INTRODUCTION

Climate change is unprecedented with respect to scale, severity and complexity. Like no other environmental problem it unsettles contemporary society and calls into question the ways in which we collectively have come to organize and conduct social and political life in the twenty-first century. The elevated concentrations of greenhouse gases in the atmosphere are intimately linked to the rise of industrial capitalism and are today fueled by globalized patterns of production, consumption and trade. While the causes and effects of human-induced climate change are local and directly tied to everyday urban and rural life, the biogeochemical drivers of a changing climate are global and stretched out over long time periods. Given these complicated spatial and temporal dynamics, climate change has proven inherently difficult to govern. As the collective action problem par excellence, climate change has since the late 1980s spurred a plethora of state-led, private and hybrid governance activities across multiple jurisdictional, administrative and political levels. Although these activities currently are intensifying in scale and scope, we are regularly told that the political response to climate change remains inadequate. In October 2014, the Intergovernmental Panel on Climate Change (IPCC) reported that global greenhouse gas emissions continue to increase, global mean temperatures are on the rise, glacial ice caps are melting and weather extremes are more frequent (IPCC 2014). Instead of limiting global mean warming to 2°C above pre-industrial levels—a goal that today is endorsed by most political leaders—we may very well be heading towards a 4° or even 6°C world (IPCC 2014).

In this Handbook we have brought together contributions from more than 50 of the world’s leading scholars of climate governance to take stock of the political response to climate change. We do so in a time when society is increasingly ‘climate-challenged’ (Dryzek et al. 2013) and diplomatic efforts to craft a forceful global response are intensifying. While none of the authors included in this Handbook question the severity or magnitude of the climate problem, they disagree on how to make political sense of this problem and how to devise effective and just solutions. Mirroring the heterogeneous and evolving practice of climate governance, this volume mobilizes a wide range of disciplinary and theoretical resources to discuss how the ‘wicked problem’ of climate change (Rittel and Webber 1973) is best governed. These diverse scholarly approaches range from grand theorizing to close empirical studies of micro-political practices, and span the ideational and the material, the historical and the contemporary, the normative, empirical and the critical. No single volume can of course represent a synthesis of a rich and heterogeneous field in the making. The scholarship on climate governance has expanded dramatically in recent years and now engages with numerous theoretical traditions and
approaches. In order to offer a taste of this diversity, we have asked the authors in this Handbook to provide snapshots of recent debates in the literature, to present their arguments and to provoke debate. These scholarly interventions are organized in seven subsections that reflect the multitude of political sites, processes, agents, practices and ideals that currently preoccupy academics in this field. We believe that the resulting collection of chapters represents the state-of-the-art and most recent thinking in the rich and expanding scholarship on climate politics and governance.

To set the stage for the contributions that follow, this introductory chapter starts by assessing the practice of climate governance following the 2009 United Nations (UN) climate conference in Copenhagen. We use this infamous UN summit as the reference point for our joint reflections and as the stepping stone for the new era of climate politics that is currently unfolding. When the final pieces of this volume are coming together, the outcomes of the next UN climate summit in Paris in December 2015 are still unknown. While the intellectual resources mobilized in the Handbook do not allow us to predict the precise outcomes of this high level meeting, the trajectory of climate governance post-Copenhagen gives us good reason to expect a decentralized loose framework agreement far from the universal targets and timetables approach of its predecessor—the Kyoto Protocol.

CLIMATE GOVERNANCE IN THE POST-COPENHAGEN ERA

The 2009 UN climate conference in Copenhagen is often represented as a turning point not only for international climate diplomacy, but also for the scholarship on climate politics and governance. Acting as the culmination of two years of intense negotiations, this 15th Conference of the Parties (COP 15) to the United Nations Framework Convention on Climate Change (UNFCCC) was expected to form the basis for a comprehensive and legally binding treaty after the expiry of the Kyoto Protocol’s first commitment period by the end of December 2012. However, to that end the Copenhagen conference fell short. Early drafts including global emission cuts of 50–80 percent by 2050 were abandoned during the last days of the meeting and COP 15 instead ended up ‘taking note’ of a three-page non-binding political agreement—the Copenhagen Accord—which was hammered out by a group of 28 heads of state in the last 24 hours of extended negotiations (Bodansky 2010; Dimitrov 2010, this volume).

