INTRODUCTION

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Our Extractive Age unpacks the complex character of an era in which human extraction and use of natural resources contribute to an environmental crisis of planetary proportions. This crisis has multiple complex features, but the most central of these—climate change, land and forest degradation, the loss of biodiversity, even the global pandemic—are directly linked to the physical impacts caused by the extraction of natural resources and the climate gas emissions caused by a growing human population’s demands for energy, food, and consumer goods. Earth system scientists claim that through our rapacious interaction with the environment we have caused a sudden “state shift” of fundamental, irreversible change in the biosphere (Moore, 2016). Human pressures are pushing biospheric stability, climate, and biodiversity to the breaking point (Mace *et al.*, 2014; Dirzo *et al.*, 2014; Steffan *et al.*, 2015). Multiple planetary boundaries are now being crossed, or soon will be (Rockström *et al.*, 2009). Moreover, natural and social scientists widely suggest that as a result of our damaging interaction with the planet, biosphere and geological time has been fundamentally transformed. While still controversial, a new conceptualization of geological time—one that includes humankind as a “major geological force”—has been proposed: we are living in the Anthropocene (Crutzen and Stoermer, 2000).

The contributors to this volume recognize the central role that resource extraction plays in defining both our time and the character of the present existential threat. A distinct contribution is the volume’s planetary perspective and an understanding of extractive processes that moves past a narrower focus on non-renewable resources such as fossil fuels, minerals, and precious metals. The contributors argue that the pace and nature of extraction have dramatically accelerated and broadened. We argue that the expansion of extraction, aided by technological development, legal and illegal capital, and geo-political and national decision-making, is a truly global

phenomenon now stretching from developing countries to the Poles, cyberspace, the Earth's atmosphere, and even outer space. Hyper-extraction is to be found in the unlikeliest of places.

Hydrocarbon extraction is linked to significant transformative events such as the Industrial Revolution, the two World Wars, the Cold War, and the more recent New Wars involving non-state as well as state actors (Kaldor, 1999). It has played—and continues to play—a defining role in 20th- and 21st-century global and national politics, economics, and society (Mitchell, 2011). However, as we make evident in this volume, fossil fuel extraction was exploited in parallel with a much wider range of thermodynamic and calorific-rich resources, and in many cases it helped to harness them. Indeed, the extraction of other energetic resources such as biomass, somatic resources (human slaves), atomic power, industrial exploitation of hydropower, and industrial-scale agriculture have all played significant roles in the accelerated globalization of the state system and capitalism. The fossil fuel economy cannot account for all of the human influence on the climate and planet (Malm, 2016). Moreover, although carbon dioxide emissions are important, there are other greenhouse gases, including methane, nitrous dioxide, ozone, and sulphur hexafluoride, that also have important social histories linked to human adaptation and modern development. Chapters in this volume chart some of those wider social and extractive histories.

A major contribution of this volume is its exploration of the violence that surrounds, and is caused by, natural resource extraction. The volume emphasizes how the spectrum of violence—from dramatic/direct to slow/hidden—permeates contemporary collective life. In addition to increased rates of brutal suppression of local environmental and labor activists in rural and urban sites of extraction, we observe and consider a multiplicity of related violence/s in areas we might not expect, such as infrastructural developments, protected areas for nature conservation, and even geoengineering in the name of carbon mitigation. Acknowledgement is made not only of the visible violence involved in the securitization of extractive enclaves, but also of the symbolic and structural violence that the governance, economics, and governmentality of extraction have produced. Extractive violence is shown not only to be a spectacular event, but an extended dynamic that can be silent, invisible and gradual, a process of long dyings (Nixon, 2011). As a result, the volume goes further than earlier reductionist analyses that emphasizes a *resource curse*. We also recognize that much of the new violence of extraction has become cloaked in the discourse of “green development,” “green building,” and efforts to mitigate the planetary environmental crisis through totalizing technologies. As well as recognizing the contextual specificities of the violent political economy and ecologies of resource extraction, we suggest, in line with Mbembe (2019), that the predation of natural resources forms part of a *necro-political complex*, as we explain further below.

