



Article

Climate science, the politics of climate change and futures of IR

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Abstract

This article considers what is necessary politically to respond to the empirical challenge of climate change and to the present calls of climate science (a carbon-neutral world by 2050). Its basic argument is that, among an array of national and international actors, it remains the state that can drive a successful politics of climate change. Without the heavy-lifting of the state and the state's ability as a national entity to motivate behavioural change, neither the daunting scale nor imminent time-horizon of climate mitigation and adaptation is possible. The article shows how this specific argument, far from pitching anew nationalism against internationalism, can bring the two presently polarized movements together. The article then suggests that if these arguments are essentially valid, the discipline of International Relations needs to focus much more on the climate challenge, re-engage with its traditions of thought on the state and help harbour a specific disposition or mindset in the research and teaching of the discipline for the next decades: a fierce optimism.

Keywords

climate science, fierce optimism, governance, political agency, politics of climate change

Introduction

The special report of the Intergovernmental Panel on Climate Change (IPCC) in October 2018 made three calls.¹ It rehearsed the importance of keeping to a global average increase in temperature of 1.5°C relative to pre-industrial levels (rather than the previous 2°C agreed in Copenhagen in 2009 and ratified in Paris in 2015). It established the need for a 50 per cent reduction in global CO₂eq emissions by 2030 if this goal was to be achieved. It concluded with an urgent call for appropriate political response.² The report thereby confirmed two close relations at this historical juncture: the relation between

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global warming and anthropogenic emissions, and the relation between climate science and the need for political action to resolve the former relation. Greenhouse gas emissions have nevertheless continued to go up since 2018 by 1.5 per cent (4% since 2015 Paris Agreement).³ The political response required to achieve a global average increase in temperature of 1.5°C has become all the more daunting in terms of both time and scale. The IPCC special report accelerated a broad social movement asking for ‘climate action now’: foremost in the northern hemisphere, student climate strikes, led by the Swedish activist Greta Thunberg, and Extinction Rebellion. This activism has also been mirrored by multiple Climate Emergency calls at municipal levels of government and by accelerating arguments for a Green New Deal (invoking the New Deal of the 1930s).⁴ The present global pandemic, COVID-19, is also being increasingly tied to climate change and climate action. The everyday, corporal recognition that there has been a global shock to the system has precipitated a collective desire for forms of reflection and action that focus on wellbeing and a regenerative economy. A consensus may also have begun to form, during a period of populism in which emotions have trumped rational argument and decision-making, that the authority of science has again become the most trustworthy. There is, finally, a growing sense that government is still able – despite many protestations to the contrary on the Right, but also on the Left of the political spectrum – to deliver a political response to a global challenge that is appropriate in time and scale to the nature of the challenge. In sum, from the autumn of 2018 to the spring of 2020, the vital nature of the relationship between climate change and political action has been put in diverse ways to the foreground of societal concern. The question remains whether this relation can be effectively rehearsed in time and at scale to prevent catastrophe: that is, the question remains not only whether a political response to climate change is still possible within the parameters given but what political response is appropriate and what political agency is necessary that can make the first question of ‘whether’ less immediate. Against the background of a rapidly changing social landscape, the following article rehearses this relation between the empirical challenge of climate change, on the one hand, and the nature of our normative response to it through politics, on the other.

The article is divided into three sections. The first section considers the main points of climate science in the IPCC special report of 2018 and unties the major implications lying behind them from a social science perspective, particularly that of political theory and International Relations (IR).⁵ The second section considers what kind of politics is necessary to address the scale of the challenge and the time-horizon it sets. My argument is essentially that the state must constitute the vital agent of political change for the next decades ahead, both nationally and internationally. That said, state action can only be effective if it proves able to provide a vision and a plan that *integrates* solutions to the climate challenge as well as a canopy/steer for other types of agency to accelerate their own actions through this vision and plan (from the action of individuals and local communities to international institutions). These two sections pick up many of the themes of this Special Issue (SI) on ‘Facing Human Interconnections: Thinking IR into the Future’: in particular, human interconnectedness, the interconnected nature of global challenges and alternative futures and governance. It emphasizes the importance of the next three decades within the forthcoming century specifically. It is in the context of this emphasis on the next three decades that the third section specifically focuses on the SI theme of the

‘futures of IR’. What are the implications of the first two sections for the futures of the discipline? I suggest that they are in sum threefold: continuous engagement with the state and the state system in order, paradoxically if one wishes, to help effect structural change; alignment with, and reinvention of, the sustainable development agenda in order to help reorganize the North/South divide under general conditions of climate vulnerability; and the disciplinary adoption and fostering of a fierce optimism in order to put focused and sustained pressure on political institutions and their leaders so that social change is brought about.

The call of climate science and its implications

The IPCC’s special report in October 2018 was requested by the outgoing Paris Agreement at the CoP21 in 2015, particularly by the small island states which achieved, under the French presidency and gavel, political voice. The special report was redacted by a core group of 70 climate scientists and includes over 6000 peer-reviewed references. Working within the parameters of uncertainty and probability particular to scientific calculation,⁶ its estimates have been accepted by a broad sway of national and international actors (but not by the governments of the United States, Russia and Saudi Arabia). The initial report made several points that have helped provide a national and global framework for climate action. To summarize, they are as follows:

- Limiting the global average temperature increase to 2°C relative to pre-industrial levels could cause catastrophic harm and a new climate regime; the higher ambition of a 1.5°C increase constitutes, for climate science, the upper limit of present-day ‘natural’ variability.
- The remaining allowable global carbon budget, to limit average global temperature to below 1.5°C relative to pre-industrial levels, is estimated at 420 Gt CO₂eq.
- Whatever the exactitude of this estimate,⁷ only a 0.5°C additional temperature increase is now in view, and only three decades are envisaged before the world has to reach average net-zero carbon emissions and, thenceforth, negative emissions.
- The goal of a 50 per cent decrease for the next decade requires on average a five-fold increase of existing reduction commitments by the nations of the world between the years 2020 and 2030.
- If net-zero is not achieved by 2050, climate science predicts that the climate will become self-determining: that is, with tipping-points reached like the melting of Canadian and Siberian permafrost or the melting of the Arctic icecap, the climate will move outside the powers of the human species to control its effects.