Many scholars of international relations (IR) have interpreted this ‘Copenhagen failure’ as a legitimacy crisis for multilateralism in general and as a crisis in confidence for UN climate diplomacy in particular (Bäckstrand 2011; Hoffmann 2011; Victor 2011). The Copenhagen Accord signifies the rise of a new fragmented global climate order where a system of voluntary carbon reduction pledges submitted by states has replaced binding targets and timetables negotiated under the UN framework. Hence, the top-down universal approach to global climate governance—modeled on the Kyoto Protocol—has after the Copenhagen summit given way for a fragmented and decentralized global climate policy architecture (Aldy and Stavins 2010, Zelli and van Asselt this volume). In this new political landscape, climate governance appears more hybrid, complex and dispersed. As demonstrated by the collection of chapters in this Handbook, post-Copenhagen climate politics has turned into virtual laboratory for novel ‘governance experiments’ (Hoffmann 2011) emerging in the absence of, or in parallel to, traditional state regulation.
As political leaders now are preparing for the 2015 UN climate conference in Paris where a new global climate treaty for the post-2020 era is expected to be signed, the primacy of intergovernmental regulation is challenged along with the conceptual frameworks used to understand climate politics. The time when the state was the privileged unit of analysis and only locus of climate politics has passed and given way to new sites of power, authority and governance that cut across national boundaries and conventional divisions between public and private domains (Stripple and Bulkeley 2014). The scholarship on climate governance has played a central role in this recasting of climate change as a political problem. By drawing attention to the dense and multidirectional interactions between state and non-state sectors, work in this field has dislodged political authority from the sovereign state and invited us to consider the changing form and institutionalization of climate politics (Bulkeley and Newell 2010; Bernauer 2013; Dryzek et al. 2011). In this Handbook we cast a broad net to capture the multiple, and sometimes conflicting, empirical, normative and critical engagements with this reordered world. We begin our overview by turning to the various theoretical perspectives they draw upon.

THEORIZING CLIMATE GOVERNANCE

Needless to say, there is no unified theory or methodology of climate governance. The academic study of climate politics and governance borrows widely from multiple disciplines including political science, law, economics, sociology and geography. While this heterogeneous scholarship cannot easily be captured or contained, this Handbook suggests that the terminology it draws upon owes much to trends in IR theory. In the latter, global governance emerged as a new research agenda in the 1990s and offered a powerful way to think through the character of global life at the end of the twentieth century (Latham 1999). The idea that the political world is undergoing profound change is at the heart of the global governance scholarship (Rosenau and Czempiel 1992; Rosenau 2009). Following the end of the Cold War, the globalization of economies, the advent of social movements and the growth of intergovernmental and non-governmental organizations, literature in this field has described a world where governance no longer is confined to governments and political rule is more multilayered, polycentric and networked.

The conceptual language of global governance was adopted by scholars of international climate politics in the new millennium and emerges as a response to realist arguments that national self-interests and entrenched norms of sovereignty are inevitable drivers of dangerous climate change. For realists, the climate threat epitomizes Garret Hardin’s (1968) parable of the tragedy of the commons, where greenhouse gas emissions by almost 200 states have resulted in an over-usage of the atmospheric commons. Climate change thus represents the ultimate global collective action problem associated with strong asymmetries of costs and benefits for climate action, free-riding and differentiated climate impacts spread across developing and developed states (Andresen this volume; Barett 2005). Whereas realists have used the disjuncture between individual state interests and those of the common good to explain the impossibility of effective international climate cooperation (Vogler this volume), liberal institutionalist scholars are more optimistic about the diplomatic efforts to formulate a global response to climate change. Entrenched state interests and political gridlock remain important themes in this parallel scholarship
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(Victor 2011). However, work in this field has also demonstrated how international institutions, norms and transnational activist networks can facilitate flows of information, build trust, identify points of agreement and hereby forge international climate policy coordination (Siebenhüner, Dimitrov, Betsill this volume). The international climate regime, organized around the UNFCCC and the Kyoto Protocol, represents the ultimate example of such structured patterns of cooperation and was for a long time the focal point for political analyses of climate change.