Perhaps most importantly, this book is more than a new reading of the visible physical traces and impacts of resource extraction. The authors argue that extractive violence is not an accident or side effect, but rather a core logic of the 21st-century global experience. Contributors make the case that our world can no longer be

defined merely as late-capitalist, postmodern, neoliberal, or authoritarian. Rather, *hyper-extractivism* is a defining dynamic and mentality of our era. An extractivist logic justifies the violence of removal and exploitation that are hallmarks of our hyper-extractive age. Ironically, green technologies and other contemporary efforts to tackle environmental ills often themselves depend on the continuance of social exploitation and the contaminating practices of non-renewable extraction.

We also emphasize that extractivism is the result of a particular ontological assemblage. Throughout human history, ideas of civilization, empire, sovereignty, accumulation, *terra nullius*, capital, and modernity have become layered and intertwined to form a rationale for intensifications of both social and planetary exploitation. In our moment, this assemblage has created particular expressions, contestations, and logic. However, these are met with contestation and resistance. In this volume, contributors see the power of ontologies as expressions of power, but they also acknowledge countervailing acts and ideas of extrActivism (Willow, 2018). Multiple communities across the world express political ontologies that not only confront the displacement and destruction caused by resource extraction, but also militantly and legally resist, interact with, and contest *extractivist onto-logic* claims as to the necessity of earth and life removal.

These points fall within three key cross-cutting themes: 1) the universalization of sacrifice zones; 2) extractive necro-politics; and 3) political geo-ontologies. We now move to a deeper examination of these themes before concluding this introductory chapter with an overview of the volume's structure and a short account of the foundational story of the book itself.

When Sacrifice Zones Become Universal

Nicholson comments in this volume that “An extractivist mindset or pervading set of understandings opens the whole world to human exploitation, justifying taking with too little regard for the environmental and social consequences.” In this chapter and in the other contributions to the book, authors powerfully highlight this insight by exploring the historical and geographical reach and forms of extractive activities.

This volume explores multiple forms and locations of resource extraction. In addition to the usual suspects of oil and mining (see chapters by Watts; Richardson and McNeish; Le Billon and Middelorp), chapters highlight the extractive activities and logics of the building trade (Kiechel); industrial agriculture (Graddy-Lovelace); food, tourism, and talent industries (Li and Shapiro); information and data industries (Chagnon *et al.*) and geo-engineering (Nicholson). In a chapter theorizing the meaning of extraction and extractivisms, Durante *et al.* provide an important sketch of the historical relationship between these terms and an expanding scholarship in political economy and political ecology critical of resource extraction across various fields of activity. Although the violence and environmental impacts of mining remain of central concern, Durante *et al.* highlight that literatures have also developed emphasizing the extractive nature of activities in the agriculture and forestry sectors.

In extending earlier understandings of the scale and character of extraction, this volume adopts a theoretical and empirical position different from that of some earlier authors. Gudynas (2018) has, for example, influentially maintained that an expansion of the concept of extractivism beyond the realm of natural resources—to finance, or all forms of development, for instance—is detrimental to the analytical and descriptive power of the concept, and thus undermines the search for alternatives. Chagnon *et al.* emphasize in this volume, however, that the concept of “extractivism in fact rests upon a universalizing ‘natural law’ in which the exploitation of ‘nature’ features as an ontological prerequisite to the forms that European modernity developed over the last 500 years.” Moreover, they acknowledge in line with other authors (Mezzadra and Neilsen, 2017) that “new forms of financial and digital processes facilitate the expansion of resource extraction in the global economic system.” The digitization of finance and data renders these sectors of the global economy dependent on one another in increasingly complex ways. As Chagnon *et al.* suggest, an emphasis on the “existence and prominence of less visible and tangible thrusts” aligns with what Dunlap and Jakobsen (2020, p. 6) have termed “total extractivism” and its “deployment of violent technologies aiming at integrating and reconfiguring the earth.” For Dunlap (2019), this now involves the imposition of industrial-scale wind and other renewable energy projects in the name of clean power and green capitalism.

