Author/s:
Eckersley, R

Title:
Green Theory

Date:
2021

Citation:
Eckersley, R. (2021). Green Theory. Dunne, T (Ed.). Kurki, M (Ed.). Smith, S (Ed.). International Relations Theories: Discipline and Diversity, (5th), pp.263-284. Oxford University Press.

Persistent Link:
https://hdl.handle.net/11343/340412

In Tim Dunne, Milja Kurki and Steve Smith (eds.) *International Relations Theories: Discipline and Diversity,* 5th edition (Oxford University Press, 2021), Ch14, 263-84.

14

Green Theory

Robyn Eckersley

<start feature>

Reader's Guide

This chapter explores the ways in which environmental concerns have influenced International Relations (IR) theory. It provides a brief introduction to the ecological crisis and the emergence of green theorizing in the social sciences and humanities in general, and then tracks the status and impact of environmental issues and green thinking in IR theory. It shows how mainstream IR theories, such as neorealism and neoliberalism, have constructed environmental problems merely as a 'new issue area' that can be approached through pre-existing theoretical frameworks. These approaches are contrasted with critical green IR theories, which challenges the state-centric framework, rationalist analysis, and ecological blindness of orthodox IR theories and offer a range of new environmental interpretations of international justice, democracy, development, modernization, and security. In the

case study, climate change is explored to highlight the diversity of theoretical approaches, including the distinctiveness of green approaches, in understanding global environmental change.

<end feature>

Introduction

Environmental problems have never been a central preoccupation in the discipline of International Relations (IR), which traditionally focused on questions of 'high politics' such as interstate conflict. However, the growing prominence of transboundary and global environmental problems from the 1970s saw 'the environment' emerge as a new issue area, particularly in research on the negotiation and implementation of environmental regimes, but with no adjustments to existing IR theories. If we fast forward to the second decade of the new Millennium, most IR scholars agree that climate change will be one of the major threats to development, human rights and security in the 21st century. However, until recently, there has been very little reflection on what this means for IR theory.

In the closing decades of the twentieth century, a growing body of ecologically focused or 'green' IR theory has emerged that has called into question some of the basic assumptions, units of study, frameworks of analysis, and implicit normative purposes of the discipline of IR. Just as feminist theories emerging from outside IR have exposed the gender blindness of much IR theory (discussed in **Chapter 10**), green IR theories has drawn on ecologically focused research in the humanities, social sciences and natural sciences to expose the ecological myopia of IR theory. These theories have a variety of critical roots, including critical **International political economy** (IPE), poststructuralism, critical constructivism, critical cosmopolitanism, science and technology studies (STS) and, more recently, posthumanism new materialism. Yet they have all challenged the idea that the environment is merely a backdrop upon which the drama of international politics unfolds, along with the ontological separation of human, international and ecological relations. They have also reinterpreted some of the central concepts and discourses in IR and global politics, and challenged traditional understandings of justice,

security, development, and democracy, and offered new interpretations of **environmental justice**, **ecological security**, **sustainable development** and **ecological democracy**.

The complex problem of global warming provides an especially illuminating illustration of the diverse ways in which 'real-world' environmental problems are refracted through different theoretical lenses in the discipline of IR. As we shall see, realists typically dismiss environmental problems as peripheral to the main game of international politics unless the consequences of climate change can be shown to impinge directly on national security. Neoliberals institutionalists, in contrast, are more likely to offer advice on how to adjust incentive structures in the climate change regime to induce interstate cooperation and improve implementation. Critical theorists, however, have criticized these approaches for failing to question social and economic structures of domination (as noted in **Chapters 7** and **8**). Green IR scholars have extended this line of critical inquiry to include neglected areas of environmental domination and marginalization, such as the ecological legacies of colonialism, the domination of nonhuman nature, the growing risks passed on to future generations and the skewed distribution of ecological risks among different social classes, states, and regions. As we shall see, it is this overriding concern with ecological sustainability and environmental justice that unites the many otherwise diverse strands of green IR theory.

This chapter will begin with a very short history of the emergence of the global ecological crisis and the key political responses. This is intended to provide the context for tracking the emergence of green theory in the social sciences and humanities in general, and showing how it has influenced critical IR theories. The chapter also highlights the different ways in which environmental issues have been absorbed by traditional IR theory. The diversity of theoretical approaches, including the distinctiveness of green theories, will be further highlighted through the case study of the evolution of the international climate regime.

A very short history of global environmental politics

Environmental degradation caused by human practices has a long and complex history but remained relatively localized until the period of European global expansion in the 18th century. The colonization of peoples in the 'New World' by the European powers, which began with Christopher Columbus's 'discovery' of the Americas in 1492, was inextricably linked to the colonization of New World environments. This occurred not just through the barrel of the gun and the exploitation of natural resources but also through the introduction of exotic plants, domesticated animals and pathogens (micro-organisms) (Crosby 1986). The industrial revolution, which began in Britain and spread to the rest of the world, saw rapid population growth, the expansion in trade, the global spread of capitalist relations and the broader processes of modernization, all of which have transformed societies, identities and biophysical environments in unprecedented ways. The 'modern ecological crisis'—marked by an exponential increase in the range, scale, and seriousness of environmental problems around the world—is generally understood to have become recognizable in the second half of the twentieth century, in the wake of the spectacular growth in mass production, consumption and human population in the 1950s (International Geosphere-Biosphere Program, 2015). The most recent phase of economic globalization set in train with the rise of neoliberalism in the 1980s has ushered in an intensification of global environmental change. The cumulative effects of these processes have increasingly disconnected and distanced investors, producers, consumers and decision makers from many of the environmental effects of their decisions.

The political response to the 'great acceleration' in environmental impacts in the 1950s emerged in the 1960s, with the 'birth' of the 'modern' environment *movement* as a widespread and persistent social movement that has sought to curtail the environmental 'side effects' of industrialization in both its capitalist and communist forms (although there are many earlier but less widespread manifestations of environmental movements). The 1980s saw the emergence of new green parties at local, national, and regional level, based on the 'four pillars' of green politics: ecological responsibility, social justice, nonviolence, and grass-roots democracy. These pillars have provided a common platform for new green party formations around the world, including in Africa, Latin

America, and Asia. Governments responded to these new political pressures and scientific warnings by expanding their environmental management and protection roles in the 1970s, and by negotiating a growing raft of new environmental treaties to address transboundary and global environmental problems. Some of these treaties have been successful, such as the Montreal Protocol in phasing out the production of ozone depleting substances. However, overall the effects of this growth in environmental multilateralism has been modest when set against the scale of ecological problems. In short, the paradox of environmental multilateralism is that the most serious and irreversible global ecological problems such as biodiversity loss and climate change have worsened as environmental treaty output has increased (Christoff and Eckersley 2013, 168, Stevenson 2013). Explaining this paradox is one of the central puzzles of green IR.

Nearly two decades into the new Millennium, the overall global environmental assessment remains bleak. Biologists have also warned that the planet is experiencing a sixth mass extinction event, with little prospect of recovery through speciation. The Global Assessment of the Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES 2019) found that more than one million species are facing extinction, and that the loss of biodiversity and ecosystem functions will undermine human health and wellbeing. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) declared that 'warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia' and that it is 'extremely likely' that most of this warming is caused by anthropogenic greenhouse gas emissions (IPCC 2014, 2 and 4).