With the adoption of the global governance terminology, the theorization of international climate cooperation has become less state-centric and also extended beyond the international climate regime (Okereke et al. 2009; Bulkeley and Newell 2010). Biermann (2006) offers two broad categories of meaning for the global governance concept that are helpful to illustrate directions in the climate governance scholarship. Empirically, the concept speaks to important political transformations of our times. It describes a world that no longer is defined by nation-states, but increasingly made up by dense and multidirectional forms of cooperation between public and private sectors. In this emerging global governance system, climate politics is no longer a strictly intergovernmental affair (if it ever was). Climate governance has been rescaled to include a variety of actors and is characterized by complex layers of rule-making and implementation that cut across subnational, national, international and transnational levels (Biermann 2006). Many chapters included in this Handbook use this empirical or phenomenological notion of the term ‘governance’ to make sense of the changing forms of political rule that characterize the post Copenhagen era. By drawing attention to the increasing involvement of private and civil society actors in climate rule-making and implementation, work in this field has opened the study of climate politics to disciplinary fields beyond IR theory and hereby brought new analytical resources to bear on the challenges of collective climate action.

In parallel to this empirical interest in the multiple and dispersed processes of climate governance, Biermann (2006) reminds us that global governance also has a strong normative connotation. Wedded in a language of collective problem-solving and partnering, the governance concept has been advanced as a political program for the cooperative establishment, promotion and restoration of order in an increasingly disaggregated, pluralized and interdependent world (Rosenau 2009). In the field of climate politics, this normative project typically involves calls for state orchestration of a complex and fragmented climate regime (Zelli and van Asselt this volume), the creation of more legitimate forms of UN climate diplomacy (Eckersley, Stevenson this volume), the development of new financial mechanisms for climate adaptation and low carbon development strategies (Linnér and Rayner this volume) and more transparent forms of international climate expertise (Beck this volume). Whereas most authors in this Handbook demonstrate a normative commitment to forceful collective climate action, the volume also includes many chapters that engage with climate governance in critical terms. Whether grounded in neo-Gramscian, Foucauldian or Habermasian critique, these critical approaches seek to reintroduce neglected dimensions of power, politics and justice to the study of climate governance. Of central concern are the political drivers and effects of the emerging climate governance order. Some chapters in this Handbook draw attention to the macro-political dynamics of capitalism, neo-colonialism and patriarchy to examine who wins and who loses in an increasingly decentralized, privatized and liberalized climate policy architecture (Newell, Kronsell, Ciplet et al., Gupta, Lipschutz this volume).
Other chapters critically interrogate the micro-political processes of knowledge-making (Jasanoff, Forsyth, Hulme this volume), environmental monitoring (Lovell, Turnhout et al. this volume) or individual self-regulation (e.g. Stripple and Bulkeley this volume) at work in the everyday governance of climate change.

In the first part of the Handbook, we present a number of theoretical inroads to this rich and evolving scholarship. The chapters span different disciplinary traditions and demonstrate the diverse ways in which climate governance currently is theorized as a matter for the political and social sciences. In the following we map some of the empirical, normative and critical claims emerging from this scholarship. We do so by following the subsections of this Handbook.

PROCESSES AND SITES OF CLIMATE GOVERNANCE

A central focus for many chapters in this Handbook is the complex and unruly nature of contemporary climate governance. Processes of rule-making, standard-setting and implementation that previously were in the hands of governments are today contracted out to corporate, civil society and local government actors in ways that make collective climate action seem more heterogeneous and dispersed. One of the values of the governance perspective is its capacity to provide a framework for understanding these changing forms of political rule (Stoker 1998). By advancing concepts such as ‘regime complexes’ (Keohane and Victor 2011), ‘institutional fragmentation’ (Zelli and van Asselt this volume), ‘climate anarchy’ (Dyer 2014) and ‘orchestration’ (Abbott 2012), work in this field is now providing a language and common frame of reference through which a complex institutional landscape can be studied and explained. The second part of this Handbook includes chapters that draw upon this language to map and critically interrogate the climate governance order that has evolved after the Copenhagen conference in 2009.

