics of transformation. These run the gamut from studies of multilevel socio-technical transitions (Geels and Schot 2007), over feminist approaches to climate change governance (Bee et al. 2015) to analyses of the social dimensions of climate change adaptation (Pelling 2010). Based more specifically on political economy scholarship focused on unpacking interactions between material, ideational and agential dimensions, this paper seeks to advance this important agenda by offering an analytical framework that can support comparisons of the type of change – and of the political and social forces – necessary to realize competing ecopolitical projects. The paper is motivated by the wish to mitigate current tendencies of ecopolitical projects to talk past each other. Consider two of the camps debating policies for tackling the climate crisis. On one hand, advocates of green growth argue that a sustainable economy can come to exist within the framework of the prevailing economic system, i.e., capitalism. This is the

currently dominant ecopolitical project, enjoying support from mainstream economists, national governments and international organizations (OECD 2011; World Bank 2012). On the other hand, a fast-growing number of natural- and social scientists argue that economic growth and sustainability are irreconcilable. A statement signed by more than 11.000 natural scientists for instance identifies GDP growth as a main driver of CO2 emissions and calls for a shift in our goals “from GDP growth and the pursuit of affluence toward sustaining ecosystems and improving human well-being by prioritizing basic needs and reducing inequality” (Ripple et al. 2019). According to advocates of ‘degrowth’ and ‘post-growth’ (Kallis 2018; Gough 2017) such a shift necessitates a move beyond capitalism. The ecopolitical projects of green growth and degrowth thus clearly differ in their analysis of how and to what extent the organization of the economy must be transformed. This is for example seen in how advocates of a ‘Green New Deal’ promote interpretations that, respectively, build on and break with economic growth (see e.g. Pollin 2018 versus Mastini et al. 2021). However, to go beyond this general observation requires a set of analytical tools useful for comparing and analyzing their political economic differences.

Ecopolitical projects advance specific constellations of policies and policy ideas the implementation of which imply a more or less significant reshuffling of the relationship between state, market and social institutions, which in turn has vital implications for the allocation of resources within current and future societies (Newell and Paterson 1998). The changes proposed by ecopolitical projects thus broach important issues about how extensive the necessary changes are, who the central agents of change are, on what scientific knowledge policies are based and who the main beneficiaries of ecopolitical projects are. The paper employs extant political economy scholarship to develop these four dimensions as points of comparison between ecopolitical projects. The comparison is furnished by the pivotal contribution of Hall (1993). Originally developed within comparative political economy to bring greater prominence to social learning processes within and beyond the state, it set in motion a much-needed re-focusing on the role of ideas in political economy by putting forward a model of policymaking as structured by the ideas, theories and instruments of policy paradigms. While Hall’s approach is relevant in the present context because it combines a view of how ideas, institutions and the material interact, and because it has proven particularly apt at analyzing large-scale shifts, in

important respects it requires further conceptual work to be a suitable framework in the present context.

The paper is structured as follows. The next section outlines Hall's approach and identifies two key limitations that our framework seeks to overcome. The subsequent sections unfold the four dimensions of our framework one by one, relating each dimension to the ecopolitical projects of green growth and degrowth. A concluding section summarizes and reflects on the main findings.

2. Policy paradigms and ecopolitical projects

A shift of the magnitude necessary to effectively address the climate crisis involves not only changes at the level of the company or the consumer but ties in with changes in the political-economic ideas and institutions that govern interaction between economic and political actors in society. In terms of assessing the different levels and kinds of change in both incremental and fundamental shifts in the political economy, and the power struggles and social learning processes involved, we submit that Hall's (1993) policy paradigm approach is particularly useful.

Starting from the observation that policymakers customarily work within policy paradigms that specify "not only the goals of policy and the kind of instruments that can be used to attain them, but also the very nature of the problems they are meant to be addressing" (p. 279), Hall (1993) provided a powerful argument for why the interaction between politics and knowledge is so central to processes of social learning. Moreover, building on the distinction between normal science and scientific revolutions first developed by Kuhn (1970), Hall (1993) distinguishes between different levels of change: first order change where the settings of a policy is altered; second order change where new instruments are introduced; and third order change that involves a wholesale paradigmatic shift in the ideas and institutions that structure policymaking. This disaggregation of levels of change opens the way for appreciating that actors may learn in light of their experiences – i.e. update institutions and their settings based on new information – but that really large shifts in policy require a shift in policymaking authority and governing power that may usher in a set of new ideas and institutions useful for once again stabilizing interaction between actors in a political economy. Another useful conceptual adaptation of Kuhn

(1970) is the introduction of the notion of policy anomalies, i.e. “developments that are not fully comprehensible, even as puzzles, within the terms of the paradigm” (Hall 1993: 280). If persistent, such occurrences may come to undercut the credibility and authority of the policy paradigm, opening the way for the introduction of a competing paradigm able to effectively resolve the anomalies. Importantly, then, the concept of anomalies, show how struggles over what is learned and what should be its implications is absolutely vital for understanding both institutional change and stability.