Earth systems scientists have warned that human civilization is drifting out of the Holocene into a new epoch of the Anthropocene in which humans are the dominant 'geological force' shaping the Earth's systems. Whereas over the last 11,500 years the Holocene provided a relatively stable climate conducive to the development of human civilization, the Anthropocene is characterized by unpredictable and possibly abrupt and cataclysmic environmental changes. Earth systems scientists warn that human-wrought changes may be creating

a climate and a biosphere that will become increasingly inhospitable to human civilization unless drastic socioeconomic changes are made to ensure that human activities operate within the 'safe operating space' of our 'planetary boundaries' (e.g. Rockström et al. 2009; Stockholm Resilience Centre 2015).

None of these environmental and Earth systems changes, nor humanity's new status as a 'geological force', were deliberately intended. However, they are no longer unforeseeable. This has prompted environment movements, scientists, and critical voices in the social sciences and humanities to put a break on economic growth, arguing that so-called negative environmental side-effects of growth and modernization threaten to overwhelm the benefits. The first round in this debate occurred in the 1970s with the call for 'limits-to-growth'. Influential publications such as the Club of Rome's *The Limits to Growth* report (Meadows et al. 1972) and *The Ecologist* magazine's 'Blueprint for Survival' (*Ecologist* 1972), offered dire predictions of impending ecological catastrophe unless exponential economic growth was replaced with 'steady-state' economic development. These debates coincided with the first United Nations Stockholm Conference on the Human Environment (1972), which gave official recognition to the environment as a 'global issue'.

By the late 1980s, the limits-to-growth debate, which proved to be politically unpopular, was eclipsed by the more appealing discourse of sustainable development, which had been widely embraced following the publication of *Our Common Future* (the Brundtland Report) by the World Commission on Environment and Development (WCED 1987). The Brundtland Report challenged the idea that environmental protection and economic development stand in a simple zero-sum relationship and it pointed to the opportunities for 'decoupling' economic growth and environmental deterioration by pursuing an environmentally friendly or sustainable development path that met the needs of present generations without sacrificing the needs of future generations. A broad strategy of sustainable development was officially endorsed at the United Nation's Conference on Environment and Development ('the Earth Summit') in Rio de Janiero in 1992. This strategy of integrating environmental and development continues to serve as the dominant meta-discourse of national and international environmental law

and policy in the new Millennium and it is supported by the Sustainable Development Goals (SDGs) (which replaced the Millennium Development Goals). Yet it sustainable development remains weakly implemented, despite efforts by the OECD, IMF, and World Bank to promote 'green growth' as a pathway to sustainable development. Meanwhile, the case for limits to economic growth and freedom of capital has resurfaced in the proposals for a global carbon budget, planetary boundaries, and new discourse of degrowth and post-growth.

From 'environmental issues' to green theory and critical political ecology

Environmental concerns, like feminist concerns, have left their mark on most branches of the social sciences and humanities. However, it was not until the late 1980s that a distinctly 'green' political theory emerged. While the term 'green' is often used to refer simply to environmental concerns, by the early 1990s 'green' had acquired a broader meaning as a new ecologically-inspired political tradition of inquiry that challenged the instrumental posture towards the environment shared by liberalism, socialism and new expressions of conservatism.

In broad outline, the first wave of green political theory mounted a critique of both Western capitalism and Soviet-style communism, both of which were regarded as essentially two different versions of the same overarching ideology of industrialism, despite their differences concerning the respective roles of the market and the state. Liberalism and orthodox Marxism in particular were shown to have developed on the basis of the same cornucopian premises, which assumed that the Earth's natural resource base could support unbridled economic growth (Eckersley 1992). Drawing on radically new environmental philosophies dating from the late 1970s and 1980s, green political theorists problematised the ways in which the construction of the human vs. nonhuman binary was linked with other binaries (man vs. women, reason vs. emotion etc.) to inferiorise, by way of invidious comparison, not only women and Indigenous peoples but also to deprive the nonhuman world of recognition and agency (Plumwood 1993). This critique called question anthropocentrism or human chauvinism—the idea that humans are the apex of evolution, the centre of value in the world, and the only beings that possess moral worth. Rejecting such a posture as arrogant, self-serving, and ecologically foolhardy, many green theorists have

embraced a new ecology-centred or 'ecocentric' philosophy that seeks to acknowledge that all forms of life have their own distinctive modes of being, for their own sake, and not merely for their instrumental value to humans. Environmental governance should be about protecting not only the health and well-being of existing human communities and future generations, but also the larger web of life, made up of nested ecological communities at multiple levels of aggregation (e.g. gene pools, populations, species, ecosystems, and Earth system processes such as the hydrological, nitrogen, phosphorus, and carbon cycles). This perspective embraced complexity theory and drew attention to the limits of humanity's knowledge of the natural world. Green political theorists did not oppose the modernization process: instead they called for more reflexive *ecological* modernization that included a more cautious and critical approach to the assessment of new development proposals, new technologies, and practices of risk assessment in general. For Ulrich Beck, this required transforming systems of 'organised irresponsibility' (chief among which are states and capitalist markets) and replacing them with systems of organized responsibility (Beck 1995, 2). This entailed the development of more cosmopolitan states (Beck 1995) or 'green states' (Eckersley 2004) that recognized complex interdependence and served not only their citizens but also larger communities in space and time.

Some of these green themes—particularly the critique of the ascendancy of instrumental reason—were central to the first generation of Frankfurt school critical theorists (discussed in **Chapter 8**), who were the first Western Marxists to problematize the domination of nature and explore its relationship to the domination of humans. Whereas the mature Marx had adopted a Promethean posture towards nature and welcomed scientific and technological progress, the exploration by Theodor Adorno and Max Horkheimer of the 'dialectic of Enlightenment' pointed to the multiple costs to human and nonhuman nature that accompanied the increasing penetration of instrumental reason into human society and nature (Adorno and Horkheimer 1972). This also echoed Polanyi's critique of the increasing commodification of humans and nature that accompanied the expansion of markets (Polanyi 1944). These themes were further developed (albeit in less pessimistic terms) by

the second generation of Frankfurt school critical theorists, led by Jürgen Habermas. One of Habermas's enduring concerns has been to protect the 'lifeworld' from the march of instrumental rationality by ensuring that it remains subservient to communicative reason. Habermas's ideal of communicative rationality, along with the more general deliberative turn in democratic theory, have served as a major source of inspiration in the development of green democratic theory and critical green explorations of the relationship between risk, science, technology, and society.

In exploring the relationship between environmental justice and environmental democracy, green political theory has increasingly 'transnationalized' the scope of many core political concepts and institutions with environmental problems in mind. This scholarship has produced new, local, transnational, deterritorialized, or global conceptualizations of environmental justice (e.g. Low and Gleeson 1998; Schlosberg 2007), environmental rights (e.g. Hayward 2005), environmental democracy (Doherty and de Geus 1996; Eckersley 2000; Mason 2007; Stevenson and Dryzek 2014), environmental activism (Wapner 1998), environmental citizenship (Barry 1999; Dobson 2003), and green states (e.g. Eckersley 2004; Barry and Eckersley 2005). There has also been an increasing engagement by green political theorists with some of the core debates within normative IR theory, particularly those concerned with securitization, human rights, cosmopolitan and global democracy, transnational civil society, and transnational public spheres (e.g. Stevenson and Dryzek 2014).

Whereas green political theory drew its philosophical inspiration from environmental and ecofeminist philosophy and the Critical theory of the Frankfurt School, and green political economy is informed by ecological economics, Polanyi and neo-Gramscian IPE political economy. Since this green IPE has always had a global focus, it is discussed in detail in the next section.