Many of these contributions focus on the structural dynamics that drive and define UN climate diplomacy. Gupta (this volume) refers to entrenched colonial patterns to explain the multilateral crisis that erupted in the Bella Conference Centre in Copenhagen in December 2009. The US rejection of the Kyoto Protocol eight years earlier intensified the disparity between the world’s rich and the poor countries and created a deep mistrust that could not be bridged despite intense rounds of negotiations. Given the persistent North–South asymmetries in historic greenhouse gas emissions and in levels of climate vulnerability (Forsyth this volume), efforts to forge a new global climate treaty were doomed to fail. In contrast, Ciplet et al. (this volume) suggest that the Copenhagen summit marked a geopolitical shift where ‘major economies’ and ‘major emitters’ emerged as key sites of climate governance. A new climate (dis)order defined by the rise of China, the fragmentation of G77 and the decline of European Union (EU) leadership was consolidated. In this altered ‘powerscape’, new political coalitions have emerged and the firm distinction between developed and developing countries inherited from the Berlin Mandate is less pronounced. A handful of developing countries have now surpassed the North in greenhouse gas emissions and are thus increasingly part of the climate problem and its solution (Ciplet et al. this volume). In parallel to this development, the familiar top-down approach to UN climate diplomacy organized around binding and absolute emissions reduction targets has given way to a political order that invites states to make...
unilateral and voluntary mitigation commitments. The Intended Nationally Determined Contributions (INDCs) adopted by the 194 parties at the UN Lima Climate Conference in 2014 reflect this bottom-up process of voluntary national pledging that will form the basis of the Paris climate agreement.

McGee (this volume) interprets this post-Copenhagen shift towards voluntary and non-binding climate policy schemes as an effect of the normative dominance of liberal environmentalism. Following Bernstein’s (2001) seminal work on the topic, McGee describes liberal environmentalism as a set of norms that predicate international environmental protection on the promotion and maintenance of a liberal economic order. In a world dominated by liberal environmentalism, global responses to climate change will prioritize the creation and expansion minilateral carbon clubs over mandatory restrictions on fossil fuels by large emitters. McGee invites scholars to pay closer critical attention to the subtle ways in which an increasingly decentralized climate regime undermines effective and just collective climate action. Dimitrov (this volume), by contrast, paints the normative development in brighter colors. Even though the Copenhagen Accord was a weak outcome and opened the door for a bottom-up approach to international climate policy, he argues that UN climate diplomacy has been successful in changing state interests in greener directions. By illustrating the multiple economic benefits of emission reductions, including financial savings, increased economic competitiveness and job creation, UN climate diplomacy has fostered the development of domestic climate activities even in the absence of a formal treaty.

In a similar vein, Dingwerth and Green (this volume) outline how the gridlocked multilateral process has spurred a Cambrian explosion in transnational climate governance activities including regional and national carbon markets, corporate carbon disclosure initiatives and transnational city networks. They describe the world of transnational climate governance as a complex political sphere where groups of actors—business, cities, non-governmental organizations (NGOs)—pursue their individual goals with little if any central coordination. This à la carte approach to climate regulation has indeed turned post-Copenhagen climate politics messier, more diffuse, dynamic and experimental (Hoffmann 2011). However, transnational climate governance is not about the disappearance of rules and order. What appears striking is instead the increasing scope and breadth of carbon management activities across all sectors of society. Although there are examples of continued domestic resistance against ambitious climate mitigation schemes, particularly in the US where climate skepticism is on the rise (Grundmann this volume), the chapters in this section invite us to consider the changing forms of political rule in the post-Copenhagen era. Climate change is not governed less, but differently through complex and hybrid patchworks of regulatory activity that entangle state and non-state sectors in intriguing advanced-liberal ways.

STATE AND NON-STATE AGENTS OF CLIMATE GOVERNANCE

The changing role of the nation-state is a core theme in scholarly assessments of climate governance after Copenhagen. While work in this field was quick to declare the demise of UN mega-multilateralism and to turn attention to novel forms of climate action emerging beyond the international climate regime (Hoffmann 2011; Andonova et al. 2009;
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Bulkeley et al. 2014; Okereke et al. 2009), the state has continued to loom large in this literature. Few chapters included in this Handbook speak of a state in decline or retreat. With the emergence of a more complex climate regime, we have instead seen a new wave of scholarship aiming to revisit the role of the state in climate governance (Bäckstrand and Kronsell 2015; Duit 2014). The third part of this Handbook includes a collection of chapters that seek to understand developments within four of the world’s greenhouse giants—China, the USA, the EU and Brazil (Parker and Karlsson, Stalley, Bang, Viola and Hochstetler, Dupont and Oberthür this volume). A central feature in all these chapters is the close links between states’ domestic dynamics and their bargaining strategies in the UNFCCC process, consistent with scholarship on the domestic sources of international agreements (Bang et al. 2015; deSombre 2010). Rather than representing the state as a unitary actor divorced from wider societal forces, these chapters illustrate how the state’s interests and policy priorities develop and change in close interplay with domestic institutions, actors and policy processes.