However, in terms of analyzing the political economy of the ideational and institutional shifts proposed as necessary to address the climate crisis, Hall’s (1993) paradigm approach remains wanting. Two general problems stand out. First, whereas addressing the climate crisis by definition requires changes in multiple policy areas, Hall’s approach is designed to focus on one policy area at a time. In its current conceptualization, then, the approach is not well placed to analyse the interconnectedness of policy paradigms – i.e., how paradigms in different policy areas serve to reinforce or potentially undermine each other. Second, while the paradigm changes analysed by Hall (1993) certainly signify major economic and political shifts, they are not in fact at the level of change deemed necessary by for example degrowth advocates. While the major ideational contenders for macroeconomic policymaking of the 20th century analysed by Hall (1993) – Keynesian and Neoclassical economics – are divided on a number of fundamental economic issues, they also share a fundamental aim of economic growth within a capitalist framework. Nowhere does Hall (1993) indicate that paradigmatic change can transcend capitalism. Taken together, these two limitations indicate that the policy paradigm approach needs additional conceptual work to be relevant for analyzing shifts at the size many scholars consider necessary to deal with the climate crisis.

Below we develop the framework for comparing and analysing ecopolitical projects. Relating to key dimensions of Hall’s (1993) paradigm approach, we focus on the extensiveness of change, who the key change agents are, what the main scientific base of an ecopolitical project is, and what its distributional consequences are (see Table 1). The identification of the projects and the comparison of them is based on an extensive review of key academic texts and policy documents.

Table 1 here

3. The extensiveness of competing visions of change

The first dimension concerns the extent of change that according to different ecopolitical projects is necessary to transition towards a sustainable organization of society. Here we start out from the distinction made by Hall (1993) between three levels or degrees of policy-change, particularly from the notion of third-order paradigmatic shifts. As noted above, this notion signifies major economic and political changes and is of use when analyzing major shifts *within* capitalism. Yet it does not help us think about changes pointing *beyond* this economic system and thus falls short of covering the sort of ideational and institutional change envisioned by some ecopolitical projects against the background of a crisis that is general and systemic (Bruff and Horn 2012: 162). We thus introduce a fourth level, namely that of *general systemic logics*. A logic is systemic if it is *permanent and general*: while institutions forming part of a given economic system may change, the underlying logic does not (as long as that system is in operation).

To illustrate, consider the currently prevailing economic system, capitalism. Following Beckert (2013: 327), we can define capitalism as ‘an endemically dynamic economic system in which the production of goods and services is motivated by expected profits, materializing in market exchange’. Along similar lines, Karl Marx associated capitalism with endless M-C-M’ cycles, where capital as money (M) is invested, then assumes commodity form (C) before it again assumes money form with added profits (M’) (Marx 1990: 247-257). This process of capital accumulation – where capital is invested with a view to make profits – is the key driving force in capitalism (cf. Streeck 2016: 204-205). This process instils an “accumulate or die” logic in economic life, which is permanent and general. That is, while there is plenty of flux and variation in capitalism and while profound transformations have historically occurred within this system, there are also recurrent patterns, manifested not least in the business cycle which is repeated over and over again. Deep transformations *and* endless repetition are interwoven, and both emanate from the logic associated with the capital accumulation process, i.e., the endless M-C-M’ cycles (Sewell 2008).

That the logic of an economic system is permanent does of course not mean that systemic logics never change. Sooner or later prevailing economic systems give way to other systems based on other logics. Just as feudalism and Soviet socialism gave way to capitalism, so it can be assumed that capitalism will eventually be replaced by another system (Sewell 2014). Changes from one systemic logic to another is associated with what we refer to as *fourth-order change*. This is the deepest form of social change in that it involves changes on all four levels: systemic logic, policy paradigms, instruments and settings. Against this background we distinguish between political projects based on the degree (extensiveness) of change they entail. For instance, whereas a ‘third-order project’ entails changes in the goals and ideas that drive policymaking, such change does not go beyond the existing capitalist systemic logic. In contrast, a ‘fourth-order project’ speaks to a different systemic logic and thus involves much deeper institutional and ideational change. By implication, fourth-order projects will tend to involve institutional change across a broader range of policy-areas than do third-order projects.

The ecopolitical projects of green growth and degrowth illustrate this distinction. In the OECD’s definition, green growth involves “fostering economic growth and development while ensuring that the natural assets continue to provide the resources and environmental services on which our well-being relies. To do this it must catalyze investment and innovation which will underpin sustained growth and give rise to new economic opportunities” (OECD 2011: 9). While there is no general agreement on this or other definitions, what unites proponents of green growth is “the idea of a growing economy (in terms of the value of goods and services produced) that protects natural assets and resources” (Bowen and Hepburn 2014: 411), as well as the idea that achieving sustainability rests almost entirely on ‘getting the economy right’ (e.g. UNEP 2011, p. 16; see Tienhaara 2016). Green growth, then, is growth in gross domestic product (GDP) “which also achieves significant environmental protection” (Jacobs 2012: 4). The question of *how* significant, however, is a matter of dispute.