The normative and IPE branches of green political theory form part of the broader, interdisciplinary field of 'critical political ecology' that emerged in the 1990s, including a distinctive 'third world political ecology' (e.g. Bryant and Bailey 1997), with contributions from geography, development studies, sociology, anthropology,

ecological economics, political science (including political economy) and science and technology studies (STS) (Byrant 2015). This work has focused on the political economy of environmental change, the 'environmentalism of the poor' (e.g. Martínez-Alier, 2002), environmental conflicts, biopolitics, governmentality, particularly the relationship between science and politics in the production of environmental knowledge (e.g. Forsyth 2003, Robbins 2004). Inspired by Foucault, much of this work has concentrated on critique in the form of unmasking and revealing the power-knowledge nexus in the production of categories, new objects of environmental governance and neoliberal environmental subjects. In the new Millennium political ecology has also engaged with posthumanist theory (such as the work of Donna Haraday and Bruno Latour) and new materialist philosophies to produce a more 'capacious historical materialism' (e.g. Coole 2013).

Notwithstanding the theoretical and disciplinary diversity of this work, it shares an explicit (or implicit) concern for environmental justice and a critical focus on power, domination and the relationship between the exploitation of peoples and environments. This work also understands environmental problems and environmental injustices as structurally (rather than accidentally) generated in ways that empower some classes and communities at the expense of others. Environmental *problems* arise because market rationality and states allow unaccountable agents to 'externalize' the environmental costs of their decisions and practices through space and time to innocent third parties. Environmental *injustices* arise because these costs are concentrated in marginal communities. As Schlosberg (2007) has shown, environmental injustices have three dimensions: lack of *recognition* of marginal communities, lack of *participation* by them in policy making (along with lack of accountability towards them), and that this results in a skewed *distribution* of ecological harms and risks to such communities. Rob Nixon has described this process of generating environmental injustices as 'slow violence' because it so often slips under the radar of political attention—unlike sensational environmental disasters that produce immediate harm and a concerted response (Nixon 2011). The fundamental critical and normative task of all green theory is to highlight this problem and work towards reducing the production of ecological risks while

also preventing their unfair externalization and displacement through space and time (e.g. Christoff and Eckersley 2013). These normative arguments have fed into, and helped to shape, a distinctly green branch of normative IR theory concerned with global environmental justice and democratic accountability.

The greening of IR theory

Green IR theory shares many of the characteristics of the new IR theories emerging out of the so-called 'third debate' (also sometimes referred to as the 'fourth debate'; see **Chapter 1**): they are generally critical, problem-oriented, interdisciplinary, and above all unapologetic about their explicit empancipatory orientation. Green IR theory has a distinctive IPE wing that offers an ecological critique of both regime theory and traditional IPE and provides an alternative analysis of the systematic production of ecological problems; and a normative wing that articulates a new ecological ontology and new norms of environmental justice and democratic accountability at all levels of governance as the path to sustainability and security. We begin with the green critique of mainstream IR theories on international regimes waged principally by green IPE, followed by the green IR contribution to governance and security and finally the case study of climate change.

1) Environmental Regimes: Rationalist accounts and green IR alternatives

The two dominant rationalist approaches in IR theory—neorealism and neoliberalism—have approached environmental problems as a 'new issue area' to be absorbed within their pre-existing theoretical frameworks rather than as prompts for critical theoretical reflection and renewal. Neo- or structural realists have been mostly dismissive of the 'low politics' of the environment, and focused instead on security and economic regimes. Environmental issues may, however, achieve the status of high politics insofar as they generate international conflict and/or impinge upon national security. In all cases, states are conceived as like-units in an anarchic system, which generates mistrust, a self-help logic and a preoccupation with relative rather than absolute gains.

Neorealists therefore predict that interstate environmental cooperation is highly unlikely unless it can be induced or coerced by a hegemonic state, and that such cooperation will always remain vulnerable to shifts in the distribution of power (understood as the distribution of material capability). For neorealists such as Kenneth Waltz the 'tragedy of the commons' arises from the anarchic structure of the state system, which is essentially unchanging. The only changing variable in this system is the distribution of material capabilities among states.

Garret Hardin's (1968) parable of the 'tragedy of the commons' brings this rationalist logic to the fore, and also provides a bridge to neoliberal approaches to environmental cooperation. According to the parable, it is more rational for each herder to continue stocking the unowned commons with more cows even with the full knowledge that this would lead to the collective ruin of the commons and the herders. This is because herders do not want others to gain an advantage over them by free riding on the collective benefits provided by their costly unilateral action to protect the commons. Hardin offered two solutions to this tragedy: 'mutual coercion mutually agreed upon' (that is, an agreement to cooperate, backed by sanctions, that provides mutual assurance that everyone would make reciprocal sacrifices) or privatisation of the commons – the latter on the dubious assumption that private property owners would maintain the ecological integrity of their land.

Neoliberals take this focus on mutual agreements seriously and argue that well-designed institutions make a difference because they reduce transaction costs, change incentivesm expand the menu of state choices and provide mutual assurance of reciprocity and thereby produce absolute gains for states. They have conducted extensive empirical work on regimes dealing with transboundary and global environmental problems and provided a range of useful insights. In the last decade, this scholarship has expanded to include the interplay between environmental and other regimes, and broader regime complexes covering particular environmental issue areas, such as the regime complex on climate change (e.g. Keohane and Victor 2011). However, scholars working in this field are unapologetic about their problem-solving and reformist, as distinct from critical, orientation to regimes (Haas et al. 1993: 7). Indeed, one of the US's leading neoliberal institutionalist scholars

on regimes has argued that, while equity considerations are important, scholarship on climate policy should not focus on normative dimensions (Keohane 2016). This has drawn a spirited reply from eighteen leading critical scholars with expertise on the international climate governance in defence of the importance of researching equity and justice issues (Klinsky et al. 2017). They argued that IR scholars have a responsibility to uphold human rights and human wellbeing, that understanding the justice arguments of the parties is crucial to understanding the negotiations, that equity is not always in tension with climate policy, and that equity concerns are central to the trade-offs that are made in reaching international agreements. Green IR theory not only endorses these claims but also argues that mainstream approaches to environmental regimes fail to grapple with the paradox of global environmental multilateralism.

Both the critical normative and political economy wings of green IR theory address this paradox head-on, and in so doing they have challenged the rationalist underpinnings and state-centrism of neorealism and neoliberalism and exposed their failure to even acknowledge, let alone explain, the paradox of environmental multilateralism.

First, all green IR theories take seriously Robert Cox's observation that 'theory is always for someone and for some purpose' (Cox 1981). By bracketing and rendering invisible the global capitalist system (and the economic regimes that support it) that are generating environmental problems, rationalist approaches are criticized for 'normalizing' rather than challenging the environmentally exploitative economic practices that licensed and/or carried out by states. This is also demonstrated in Hardin's parable, which is ahistorical and asocial while also serving to normalise the purely self-serving, consequentialist logic that gives rise to collective ruin. As many critics have noted, Hardin's commons bear no resemblance to the commons of medieval England, which were well-managed on a collective basis until the enclosure movement of the 16th century, which saw the fencing and privatisation of the land that had been communally owned and managed. Far from being the solution to the tragedy of the commons, privatisation has helped to degrade them via the move towards industrialised

agriculture. This account also ignores the many other reasons (beyond the selfish pursuit of private gain) why economic actors and statesdo not contribute to the collective effort to reduce emissions, such as a lack of capacity due to poverty or under-development, or grievances based on injustices. These concerns are invisible in Hardin's parable because there are no rich and poor herders, no differences in historical use of the commons, no scientists researching the commons, no alliances among different herders, and no public discussions and disagreements about what might be a fair allocation of responsibility to protect the commons. To reduce the failure to cooperate to the 'rational calculations' of states obscures the deep disagreements over the allocation of responsibilities, which are intimately related to deep inequalities between states that lead to starkly different understandings of fairness and responsibility and undermine trust and cooperation (Parks and Roberts 2010).