The global extent and geo-political significance of extraction and extractivism are also made evident in this book. Chapters detail specific contexts of extraction in Latin America, Africa, and Asia and emphasize their positioning within historic and contemporary economic development and geo-politics. Emphasis is placed on the role of resource extraction as a key dynamic of previous capitalist *primitive accumulation*, and present *accumulation by dispossession* (Graddy-Lovelace). Resource extraction is observed here as playing a central role in nationalism and contemporary racialized capitalism (e.g. Richardson and McNeish on Colombia; Watts on Nigeria) and in regional and transnational ambitions as well as new imperial ambitions, importantly including the vast Belt and Road programme of the Chinese state (Li and Shapiro). Our authors recognize that technological advances, both in terms of information technologies and extractive technologies, have played a significant role in increasing the speed, volume, and scale of extraction.

Although geologies and resource geographies are constant, the producers and politics of extractive resources have changed dramatically (Magrin and Perrier Brulé, 2011). Owing to the continued growth of the global economy and growing number of emerging economies, the demand for natural resources continues to increase. Taking into account all the materials that are extracted, resource extraction has more than doubled in the last 25 years. Estimates further demonstrate that material extraction went into high gear in 2000, owing to expanding demands from emerging powers. Indeed, many of the new powers added significantly to foreign investment and direct involvement in extractive projects as well as related mega-development and infrastructure projects beyond their borders. China’s Belt and Road Initiative is the most significant of these efforts. Responding to increasing demands

for commodities, international commodity market prices spiked for almost a decade before falling again in 2012.

As Chagnon *et al.* observe in this book, whereas in previous eras resource extraction might have remained unseen, playing out at the frontiers in marginalized spaces, technological advances allow a window into the extractivist activities taking place. Given the widespread access to information technologies, social media, and the active campaigning of environmental and human rights organizations, consumers can no longer avoid awareness of the social and environmental consequences of the manufacturing and extractive practices involved in the production of the goods they purchase. As Watts indicates, technological advances also allow new zones of exploitation to be opened, new resource forms to be exploited, value chains to be expanded, and new players—both legal and illegal—to enter the resource-extraction business. As Glaab and Stuvøy observe in their chapter, knowledge has achieved the status of a raw material that can be traded. This development is evident, for example, in the notion of “biopiracy,” whereby the knowledge of local communities is commercially exploited, or biological resources are patented without adequate compensation. Novel forms of extractivism are also seen, in the work of Li and Shapiro, to extend to cultural appropriation and to the commandeering of human talent.

“Sacrifice zones,” which can be understood as geographic areas impaired by environmental damage or economic disinvestment (Lerner, 2010), are no longer hidden from the view of those who benefit from the consumption of goods produced from extracted raw materials. As Wapner importantly makes clear, environmental harm primarily affects those living on the frontlines of extraction, but these frontlines are changing. As infrastructural technologies reconstitute the frontiers of extractive enclaves, production sites have shifted into areas previously out of reach of industry (e.g. drilling and mining in isolated and challenging environments such as Amazon jungles, the high Andes, Sub-Saharan Africa, and Greenland and other Arctic zones). They have moved ever closer to major populations (e.g. sites of petrochemical production or the construction of wind, geo-thermal, and solar parks on the doorsteps of cities around the world). And they have expanded into areas previously delimited for national parks and nature conservation.

As Watts masterfully demonstrates in this volume, a mapping of the visible and invisible networks leading from extractive frontiers—exemplified in his chapter by the Arctic, Nigeria, and Mexico—across the face of the planet defies any previous restricted spatial or scalar notion. Watts emphasizes the speed, intensity, and energy of contemporary extractive systems, but also the friction, disorder, and layered sovereignties of the flows of minerals, materials, and capital. Indeed, with the value chain of extraction moving ever further out (we even see projects under way to mine the far side of the moon and asteroids in outer space), and ever closer (to protected species and middle-class urban communities), it now appears that nothing is to be spared. The sacrifice zone has not only become planetary but universal, with the possible exception of the lived spaces of the extremely wealthy. Our age is not only extractive, but hyper-extractive.