To be sure, there is not one coherent green growth approach. For instance, some eco-socialists criticize capitalist growth yet believe that economic growth under socialism can be environmentally sustainable (e.g., Schwartzman 2012). Yet in its currently prevailing guises, which we limit our focus to here, green growth is characterized by

operating within the existing, capitalist systemic logic. Here green growth is held to depend “not on radical change but on a restructuring of policies and investments and an integration of ecological with economic strategies” (Fiorino 2018: 189). The introduction of a small number of policies, such as a carbon price, is argued by some green growth advocates to be sufficient to bring about the changes needed to address the climate crisis (see Bowen and Hepburn 2014: 420). Others envision changes in multiple policy areas (Fiorino 2018: 125) yet without breaking with the systemic logic of capitalism. The project harbors great belief in the ability of markets, if regulated the right way, to propel economies towards sustainability and growth. As noted by Kenis and Lievens (2016: 221), “instead of being a goal in itself, climate stabilization becomes a starting point or a means for assuring renewed growth and economic and political hegemony.” Overall, then, green growth involves *third-order change*. Despite limits to the changes recognized as necessary within this paradigm, it is well worth noting that the ideas underpinning the tradition are in many cases characterized by multidimensionality, meaning that proponents of green growth are able to draw “on several potential lines of argumentation [that] enhances monopolistic subsystem actors’ capacity to defend their policies against outside criticism by rejecting counterimages or claiming that they take into account some of their ideas.” (Mondou et al. 2014: 160)

The notion of degrowth first emerged in France in the 1970s. Today degrowth constitutes an emerging academic paradigm, a movement and a political project, making it “a confluence point where streams of critical ideas and political action converge” (Demaria et al. 2013: 193). While the degrowth project encompasses a variety of perspectives, overall degrowth is a vision for sustainable and socially equitable societies that can function well without economic growth. Far from concerning simply the size of the economy, the degrowth project envisions democratic transitions toward societies in which “everything will be different: different activities, different forms and uses of energy, different relations, different gender roles, different allocations of time between paid and non-paid work, different relations with the non-human world” (Kallis et al. 2015: 4). Moreover, a fair distribution of economic resources, so as to be able to meet the human needs (as opposed to wants) of all, is highlighted (Koch et al. 2017). To this end, advocates of degrowth propose a broad range of *ecosocial policies*, i.e., policies that simultaneously

advance the goals of environmental sustainability and social equity (Gough 2017; for reviews of proposals see e.g., Urhammer and Röpke 2013; Cosme et al. 2017). To mention but a few, there are proposals to introduce complementary currencies distributed as a basic income to all citizens (Hornborg 2017), to implement maximum caps on income and wealth (Author A 2019), to promote work-sharing and a reduction in working time (Schor 2015), to tax high-carbon luxuries (Gough 2017), to place caps on flights, levy a tax on air miles and reduce the number of planes and airports (Hassler et al. 2019) and to place limits on advertisements (Dietz and O'Neill 2013).

Each of these proposals may be compatible with the systemic logic of capitalism. For instance, taxing high-carbon luxuries and air miles are (second-order) policy instruments that could form part of policy mixes in the current system without undermining its logic of accumulation. Yet a policy mix consisting solely or primarily of the proposed ecosocial policies could not be reconciled with a growing economic system. The degrowth project can be seen to aim precisely for this: across-the-board policy-paradigm change to bring about fundamental changes in a broad range of societal institutions. Such changes necessitate a different systemic logic, namely one centered on sustainability and social equity. While there are examples of degrowth scholarship that does not address the question of whether degrowth is consistent with capitalism, and while a few growth-critical scholars have argued that capitalism can function without growth (Lawn 2011), overall the ecopolitical project of degrowth can only be regarded as “fundamentally anti-capitalist” (Latouche, 2009: 91), meaning that it aims for *fourth-order change*.

To recapitulate, the green growth and degrowth projects differ profoundly as regards the degree of change they consider necessary to halt the climate crisis. Advocates of the (third-order) project of green growth believe that a sustainable social order can be brought about through modifications in the existing system, i.e., within the framework of a growth-based economy and without extensive policy changes. Conversely, proponents of the (fourth-order) project of degrowth believe that it is necessary to break with the accumulation logic defining capitalism and argue for changes across a broad range of policy areas. This disagreement on the degree of necessary change is underpinned by diverging views as to the nature of the climate crisis: is it a market failure or is capitalism its root cause? These views are incommensurable (Kuhn 1970) to a much greater extent than are

the views associated with, respectively, the Keynesian and monetarist policy paradigms dealt with in Hall (1993). Whereas those paradigms both cater to the systemic logic of capitalism, rendering them commensurable in important respects, the green growth and degrowth paradigms are in fundamental disagreement as to whether capitalist growth is desirable in the first place.

4. Key agents of change

The second dimension concerns which agents are considered pivotal for the realization of an ecopolitical project. Are the agents in question equipped with formal governing authority or rather empowered by their position in the marketplace? Are the changes to take place within or beyond established institutions such as the state or current international organizations? Ecopolitical projects present us with stark differences in terms of which actors they place centrally for driving processes towards their realisation, which indicates that an analytical framework useful for comparing ecopolitical paradigms should also provide a view of which actors are most important for its political economic dynamics. It is thus important to leave enough analytical room in the framework to contain the broad range of actors that ecopolitical projects may ascribe importance to in the process of bringing about ideational and institutional change. In addition to, or instead of, the actors that take up the bulk of the focus in Hall's (1993) analysis – i.e. bureaucrats, interest groups, political parties and the news media – a multitude of other agents of change may be regarded important. These include actors that have traditionally not been taken seriously in state-oriented approaches, not least transnational actors, i.e. subnational and non-state actors that form links and engage in political contestation across national borders (Andonova et al. 2017). Cases in point are for example NGOs and social movements, businesses that engage directly in public-private partnerships or multistakeholder initiatives (Reinsberg and Westerwinter 2020) or cities that set ambitious emissions reduction targets (Bulkeley 2013).