The above calculations were made in late 2018. Although one and a half years later – with a 1.5 per cent increase of average global temperature since – this fivefold increase of existing reduction commitments may be considered conservative,⁸ these calculations *already* require that the average *annual* reduction of emissions from 2020 to 2030 (to attain the 50% reduction above) must be by 7 per cent to 8 per cent. To understand the order of action required, it is very important to underscore here the recent fact that the 4-month staggered lockdown of all national economies in the world resulting from

COVID-19 has led to a reduction in carbon emissions of 17 per cent, and a predicted annual decrease of 8 per cent relative to 2019.⁹ In other words, the scale of decarbonization required *per year* for the next decade is one just witnessed in reactive response to the coronavirus pandemic. *The scale of proactive action required within the time-horizon given is consequently daunting.*

If the minimal increase of 1.5°C is not achieved within this century, the IPCC 2018 special report predicts existential harm to biodiversity and to human life, following soaring temperatures, drought, excess precipitation and severe flooding, with increasingly overlapping energy, food and water risks.¹⁰ The report maintains that the latter will affect in particular small islands, low-lying coastal areas and deltas as well as formerly arable land areas. The regions of main attention are West Africa, the Sahel, and Southeast and West Asia with an estimation of 450 million people, at most, at risk of death, or, at least, as dramatically more vulnerable if an increase of 1.5°C (rather than 2°C) of average global warming is not secured. The conclusion to the scientific report therefore maintains that the only way to begin to reach 1.5°C is *systemic change now*. ‘Fundamental societal and systems changes are required that explicitly link mitigation and adaptation strategies to practices of sustainable development’ of both rich and poor countries in the world (economic, financial, technological, behavioural).¹¹ Before turning to the political response to the advice of climate science, I wish to rehearse the profound implications of the IPCC report.

First, the time within which action is necessary as well as the scale of action necessary within this time are literally unprecedented within the 3000-year history of advanced human civilization. Most analogies made between previous mass action and the action required to achieve a carbon net-zero society by 2050 concern, at an international level, the mobilization of forces for the second world war and, at a national level, the progressive New Deal put in place by US president Franklin Roosevelt in response to the Great Depression.¹² These analogies, while highly relevant, miss something essential: the scale of change to keep climate change within the least harmful parameters must be *sustained* over three decades. Nothing short of a large-scale transformation in human self-organization can reach the scale required over this sustained period of time.

In the wake of the Special Report, the young activist Greta Thunberg and social movements like Extinction Rebellion emphasize that the temporal horizon of disaster is imminent (they use the language of ‘existential risk’), and that, accordingly, large-scale coordinated action is required now.¹³ As Thunberg memorably put it in March 2019 in front of the Davos elite, ‘We don’t want your hope. We don’t want you to be hopeful. We want you to panic and take action’.¹⁴ The second implication lies here (whether one agrees with some of the strategies of present-day environmental activism, or not). The long-term future of the planet exists *already* in our human and non-human present. Or, inversely and better, because of the stock of CO₂eq in the atmosphere, *our present is already the future*. The point is well made by us returning to the above decrease this year in carbon emissions (8% on average). This decrease only reduces the average global carbon budget by 0.4 parts per million because of the stock of CO₂eq *already* in the atmosphere.¹⁵ Now, it is precisely because this stock has a life-expectancy of 1000 years that a sustained strategy of carbon reduction and of negative carbon emissions is required. Climate change is, as a result, an immediate intergenerational *phenomenon*. This

temporal complication of our present means two things in turn. The past responsibility of the largest emitters is about the present and the future. Past, present and future are brought together not through a human narrative offered by religion or national myth, myths that we know can motivate collective action on vast scales.¹⁶ Past, present and future are brought together through the *scientific fact* of climate change: through, that is, the material effect of human action on the environment. This bringing together of past, present and future is unprecedented because *it is empirical, not normative*.

Human endeavour (simultaneously creative and destructive) has been marked in the last 1000 years by political teleology. According to this teleology, the future exists in the present in the specific normative sense that the present constitutes a means to a delimited future goal. The politico-religious narrative of Christianity has provided perhaps the strongest example of this temporal logic, just as the secularization of this narrative in Marxism and Liberalism provide the strongest examples in the temporal logic of modernity.¹⁷ Indeed, it is not wrong to say that the embedding of the future in the present constitutes one of the strongest characteristics of political ideology and is the reason why such ideologies can motivate people to effect change: structuring the present through the future makes this present emotionally resonant and directed. What is clearly particular about the climate embedding of the future in the present is that this embedding is empirical and non-human, not normative and human-focused. In terms of the overall concerns of this SI – where the aim is to think through varied types of human interconnections which include connections between the human and the non-human – the future present of climate change unmakes the modern (human) organization of the present, a present pregnant with a future that defines modern notions of progress, development and growth. This temporal dimension of climate change constitutes, accordingly, a radical material departure from human normative organizations of time, and this departure has important political consequences that I address in the next section.¹⁸