Wapner, in this volume, recognizes the disappearing wilderness and warns us of the divisions that have been produced by narratives of global collapse and threshold politics. These forms of thinking, he argues, enable the privileged to displace environmental harms onto others and to sidestep direct experience of the dangers they predict. This allows the privileged to postpone their environmental reckoning and thus divert attention from global environmental decline. Wapner (2020) also suggests in a recent book that this politics of postponement needs to be disrupted through rewilding—a process through which we must relinquish the fantasy of mastery over the natural world.

Extractive Necro-Politics

The link between extraction and violence has been a major theme of political economy and political ecology for some time. Key works in political economy have contributed an important analysis of the relationships between resource-based conflict and geo-politics, the structure of the international economy, and national-level political and economic competition over rents and territory (Homer-Dixon, 2001; Harvey, 2009; Mitchell, 2011; Ross, 2012). The political economy of resource conflict also explores the linkages between the opening of new extractive frontiers and civil war (Auty, 1993; Humphreys *et al.*, 2007). Despite the frequent expectations of wealth produced by new discoveries, the resource curse literature argues that the exploitation of “point” resources commonly generates low levels of economic growth and a series of adverse effects on governance, including authoritarianism, militarization, regional secessionism, chronically unstable governments, and high levels of conflict (Lynn-Karl, 1997; Collier, 2000).

Despite widespread acceptance of the resource curse concept both in academic and policymaking circles, significant critique is now made of its common rational-actor and behaviorist assumptions, particularly the view that extraction necessarily represents an opportunity for elites and the weaponized to maximize their advantages and wealth. This analysis of extractive violence is now countered by a growing body of studies (McNeish and Logan, 2012). Instead, these studies highlight the roles of history and social structure in guiding or catalyzing the direction of political actions (Rosser, 2006; Stevens and Dietche, 2008; Omeje, 2008). While some writers highlight a heightened level of conflict resulting from either naturally occurring or politically induced resource scarcity (Kahl, 2006), a contrasting body of literature suggests that such conditions can also lead toward increased cooperation (Wolf *et al.*, 2003). There is also a growing understanding that the study of extractive violence has been positioned too often at the national and international levels. This has fed reductionist assumptions regarding the inevitability of civil war or the paradox of plenty in resource-rich societies (Lynn-Karl, 1997; Collier, 2010). Moreover, it has left understudied the relationship between sub-national political dynamics and extraction.

In contrast to the costs of extraction emphasized by political economy, political ecology has emphasized the close relationship between environmental costs and

impacts on local life and culture, from corruption to changing patterns of consumption (Peluso and Watts, 2001; Le Billon, 2001; Le Billon and Bridge, 2012). While a “political ecology of the subsoil” is still in its early days as compared to political economy (Bebbington and Bury, 2013), a growing literature recognizes the need to study the emergence of extractive conflicts over the distribution of costs and benefits associated with the subsoil. For example, water can become unavailable or contaminated, while few of the supposed financial benefits of its use in extractive processes are accrued in the community (Kirsch, 2014; Perreault, 2017).

Another important strand to the political-ecological study of extractive conflicts considers the way that natural resources are differentially valued and understood in different contexts (McNeish *et al.*, 2015). There is a growing awareness that environmental goods such as water, land, and soil cannot be understood in merely physical terms. For example, the concept of “waterscape” recognizes water as a “socio-natural entity” (Loftus, 2009) rather than as something to be theorized purely in material terms. Boyer’s (2017) recent proposals for *energo-power* as a means to express an alternative genealogy of modern power further contribute to a biopolitical take on extractive violence, arguing that our very bodies are intertwined with the pipes and ductwork of energy installations and the logic and expression of extractive politics. The environmental impacts of extractive activities are also increasingly recognized in political ecology as leading to the formation of environmental movements in defense of rural livelihoods and resources (Li, 2015; Bury and Bebbington, 2015), and visible expressions of an “environmentalism of the poor” (Guha and Martinez-Alier, 1997).