Turning to the green growth and degrowth projects, Urhammer and Röpke (2013: 68) point out that there are many 'heroes' in the green growth narrative: "the market, the government, the investor, the technology, the innovator, and the entrepreneur. In the

interaction on market terms, these characters create the modification of the economy and actualise the new green growth economy". While various actors are envisioned to play a positive role in the green growth transition, market actors are considered pivotal. Indeed, green growth advocates place their bet on the capacity of market-based solutions to address the climate crisis. The role of the state is more ambiguous. Fiorino (2018) observes the existence of a "rich set of strategies and policies ... for applying green growth in practice", Rodrik (2014: 488) notes the need for green industrial policy and concerted efforts by governments to avoid catastrophic climate change, and Bowen and Hepburn (2014: 419) suggest that "at the least the state must also provide overall strategic direction". At the same time most proponents of green growth take the position that green growth can be achieved without the state becoming highly interventionist. Instead the state's role is mainly to create "market-like mechanisms to reflect the social costs of ecological harm" (Fiorino 2018: 133). The creation of carbon markets which commodify carbon is a case in point (on the creation of carbon markets, cf. Knox-Hayes 2010 and Stuart et al. 2019).

Whereas a key role is ascribed to market actors in green growth transitions, they do not play a leading part in the degrowth vision. Degrowth proponents are not against markets or companies *per se* (Dietz and O'Neill 2013: 146). Social enterprises, such as cooperatives, are regarded as important organisations in a future sustainable economy – and as a social force that could come to form part of a constellation pushing for degrowth. Conversely, however, the dominant business entity in contemporary capitalism, the shareholder-owned corporation which is under legal obligation to maximise profits, is perceived as an obstacle to degrowth transitions (Author A 2014). Grassroots movements and community-led activism, in turn, are considered key to the realisation of the degrowth project. The key mechanism envisioned for bringing about degrowth transitions is to build an international 'movement of movements' which brings together actors committed to bringing about socially just and environmentally sustainable societies beyond economic growth. To no small extent, then, degrowth entails 'a citizen-led transformation' (Scoones et al. 2015).

Gough (2017: 206) observes that "[m]uch green political thought has tended to view states as part of the problem rather than the solution". Nonetheless, while degrowth

proponents highlight the importance of bottom-up mobilization, the ecosocial policies they advance in most cases seem to require a high level of intervention by states and international organisations (Cosme et al. 2017: 327). Although this points to a potential tension in the degrowth project it does not necessarily involve a contradiction. As Koch (2019) notes, the actions of states are affected by what goes on beyond them. On this view, if the mobilization of growth-critical and socio-ecological social forces were to gain a decisive momentum, states could come to implement the ecosocial policies envisioned by degrowth proponents (instead of serving as facilitators of economic growth). Koch imagines “a combination of bottom-up mobilisations and action and top-down regulation, resulting in a new mix of property forms including communal, state, and individual property and a new division of labour between market, state, and ‘commons’” (Koch 2019: 13; see also Gough 2017).

To recapitulate, while the green growth transitions are imagined to be led by market actors, degrowth transitions are imagined to mainly be citizen-led. The state is envisioned to play a role in the transitions of both projects, yet the nature of that role diverges significantly. Related to these differences as to who the main change agents are considered to be, it is worth noting that there are also major differences in who the advocates of the two projects are. For almost a decade, green growth has been the preferred approach of governments, large corporations and international organizations to address the climate crisis (Dale et al. 2016). The 2008 financial crisis offered green growth a surprising additional impetus, particularly from arguments based in Keynesian economics calling for a heavy increase in green investments to fend off the economic crisis (Tienhaara 2018). International organisations like the OECD, the United Nations and the World Bank were first movers in publishing agenda-setting reports that tout the potential of a green growth approach for reaching economic, social and environmental sustainability (OECD 2011; World Bank 2012; UNEP 2011). More recently the European Commission framed its long-awaited climate strategy as a green growth ‘new deal’ (European Commission 2019). In contrast, the degrowth project neither enjoys support from governments and international organisations nor from large corporations. Its main advocates are grassroots movements, small fractions of unions and left-wing parties and a growing number of academics and other citizens (Author A 2018).

5. Scientific basis and legitimacy of ecopolitical projects

The third dimension concerns the scientific basis of ecopolitical projects and particularly the legitimacy conferred upon projects by the status and institutional position enjoyed by its scientific proponents. As argued by Hall (1993), policy paradigms have their basis in specific scientific paradigms. In his analysis of British economic policy making, Hall (1993) casts neoclassical economics and Keynesianism as the major contenders. An important background for the rise of Thatcherism during the period from the oil crises of the 1970s until the heyday of conservative rule in the 1980s was the shift in the dominant scientific paradigm in economics, from the Keynesian to the neoclassical one. From this perspective, the policy paradigm that played such a crucial role in paving the way for Conservative rule in almost two decades was further bolstered by the legitimacy lent to it by its dominance in the economic sciences. Making room for a new paradigm, however, required the downfall of the existing one. As already noted, Hall (1993), drawing on Kuhn (1970), argued that processes leading eventually to the demise of a policy paradigm are set in motion by the appearance of policy anomalies, i.e. events that are not explicable within the premises of the policy paradigm.