Nor does Hardin's parable leave room for a logic of appropriateness, or for the influence of different political ideologies, or different risk cultures in different jurisdictions in state decisions to cooperate or defect. Yet these other logics, rather than 'rational choice', along with the roles of scientists and transnational environmental advocacy networks, are essential to understanding why regimes have emerged to protect endangered species (such as whales or elephants), the atmosphere, the oceans, or wilderness areas (such as Antarctica). Although neoliberals offer a more plausible account of the evolution of international environmental cooperation that makes room for the role of ideas in state preference formation, they nonetheless still privilege an interest-based explanation as 'given', and understand state preferences as a function of relative environmental vulnerability (which includes relative capacity to adjust to environmental change), and the relative costs of adjustments (e.g. Sprinz and Vaahtoranta 1994).

Second, green IR theorists have added their weight to the critique of narrowly state-centric IR theories. Indeed, green IPE started out by defining itself in opposition to rationalist environmental regime theory, which was seen to deflect attention away from the primary drivers of global ecological degradation and environmental injustices, namely the competitive dynamics of globalizing capitalism rather than the

disagrement and rivalry of states per se (e.g. Paterson 2000; Newell 2012, Katz-Rosene and Paterson 2019). Likewise, Clapp and Heillener (2012) identify neglected aspects of the global political economy that are profoundly shaping the global environment but lie outside the field of regimes, such as the globalisation of financial markets, rising and increasingly volatile commodity prices and the rise of China and India.

Moreover, a single-minded focus on states or 'countries' is seen to be misguided, because it disaggregates global production and consumption in arbitrary ways and, therefore, misidentifies where social power, social responsibility, and the capacity to adjust lie. Transnational corporate capitalism thrives on uneven development and it produces highly uneven impacts on different human communities and ecosystems, with some social classes and communities benefiting much more than others, and at the expense of others, in terms of international flows of money, goods, energy, resources and pollution, wastes, and emissions (Roberts and Parks 2007). Merely singling out those countries that are, say, heavy aggregate polluters ignores the fact that many consumers and financial interests located elsewhere benefit from the pollution without taking any responsibility for the costs. In this respect at least, states are not always the most meaningful units of consumption, and aggregate figures of wealth or pollution in particular states say nothing about the vast disparities of wealth, income, and risks within those states. Instead of allocating blame and responsibility exclusively to particular states, green IR theorists suggest that we should be monitoring and allocating responsibility along transnational commodity chains, from investment, resource extraction, production through to marketing, advertising, retailing, consumption, and disposal (Conca 2000: 149). Indeed, one of the innovations of green IPE is that it focuses as much on global consumption as global investment and production (e.g. Princen et al. 2002). For example, Mathew Paterson (2000) has provided an innovative green neo-Gramscian 'cultural political economy' study that tracks the power of, and ecological shadow cast by, the global automobile industry, which includes a critique of 'car culture'. Dauvergne (2008) tracks the ecological shadows associated with the trade and consumption of automobiles, gasoline, refrigerators, beef, and harp seals.

Other green IPE scholars have built upon Wallerstein's world system theory in developing a new theory of 'unequal ecological exchange' to bring into focus the enduring legacies of colonialism. This theory argues that the global trading system has produced an international division of labour that has enabled overconsumption and improved domestic environments in the Global North alongside underconsumption, environmental load displacement, and degradation of domestic environments in the Global South (e.g. Hornborg 1998; Parks and Roberts 2010). However, the rapidly growing middle classes in major economies such as China and India suggests that the simple North–South axis underpinning this thesis needs to be modified in line with major shifts in the international economic division of labour.

Third, complementing green IPE, green IR theorists focusing on global governance have directed their critical attention to the social agents and social structures that have systematically blocked the negotiation of more rigorous environmental regimes. These critical analyses have been applied not only to ineffective regimes (chief among which is the Tropical Timber Agreement that is dominated by the timber industry and those states involved in the import and export of timber) but also to the ways in which states have managed the interplay between environmental and economic regimes. One prominent concern of green global governance scholars is that international economic regimes, such as the global trading regime, tend to overshadow and undermine many international environmental regimes (e.g. Eckersley 2015). This has sparked an ongoing green debate about the desirability and/or possibility of greening the World Trade Organization (WTO) versus setting up counter-institutions, such as a World Environment Organization, to balance the disciplinary power of the WTO (Biermann and Bauer 2005). However, the stalemate in the environmental negotiations in the WTO has been overshadowed by the growth in preferential trade agreements (PTAs). While some of these PTAs contain environmental provisions, many also include investor-state agreements that enable corporations to sue states that introduce stricter domestic environmental regulation if it affects profitability. Green IR theory has also sought to give voice to new forms of counter-hegemonic resistance to neoliberal economic globalization, from protests

by peasant farmers against bioprospecting for genetic resources on their land to organized consumer boycotts of unsustainable trade practices and fair trade movements.

Finally, green IR theorists have explored the role of nonstate forms of 'deterritorialized' governance, ranging from the transnational 'civil governance' initiatives of environmental nongovernmental organizations, such as the Forest Stewardship Council, which has produced an influential certification scheme for forest products produced from sustainably managed forests (Tollefson et al. 2009), to the private governance practices of industrial and financial corporations (Pattberg 2007). This new scholarship has produced a more complex and layered picture of global environmental governance that includes an examination of new, hybrid, and/or network patterns of authority and accountability that straddle state jurisdictional boundaries or, in some cases, bypass the traditional hierarchical forms of governance typical of nation-states. However, new accountability mechanisms do not improve environmental outcomes if they are geared towards economic rather than environmental goals (e.g. Parks and Kramarz 2019). More generally, the idea of planetary boundaries has spawned new empirical and normative research on Earth Systems Governance (e.g. Dellas et al. 2011; Bierman 2014), including a dedicated new journal by the same name. This new research seeks to grapple with the fragmented (Bierman et al 2009, Pattberg and Wilderberg 2014) and polycentric character of global environmental governance from an interdisciplinary perspective, and to promote more reflexive and accountable ecological governance at all levels.

2) The Environment-Security Nexus

Consistent with their critique of state-centric IR, green IR theorists have also challenged the restrictive understandings of environmental security that are wedded to a narrow national security frame (e.g. Kaplan 1992, Levy 1995) and traditional understandings of territorial defence. Moreover approaches tend to single out particular problems, such as growing natural resource scarcity (particularly water), food scarcity, environmental degradation, and increasing flows of so-called 'ecological refugees' as new sources of insecurity that are likely to

generate increasing conflict and violence both with and between states. However, in posing ecological problems as 'external' threats to national security, they deny the complicity of the security referent – states – in generating or contributing to the systemic production of these problems. More sceptical green IR theorists have argued that framing ecological problems as a security issue in order to raise their status to a matter of 'high politics' could backfire. Instead of leading to a broader and more enlightened security agenda that will also 'green' the military, they suggest that the new discourse of ecological security may end up merely playing on traditional security concerns and possibly facilitating militarized solutions to the sustainability challenge. According to the sceptics, led by Daniel Deudney (1990), environmental threats and military threats are of a different order, and they should therefore be addressed differently. Conceptualizing ecological problems as security problems also betrays the core green values of nonviolence and anti-militarism and deflects attention away from the important task of promoting ecologically sustainable development. Sceptics have also pointed to the dangers of linking environmental deterioration and scarcity with conflict, arguing that it represents a crude form of environmental determinism (e.g. Barnett 2001).