The final implication of the IPCC special report of 2018 that I wish to address concerns the question of *development*. It is clear that to reduce emissions by an average of 50 per cent by 2030 and to reach carbon net-zero by 2050, adaptation will be increasingly linked to, and will replace, strategies of mitigation. From this perspective, with regard to the time and scale of the global challenge of climate change, all countries, whether advanced or developing, are *in development*. The global challenge of climate change reorganizes in this specific sense modernist distinctions between ‘North’ and ‘South’ and materially places all countries *in one common, if highly differentiated process of development*. It is difficult to catch this new material phenomenon conceptually for several reasons (although the Sustainable Development Agenda may offer a normative framework within which to do so; the IPCC report uses the UN agenda in its concluding comments quoted above). There remain huge disparities and inequalities between advanced and developing countries, even if the middle-income countries are catching up in terms of GDP per capita and the advanced countries are in levels of debt similar to many of the developing countries in the 1970s and 1980s.¹⁹ Second, it is the poorest countries in the world that are most vulnerable to climate change and need development aid that is targeted at one and the same to poverty and climate change. Here, the Sustainable Development Agenda *remains* importantly the successor of the Millennium Development

Goals and is engaged with the pursuit of development of vulnerable countries and populations in the wider context of climate change.²⁰

That all said, there are important reasons for the framework of development to be reorganized in order to embrace *both* advanced *and* developing countries, and the Sustainable Development 2030 Agenda offers an important, but at present insufficient step in this direction (precisely because its framework remains informed by ‘development of the South’ reasoning). The gap between advanced and developing countries is decreasing on average with middle-income countries like China, India, Brazil and South Africa and with increasing inequality within the advanced countries since the removal of national capital controls from the end of the 1970s (the birth of neoliberalism). But the reason is not just economic; it is crucially also cognitive. The practices of indigenous communities are increasingly considered to be in tune with the natural environment in a way that processes of modernization mis-recognized as they came to dominate nature (for a discussion, see article by Chaudhury and Mitchell in this issue).²¹ Since meeting the temporal and scalar challenge of climate change will require a shift from an extractive to a regenerative relation to nature and natural resources, it is not only the modernist narrative *of* development that is made redundant by climate change. The very distinction between ‘advanced’ and ‘developing’ is consequently unmade and made anew.²² The agenda of ‘sustainable development’ needs to frame more explicitly this cognitive, economic and geographical transformation. Whether it ultimately can or not, the recognition that climate change has empirically put us all in the same ship whatever the particular state of each country’s lifeboats has profound consequences (see Pasha in this issue for discussion on Anthropocene and inequality).²³ Whether it be out of self-interest or altruism, the least vulnerable countries must help, in a sustained manner, the most vulnerable countries in these coming decades. For, without such help, the inability to adapt to climate change on the part of the more vulnerable countries will simply make the less vulnerable countries themselves more vulnerable (as they battle with the increasing insecurity of new flows of migration, disease and international and intranational conflict). Solidarity between advanced and developing countries constitutes, accordingly, a necessary normative consequence of the material reality of climate change. The next section takes up the political dimension of this consequence.

To conclude this section: since at least the foundation of the United Nations Framework Convention on Climate Change (UNFCCC) at the Rio summit of 1992, climate science has confronted the nations of the world with an increasingly accurate account of the close relationship between anthropogenic emissions and global warming. In so doing, it has provided these nations with scenarios of both mitigation of, and adaptation to, climate change that reduce harm to our human and non-world world as much as possible: that is, before tipping points are reached that take solutions to climate change beyond human control. With 30 years of climate inaction, this science, under the aegis of the United Nations, confronted the countries of the world in 2018 with an agenda that has profound implications – ones regarding the scale of action required, regarding the time within which this action is necessary; ones that undo and redo our understandings of modernity and progress and of development and international/global solidarity.

What climate action, then, can respond to this science and to these implications?

The politics of climate change

Climate action requires political action simply because, without political action, the scale of the challenge as well as the time within which this action must be achieved cannot be met. If the shutting down of the global economy during the first 4 months of COVID-19 led to an 8 per cent annual decrease in carbon emissions, and this decrease is required yearly for the next 10 years, *nothing short of coordinated national and international action can be effective*. As the logic behind the CoP15 Paris Agreement understood, in a world structured by a system of states, the state remains, in relation with other states, the effective focus for these national and international acts of coordination.

One can maintain, of course, that concerted reflection on goals and their practice cannot be rehearsed within the same state system that, in co-evolution with capitalism, has produced the climate problem in the first place.²⁴ Yet, my argument here is simple: (1) climate action must be of a political kind if this action is to be coherent and effective, and the horizon of this understanding of the political (comprehensive and effective action) is in a vital sense defined by the state; (2) this political action redounds above all to the agency and responsibility of the state both in relation to its own citizenry and in relation to other states and their citizenry. In response to the challenge of time and scale, I argue we should turn to, not turn away from, the state as an *agent of change*. Only if one renounces the potential of political action today through historically constituted practices of political efficacy does one shun this kind of conclusion. In which case, I would argue, one has renounced politics for our age, as well as the major emotion on which politics is based, hope.²⁵

Since Max Weber, the state is sociologically defined by the legitimate monopoly of violence that it holds over all other forms of force within a nationally determined territory.²⁶ There are many ways in which this monopoly is contested today. The description of a state as ‘vulnerable’ is nothing but the indication that a particular state does not hold the monopoly of violence within its territory. Prior to questions of political authority and legitimacy, all states are today vulnerable in this sense given the nature of global challenges that follow intended and unintended processes of interdependence (global financial instability, global terrorism, migration flows, pandemics, climate change, etc.). That said, the responses both to the financial crisis of 2008 and (much more so) to the present COVID-19 crisis testify to the fact that the monopoly of violence particular to the effectiveness of state governance remains in place. Among an increasing complexity of social actors, the state still holds the levers of power that are decisive in effecting social transformation. Consequently, to one side of the empirical fact that countries constitute the beef of the UNFCCC climate regime, I am arguing that the state remains the primary vehicle of a politics of climate change. As the emerging literature on the Green New Deal implies, the state can do the following.