The fourth part of this Handbook links these dynamic forms of climate statehood to the manifold climate activities and initiatives among non-state actors and networks. An important finding from these chapters is that private and voluntary sectors increasingly are involved in agenda-setting, rule-making and implementation. Betsill (this volume) makes a useful distinction between three overlapping roles played by NGOs in post-Copenhagen climate governance that speak to several non-state actor groups examined in this section. First, Betsill finds that many NGOs remain activists and seek to mobilize social change beyond the state. By engaging in disruptive protests, blockades, walkouts, meeting boycotts and direct actions, civic groups such as 350.org and Climate Justice Now! seek to raise public concern about climate change and to challenge the slow pace of government action (Fisher and Galli this volume). In parallel to these outsider tactics, Betsill suggests that NGOs frequently take on the role as diplomats in conjunction with UN climate meetings. By exchanging information, making formal statements on specific proposals and providing policy advice, non-state agents work directly with government representatives to craft climate policy (see, for instance, Beck this volume). Finally, Betsill suggests that non-state actors have become governors in their own right in the post-Copenhagen era. As global governors, NGOs, business groups and city networks partner with the state in the quest for solutions to climate change.

In some cases, these new forms of non-state led governance arise in an attempt to fill the regulatory and implementation deficits in UN climate diplomacy (Bulkeley et al. 2014). More often, however, non-state climate initiatives seem to evolve in tandem with government regulation. Okereke (this volume), for instance, illustrates how corporate carbon reporting schemes came about in direct response to the adoption of the Kyoto Protocol in December 1997, which sent a clear signal to industry that governments will act to limit climate change in their respective jurisdictions. Klintman and Boström (this volume), in turn, examine how voluntary carbon labeling and boycotting campaigns have aligned individual consumption patterns with public climate goals. Whereas many corporate and civic actors have engaged with climate change without reliance on the formal resources of government, the rise of non-state climate action does not seem to denote the hollowing out of the nation-state. On the contrary, the chapters in this section point to intricate and complex forms of public–private collaboration. In the post-Copenhagen era, the nation-state and the state system seem to be enmeshed in cross-cutting webs of
governance that blur familiar boundaries and responsibilities between public and private sectors.

**MODES AND TECHNOLOGIES OF CLIMATE GOVERNANCE**

The fifth part of this *Handbook* pays close attention to the practical ways by which climate governance is accomplished in the post-Copenhagen era. This collection of chapters engages with a diversity of modes and technologies including emission trading, low carbon economies, climate policy integration and multi-stakeholder governance. These ‘climate policy experiments’ (Hoffmann 2011) reflect the exponential growth of market-based, civil society and public–private tools of climate governance at various jurisdictional levels from the local to the global (Bulkeley and Newell 2010). Mirroring a larger trend in environmental politics, climate governance post-Copenhagen seems to be defined by a shift from ‘hard’, hierarchical steering to ‘soft’, non-hierarchical and collaborative modes of governance. Framed as ‘new’ modes of governance, this mix of state, civil society and market-led instruments are claimed to hold the promise of increasing deliberation and participation as well as environmental performance and effectiveness (Bäckstrand et al. 2010).

The Kyoto Protocol's flexibility mechanisms typify the turn to market-based climate governance. When the Kyoto Protocol entered into legal force in 2005, and the international trade in carbon credits became a political reality, the EU launched its Emissions Trading System (EU ETS). Wettestad (this volume) traces the evolution of this grand policy experiment. While framed as a ‘revolution in EU climate governance,’ the effectiveness of the EU ETS has been severely challenged in the post-Copenhagen era. Due to the volatile carbon market price following the financial crisis in 2008 and the subsequent failure of the 2009 Copenhagen climate summit, the EU ETS has not been able to foster the low carbon transition required to match the EU’s climate mitigation targets. In the absence of stringent climate policy goals, or when policy experiments fail to meet them, post-Copenhagen politics is defined by long-term and qualitative goals such as ‘low carbon economies’ and ‘low carbon development transitions.’ Lovell (this volume) examines the sites and spaces where these low carbon ideals are forged, particularly by focusing on the discourses and technologies that they draw upon. One technology that has been central to the idea of ‘the low carbon economy’ is carbon accounting. Turnhout et al. (this volume) specifically address the carbon accounting practices developed under the UNFCCC Reduced Emissions from Deforestation and Forest Degradation (REDD+) mechanism. They find that the standardized carbon accounting schemes of REDD+ follow a ‘measurementality logic’ that brings tropical forest carbon into market circulation, but risks alienating and disenfranchising local actors including forest dependent people.