This rich bibliography, only partly surveyed here, provides an important foundation for this volume. However, there is much room to build on this to understand the expressions of violence in a hyper-extractive age. Volume contributors draw on the analytical benefits of both political economy and political ecology by employing multiple scales of analysis, economic and cultural understandings of how value is differentially created, and the possibility of combining structure and agency in decoding power relations. Here we also suggest the need to understand violence not only as physical action but also as a force with a plurality of expressions and consequences.

Kiechel, for example, in her chapter on the built environment, comments, “In a seeming paradox, construction involves destruction—not only of raw material stocks, but often of local economies excluded from benefit, of the socio-spatial fabric of neighborhoods, and of construction workers themselves.” The built environment, she suggests, whether beneficial or oppressive in its social and ecological effects, owes its very existence to extractive actions. In highlighting these connections Kiechel provides a powerful new twist to previous studies that highlight the links between technology and asymmetries in global exchange and that uncover the relationships between ecology and power. In an earlier comment on *imperial thermo-dynamics*, for example, Hornborg (2001) argued that we should reconceptualize “the machine”—or industrial technomass—as a species of power and a problem of culture. As technological devices multiply exponentially in a vain attempt to make life “efficient,” “luxurious,” and “productive,” Hornborg argues

that on planet Earth everything is a zero-sum game, and that one person's gain is always another's loss. Kiechel's extension of technomass from machines to the built environment not only updates the civilizationary nature of this zero-sum game, but its violent reconfiguring of humans and nature, animate and inanimate life, or what Hornborg terms biomass.

Our volume explores the multiple dimensions, scales, and local contexts of this global reconfiguration. Evidence and discussion of the violence against nature caused by resource extraction is visible in all contributions to the book. We concur with other studies that highlight that oil and petrochemical production has led to dumping millions of barrels of a cocktail of chemicals, drilling fluids, and formation water into our seas, rivers, and forests. Mining practices, including those for rare earths, have caused river courses to change and heavy metals and chemicals used in processing to leach into drinking water and aquifers. Persistent toxic leaks, periodic catastrophic spills, large-scale mining, and oil-exploitation projects play important roles in opening areas of sensitive biodiversity and human population to industrial development. Extractive activities involve the construction of supporting infrastructures such as roads, pipelines, hydro-electric dams, pylons and cable networks, ports and storage facilities (see Watts for a detailed characterization of these infrastructures in the oil assemblage). Many of these projects have their own direct costs for the environment and encourage problematic destabilization and displacement of human populations.

The visible violence against nature is also being waged on human populations and individuals who dare to stand in the way of extractive development. In the chapters by Le Billon and Middelorp, Graddy-Lovelace, Watts, and Richardson and McNeish, we see the extent of the physical violence waged against land defenders by the actors involved in resource extraction. In doing so, we mirror in our academic work the reports produced by journalists and human rights organizations that highlight a rising trend of violence against land defenders across the world. For the Past three years the *The Guardian* newspaper and the international human rights non-governmental organization Global Witness have worked together to form and update a global database that attempts to record and map what they call "a murder epidemic." In its 2019 report, *Enemies of the State?*, Global Witness highlighted that on average more than three "land defenders" (civil society leaders, human rights activists, indigenous and peasant leaders) were killed every week in 2018. These attacks occurred in relation to extractive industries such as mining, logging, and agri-business. The report also reveals how countless more people were threatened, arrested, or thrown in jail for opposing the governments or companies seeking to profit from their land. Our work extends this picture by pointing to the relationships that exist between legal and illegal actors, companies, and politicians involved in the business of resource extraction. It also discusses the manner in which these relationships background the manipulation and circumvention of laws, regulations, and consultations meant to govern the sector, as seen in particular in the chapters by Graddy-Lovelace and Le Billon and Middelorp.