At a national level, it can organize and steer fiscal, monetary and sector-policies like those of energy, transport, agriculture, the communications industry and housing in such a way that both businesses and consumers are motivated to shift behaviour towards a carbon-neutral society. This model of the state is one of a regulated market economy that uses the coordination of state direction with market dynamism to effect broad social change. Governments respond to markets as they plan ahead with regard to climate

change (the rapid fall in the price of solar and wind energy, for example), and much of the new green infrastructure is/will be locally distributed and assembled (no ‘giant public works’ given that contemporary technology is smart).²⁷ That said, governments are *the sole governance body* with appropriate fiscal and monetary tools (1) to set up the rebuilding of national economies with new strategic priorities; (2) to steer and to guarantee *concerted* action across sectors; and (3) to guarantee, in turn, that this action is underpinned by the principles of ‘*a just transition*’.²⁸ If the timeline to a 50 per cent reduction of carbon emissions is 2030, then the state must so organize and steer that solutions to climate change are *integrated*. Attention to ‘the climate emergency’ alone will not lead to the necessary change. This last point is important and suggests why the idea of the Green New Deal, whether one is on the Left or Right, harbours the appropriate response. The integration of climate policy with radical policies for poverty alleviation and re-employment in sustainable industries and commerce provides the only way in which the shift from an extractive to a regenerative economy and society is possible in the first place. *Without this convergence of solutions*, practical solutions to climate change will not only tackle the scale and timeline of the problem; they will re-create a deeply divided polity of the employed and unemployed that could lead to ever-worse scenarios of a politics based on division and fear, not community and hope. It is the state alone – in conjunction with the forces of the market and civil society – that can provide the vision, the terms of execution of this vision (organized integration) and, critically, the policy-leverage that can bring about economic and social convergence.

This primary focus on the governance of the state may appear to balk internationalism, especially against the background of recent attempts, within the broad church of international liberalism, to move to the ‘post-national’ and show the necessity of global governance to resolve global problems.²⁹ One of the major lessons of contemporary populism is nevertheless that attention to the global cannot be made at the expense of national communities. To focus on the capacity of the state to respond to the scalar and temporal challenge of climate change by fostering deep social change at national and local levels answers also to the internationalist brief, however. Under the present climate regime, a state is internationalist if it is able to set a best practice and offer leadership in climate action that other countries can follow. CoP26, postponed till 2021 due to COVID-19, aims to review and update the nationally determined contributions (NDCs) of all 193 signatories to the 2015 Paris agreement.³⁰ *If the immediate timelines of 2030 and 2050 mean anything with regard to decarbonizing human civilization*, then the climate leadership of particular states and their governments will be critical to the conference’s success. What will make a success of CoP26, in distinction to many CoPs before and after Paris, is that a leading group of states and unions like the EU commit to markedly higher NDCs. Whether this is achieved at CoP26 is an empirical question of political influence and struggle, highly dependent on the outcome of the US presidential elections in November 2020. My concern here is one of principle and theoretical focus: in the present international structure of responsibilities and interests, major progress on the international climate agenda can come, and perhaps can *only* come, through progressive state action. Furthermore, it is perhaps only through this progressive state action that a successful multilateral order will again emerge.

This action must harness the energies of business and active citizenry to lead appropriately. That said, it is primarily particular states and particular groups of states that will offer the terms of climate leadership through the next 10 years, whatever other forms of climate leadership are also offered at post-national and sub-national levels (in decarbonizing markets, among NGOs and among the actors of the UNFCCC and the United Nations more broadly). The Paris Agreement would have been impossible without the prior bilateral agreement the previous year between the United States and China to lower their national carbon emissions.³¹ In an international system of states, effective response to the global challenge of climate change requires *heavy lifting*. This is not an argument for hegemonic practices in international relations; it is, for example, critical that transformational alliances are increasingly formed between the more vulnerable and less vulnerable countries. Rather, it is an argument for the critical role of state leadership, at this historical juncture, in the simultaneously national *and* international politics of climate change. I take this point further in my comments below on sustainable development.

I argued above that the second implication of climate science concerns the temporality of the present: with the stock of CO₂eq in the atmosphere for another 1000 years, the present is essentially structured by the future. I argued above that the material embedding of the future in the present through global warming presents an important departure from past and present human organizations of time. The present is no longer constructed *normatively* through a future horizon that bestows upon the present meaning and purpose; it is structured *empirically* through future force that has no regard to the human. This difference in the way in which the present is pregnant with the future has political consequences. Fashioning a just transition to net-zero societies requires enormous political ambition and imagination. Focusing on meeting the challenges of *this* re-imagination, I argue, should be our focus, not focusing on new political imaginations per se. This ambition is channelled towards creating a *society of limits* in which the wellbeing of human beings is predicated on the *lesser violence* and *self-restraint*. Catastrophic climate change will happen, and carbon neutrality will require negative emissions. A politics of climate change that has vision and execution around a set of integrated climate solutions must, therefore, motivate many sections of society to *behave in a self-limiting way and in a common direction*. Motivation structured over long periods of human history through political narratives of human redemption or collective/individual emancipation must be quickly replaced by a political narrative of human limits. Quite simply, is the logic of 'the lesser violence' (to the climate, to other species, to the human species) enough to give common hope and motivate people in a common direction of self-restraint?³²