Betts and Schroeder (this volume) examine to what extent the introduction of multi-stakeholder practices in REDD+ may help to render tropical forests governable in more democratic ways. Through their Indonesian case study, they demonstrate how a dense network of state, non-state and hybrid actors is involved in REDD+ implementation across various political and jurisdictional levels. Although the Indonesian state remains the most powerful actor within this multi-actor governance system, Betts and Schroeder find that participatory ideals of stakeholder governance have gained effect also in this
post-colonial, post-authoritarian state. This is an interesting finding, given that most of climate policy experiments addressed in this *Handbook* are found in industrialized countries and against the background of stable liberal democracies and market economies. Moreover, the Indonesian case study reminds us that participatory forms of climate governance often operate in the ‘shadow of hierarchy’ with background conditions of state intervention, public authority, steering, control and sanctions (Bäckstrand et al. 2010; Börzel and Risse 2005).

Another theme in this part of the *Handbook* is how to govern a complex and ‘wicked problem’ that cuts across almost all sectors of society. Van Asselt et al. (this volume) examine governance through climate policy integration (CPI). Following the legacy of environmental policy integration (EPI), introduced by the EU in the wake of the UN Conference on Environment and Development (UNCED) in 1992, CPI is a policy instrument that epitomizes the eco-modern promise of maximized synergies between climate policy objectives and other sectoral and economic policies. Interestingly, however, the authors find that the no-regrets rationale and technical procedures of CPI (checklists, strategy documents, strategic environmental assessments) tends to obscure the fundamental tradeoffs that still remain between long-term climate mitigation objectives and many other political goals (including climate adaptation). Van Asselt et al. conclude that these tradeoffs will need to be addressed head-on to avoid the ultimate ‘democratic’ tradeoff. After all, the effectiveness of climate policy instruments does not hinge on technical and political-administrative factors alone. As outlined by Matti (this volume), public support and acceptance are central for compliance and long-term policy stability. In Matti’s chapter, the social and cultural mechanisms behind public support for climate policy instruments are outlined and discussed. An important message stemming from this overview is that we need to pay closer attention to contextual factors (e.g., political culture, values, attitudes) in order to explain cross-national variations in climate policy experimentation.

Public support is also a key issue in debates over climate engineering. Opposite to the soft and decentralized modes of climate governance discussed in most chapters in this *Handbook*, climate engineering has in recent years surfaced as a technocratic response to the Copenhagen failure and as a last resort in the face of dangerous climate change. Hansson et al. (this volume) outline the various ways in which the climate can be engineered (from proposals to remove carbon dioxide from the atmosphere to efforts to reflect the sun’s light and heat back into space) and discuss the technical feasibility, environmental risks, cost estimates, moral implications and governance challenges of these options. The chapter effectively demonstrates that climate engineering remains a highly unreliable political alternative for the years to come. Currently we do not only lack the understanding and ability to control the negative side-effects. Most ethical and governance issues also remain unresolved.

**NORMATIVE IDEALS OF CLIMATE GOVERNANCE**

The literature on climate governance post-Copenhagen frequently blends empirical analyses of the contemporary climate governance order with policy prescriptions for the post-2020 era. The sixth part of this *Handbook* includes a collection of chapters that explicitly
address a number of political ideals mobilized in the climate governance scholarship. The effectiveness and democratic legitimacy of an increasingly complex climate regime are two reoccurring themes in this normative debate. Andresen (this volume) devotes his chapter to the weak performance of UN climate diplomacy. While he sees the wicked or malign problem structure of climate change as the root cause of the lingering UN climate negotiations, Andresen notes that institutional design matters for regime effectiveness. In a time when developing country economies jointly produce some 85 percent of total global carbon emissions, the Kyoto template has grown obsolete. A new framework treaty in Paris blending bottom-up national pledging and top-down review may provide the necessary institutional design to involve developing countries in climate mitigation efforts. However, Andresen concludes that unless public demand for strong climate policies increases considerably, any new agreement, irrespective of approach, will eventually prove insufficient to solve the complex problem of climate change.