However, Deudney's critique is directed against those who argue for the development of *national* environmental security strategies. It does not address green arguments for a more comprehensive conceptualization of ecological security that seeks to widen the moral referent or unit of analysis of security. Here, green security scholars have focused on human well-being and ecosystem integrity, rather than nation-states, as the more fundamental moral and analytical reference point (e.g. McDonald 2012). These alternative approaches also extend and rework traditional understandings of the sources of insecurity, responses to insecurity, and the conditions for long-term security. Proponents of this more expansive understanding of security argue that it has the potential to undermine traditional ideas of state territorial defence (along with the logic of the zero-sum game presumed by realists) and promote international cooperation towards long-term sustainability. These broader conceptualizations also direct

attention to value-complexity in security policy-making, enable a more critical scrutiny of the role of the military as a source of insecurity, and seek a diversion of military spending to sustainability spending.

Nonetheless, many green critical security scholars are wary of the move to 'securitise' climate change and other environmental problems at the national level (e.g. Floyd 2010, McDonald 2012) and/or are concerned to distinguish between just and unjust forms of securitization (Floyd 2019). While acknowledging that climate change is likely to serve as a 'threat multiplier', green IR theorists question the assumption that climate change and other ecological problems will inevitably lead to conflict. Instead, they have emphasized the potential for shared ecological problems to present peace-making opportunities by providing a basis for conducting collaborative research, stimulating dialogue, building trust, and transcending differences by working towards common environmental goals and strategies (Conca and Dabelko 2002).

<start feature>

Featured book

Matthew Paterson (2000), *Understanding Global Environmental Politics: Domination, Accumulation, Resistance* (London: Palgrave).

Understanding Global Environmental Politics provides an exemplary illustration of the central theoretical preoccupations of green IR theory and an explanationof the paradox of environmental multilateralism. The book provides a fundamental challenge to the basic questions and units of analysis adopted by mainstream (neoliberal institutionalist) regime theorists in the study of global environmental politics. The core question of mainstream inquiry is: 'What affects the possibility of states collaborating successfully to resolve particular transnational environmental problems?' (p. 1). Matthew Paterson argues that this narrow framing of the problem depoliticizes global environmental politics, breaks it down into discrete environmental issues and trends, restricts attention to

international environmental negotiations, and closes off any investigation into the social institutions that systematically produce ecological problems. The origin of global environmental change is seen to lie in an interstate tragedy of the commons and the absence of global political authority, or simply a set of discrete trends that are treated as exogenous to the conceptual inquiry. The anarchic state system is taken for granted and the analysis is confined to the relative versus absolute gains debate, the role of institutions, the behaviour of states, and the influence of nonstate actors on interstate negotiations.

Paterson argues that green IR theory should start with three more fundamental questions: (*i*) Why have ecological problems arisen or how are they produced?; (*ii*) What are the impacts of ecological problems on different social groups?; and (*iii*) What should be the response? In reply to the first of these questions, he offers an interlocking structural explanation. That is, the production of ecological problems is understood as internal to the logic of four main power structures of global politics: the state system, capitalism, scientific knowledge/managerialism, and patriarchy. Building on a neo-Gramscian understanding of power structures as producing social identities and practices, Paterson teases out the different ways in which these four power structures work together to produce ecological problems on a routine basis. In response to the second question, he also highlights the skewed distribution of ecological risks and the distance in space and time between those who benefit from the social practices that produce them, and those who ultimately suffer. In response to the third question, he argues that the appropriate response is to resist these interlocking power structures and build smaller communities and steady-state economies based on egalitarian social principles.

Paterson has also helped to pioneer the study of everyday practices of consumption and production and the social identities that are produced. He illustrates his structural theory through a detailed examination of three case studies that are ‘local everywhere’: the construction of sea defences, driving cars, and eating McDonald’s hamburgers. He shows how each of these local practices simultaneously produces global environmental

problems in a systematic fashion and helps to reproduce state, economic, scientific–technological, and patriarchal power structures.

<end feature>

In sum, green IR theory has self-consciously sought to transcend the state-centric framework of traditional IR theory and offer new critical, analytical, and normative insights into global environmental change. The case study on climate change provides a useful means of illustrating this contribution, from the critique of mainstream IR approaches through to the recommendation of alternative policy prescriptions.

<start feature>

Case study: The challenge of climate change

The problem of human-induced climate change represents one of the most challenging environmental problems confronting humankind. Atmospheric concentrations of greenhouse gases resulting from human activity have increased substantially from pre-industrial times and exponentially since the end of the Second World War. The IPCC's special report on the impacts of global warming of 1.5 °C above pre-industrial levels (IPCC 2018) found that the Earth has already warmed around one degree Celsius since pre-industrial times, and that the carbon budget for holding warming below 1.5 °C is likely to be consumed in the next decade on current emissions trajectories. Scientists predict that if greenhouse gas emissions continue unchecked, the world will face mass extinctions; water, energy, and food scarcity; the loss of coral reefs through coral bleaching; rising sea levels, along with coastal, and infrastructural damage; populations displacement; and human death and suffering from a growing incidence of 'extreme weather'. While the incidence of climate risks is expected to vary geographically, lower-income populations in developing countries are expected to suffer the most. Climate change will also exacerbate existing inequalities in access to basic necessities such as healthcare, adequate and affordable food, and clean water. The inhabitants of small islands and low-lying coastal areas are particularly at

risk from sea-level rise and storm surges, and many low-lying island communities will be forced to leave their territories permanently.

In response to the alarming predictions of the Intergovernmental Panel on Climate Change's (IPCC) First Assessment Report in 1990, states negotiated and signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1992. The basic objective of the agreement is to achieve a 'stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system' (Article 2). The Framework Convention also established basic principles of equitable burden-sharing in Article 3, the most significant of which are that the parties should protect the climate system 'on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities' (hereafter CBDR); that developed countries should take the lead in combating climate change; and that full consideration should be given to the specific needs and special circumstances of developing countries, especially those that are particularly vulnerable to the effects of climate change.

In 1997, the parties negotiated the Kyoto Protocol, which required industrialized countries to commit to legally binding targets and timetables. The grand bargain struck at Kyoto was that developing countries would be exempted from emissions reduction obligations in return for the inclusion of a range of 'flexibility instruments' such as carbon trading and offsetting that would lower the cost of compliance. In 2001, the Bush administration expressly repudiated the Kyoto Protocol on the grounds that the US's Kyoto target would harm the American economy, and that the Protocol was flawed because it did not require major developing countries, such as China, to undertake emission reductions in the same commitment period.

In an effort to draw the USA back into the climate regime and to increase the engagement of the major emitters in the developing world, such as China and India, in 2007 the parties launched a new negotiation track for a Treaty on Long-term Cooperative Action (the LCA treaty) alongside negotiations for a second commitment period to the Kyoto Protocol. However, no treaty was concluded at the Copenhagen meeting in 2009 owing to

major differences between developed and developing countries (especially between the USA and China and India) over burden-sharing and the interpretation of CBDR. The USA insisted that the LCA treaty would be ineffective without significant commitments from all the major emitters, and focused on the need to curb future growth in emissions, particularly in major developing countries. In contrast, China (supported by the G77) insisted that developing countries were under no obligation to accept internationally binding commitments given their significant development needs and the failure of developed countries to fulfil their leadership obligations under the Convention given their greater historical responsibility, capacity, and per capita carbon footprint. Nonetheless, in the final chaotic days of the Copenhagen negotiations, the USA and the newly formed BASIC group (Brazil, South Africa, India, and China) managed to broker a nonbinding political accord, known as the Copenhagen Accord, which invited parties to make voluntary pledges to reduce, or slow the growth of, their emissions by 2020. This political accord based on pledge and review was officially endorsed at the next annual negotiations in Cancún.