In their chapter, Glaab and Stuvøy study the nexus between extractivism and violence. Their work argues for a need to push beyond obvious violent impacts and their common normative explanations. In common with many of the other chapters, their work emphasizes the structural nature of extractive violence at different scales e.g. its character as horizontal and vertical (Watts); its grounding in histories of structural racism and criminalization (Graddy-Lovelace); its positioning within capitalist and now multipolar geo-politics (Li and Shapiro). However, their theoretical analysis goes even further. Arguing that “violence is ambiguous and transcends the local/global divide,” Glaab and Stuvøy suggest that researching violence in extractivism brings into discussion the multi-scalar and hetero-temporal character of violence. Instead of thinking of scales as separate, they stress the need for a focus on entanglements (Tsing, 2005). The global is in this perspective not a separate scale, but part of scale-making processes. Such a perspective moves a focus away from the directly observable to what is commonly unseen, or what they more precisely define as “site effects”—violence as built into structure, symbolism, and space; and the temporalities of violence on humans and the environment as both fast and slow, both immediate and incremental.

Significantly, Glaab and Stuvøy recognize that the degree, character, and manifestation of extractivism have changed in the neoliberal age. This signposts the need for a more comprehensive, or suitably entangled, meta-narrative of our extractive age and the place within it of resource extraction and related violence. Watts’s chapter makes a particularly significant contribution to such a meta-narrative. His chapter here on extractive value formation in the global oil assemblage not only lays bare the complex licit constellation of science, technology, rent-seeking, and financial speculation, but also its hidden deep reliance on the illicit and criminal.

Building on our colleagues’ observations and analysis we also suggest here that Mbembe’s (2019) deep, and necessarily complex, characterization of necro-politics could represent a timely meta-narrative in this regard. Mbembe’s concept of necro-politics is a “decolonial” meditation on the current epoch—one defined by a sense of global realignment, an inward turn, and the reorganization of space and being between the living and the dead. Acknowledging the renewed rise of the extreme political right and the camps imprisoning migrants, Mbembe posits that we live in an epoch defined by a politics of enmity and separation. If globalization and neoliberalism were said to shrink the world, Mbembe now sees a backlash of retrenchment and borderization. Democracy, he suggests, has begun to embrace its dark side, or nocturnal body, based on the historical fuel of the desires, fears, affects, relations, and violence that drove colonialism. Necro-politics entails the “subjugation of life to the power of death” (Mbembe, 2003, pp. 39–40). To this end, a necro-economy encourages as one of its central features the predation of natural resources in which violence on humans and nature are justified, and populations are displaced and eliminated in the causes of consumer- or energy-protection and security.

Political Geo-Ontologies

Durante *et al.* contribute to this volume an exploration of the etymological evolution of the concept of extractivism and the developmental trajectory that has served to inform the underlying and overarching extractivist logic. In line with the intentions of many of the other contributions, they suggest that “this could be described as an extractivist mindset, or ontology, which has its particular expressions, practices, and understandings in different extractive sectors, which have become global (global extractivisms).” The chapters by Li and Shapiro, and by Nicholson, are particularly important in revealing the global scale and expression of an extractivist onto-logic, even in connection to supposedly green fixes.

With the example of the Chinese Belt and Road Programme, Li and Shapiro highlight how the extractive mindset can inspire ambitions with massive proportions. Moreover, they importantly characterize how the pattern of social and ecological destruction of the classic extractive economy—the transfer of key resources to benefit the people and economy of the destination to the detriment of the people and environment of the origin—not only spills over into a wider range of economic areas, but also takes on a seemingly more benign form that appears not to be extractive at first glance. Their work reveals less well-known aspects of extractivism, including securing food supply chains, commodifying cultural heritage for mass tourism, and appropriating human talent and intellectual property. From a different geo-political positioning, but still with clearly global and extractive ontologic intent, Nicholson describes the politics and deployment of U.S. and European geo-engineering strategies. Although carbon-removal technologies are ostensibly aimed at cleansing the air and helping to stabilize the climate by removing the dangerous byproducts of our production and use of fossil fuels, Nicholson argues that carbon-removal schemes operate according to an extractivist logic. This is indicated by the requirements and outcomes of the geoengineering techofix, including massive land-use changes and multiple interventions in the geology and atmosphere of the planet. These are outgrowths from the fossil fuel industries of a vast new industrial infrastructure requiring further vast expenditures of mineral and energy wealth.