Consider the case of capitalism. As already argued, the general logic structuring interaction within the capitalist organization of an economy is based on the possibility, indeed necessity, of continual expansion of the economy. If this expansion is revealed as impossible – for example as it turns out that such continual expansion is incompatible with ecological or social sustainability – this would fundamentally challenge the logic that has given meaning to economic action, which, in turn, puts pressures on the legitimacy of this logic. It is certainly possible to imagine that solutions to systemic contradictions will be sought at the level of experiments within policy paradigms, and that this effort will for some time bolster the legitimacy of the systemic logic. In this view, multiple policy paradigms may replace each other while the general systemic logic remains intact. However, as anomalies continue to mount, they are – as argued by Hall in the context of policy paradigms – likely to over time undercut the authority of the systemic logic, setting

in motion a search for a new systemic logic. This would help spark (or further accelerate) a number of interrelated economic, social, political and ecological crises.

For an anomaly to have this kind of effect it requires ideational struggles through which actors are able to convince a large enough group of people that such an observation actually constitutes an anomaly (Author B 2016). It is important to note that there is no pre-given point at which such a common realisation occurs. Consider once again the example of capitalism. To be sure, much indicates that there are limits to the exploitation of land (nature) and labour, but the assessment as to when such limits have been reached will itself be subject to authority struggles (Seabrooke 2014; Author B 2018). In regard to fourth-order change, we are also likely to find struggles going on within economics, e.g. between mainstream, neoclassical or Keynesian scholars and more 'radical' approaches (Ban 2015). However, since fourth-order change traverses a number of different scientific paradigms (from economics to the natural sciences), it leads us to expect that we will find an increasing occurrence of authority struggles between scientific disciplines that are not usually mutually engaged, but which are each seeking to convince policymakers about the usefulness of their discipline's insights. Indeed, important struggles are likely to take place not only across disciplines, but also between policy networks each supporting a more or less clear view of how to address capitalism's crisis (Coleman et al. 1997).

Turning to the cases of green growth and degrowth, the first thing to note is that green growth has its disciplinary origin in environmental economics, which is an extension of neoclassical economics (Spangenberg 2016). Environmental economics regards nature to be a subsystem of the economy and is based on the notion that there are technological fixes to environmental problems. On this view, unlimited economic growth is desirable as growth is a precondition for the investments in technologies that can halt the climate crisis. Environmental economics is a broad church that for instance houses both Keynesian and neoclassical approaches and that draws variously on concepts like green fiscal stimulus, market externalities, or innovation and entrepreneurship (Bowen and Fankhauser 2011; Jacobs 2012; Ferguson 2015).

Whereas the green growth project finds legitimacy in the field of environmental economics, ecological economics constitutes the main scientific base for the degrowth project. Or rather, what Spash (2020) calls *social* ecological economics does. Social

ecological economics stands in opposition to mainstream neoclassical/environmental economics and “its belief in human progress through competition, innovation, technology and capital accumulation” (Spash 2020: 1), whereas other forms of ecological economics utilize models and concepts from neoclassical economics (Spash 2020). Classic works in ecological economics were published in the 1970s (Georgescu-Roegen 1971; Daly 1974) and the field’s premier journal, *Ecological Economics*, was launched in the late 1980s. A defining feature of ecological economics is that it regards the economy to be a subsystem of society, which is in turn a subsystem of nature (Spangenberg 2016). On this view, there are natural limits as to how big the economy can grow: beyond a certain point, which has been passed decades ago, economic growth in the rich countries is not desirable. In this context growth denotes “an increase in the physical scale of matter/energy throughput that sustains the economic activities of production and consumption of commodities” (Daly 1996: 31).

The major bone of contention between environmental and social ecological economists – and thus between advocates of green growth and degrowth – is the extent to which economic growth can be decoupled from its negative environmental impacts (Fletcher and Rammelt 2017). Environmental economics is premised on the view that it is possible, with the intervention of technology and market-based instruments, to reduce matter-energy throughput to a sustainable level while the economy keeps growing. This is known as ‘absolute decoupling’. Many ecological economists have pointed out that so far there is no evidence of absolute decoupling actually occurring on the necessary scale or of it being likely to happen in time (Hickel and Kallis 2019). They for instance note the strong correlation between global GDP growth and CO₂ emissions that has existed historically (Steffen et al. 2015). Similarly, they point out that global CO₂ emissions continue rising despite all the green technologies that have been invented, the market-based instruments that have been introduced and the political commitments that have been made. That there has been no progress towards absolute decoupling is also recognized by most proponents of green growth (e.g. OECD 2017: 11). Seen from the vantage point of social ecological economics and the degrowth project, then, a glaring anomaly exists at the heart of environmental economics and the green growth project: there is no evidence that throughput can be reduced to a sustainable level fast enough while the global economy

keeps growing exponentially. Against this background, degrowth advocates argue that rather than risking everything on technological solutions many of which have still to be invented or tested, it is necessary for the rich countries to immediately reduce their matter-energy throughput by producing and consuming less and differently.