Considerable attention has been given in the last 40 years to the narrative potential of the nation.³³ The nation has proved itself a highly effective repository within which past, present and future can be effectively conjoined. In his new book, the journalist and IR scholar Anatol Lieven has argued, for example, that:

the Democratic Party . . . needs to frame the [. . .] public appeal of the Green New Deal not just in socioeconomic terms but in national and nationalist ones; to infuse it with 'a conscious sense of national purpose' and in turn build this national sense of purpose and pursuit of the common good around the struggle to limit climate change.³⁴

For him the Green New Deal builds this sense of purpose around limitation by appealing to the memories of the New Deal and the Second World War, reminding Americans of 'great national collective efforts in the past'.³⁵ Lieven's argument appears correct, however divided the present American polity is. National identity stretches between past, present and future in a way that can allow for common direction at the level at which people live. The nationalism advocated by Lieven is not the opposite of cosmopolitanism. Rather, it is the way in which a political response to the global challenge of climate change (a future embedded in the present) can be lived by citizenry in the texture of their local lives. Without this texture self-restraint, I fear, will be meaningless. Despite the best efforts of global environmentalism and pragmatically focused versions of cosmopolitanism, political narratives of the world cannot yet reach this level of experience and motivation: hence, the vital distinction within contemporary populism between the winners and losers of globalization.³⁶ And yet, to limit the average increase in global temperature to 1.5°C, political action is necessary and, therefore, such motivation is necessary. Lieven is right: to be a nationalist is accordingly, in this specific circumstance, to be globally minded. In our terms, the political action brought about by the state to respond to climate change can use national narratives precisely to motivate a politics of limits and self-restraint. Ultimately, these national narratives become global (given the material nature of climate change); they begin nevertheless with the local texture of people's lives.

The third implication of contemporary climate science concerns what I have called above 'the necessary normative consequence' of climate change – the sustainable development agenda. This agenda, I have argued, unmakes and reorganizes the distinction between Global North and Global South since all countries are in processes of development with regard to climate change. Within this agenda, solidarity between nations presents a necessary moral response to an empirical reality that concerns at one and same time the peoples of other nations and one's own. Lieven's above argument for a civic nationalism makes a lot of sense in terms of the requirements of motivation; it also works with a realistic sense of democratic accountability. As he argues, the primary responsibility of government and state officials is to their state and its people.³⁷ The foreign aid of government departments is understandable, but the officials of that aid are, he argues, 'not accountable to the people receiving it' and 'they are not responsible for these foreign countries' policies or these countries' fates'.³⁸ Lieven's important argument for national responsibility towards climate change fails here to consider widely enough *the normative implications of the reality of climate change*. If, under unintended processes of interdependence like global warming, the fates of countries become inextricably entangled, then a political vision as well as its terms of execution are required that respond to, are responsible for, the entangling of these fates.³⁹ The sustainable development agenda (as I have argued it here) begins to assume this vision. It requires international institutions like the UN to frame it and coordinate action among states and non-governmental organizations. However, for the next decades, it is, and will remain, states that *drive* this action politically, in partnership with international and domestic actors. In this sense, and *contra* Lieven's argument here to reframe the struggle against climate change in nationalist terms, *nationalism and cosmopolitanism must be rehearsed together in one and the same response to climate change's empirical reality*. It is this convergence of nationalism and

a cosmopolitan internationalism that provides the right political choice for states, state responsibility and state leadership under the constraint of the climate challenge.⁴⁰

Concluding this section, I turn to present political realities. Contemporary forms of nationalism and populism throughout the countries of the world pitch nationalism against internationalism. The opposition has been, and continues to be, a battle between two responses to processes of interdependence and global challenges: one that has turned, rhetorically at least, to the state and to its people; one that seeks to place an interdependent world in institutional structures fit for purpose. Pursuing the implications of climate science, this section has argued for a politics of climate change that shows how nationalism and the global and cosmopolitan dimensions of internationalism must work together if political action in response to climate reality can be remotely successful, and it has argued that this action is dependent, first, on the powers, responsibilities and leadership of states. The present pandemic provides both an intellectual and practical window of opportunity to transcend the above opposition and bring recently polarized strands of ideology and experience together into a more common direction. Effective political action in the next 10 years regarding a comprehensive set of solutions to climate change will be proof of whether this opportunity – in distinction to the missed opportunity of the financial crisis of 2008 – has been seized.

The politics of climate change and the futures of IR

What are the implications of the argument of the last two sections for the discipline of International Relations and its futures? I have argued, first, that climate change presents an empirical global challenge that necessitates not only a normative response, but a normative response through politics if this change is not, at worst, to obliterate human possibility, human time and human space. This political response requires, second, comprehensive, integrated political action on a scale and within a timeline that is historically unprecedented. Given both the nature of the response needed and the scale and time within which this response must work, this politics must be structured, third, through the modern state system and through the economic system upon which this system was built (capitalism). In contradistinction to sub-national and post-national forms of governance, it is only the state that has the power and leverage to organize, steer and enable concerted, coordinated, intersectoral action so that a just transition to a carbon-neutral, indeed carbon-negative society is in the least possible by 2050. If it is only the state in principle that can do this, the success of its action will, at the same time, only happen through enabling other actors across society (both domestic and global) to work to the end of transition more effectively than itself – in energy markets, in local areas, in financial investment strategies for nature-based solutions, in behavioural change towards a society of limits and so forth. The argument is, consequently, not state-centric; it posits that the state, within processes of social agency and social transformation, is the sole political instance of governance, at the same time, to enable and steer in an integrated, comprehensive manner. Fourth, I argue, therefore, that, against the background of faltering global governance regimes and a renewed nationalist mindset, it is the state that bears the responsibility, both towards its own citizens and towards those most vulnerable to the effects of climate change, to respond to climate change and lead, with international

institutions, climate alliances among states. Finally, fifth, I have intimated that it is through these alliances that coordinated global climate action will emerge that reorganizes the development agenda beyond the distinction between North and South. A new global order could emerge from this reorganization, in response to climate change.