Our volume recognizes that while an extractive ontologic is hegemonic in current geo-political and economic decision-making, it has met considerable resistance and contestation. The chapters by Richardson and McNeish, Graddy-Lovelace, and Wapner narrate histories of extrACTIVISM i.e. activism opposing the impacts of resource extraction (Willow, 2018). Importantly, our work demonstrates that extrACTIVISM does not necessarily imply acts of protest and political militancy. Richardson and McNeish highlight in Colombia the recent use of the courts, and an alliance between local indigenous and afro-descendant communities and specialists in the national legal system, to combat illegal-mining and secure the environmental protection of the Atrato River. Graddy-Lovelace gives an account of the efforts by agrarian movements around the world to proactively harness legal and political channels to seek justice for those who have been killed and to defeat efforts aimed at

the criminalization of land and environmental defenders. She highlights the successful extraACTIVISM leading to the 2020 signing of the Escazú Agreement (Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters) by 22 Latin American and Caribbean countries. Wapner makes a further connection between the actions of the USA and international environmental justice movements and extraACTIVISM.

Importantly, these acts of extraACTIVISM are driven by ontologies that challenge an extractive onto-logic. Indeed, it is evident that multiple local communities and international networks envision and embody a different relationship between people and the planet. Although with varied histories, characteristics, and nuances of expression, there is a common mobilization of beliefs and sensibilities about our common human connection with the environment and nature. While our chapters only touch on this theme, we can indirectly contribute to the theorization and empirical study by a growing number of philosophers and social scientists who emphasize the “more than human” ontological turn. In this perspective, the environment is intrinsically entangled and co-evolving with society. Agency is also no longer seen as the sole privilege of human consciousness.

Latour (2014; 2017), who is one of the leading leaders of this intellectual turn, highlights that global warming and climate change threaten our existence and force us to acknowledge that the earth is agential in its own right. He argues that if we bear in mind the current ecological crisis, we must devise a new theory of agency for recognizing the active role of nonhumans, both organic and inorganic. As “more than human” thinking has gained increasing currency, new efforts have also been made to test its value in practice. A series of writers now emphasize the manner in which ontologies have been made political, or the basis of a cosmo-politics (e.g. de la Cadena, 2010; Escobar, 2015; Blaser, 2016). Wapner’s call for rewilding and its connection to environmental justice is an expression of this. Importantly, Povinelli (2016) suggests the terms geontology and geontopower as a means of capturing the intensifying visibility of the interaction between components of nonlife (geos) and being (ontology) in late liberal governance and economics. A clear example of this is the trend towards ecocentric or “earth law” made visible in the legal case of the Atrato River described by Richardson and McNeish in this volume.

Volume Structure

Part 1, *Theorizing Violence in An Extractive Age*, provides a theoretical grounding in the themes of extraction and violence, and of the connections between them. In *Extraction and Extractivisms: Definitions and Concepts*, Durante, Kröger, and LaFleur provide an intellectual history of the scholarship of extractivism; in *Politics of Violence in Extractivism: Space, Time and Normativity*, Stuvøy and Glaab refine understandings of “violence,” and in *Thresholds of Injustice: Challenging the Politics of Environmental Postponement*, Wapner argues that the hyper-extractivism of the current age has revealed and disrupted the displacement of environmental harm onto the vulnerable and created a wave of resistance.