Gupta and Mason (this volume), by contrast, problematize the standards of performance used to assess the effectiveness of the wider regime complex for climate change. The monitoring, reporting and verification (MRV) schemes used in the UNFCCC context, and the range of voluntary carbon disclosure initiatives developed by corporate and civic actors, do indeed help to make transparent who is doing what, how and to what end in a decentralized and messy climate policy architecture. Such rendering of climate action transparent is a necessary step in holding actors to account for their (in-)actions. However, Gupta and Mason also illustrate how the growing embrace of voluntary transparency as a default governance option is actively promoted by powerful actors, such as corporations and policy elites, in order to create and facilitate markets that allow major emitters to avoid more stringent or costly action pathways. By drawing attention to the political disagreements about whose actions should be made transparent, by whom and to what end, they invite us to critically reflect upon the standards of performance used in the post-Copenhagen era.

Weak mitigation performance brings questions of climate adaptation, vulnerability, security and resilience to the fore. While these concepts remain at the margins of the climate governance scholarship, they have proliferated and matured in parallel literatures such as geography and development studies during the past decades. Dilling (this volume) outlines how the climate adaptation literature has focused on identifying decision-making processes that are capable of responding to a deeply uncertain, highly changeable and contested policy field. Flexibility, robustness, adaptive capacity and risk tolerance emerge as reoccurring political ideals in this scholarship and are frequently expected to help societies to build resilience to dangerous climate change. While the resilience terminology now is moving rapidly into climate policy research and practice, it has been criticized for its ambiguity and lack of attention to issues of power and human agency (Adler et al. this volume). Inattention to power relations does not, of course, mean that concepts such as climate resilience are politically neutral. Oels (this volume) interprets the discourse of resilience as an expression of an advanced liberal form of climate governance. It is a discourse that tells those under threat of dangerous climate change to accept pending climate risks as inevitable and to prepare themselves for the coming disasters. By constructing climate change as uncertain and catastrophic, fundamental questions about our social relations with nature get lost and technocratic forms of governing are legitimized.
Against this backdrop, Fischer and Neimanis et al. (this volume) offer important analyses of the future of democracy and environmental ethics under the challenging conditions of the climate crisis. Giddens’ proposal (2009) to leave climate politics in the hand of experts, and Lovelock’s suggestion to ‘put democracy on hold’ (quoted in Hickman 2010), demonstrate that eco-authoritarian thought may indeed resurface in face of pending climate catastrophe. Fischer does, however, see glimmers of hope in the global ecovillage movement. Anchored in a tradition of participatory democracy, local environmentalism, decentralization and bioregionalism, the ecovillage movement invites us to consider how ordinary citizens mobilize to reduce their carbon footprints, strengthen sustainable lifestyles, and promote self-sufficiency and consensual decision-making (Litfin 2013). Whereas Fischer suggests that these participatory modes of ecological democracy may offer a grounded response to the technocratic tendencies in contemporary climate governance, Neimanis et al. (this volume) propose that new ways of living with climate change also may provoke a rethinking of the presumed distance between our human embodied selves and meteorological phenomena. By recognizing that humans are always of the world and its ‘nature,’ Neimanis et al. suggest that we can foster a climate politics of location and justice whereby specific histories of subjects and communities are taken as primary, rather than incidental.

FUTURE DIRECTIONS

The final part of this Handbook takes a forward-looking perspective on climate governance practice and invites us to reflect upon directions in the scholarship. It is not surprising to find that the future of the UN climate regime remains a central concern for many authors in this section. The scholarship on climate governance after Copenhagen has, on the one hand, asked us to broaden our conception of climate politics and to pay close attention to novel forms and topographies of regulation emerging beyond the international climate regime. On the other hand, the chapters included in this Handbook effectively illustrate how climate governance post-Copenhagen has developed in dense interplay between governments, markets and civil society. Much of the low-carbon experimentation found at national, regional, local and transnational levels—be it through markets, corporate carbon disclosure or individual footprinting—would simply not have taken off without intergovernmental agenda-setting, norm diffusion and legitimation. Against this backdrop, Eckersley (this volume) challenges the notion that UN climate multilateralism is facing a crisis of legitimacy. Despite the disappointing outcomes in Copenhagen, she finds that the negotiating states so far have managed to avert crisis by lowering expectations, avoiding principled commitments and introducing greater flexibility in texts and decisions. Although these developments may not be sufficient to avoid a real-world climate crisis, they have kept parties at the negotiation table and hereby spurred activities in the wider regime complex for climate change.