This sequence of points means that a state-focused perspective on international politics must continue to be embraced in the discipline of IR for the coming decades. In the last 40 years, and partly as a healthy intellectual reaction against the supposed domination of state-centred realism and inter-state liberalism in the discipline, there have been multiple initiatives in IR to step to one side of the state and seek the grain of international politics in other actors and processes (from Susan Strange's *Retreat of the State*⁴¹ to recent critical theoretical interest, as also exemplified in this SI, in the 'posthuman'). These diverse initiatives have made the discipline intellectually richer and more inter- and pluri-disciplinary. They have, I would suggest, come at the cost, however, of losing grasp of the state where and when the state remains a necessary *agent of change*. This article has argued that this is foremostly the case when it comes to responding to climate change. From this perspective, continued engagement with the state as an agent of change requires that the discipline as a whole re-engages with the legacy of Weberian realism (the state and the state system), the legacy of classical realism (the ethics of the lesser violence in world of limitation) and the legacy of the English School (state responsibility and state leadership), together with the insights of constructivism, in order to reconstruct domestic and foreign policies in tight relation to climate change and its effects.⁴² Only, perhaps, as a result of this reconstruction can something like a reinvigorated liberal internationalism emerge that has authentically cosmopolitan aspirations: that is, aspirations that do not redound to the national interests of the more powerful states, but seek to organize, amid the risks of regression, conflict and the greater violence, a global order of sustainable development and sustainability that transcends the conceptual and practical 'North/South' divide.

A great deal needs to be unpacked in the suggestions of the last paragraph in order to map how the various theoretical legacies in IR can be turned to the most complex human interconnection at hand: climate change. Suffice it to add here three things of import. First, the discipline's response to climate change must work across its various traditions and 'schools' to have ontological, epistemological, ethical and political traction upon it. I have maintained that the state must be foregrounded in this response, but this foregrounding can only make sense if the state is seen to be working in, through, and for a larger environment of actors and their practices. The discipline of IR needs to provide normative vision for, and empirical analysis of, this coordinated set of arrangements. Second, the move to deepen and reconfigure the sustainable development agenda in the light of response to climate change should, I have suggested several times, be far-reaching. Vision for, and analysis of, the ever-closer connections between the disciplines of International Relations and International Development must be forged; for example, connections based not on conflict and post-conflict scenarios, but primarily on what sustainable resilience means conceptually and policy-wise across all states and their populations. Third, and finally, a new academic mindset in the discipline may be required; or it should at least be fostered through the discipline. At a theoretical level, liberalism is considered the one 'optimistic' tradition within IR, a tradition predicated on belief in

rational politics and cooperation, progress and embetterment. Liberalism harbours an optimism the very critique of which often defines the respective critical mindsets of realism, Marxism, feminism, post-colonialism (and) IR critical theory. These critiques have again been very rich for the discipline of IR over the last 40 years, perhaps, most tellingly for the contemporary student with regard to the hubris of post-Cold War liberalisms. In the context of climate change's challenge for IR, a fierce optimism is nevertheless now required: an optimism no longer harnessed to the nineteenth- and twentieth-century terms of liberal progress, but a mindset of purpose that is focused, deftly aggressive and sustained within the logics of sustainable resilience. Given both the time and the scale of political action required for net-zero national and global societies to emerge by 2050, there is, in essence, no time to be pessimistic or sceptical; whatever happens empirically in the next 30 years, there is the time to place sustained, focused pressure on political institutions and their leaders so that social transformation towards a national and global society of limits is brought about. In this sense, fiercely optimistic, bearers of the discipline of IR should assume a strong intellectual, pedagogical and social role in the three coming decades.

Conclusion

Climate science has put society as a whole in front of an unprecedented empirical challenge: to reduce carbon emissions by 2030 and attain carbon neutrality by 2050 if catastrophic harm is to be avoided and the human species is to remain in basic control of its planetary environment. This article has argued that, in appropriate response to the estimates of climate science, concerted political action is necessary. Contemporary political realities are shaped by strong reaction against globalization and the ideologies of both neoliberalism and international liberalism that have, in diverse ways, underpinned the uneven nature of post-Cold War globalization. The present COVID-19 crisis suggests, for many, a window of opportunity to think and practice both national and international political action differently. This requires trust in the authority of science, on the one hand, and, on the other, strong support for policy that is as visionary and integrative as possible. At this moment in history, visionary *and* integrative policies can only be led by the state and by the political agency of the state: first, it is the only social organization that has the monopoly of violence to effect strong fiscal and monetary policies; second, at national and sub-national levels, it is the only social organization that can help mobilize other social actors and steer society as a whole within a common national direction of economic and social transformation; third, at the international and global levels, it is the only political organization that can lead other states into the 'ratcheting up' of mitigation and adaptation measures among the major emitters of greenhouse gases; alliances between less vulnerable and more vulnerable states). I have argued in conclusion that in the context of the challenge of climate change and of the unprecedented normative political response needed to meet this challenge, the mindset of a fierce optimism is required in the discipline of IR and its futures. This mindset believes that radical change is still possible within present political and economic governance systems and works in a sustained manner within these systems to effect this change. Against this background, I

have, perhaps provocatively, suggested that the traditions constitutively critical of liberalism in the discipline of International Relations are not yet attuned to the unprecedented specificity of the problem and directed to address solutions to it. A re-alignment of these traditions, together with the reinvention of the liberal sustainable development agenda, would be welcome to enable IR to both research and teach effectively in the next 30 years of national and international politics.