Although the green growth project does not clash with the systemic logic of capitalism, it is still faced with political challenges in gaining and maintaining impact. In this context, the aforementioned anomaly represents a major weakness of the project: its credibility and legitimacy in large part hinges on the continued persuasiveness of its key mechanism of obtaining green growth, namely decoupling. Green growth proponents may however claim that the fact that absolute decoupling has not yet taken place is an argument for sticking to green growth policies in order to realize such effects. Authors sympathetic with the green growth paradigm, like for example Hepburn and Bowen (2013) or Sachs (2015), argue that the current absence of absolute decoupling does not provide irrefutable proof of the impossibility of any future structural shift in this direction. On this view, the right solution is to continue down this path until the effects of decoupling are realized. This is also indicated by the amount of resources that goes into bolstering the paradigm using methods and theories recognized by mainstream (economic) science and to disseminate it as scientifically based knowledge through forums like the Global Green growth Institute or the Green growth Knowledge Platform. This suggests that the anomalies that Hall (1993) places so centrally for the process of undermining the legitimacy of existing paradigms, do not materialize as readily as assumed by Hall.

Whereas the degrowth project is anchored in the contender field of social ecological economics, the green growth project holds the potential to join otherwise disparate major theoretical approaches within economics as well as their political corollaries. This puts its proponents in a strong position to harness the power and legitimacy of mainstream economics while keeping alternative ideas off the agenda (Author B 2016). Indeed, in a number of policy areas economics come to play an increasingly important and structuring role in policy-making pushing other disciplines from the center of how policy issues are dealt with (Babb 2013; Allan 2019, Hirschman and Berman 2014). However, the dominance of economic thinking within green growth makes it susceptible to challenge from disciplines working within other ontologies and methodologies that may over time

amass greater legitimacy than environmental economics and use this credibility to leverage their calls for more radical change. Evidence produced within other disciplines, not least the natural sciences, together with popular dissemination through the mass media, lends support to the growth-critical stance underpinning social ecological economics and the degrowth project while serving to undermine the credibility of the optimism of green growth.

6. Distributional consequences

The final dimension concerns distributional consequences of ecopolitical projects. While the advocates of policy paradigms typically present them in apolitical terms, conveying the impression that they are in the interest of society as a whole, in distributional terms the institutionalization of policy paradigms always produces winners and losers. Cases in point are the aforementioned policy paradigms dealt with in Hall (1993), i.e., Keynesianism and monetarism. Keynesian policies *inter alia* aspire to work to the advantage of employees and industrial capital, whereas the anti-inflation instruments associated with monetarism primarily benefit financial capital and wealthy individuals (Author A 2011). Similarly, in the case of ecopolitical projects, while their overall goal is to provide solutions to ecological problems, the instruments and trajectories they prescribe inevitably benefit some actors more than others. Here we speak of benefits in a narrow economic sense, leaving aside for instance the important question of ecological distribution and the conflicts it gives rise to (e.g., Temper et al. 2018). In political economy it is conventional to expect a considerable overlap between beneficiaries and advocates of a political project. If, say, financial capital stands to gain materially from the implementation of a project, this capital fraction is considered likely to promote that project (e.g., Jessop 1990). In extension, several scholars have suggested that, under capitalism, for political projects to become hegemonic, they need an 'accumulation strategy' that benefits a leading capital fraction and its allies (e.g., Maisenbacher 2018; van Apeldoorn and Overbeek 2012: 5).

Yet when fourth-order ecopolitical projects are brought into the picture, this conventional perspective may no longer be sufficient. That is, while it may certainly apply to an ecopolitical project operating in accordance with the systemic logic of capitalism, it

could be insufficient with respect to projects aspiring to break with this logic. Not only are the latter type of projects unlikely to benefit any leading capital fractions; their advocates may also have no particular material interest in the implementation of the project. In other words, ecopolitical projects can be more or less materially driven. That is, a project can enjoy support because its advocates stand to gain materially from its realization. But its advocates may also support it for 'idealistic' reasons, i.e., because they consider the project necessary to avoid ecological collapse even if its realisation means that they will be less well off in monetary terms. The point is not to suggest that such 'ideationally driven projects' (Author A 2018) do not produce winners and losers in narrow material terms; it is to point out that the winners are not necessarily those advocating the project.

While winners and losers can be identified among a range of different types of actors, we limit our focus here to two types, namely businesses and citizens. In other words, we ask: what companies and individuals stand to gain from the implementation of a given ecopolitical project? While answering this question is an empirical task, theoretically we expect the nature of the axes dividing those winning and losing from the realization of an ecopolitical project to vary profoundly depending on whether we are dealing with a third-order or a fourth-order project. That this is so is most clearly the case with respect to businesses. Third-order projects speak to businesses with a vested interest in the prevailing economic system. Their realization produces winners and losers among axes such as national versus transnational capital, 'black' versus 'green' capital and financial versus productive capital (Ougaard 2016; see also Snell and Smith 2012). These and other axes thus tend to produce conflict lines among accumulation-oriented companies. As regards fourth-order projects, they are in opposition to the established economic system. Seen from the vantage point of accumulation-oriented companies, the realization of such projects will either be perceived of as going against their material interest or be associated with profound uncertainty. Overall, companies operating in accordance with the systemic logic of capitalism are unlikely to have a material interest in fourth-order change. Consequently, the main axis dividing winning from losing companies does not run between different types of capitalist companies but between capitalist companies and companies operating in accordance with other logics.