However, the negotiations for a LCA treaty were superseded at the Durban meeting in 2011 where the parties agreed to embark on a fresh round of negotiation for a new 'protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties' (UNFCCC 2011). The participation of major developing countries in these negotiations was secured by the EU's commitment to a second commitment period for the Kyoto Protocol from 2013-2020. These negotiations were concluded in 2015 with the signing of the Paris Agreement which adopted a modified voluntary pledge and review system inside a formal treaty.

However, success in Paris was by no means a *fait accompli*. China and India, in particular, had insisted on legal differentiation between developed and developing countries in terms of not only the content of national commitments but also their bindingness (i.e. binding for developed countries and voluntary for developing countries) and the rules of transparency. They also repeatedly reiterated the responsibility of developed countries to lead in mitigation and provide adequate climate finance given their greater historical responsibility for the

emissions that have accumulated in the atmosphere since the industrial revolution. The US, while accepting the responsibility for contributing to climate finance, had traditionally insisted on *legal* symmetry of commitment and an end to the rigid binary between developed and developing countries in view of the rapid growth in aggregate emissions of countries like China and India. However, in the Paris negotiations, the US pursued a lowest common denominator approach by pressing for 'nationally determined contributions' (NDCs) that would not be inscribed in the agreement like the Kyoto targets. In contrast, the EU joined with more climate vulnerable developing countries, such as low-lying island states and the least developed countries, in arguing for legally binding commitments for all parties (but differentiation in terms of content) and rigorous process of *ex ante* scientific and equity review of NDCs before they became inscribed in the agreement. The US proposals proved to be more appealing to major emitters than the EU's.

Paris succeeded not because the parties resolved their disagreements but rather because the they (and above all, major emitters such as the US and China) improvised around disagreement by leaving it to each party to voluntarily decide their NDCs, in accordance with their own interpretation of fairness and CBDR and in light of their national circumstances. The focus was on achieving breadth of participation in the agreement rather than depth of commitment in the first instance, and then developing a process whereby parties would ratchet up their ambition in each cycle of voluntary pledges. Whereas the developed countries' emissions reduction obligations under the Kyoto Protocol obligations were expressed as legally binding commitments with penalties for noncompliance, the Paris Agreement provides no penalties for parties who fail to achieve their NDCs and the review process is designed to be facilitative and non-punitive. The only obligation is that each successive NDC shall be more ambitious than the previous one. Given that this flexible approach clearly suited the major emitters, there was strong push back from many of the more vulnerable parties in the final week of the Paris negotiations. These parties formed a coalition with the EU, called the High Ambition Coalition, which

succeeded in negotiating into the agreement the more stringent temperature target of 1.5 degrees Celsius alongside the previously agreed guardrail of two degrees.

The Trump administration's announcement of its intention to withdraw from the Paris Agreement dealt a major blow to the political momentum arising from the negotiations, despite reaffirmation of commitment by most parties, including China. The Trump administration also moved quickly to dismantle the Obama administration's climate and clean energy initiatives, and aggressively step up US exploitation of fossil fuels. The Obama administration had pledged three billion US dollars in climate finance, and paid over one billion, but the Trump administration cancelled any further payments. Many developing countries' NDCs were dependent on receiving financial assistance to boost their capacity for mitigation and adaptation, so this depletion of funds has weakened the collective mitigation effort, which already fell well short of what is required to hold warming below two degrees.

Despite the significant climate diplomacy of the Obama administration, the hydraulic fracturing or 'fracking' revolution in the US, which began in 1998, enabled accessed to previously unrecoverable reserves of oil and gas. This has seen the US fossil fuel industry expand its investments in new oil and gas projects over the last two decades to the point where US became a net oil exporter, outpacing Saudi Arabia. The US fossil fuel industry has also contributed to organized disinformation campaigns (before and during the period fo the Obama administration) designed to throw doubt on climate science (Dunlop 2013). At the same time, anti-fracking and fossil fuel divestment movements, shareholder activism and climate justice movements have grown in the US and worldwide. Many US sub-national governments, including California, along with cities, businesses and other organisations, have signaled their commitment to the Paris Agreement. .

Given the enormity of the climate change challenge, and the complexity of the issues involved, it is hardly surprising that it has elicited a diversity of theoretical analyses and responses from the discipline of IR. However, the contribution of green IR theory is distinctive in two respects. First, it has offered an alternative analysis and

explanation of the political problem and of the international negotiating process to that of mainstream rationalist approaches. Second, green IR theories have provided critiques of many of the climate policy instruments that have dominated the international negotiations and national climate policy debates.

Alternative green explanations

While the theoretical parsimony of realism served it reasonably well in accounting for the security and economic relations between the superpowers during the Cold War, it has struggled to make sense of international environmental regimes, especially the climate change negotiations. To be sure, great powers like the USA and China played significant roles in shaping the Paris Agreement, but neorealists play down the justice debates and allow no or little room for the consideration of the diversity of domestic and diplomatic responses to climate change. This is because all states, to borrow Kenneth Waltz's phrase, are 'like-units' and are therefore expected to respond in the same way to systemic pressures. This understanding cannot explain the significant variation in negotiating positions and national policy developments in different states. Neorealists cannot explain why all industrialized countries, except the USA, ratified the Kyoto Protocol in the first commitment period, despite the absence of any binding emissions reduction commitments from developing countries. While neorealists can explain laggards (such as the USA), they struggle to explain leaders such as the EU. For example, it cannot explain why the EU and certain others states agreed to a second commitment period to the Kyoto Protocol despite the absence of any commitment from major emitters such as the USA, Japan, Russia, and Canada. This decision defies the realist logic of avoiding relative losses.

Neoliberal institutionalists are able to offer a more plausible account of the outcomes of the climate negotiations based on their analyses of state interests and capacities. However, in focusing their attention on interest-based bargaining among states over the distribution of benefits and burdens of adjustment, neoliberals assume all states have the same national interests, based on cost-benefit calculation, and they thereby side-line the larger ideational, normative and communicative context that shapes the social construction of interests. This

includes the scientific findings of the IPCC, the regime's burden-sharing principles that have framed the negotiations and served as a major point of normative contestation between the USA and China/G77, and significant differences in risk cultures in different states. For example, both the USA and Germany are home to significant research programmes in climate science, yet climate denialism is high in the USA (including in Congress), and much less prominent in Germany (including in the Bundestag). More generally, neoliberal institutionalism cannot explain why climate denialism is mostly concentrated in the Anglosphere, and relatively rare elsewhere, except for certain OPEC (Organization of the Petroleum Exporting Countries) countries like Saudi Arabia. Nor can it explain why many states do not behave as rational, utilitarian actors by balancing the costs of taking action on climate change against their relative vulnerability to climate change. Some laggard states pay little heed to their vulnerability and focus primarily on the short-term costs of action (e.g. Australia), while others focus on the costs of not taking action and are prepared to absorb the costs of climate leadership in the name of climate justice (e.g. Germany). To understand these differences it is necessary to examine how national interests and international role conceptions are constructed at both the national and international levels, which includes different understandings of climate justice. Above all, these accounts do not provide an adequate explanation of why global emissions have grown over the course of three decades of climate negotiations.