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Notes

1. All references are to the summary report. Valérie Masson-Delmotte et al. (eds), 'IPCC, 2018: Summary for Policymakers', in *Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, available at: <https://www.ipcc.ch/sr15/> (accessed 15 May 2020).
2. Masson-Delmotte et al. (eds), 'IPCC 2018: Summary Report', p. 22.
3. 'Natural Gas and Oil Push Up Global CO₂ Emissions in 2019', Global Carbon Project, available at: https://www.globalcarbonproject.org/carbonbudget/19/files/Norway_CICERO_GCB2019.pdf (accessed 15 May 2020).
4. Inspired by President Roosevelt's public works project, a 'Green New Deal' group formed originally in the United Kingdom in 2007/8 in response to the financial crisis. See <https://greennewdealgroupproject.org> (accessed 15 May 2020). For application to the United Kingdom following the present COVID crisis, see Ann Pettifor, *The Case for the Green New Deal* (London: Verso, 2018); for application to the United States, see Jeremy Rifkin, *The Green New Deal: Why the Fossil Fuel Civilization Will Collapse by 2028, and the Bold Economic Plan to Save Life on Earth* (New York: St. Martin's Press, 2020). For a cross-country report of the Green New Deal in the last 12 years, see Greg Carlock and Emily Mangan, 'A Green New Deal: A Progressive Vision for Environmental Sustainability and Economic Stability', Data for Progress, September 2018, available at: http://filesforprogress.org/pdfs/Green_New_Deal.pdf (accessed 15 May 2020). For the EU's concerted sustainability plan under the name of the European Green Deal, see 'European Green Deal', available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019DC0640> (accessed 15 May 2020).
5. Following standard usage, I use henceforth 'IR' for the discipline of International Relations.
6. For a classic statement of scientific uncertainty, see Richard Feynman, 'The Value of Science', *Engineering and Science*, 19, 1955, pp. 13–5.
7. Since 2018, there has been increasing interest in the feedback loops already at play within this scenario. See Jason A. Lowe and Daniel Bernie, 'The Impact of Earth System Feedbacks on Carbon Budgets and Climate', *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 376, 2018, p. 20170263.
8. Piers Forster et al., 'Latest Climate Models Confirm Need for Urgent Mitigation', *Nature Climate Change*, 10, 2020, pp. 7–10.
9. Le Quere et al., 'Temporary Reduction in Daily Global CO₂ Emissions During the COVID-19 Forced Confinement', *Nature Climate Change*, 10, 2020, pp. 647–53, available at: <https://www.nature.com/articles/s41558-020-0797-x> (accessed 16 May 2020).

10. Masson-Delmotte et al. (eds), 'IPCC 2018: Summary Report', pp. 12–3.
11. Masson-Delmotte et al. (eds), 'IPCC 2018: Summary Report', p. 22.
12. See the Green New Deal literature in Note 4.
13. Greta Thunberg, *No One Is Too Small to Make a Difference* (Milton Keynes: Penguin, 2019); Clare Farrell, Alison Green, Sam Knights and William Skeaping (eds), *This Is Not a Drill: An Extinction Rebellion Handbook* (Milton Keynes: Penguin, 2019).
14. Thunberg, *No One Is Too Small*, p. 17.
15. See 'Summary Highlights', Global Carbon Project, available at: <https://www.globalcarbonproject.org/carbonbudget/19/highlights.htm> (accessed 16 May 2020).
16. See, most recently, Yuval N. Harari, *Sapiens: A Brief History of Humankind* (London: Random House, 2014).
17. This is an important theme in twentieth-century continental philosophy's critique of metaphysical thinking. See Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore, MD: Johns Hopkins University Press, 1976).
18. I do not discuss here the concept of the 'Anthropocene' which demarcates a new geological age in which the human species dominates the planet. See, for example, the important work of the international historian Dipesh Chakrabarty that points to the convergence and divergence among geological, evolutionary and industrial timescales under anthropogenic climate change: 'Climate and Capital: On Conjoined Histories', *Critical Inquiry*, 41, 2014, pp. 1–23 and his previous 'The Climate of History: Four Theses', *Critical Inquiry*, 35, 2009, pp. 192–222. My point on the futural complication of the present is related, but different.
19. Ian Goldin, *Development: A Very Short Introduction* (Oxford: Oxford University Press, 2017), p. 85.
20. As argued in the preamble to the UN General Assembly Resolution on the 2030 Agenda for Sustainable Development, available at: <https://sustainabledevelopment.un.org/> (accessed 16 May 2020).
21. Aadita Chaudhury and Audra Mitchell, 'Worlding Beyond "the" "End" of "the World": White Apocalyptic Visions and BIPOC Futurisms', *International Relations*, 34(3), 2020.
22. These points have not been adequately framed yet in contemporary intellectual discourse, given due attention to the poverty-reduction dimension to the sustainable development agenda as well as modernist assumptions still informing that agenda for many economists as, for example, in Jeffrey Sachs, *The Age of Sustainable Development* (New York: Columbia University Press, 2015).
23. Mustapha Kamal Pasha, 'XXX', *International Relations*, 34(3), 2020.
24. For a concerted reflection on this from the perspective of the stickiness of state sovereignty, see Danielle Young, 'Orientation and Re-Orientation: Sovereignty and Environmental Degradation' (PhD Thesis, Aberystwyth University, Aberystwyth, 2018).
25. There is an important symmetry here between climate deniers, on the one hand, and climate fatalists, on the other. Both deny the possibility of change through politics. The intentions behind this denial are of course symmetrically opposed.
26. Max Weber, 'Politics as a Vocation', in David Owen and Tracy B. Strong (eds) *The Vocation Lectures*, trans. Rodney Livingstone (Indianapolis, IN: Hackett, 2004), pp. 32–94.
27. Rifkin, *The Green New Deal*; on this point, see also his previous Jeremy Rifkin, *The Third Industrial Revolution* (Basingstoke: Palgrave Macmillan, 2011).
28. On the last, see Shannon Burrow, 'Climate: Towards a Just Transition, With No Stranded Workers and No Stranded Communities', *OECD Insights*, 23 May 2017, available at: <http://oecdinsights.org/2017/05/23/climate-towards-a-just-transition-with-no-stranded-workers-and-no-stranded-communities/> (accessed 16 May 2020).