Part 2, *Exacerbated Violence at the Local Level*, explores the intensification of violence in classic realms of extraction. In *Empowerment or Imposition? Prior Consultation, Indigenous Peoples and Extractive Violence*, Le Billon and Middeldorp examine the practice of prior consultation in advancing extractive projects in contrast to its envisioned ideal of enforcing compliance with Indigenous and environmental human rights. In *Criminalization of Agrarian Movements and the Escazu Agreement: Leveraging Law and Violence against Land Defenders in Latin America and the World*, Graddy-Lovelace contextualizes recent violence against agrarian movements within the divergences and convergences of historical peasant movements, neoliberalized environmentalist movements, and contemporary resurgences of agrarian and legal mobilization. In *Building Boom: Deconstructing Violence and Other Social Consequences of Extraction in the Built Environment*, Kiechel documents the ways in which the act of construction depends on violence and extraction, and reveals the embedded social and social justice impacts of multiple aspects of a building project's life-cycle.

Part 3, *New Ways of Thinking about Extractivism* reveals new contexts of extraction, expressions of extractivism, and extrACTIVIST innovations. In *Rethinking Extractivism on China's Belt and Road: Food, Tourism and Talent*, Li and Shapiro highlight the role that a quickly globalizing China is playing in catalyzing and intensifying novel forms of extraction and violence. In *Granting Rights to Rivers in Colombia: Significance for extrACTIVISM and Governance*, Richardson and McNeish consider the significance of legal cases that recognize the personhood rights of rivers as a means to control illegal mining and as an innovative form of extrACTIVISM. In *Extraction at Your Fingertips*, Chagnon, Hagolani-Albov, and Hokkanen provide an analysis of a complex web of extractivisms where digital and data extractivism intersect with natural resource extractivisms in their underlying logic and processes. Finally, in *Carbon Removal and the Dangers of Extractivism*, Nicholson shows how the concept of *hyper-extractivism* can help us understand and guard against problematic potentials in large-scale carbon removal activities at the level of the planetary atmosphere.

Part 4, the final section, is devoted to a major chapter by Michael J. Watts, *Hyper-Extractivism and the Global Oil Assemblage: Visible and Invisible Networks in Frontier Spaces*. Focusing primarily on the oil industry in the Arctic, Nigeria, and Mexico, Watts details the planetary nature of extractive capitalism and reveals its reliance on intertwined legal and illegal logics and actions. The chapter epitomizes the multi-scalar and complex analysis that all of the contributors argue is needed to understand the violence embedded in the hyper-extractivism of our age, and thus it deserves space of its own at the volume's finale.

The Story of the Book

This volume is the product of a multi-year research collaboration between the Department of International Environment and Development Studies, Norwegian University of Life Sciences and the Global Environmental Politics program at American University's School of International Service, with the support of the Norwegian Agency for International Cooperation and Quality Enhancement in

Higher Education (DIKU).. Scholars from the two institutions who work on environment and development identified the intensification of extraction and concomitant violence as a key element of our age. They identified their multi-disciplinary training as a core strength for a common research agenda, and invited scholars from other institutions to join them, particularly including scholars with extensive prior work on extraction and extractivism. These include Le Billon, Middeldorp, and Watts, as well as scholars belonging to the Global Extractivisms and Alternatives Project (EXALT) at the University of Helsinki (i.e. Chagnon, Hagolini-Albov, Hokkanen, Durant, LaFleur and Kröger).

The scholars represented in the volume come from many different disciplinary backgrounds: they are linked to geography, political ecology, global environmental politics, development and resource economics, international relations, architecture, environmental law, regional studies, and philosophy. They include senior scholars, junior scholars, graduate students, and project associates. They come originally from the USA, UK, Norway, Finland, Germany, Holland, France, Italy, Canada, China, and New Zealand. Examples and cases span Latin America, Africa, Europe, the USA, China, the Middle East, and the Arctic. We hope that the resulting common research project will deepen and extend understanding of multi-scalar extractive processes; we hope that it will offer fresh insights into the dynamics of both the overt and hidden violence of such extraction; and we hope that it will point a way forward in addressing the new forms of violence that characterize our hyper-extractive age.

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