Alternative green arguments

Green IR theorists are more overtly normative and critical than neo-realist and neoliberal approaches in their approach to the international climate negotiations and this also shapes their explanations and prescriptions. As we have seen, ecological sustainability and environmental justice are central normative purposes of green IR theory, while attentiveness to inequality, power and resistance are central to their critical analyses of international climate politics. Indeed, green IPE emerged in part out of a critique of the failure of mainstream approaches to environmental regime to look beyond regimes to the globalization of capitalist relations, and to the economic regimes that have facilitated this process. States are not the only units of analysis when it comes to allocating

causal and political responsibility for emissions, and the state based method of accounting for emissions, which focuses on production within state territory, does not adjust for the embodied emissions in imports and exports or attribute any responsibility for consumption. Certain corporations have made larger contributions to global warming than many states, bearing in mind that global warming is caused by the accumulation of greenhouse gases in the atmosphere, and that CO2 can persist in the atmosphere for up to 200 years. Heede (2014) has found that ninety of the largest producers of coal, oil, natural gas and cement over the period 1751 to 2010 are responsible for emitting nearly two-thirds of all known industrial emissions. Just 20 of these producers, made up of investor and state-owned companies, account for 29% of these emissions, led by Chevron, ExxonMobil and Saudi Aramco (Frumhoff et al. 2015). Despite knowing about climate change and its consequences for at least three decades (and bearing in mind that more than half of global CO2 emissions have been emitted since 1988), these producers have not changed their business models and have continued to invest in oil and gas, and to deny, discredit or downplay the significance of climate science (Frumhoff et al. 2015, 164).

Green IPE would also ask why fossil fuels are not mentioned in the Paris Agreement 2015, and only twice in the UNFCCC 1992 in clauses designed to protect fossil fuel dependent states from the adverse effects of the climate policies of other states. For green governance scholars, this highlights the dependency of many states or regions thereof on fossil fuel production, which in some cases takes the form of an 'oil curse' that produces corruption, nepotism and a weakening of democracy.

In their examination of the international climate negotiations, and the scientific research that feeds into the negotiations, green IR research is concerned to expose both substantive and procedural injustices (Okereke 2008), particularly the ways in which the parties that are most affected by the impacts of climate change and have made the least contribution to emissions typically have the weakest diplomatic capacity and negotiating power (Ciplet 2015). Poor communities, particularly in the global South but also in the global North are also less able to

adapt to, or insure against, climate-related damage. Green IR theorists welcome the proliferation of transnational public spheres as key mechanisms for calling to account not only states but also corporations (e.g. Newell 2008). More generally, they welcome the growing array of nonstate actors who attend, criticize, feed into and report on the climate negotiations in ways that overcome some of the limitations of 'executive multilateralism' (e.g. Stevenson and Dryzek 2014).

Many green IR theorists are also critical of market-based instruments as tools of climate policy, as recommended by economists, because they are not well-suited to ensuring a just transition towards a zero-carbon society, although in theory they can be paired with just transition policies.

For example, many green IPE scholars are skeptical of cap-and-trade systems and carbon offsetting schemes, which were central to the Kyoto Protocol and are also allowed under the Paris Agreement, because they enable states and industries that can afford to purchase domestic or international credits or offsets to continue their carbon pollution and avoid or defer the necessary green investment that would reduce their emissions at source. Such mechanisms also allow the continuation of fossil fuel extraction and fail to challenge directly the economic power of the fossil fuel producers (Ciplet et al. 2015). This serves to hollow out the responsibility of rich countries and undermine the UNFCCC norm that developed countries should lead the way in combating climate change by pioneering new, low-carbon technologies and practices. Carbon markets are also criticised for extending the commodification of nature and providing new avenues of accumulation and speculation while failing to address the underlying contradictions between the continuation of fossil fuel production and a safe climate (Katz-Rosene and Paterson 2019, Chapter 5, Stuart el al. 2019). Moreover, many emissions trading schemes have failed to live up to their promise (most notably, the EU carbon market), owing to, among other reasons, over-allocation of permits at the national level and gaming on the part of firms and states.

The jealous defence by states of their 'permanent sovereignty' over their fossil fuel energy resources and the defiance of climate science in the business models of major oil and gas corporations have prompted the

emergence and growth of fossil fuel divestment and 'leave-it-in-the ground' movements, spearheaded by the 350.org movement (see, e.g., McKibben 2012 and http://350.org/) in 2009, and supported by climate justice movements and world-wide school climate strikes in 2019 sparked by Greta Thunberg's protest outside the Swedish Parliament. In May 2019, the UK, Welsh and Irish parliaments responded to growing public mobilization by declaring a climate emergency. The long-term goal of net zero emissions by 2050 and the temperature targets of the Paris Agreement provide significant rallying points for mobilization and action on climate change by non-state actors . It is expected that domestic political struggles over enhanced action on climate change will become more intense as the existential impacts of climate change become more palpable

Case study questions

1. In what ways does the green IR analysis of the climate change negotiations differ from mainstream approaches?
2. Why is green IPE ambivalent about the potential of states and capitalist markets to address climate change?

<end feature>

Conclusion

Green IR theory, informed by the broader field of critical political ecology, has undergone significant development in the last two decades to the point where it is recognized as a significant new stream of critical IR theory. Despite the diversity of voices in this field they all unite around a commitment to ecological sustainability and environmental justice. However, green IR theory is not without its internal tensions.

First, there remain internal divisions over whether capitalist economies or the state system are indeed capable of becoming ecologically reflexive to the degree required to avert serious and irreversible global environmental change. For example, most green IPE scholars argue that the state's functional dependence on capital

accumulation severely compromises its ability to orchestrate ecological sustainability (e.g. Katz-Rosene and Paterson 2017). These differences have also prompted many green governance scholars to focus on polycentric climate governance while others continue to focus their critical attention on states and traditional forms of interstate cooperation. The latter, while conceding that the challenges are significant, maintain that states still remain the pre-eminent governance institution with the greatest potential to orchestrate decarbonisation and sustainability in general by disciplining and redefining capitalist markets, and managing distributional conflicts and the transition process to avoid or minimize environmental injustice. These scholars have explored how states, both individually and collectively, might be pressed to practice more reflexive ecological governance (e.g. Barry and Eckersley 2005; Bierman 2018).

Second, new engagements by green IR scholars with posthumanist and new materialist philosophies (e.g. Cudworth and Hobden 2011; Coole 2013; Eroukhmanoff and Harker 2017; Cudworth, Hobden and Kavalski 2018) have expanded the philosophical compass of the field theory while also generating spirited critiques by green IPE scholars (e.g. Malm 2018). There are also lively internal debates with green IR theory about the virtues of cosmopolitanism approaches to environmental governance versus more local and situated approaches to sustainability.

Looking to the future, the Green IR critique of **positivism** raises some new and interesting challenges for IR theory in general arising from their repositioning of humanity in Earth's history. First, if the distinctive focus of IR is relations *between* political communities (principally but not exclusively between nation-states), then green IR demands that 'communities' must be reconceived as socio-ecological communities and 'relations' (including exchanges) between communities need to include ecological relations and flows. This includes examining the dialectical relationship between how human practices and socio-economic systems reshape environments and Earth systems *and* how local environmental degradation and Earth systems changes, like climate change, will reshape the international system. In their book *Thinking Ecologically about the Global Political Economy,*

Katz-Rosene and Paterson argue that the ecological dimensions of IPE should no longer be approached merely as a *subfield* of IPE, but rather as an essential component of IPE (2019, 7). Likewise, just as the liberal international order has played a major role in producing global environmental change, global environmental change will increasingly reshape the new international order that is emerging.