To some authors in this Handbook, this dynamic interplay between multilateral and transnational climate action is not enough to counter the urgency of dangerous climate change. Biermann (this volume), for instance, explores avenues for more forceful collective climate action through strengthened involvement of civil society in climate institutions; the establishment of a World Environment Organization; the introduction of qualified
majority voting in climate negotiations; and the buildup of effective systems of global adaptation governance. Linnér and Rayner (this volume), by contrast, warn scholars and practitioners to uphold the dream of a coordinated global response to climate change. Instead of perpetuating the erroneous assumption of the Kyoto Protocol—that one day a cap on emissions will be effectively implemented and trigger a carbon price sufficient to spur transformations to the low carbon society—they envision a climate regime that incentivizes investments in low-carbon energy innovation. This alternative approach to climate regulation would stimulate policies that reduce greenhouse gas emissions as a beneficial side effect of energy efficiency and investments in renewables, and hereby put society on a low carbon development trajectory. Would such a step away from the cap-and-trade model of the Kyoto Protocol imply a break with the norms of liberal environmentalism that seem to define the post-Copenhagen era? Lipschutz (this volume) suggests not. Efforts to involve businesses and individuals in the monitoring of their carbon footprints, whether through cap-and-trade schemes or energy investment initiatives, are premised on the belief that, eventually, authoritative allocations of private property in the atmosphere will be made and distributed by individual states, who will guarantee them. Under the rubric of ‘climate governance,’ Lipschutz predicts that the atmosphere will continue to be privatized and people’s actions and behaviors governed through private data.

How then, should the scholarship on climate governance develop to foster analytical space where the ongoing privatization, marketization and liberalization of climate governance can be critically interrogated and debated? To Bailey and Revell (this volume), reinvigorating politics is the way forward. They find that the scholarship on climate governance for too long has avoided the adversarial political processes that shape the dynamics and outcomes of climate policy in particular places. One important driver of this trend, they argue, is the pressure on academics to maintain dialogue with decision-makers to be policy-relevant. The willingness to offer tacit policy recommendations has led many scholars in this field to explore reformist rather than radical transformations in climate governance. This development highlights the importance of critical governance approaches that seek to challenge and deconstruct the assumed building blocks of the current regime complex for climate change (see, for instance, Stripple and Bulkeley 2014). However, Bailey’s and Revell’s critique also concerns the critical governance scholarship. Given the academic tendency to prioritize theoretical rather than empirically oriented research, they find an overemphasis on grand theorizing and conceptual advancement at the expense of empirical assessments of the political realities facing public and private actors in the everyday governance of climate change.

This critique speaks to Hulme’s call (this volume) for knowledge pluralism in the continued governance of climate change. In contrast to the widespread assumption that consensual knowledge on climate change can build political consensus on how to foster collective action in a complex and interconnected world, Hulme argues for the political benefits of plural epistemologies and political philosophies. ‘Climate governance is not about creating the right forms of knowledge. It is thinking first about what forms of governance and democracy are desirable and needed’ (Hulme this volume). This Handbook demonstrates the important role that the scholarship on climate governance can play in this political process. As effectively outlined by Page (this volume), there are no ‘tidy solutions’ that can inform the politics of climate mitigation and adaptation. Policymakers
should therefore not expect political theorists to solve the problems of climate governance for them. More important are scholarly efforts to create a conceptual space where current political arrangements can be debated and alternatives explored. Against this backdrop, the recent expansion and pluralization of the climate governance scholarship emerges as an opportunity. Epistemological, theoretical and empirical diversity is a good way to ensure continued experimentation with multiple political ideals, concepts and governance arrangements. It is our belief that this Handbook makes a valuable contribution to that end. The broad analytical repertoire mobilized in this volume invites us to carefully think through how climate change has been construed as an object of scholarly and political concern in the post-Copenhagen era, and to playfully investigate how the range of political possibilities can be extended in the years to come.

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