Turning to the two ecopolitical projects we focus on here, the first thing to note is that advocates of the green growth project in particular downplay the extent to which there will be distributional losers, while tending to overstate common interests (Stevenson 2019). That is, green growth transitions are typically portrayed in apolitical terms as if they will benefit almost everyone, be it consumers, workers, states or companies. Indeed, the fluid green growth concept has proved successful as a ‘coalition magnet’ (Beland and Cox 2016, Jabko 2006) that powerful social forces – that may in other respects be at odds – can rally behind. Dissolving trade-offs between growth and environmental crisis, green growth serves as an effective political strategy to coopt and depoliticize the climate crisis within existing neoliberal logics. According to Kenis and Lievens (2016: 223), the green growth paradigm has been successful by managing within less than a decade to hegemonize the environmental field, “to the extent that it also becomes the focal point of many critical and oppositional forces” (see also Wanner 2015). As regards the degrowth project, many of its proponents in a similar vein tend to speak of its realization as a process that will mainly produce winners – albeit in terms of wellbeing. The currently prevailing definition of degrowth refers to it as transitions involving “an equitable downscaling of production that increases human well-being and enhances ecological conditions at the local and global level, in the short and long term” (Schneider et al. 2010: 512). It is however worth noting that a number of degrowth proponents openly recognise that degrowth transitions, far from benefitting everyone in the short run, would in all likelihood come at a considerable material cost for many actors (Author A 2017).

This brings us first to distributional consequences among companies. While its dissolution of trade-offs between growth and environmental crisis leaves great room for broad consensus between economic and political interests, it is also a key argument of the green growth project that continuing with ‘business as usual’ is not tenable. This means in the first place that the market opportunities promised with the rise of green growth will come at the expense of the weakening of ‘black companies’ whereas ‘green companies’ stand to gain from it. Ougaard (2016) for instance speaks of a conflict line between transnational companies involved in the extraction and processing of coal, oil and gas, thus having a material interest in the carbon-based economy, and companies that have a material interest in decarbonization. Examples of the latter include “producers of

equipment for renewable energy production and companies that stand to lose from the consequences of global warming, such as insurance companies” (Ougaard 2016: 467). In other words, within the business camp there are considerable trade-offs in dealing with the climate crisis – tradeoffs that are arguably underestimated by the green growth paradigm (Kenis and Lievens 2015: 229) – but which research tells us are key for the possibilities of low-carbon transition coalitions to emerge and accelerate (Hess 2014; Roberts et al. 2018).

Turning to the degrowth project, it entails placing limits on many forms of business activities so as to significantly reduce environmentally damaging forms of production and trade. As such, the project stands in opposition to most business activities in contemporary capitalism. The degrowth project does however not suggest that all parts of the economy will have to shrink. Kallis et al. (2015: 5) for instance single out education and renewable energy as examples of sectors that will have to ‘flourish’ under degrowth transitions. While this may indicate that the degrowth project could find some support among renewable energy producers, in reality this is unlikely to happen as such companies are typically controlled by transnational capital and associate themselves with the green growth discourse (Wanner 2015). Overall, it is safe to say that the degrowth project is – and will remain – friendless among those with vested interests in the growth-led capitalist system, including both ‘black’ and ‘green’ companies. While accumulation-oriented companies would end up on the losing side if the degrowth project was realized, other types of companies would benefit from it. Specifically, social enterprises which operate by different logics, cooperatives being a case in point, stand to benefit from the realization of the degrowth project (Johanisova et al. 2013: 11). The main axis separating winning from losing companies in the two ecopolitical projects thus differs fundamentally.

As regards the question of winners and losers among citizens, the prevailing version of the green growth project is not animated by aspirations to change the status quo in any major way. Certainly, citizens employed in dirty industries could lose their jobs if such industries were no longer subsidized and with the realization of the green growth project citizens living in countries with large polluting industries (say Poland) are likely to be economically worse off than are the citizens of countries with leading renewable energy companies (say, Germany). There is also a North-South dimension to the green growth project in determining who should benefit from growth and who should pay for

environmental sustainability (Newell 2019). Yet overall, this is not an ecopolitical project revolving around redistribution; it is a project premised on the notion that by growing the economic pie both environment and citizens become winners.

By contrast, the degrowth project's alternative to growth is redistribution of economic resources on a massive scale both within countries and on a global scale. Within the societies of the North, resources are to be channeled from the individuals best off to those worst off (Latouche 2009: 36-37). Yet the realization of the degrowth project would not merely affect the lifestyles of very wealthy individuals; it would involve that everyone has to lead ecologically sustainable lives so as to improve the chances that an ecological collapse can be avoided and that the needs of future generations can be met. Globally, economic resources would have to be transferred from the overdeveloped North to the global South to make the world more just and less unequal. Ending the North's 'imperial mode of living' (Brand and Wissen 2013) would deeply affect the lifestyles of the middle and upper classes in the overdeveloped countries. Stated bluntly, most citizens would have to adapt to a materially lower standard of living. Currently, most advocates of degrowth are based in Europe and it is fair to suggest that few of them would gain financially from the implementation of the project they advance. They advance degrowth not to maximise their own utility but because they consider it necessary to break with the capitalist growth logic if the Earth is to remain habitable. The degrowth project is in other words an example of an ideationally driven project – unlike the green growth project, the strongest proponents of which have a vested interest in modifications as opposed to extensive transformations of the current economic system (Newell 2019). This state of affairs does much to explain the Achilles' heel of the degrowth project, i.e., its failure to attract a constellation of social forces with sufficient power and resources to fight for it (Author A 2018; Barca et al. 2019: 6).