Second, positivist accounts of necessary and sufficient causation assume a linear reality, yet Earth systems are complex, non-linear and dynamical systems *par excellence*, with different and unknowable tipping points that are expected to produce major social and economic reverberations. IR theory has failed to predict momentous events like the end of the Cold War. We can therefore expect international politics in the Anthropocene to be much less 'knowable' and even more unpredictable than the past. Nonetheless, in the case of climate change, the various scenarios modelled by the IPCC based on different emissions reduction trajectories make it clear that global emissions reductions must be steep and dramatic in the near term if the dangerous impacts of climate change are to be minimised. Whereas the 1987 Brundtland report had provided a reassuring modernist narrative that progress is still possible via sustainable development, the new context of the Anthropocene suggests a new narrative of ambivalence but also an openness to surprises (Harrington 2016; Eckersley 2017).

Finally, the Anthropocene raise challenges for all IR theories about political responsibility for the global ecological crisis. This chapter has shown that green IR theory has a clear line of inquiry in response to this question. If humans have become a geological force in reshaping Earth systems in profoundly harmful ways, then the political questions that must be asked are: why and how has this happened and which communities, classes, states and regions have benefited most, and which have been made most vulnerable? As Malm and Hornborg (2014) have pointed out, the causes of global environmental change are not merely anthropogenic but also sociogenic. Thus far, capitalism is proving to be more resilient than democracy in democratic states and it is an open question whether states and the shifting international order will be able to rise to the challenge.

Questions

1. What is the paradox of environmental multilateralism?
2. What normative and analytical criticisms have green IR theorists levelled against mainstream rationalist approaches (neorealism and neoliberalism)?
3. What does green IR theory have in common with critical theory and constructivism? How does it differ?
4. How would you describe the different preoccupations of green normative IR theory and green IPE? What unites these two strands of green IR theory?
5. Why are green IR theorists internally divided over the wisdom of conceptualizing ecological problems in the language of security?
6. What consequences do green theory and ecological concerns have for the concept of sovereignty and the role of the state?

Further reading

Christoff, P. and Eckersley, R. (2013), *Globalization and the Environment* (Lanham, MD: Rowman and Littlefield).

Provides a long history and critical analysis of the relationship between modernization, globalization, and environmental change from the early modern period to the contemporary neoliberal era, and examines the challenges of environmental governance.

Clapp, J. and Dauvergne, P. (2011), *Paths to a Green World: The Political Economy of the Global Environment* (Cambridge, MA: MIT Press).

Provides an excellent theoretical and practical introduction to the relationship between economic globalization and environmental degradation.

Dauvergne, P. (2008), *The Shadows of Consumption: Consequences for the Global Environment* (Cambridge, MA: MIT Press).

Maps the hidden social and ecological costs of globalization and growing consumption.

Eckersley, R. (2004), *The Green State: Rethinking Democracy and Sovereignty* (Cambridge, MA: MIT Press).

Develops a theory of the green state (and state system) from a critical constructivist perspective.

Gale, F. P. and M'Gonigle, R. M. (eds) (2000), *Nature, Production, Power: Towards an Ecological Political Economy* (Cheltenham: Edward Elgar).

An edited collection providing a good illustration of innovative research in green political economy.

Katz-Rosene, Ryan and Paterson, Matthew. 2019. *Thinking Ecologically about the Global Political Economy* (Abingdon, UK: Routledge/Taylor and Francis).

Develops an account of International Political Economy that is thoroughly ecological in showing how socio-economic systems reshape environments and how global environmental change is reshaping socio-economic systems.

LaFerrière, E. and Stoett, P. J. (1999), *International Relations Theory and Ecological Thought: Towards a Synthesis* (London: Routledge).

The first book to explore the intersection of IR theory and green political thought.

LaFerrière, E. and Stoett, P. J. (2006), *International Ecopolitical Theory: Critical Approaches* (Vancouver: UBC Press).

Provides a collection of essays that showcase critical theoretical approaches to global environmental politics that challenge managerial and economistic approaches to sustainable development.

McDonald, M. (2011), *Security, the Environment and Emancipation: Contestation over Environmental Change* (London: Routledge).

Provides an examination of the role of emancipation in the study and practice of security, focusing on global environmental change; includes a critical examination of the multiple dimensions of environmental security.

Newell, P. (2012), *Globalization and the Environment: Capitalism, Ecology and Power* (Cambridge: Polity Press).

Provides a critical examination of the relationship between economic globalization (focusing on trade, production, and finance) and environmental change, with a particular emphasis on how relations of power shape whether and how globalization is managed in sustainable ways.

Nixon, R. (2011), *Slow Violence and the Environmentalism of the Poor* (Cambridge, MA. Harvard University Press).

Highlights the lack of political attention given to the 'attritional lethality' or 'slow violence' inflicted on vulnerable communities and ecosystems in the Global South through the failure to curb environmental problems such as deforestation, climate change, oil spills, and toxic drift.

Okereke, C. (2008) *Global Justice and Neoliberal Environmental Governance* (London: Routledge).

Argues that, although moral norms shape environmental negotiations more than regime theorists have acknowledged, neoliberal understandings of justice (based on mutual advantage, or upholding property rights) have dominated international environmental agreements more than environmental alternatives.

O'Neil, K. (2009), *The Environment and International Relations* (Cambridge: Cambridge University Press).

Highlights the strengths and limitations of traditional IR in understanding global environmental governance.

Paterson, M. (2000), *Understanding Global Environmental Politics: Domination, Accumulation, Resistance* (London: Palgrave).

Provides a pioneering illustration of a green neo-Gramscian approach to understanding global environmental change.

Princen, T., Maniates, M., and Conca, K. (eds) (2002), *Confronting Consumption* (Cambridge, MA: MIT Press).

Provides a path-breaking examination of the problem of overconsumption.

Schlosberg, D. (2007), *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford: Oxford University Press).

Provides a comprehensive analysis of the theory and practice of environmental justice that includes distributive justice, recognition, participation, and capabilities.

Timmons Roberts, J. and Parks, B. C. (2007), *A Climate of Injustice: Global Inequality, North–South Politics, and Climate Policy* (Cambridge, MA: MIT Press).

Highlights how inequality gives rise to disagreements between rich and poor countries over how to distribute the burden of climate mitigation, which hampers international cooperation; they also provide new measures of climate inequality.

Important websites

Intergovernmental Panel on Climate Change. Provides access to the latest Assessment Reports, including synthesis reports and summary reports for policy-makers; the reports are based on a synthesis of peer-reviewed research on climate change. **http://www.ipcc.ch/**

International Biosphere Geosphere Program (IGBP): The Great Acceleration. The Global Change tab of the IGBP site provides scientific knowledge on changes in Earth Systems to guide societies in environmental policy making, including on the Anthropocene and the Great Acceleration. **http://www.igbp.net**

Institute for Environmental Security. An international nonprofit nongovernmental organization established in 2002 in The Hague to increase political attention to environmental security as a means to help safeguard essential conditions for peace and sustainable development. **http://www.envirosecurity.org**

Stockholm Resilience Centre. Provides the latest updates on research on planetary boundaries. **http://www.stockholmresilience.org**

Sustainable Development Knowledge Platform. Provides information on the Sustainable Development Goals. **https://sustainabledevelopment.un.org**

Third World Network. An independent nonprofit international network of organizations and individuals involved in issues relating to development, the Third World, and North–South issues, with a comprehensive environment link. **http://www.twn.my/**

Notes

<start feature>

<Insert ORC icon>*Visit the Online Resource Centre that accompanies this book for lots of interesting additional material.* **www.oxfordtextbooks.co.uk/orc/dunne4e/**

<end feature>