29. One of the best books on both the necessity and difficulty of global governance remains Thomas Weiss *Global Governance: Why? What? Whither?* (Cambridge: Polity, 2013). The move to go beyond the state to resolve global problems has been a fundamental tenet of normative and institutional cosmopolitanism in the last 20 years.
30. 'Paris Agreement', available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf (accessed 16 May 2020).
31. The White House, 'U.S.-China Joint Announcement on Climate Change', 11 November 2014, available at: <https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change> (accessed 15 May 2020). I discuss the importance of this bilateral negotiation in Richard Beardsworth, 'Our Political Moment: Political Responsibility and Leadership in a Globalized, Fragmented Age', *Journal of International Relations*, 32(4), 2018, pp. 391–409.
32. The logic of the lesser violence informs the politics of prudence rehearsed in Aristotle's *Politics* and *Nicomachean Ethics*.
33. Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, Revised ed. (London: Verso, 2016).
34. Anatol Lieven, *Climate Change and the Nation State: The Realist Case* (London: Allen Lane, 2020), p. 125.
35. Lieven, *Climate Change and the Nation State*, p. 124.
36. See, for example, Richard Beardsworth, *Cosmopolitanism and International Relations Theory* (Cambridge: Polity, 2011).
37. Lieven, *Climate Change and the Nation State*, p. 143.
38. Lieven, *Climate Change and the Nation State*, p. 141.
39. From the 1990s, the work of the cosmopolitan David Held attempted to account in moral and political terms for these fates. See, for example, his David Held, *Cosmopolitanism: Ideals and Realities* (Cambridge: Polity, 2010).
40. Put differently without state leadership at the global level, the human species will lose the race against climate change. To reorganize geopolitics into 'a collaborative politics of the biosphere era' is a useful normative horizon in this respect (Rifkin, *The Green New Deal: 'New Green Deal Initiatives'*, p. 219, p. 228) just as is the related, immediate intent to make climate change the beef of national foreign policy (see the various contributions in 'The Fire Next Time: How to Prevent a Climate Catastrophe', *Foreign Affairs*, Issue 99/3, May/June 2020). On the cosmopolitan responsibility of states, see Richard Beardsworth et al., *The State and Cosmopolitan Responsibilities* (Oxford: Oxford University Press, 2019).
41. Susan Strange, *The Retreat of the State: The Diffusion of Power in the World Economy* (Cambridge: Cambridge University Press, 1996).
42. The following literature provides an indication of each respective legacy in relation to my argument: (1) Inis Claude, *Power and International Relations* (New York: Random House, 1962); Max Weber, *Politics as a Vocation*, trans. H. Gerth and C. Wright Mills (Philadelphia, PA: Fortress Press, 1965); Bernard Williams, *In the Beginning Was the Deed: Realism and Moralism in Political Argument* (Princeton, NJ: Princeton University Press, 2005); Michael Williams, *The Realist Tradition and the Limits of International Relations* (Cambridge: Cambridge University Press, 2005); (2) the work of Andrew Bacevich, in particular his *The Limits of Power: The End of American Exceptionalism* (New York: Metropolitan Books, 2008); William Scheuerman, *The Realist Case for Global Reform* (Cambridge: Polity Press, 2011); (3) Hedley Bull, 'The Great Irresponsibles? The United States, the Soviet Union and World Order', *International Journal*, 35(3), pp. 437–47; Mlada Bukovansky et al., *Special Responsibilities: Global Problems and American Power* (New York: Cambridge University Press, 2012); Barry Buzan, *From International to World Society? English School Theory*

and the Social Structure of Globalisation (Cambridge: Cambridge University Press; 2004); Robert Jackson, *The Global Covenant: Human Conduct in a World of States* (Oxford: Oxford University Press, 2000); Andrew Linklater and Hidemi Suganami, *The English School of International Relations: A Contemporary Assessment* (Cambridge: Cambridge University Press, 2006); and (4) Peter Katzenstein (ed.), *The Culture of National Security* (New York: Columbia University Press, 1996); Michael Williams, *Culture and Security: Symbolic Power and the Politics of International Security* (New York: Routledge, 2007).

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