To recapitulate, whereas the (third-order) project of green growth has moderate distributional consequences, the (fourth-order) project of degrowth entails far-reaching redistribution. Importantly, in this comparison we have focused on winners and losers in a narrow material sense. Yet those who are winners in this sense are not necessarily winners in a broader sense. Specifically, if absolute decoupling turns out not to work, the path delineated by the green growth project leads directly to a disastrous and irreversible

ecological collapse that is certain to produce losers on a massive scale and make the continuation of a growth-based economic system impossible. Indeed, the big challenge for the green growth project is to deliver. The project holds up the promise of continued growth, environmental sustainability and social justice – while the reasons for why this would not happen abound.

7. Conclusion

How can we meaningfully compare ecopolitical projects so different in their view of the problems faced by humanity that the solutions they seek are found within radically different societal formations? This paper has suggested that a key analytical move is to make room for comparing projects at the level of the systemic logic they inhabit. Doing so allows for a deeper appreciation of the ideational, material and institutional factors that make up competing ecopolitical projects and how they play out on four key dimensions related to addressing the climate crisis: extensiveness of change, change agents, scientific basis and distributional consequences. The projects compared in this study differ profoundly across all four dimensions of the framework. The green growth project envisions changes within the framework of capitalism, it regards market actors to be pivotal for sustainability transitions, it is grounded in mainstream (environmental) economics, and while it works to the benefit of ‘green’ capital, its distributional consequences are overall modest. Conversely, the degrowth project envisions systemic change to bring about a profoundly different social order, it necessitates a citizen-led transformation, it finds scientific legitimacy in the contender field of social ecological economics and it would entail a far-reaching, global redistribution of economic resources (see Table 2).

Table 2 here

While we contend that the four dimensions outlined in the paper are crucial for analyzing the political-economic dynamics of ecopolitical transformations, additional dimensions could be added. For instance, the green growth-degrowth discord also concerns the

temporality of change: the question of what sort of change is possible within the short time frame available before a large-scale climate collapse. Indeed, it could be argued that both projects come across as ‘unrealistic’ because they envision change that may not be realizable within this time frame. The green growth project appears unrealistic in the absence of evidence suggesting that it is remotely possible to rapidly enough bring about absolute decoupling of global economic growth and global CO₂ emissions by means of market solutions and technological fixes. Conversely, the degrowth project appears unrealistic because its vision of reduced production and consumption is premised on the possibility of extensive socio-economic and cultural change. Even if the majority of citizens came to perceive of fourth-order change as desirable and decided to politically support it, it is very much an open question if the change could be realized in the available time given that it would be certain to meet fierce opposition from powerful actors with a vested interest in the status quo (or minor moderations of the existing system) (Jordan et al. 2018; Geels 2014).

Similarly, while in the analysis we focus on the type of change envisioned by proponents of the green growth and degrowth projects, greater emphasis can be placed on the processes of change as they play out in practice. Even hegemonic political projects never get to fully shape social reality in the ways they aspire to. An illustration of this is ‘actually existing neoliberalism’ which in many cases differs considerably from neoliberal ideals (Peck et al. 2018). One reason for this is that institutional transformations never entail a clean break with the past. As several studies in the rich literature on institutionalist change have established, past institutions always leave an imprint on the institutions that succeed them (e.g. Campbell, 2010; Author B 2011). Research on the post-socialist countries in Central and Eastern Europe, which finds that institutional and cultural legacies greatly influenced the type of capitalism that emerged in different countries (Bohle and Greskovits 2007), shows that this insight applies also to systemic change. By implication, even extensive degrowth transformations would start out from currently existing institutional frameworks and to some extent be shaped by them (Author A, 2014). Adding to the complexity, institutional change at the level analysed here, expectedly involves multiple and not rarely contradictory political projects of which the green growth and

degrowth projects are but two. This is a complexity that future political economy research should aim to help untangle.

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Table 1: Four dimensions of the political economy of climate crisis mitigation

	<i>Key issues</i>
Extensiveness of change	Extent and depth of change: Does the ecopolitical project require a third- or fourth-order change to be realized?
Change agents	What agents do proponents of the ecopolitical projects consider pivotal for the realization of the project?
Scientific basis	What is the main scientific basis of competing ecopolitical projects?
Distributional consequences	Whose interests does an ecopolitical project serve and who loses?

Table 2: Green growth and degrowth compared

	<i>Green growth project</i>	<i>Degrowth project</i>
Extensiveness of change	Third-order	Fourth-order
Change agents	Market actors	Citizens
Scientific basis	Environmental economics	Social ecological economics
Distributional consequences	Modest	Far-reaching redistribution within and between societies