



# B/ordering the environmental commons

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## Abstract

Transboundary environmental commons are usually conceived in terms of the spatial arrangements that govern transboundary resources and coordinate responses to cross-border environmental threats and crises. Borders in this context tend to be viewed as relatively stable institutions in the administration of geographically dispersed resources with well-defined properties by a jurisdictionally divided collective of users. In practice, however, the transboundary commons defy such clear spatial resolution. This paper contributes to emerging scholarship on the transboundary commons by showing how processes of commoning and b/ordering are continually changing in relation to each other to generate flexible new geographies of conservation practice.

## Keywords

environmental governance, borders as process, common pool resources, sustainability, politics of scale

## 1 Introduction

This paper brings into conversation two rapidly moving bodies of research on ‘b/ordering’ and ‘commoning’, which speak, in distinct but overlapping ways, to the politically vexed issue of transboundary environmental governance. The vulnerability of the commons to diminution in the face of anthropogenic environmental change is calling into question the role and function of borders. The idea of b/ordering the environmental commons (Van Houtum et al., 2005; Grundy-Warr, 2017), once associated with de-commoning practices and the degradation or depletion of common pool resources, is now increasingly regarded as an important strategy to protect fragile habitats from resource grabbing and the unrestrained exploitation of nature (Tubtim and Hirsch, 2005; Amin and Howell, 2016; Schoenberger et al., 2017; Beban and Gorman, 2017; Turner, 2017). Alongside this

global trend toward enclosure of the commons for their conservation or sustainable commodification, we are seeing new environmental geographies animating across borders around the governance of particular common goods (*res communis*) such as biodiversity conservation, regional food security and carbon sequestration. Transboundary commons are also involving border crossing efforts to tackle accumulating environmental problems including air and water pollution, ocean eutrophication, acidification and the cross-border impacts of climate change (Andonova et al., 2009; Schrijver and Prislán, 2009; Jeffrey et al., 2012).

The aim of this paper is to critically examine how these diverse arrangements for governing

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transboundary environmental commons are being created, operationalised and sustained by the interactive processes of commoning and b/ordering. Both etymologically and genealogically, the transboundary commons describe specific sets of relationships that value resources 'in common' across boundaries or borders within as well as between countries (Barrett, 1996; Giordano, 2003; Dietz et al., 2003; Dragoş et al., 2007; Gidwani and Baviskar, 2011; Armitage et al., 2012). In this way, transboundary commons are distinct from global commons (the high seas, the global atmosphere and outer space) and transnational commons, which limit the study of cross-border relationships to regions comprising national scale units of analysis (Dasgupta et al., 1997; Ansari et al., 2013; Schrijver, 2016; Dietz, 2017). There are considerable areas of overlap between these discrete spatial categories of environmental governance, but, unlike global and transnational commons, the transboundary commons traverse borders at all scales of governance.

Environmental geography has so far made only fragmentary engagements with the multiple levels at which commoning and b/ordering are performed and enacted in relation to each other to co-produce transboundary commons. Environmental commoning describes the work of cultivating commons through broadly inclusive ecological knowledge sharing, informed decision-making and activities aimed at equitably (re)distributing environmental benefits and costs (Linebaugh, 2009; Ryan, 2013; Esteves, 2017; De Angelis, 2012). Transboundary communities of commoning may extend *vertically* to connect grassroots actors with higher levels of government, international non-governmental organisations (INGOs), donors and corporations. In spatial terms, they can also move *horizontally* across borders within and between countries, where the same resource is often differentially valued by state, business and societal actors.

Whereas the main concern of transboundary commoning is with bringing people together across borders around a shared interest, b/ordering directs attention toward where borders are (re)drawn and how they are reinforced to include or exclude certain groups of people from environmental benefits and to expose or insulate sections of society from emerging threats and crises. B/ordering thus denotes not only the physical (geo)political power of borders to delimit and demarcate access to common pool resources, but also the processes of (re)ordering, parcelling, fragmenting and enclosing resources, revenues and labour that shape (re)distributive inclusions and exclusions (Van Houtum et al., 2005; Dalby, 1998; Newman, 2006; Stripple, 2007; Popescu, 2012; Lamb, 2014). In everyday practice, b/ordering privileges the relationship between human interests *internal* to political boundaries and the *external* balancing of mutual (geo)political interests (López-Hoffman et al., 2017; Dallimer and Strange, 2015). The point of convergence between these internal and external interests is where the generative processes of b/ordering and commoning continually negotiate, contest and enact spaces for transboundary environmental governance.

I argue that examining these engagements between commoning and b/ordering offers an expanded optic for understanding transboundary regimes of environmental governance in two productive ways. First, I draw attention to the multiple organisational levels at which transboundary commons mobilise across borders, which are currently understudied in geographical research. Questions of sharing transboundary resources such as air, water and migratory taxa tend to be fixed at the supranational or regional scale of governance (Hirsch, 2006; Bréthaut and Pflieger, 2015; Wiering and Verwijmeren, 2012). We know far more about transboundary river governance at the basin scale than about multi-sited (upstream and downstream) geographies of commoning (for

example, around wild-capture fisheries) that traverse national and sub-national borders to sustain river commons at different levels of transboundary governance (Grundy-Warr, 2017; Middleton and Dore, 2015; Hirsch, 2016).

Second, I aim to facilitate understanding of how processes of commoning and b/ordering are continually transforming in relation to each other to co-produce transboundary spaces for environmental action. Notwithstanding Elinor Ostrom's considerable contribution to the evolution of commons theory, her emphasis on 'well-defined resources' with clearly known properties that are agreed upon by a fixed collective of resource users (1990, 1994, 2009) carries an assumption of spatial clarity and political stability to transboundary commons that is less reflected in practice than in theory. Transboundary environmental governance regimes continue to grapple with deep uncertainties regarding what constitutes shared resources, where such resources are physically located, and at which site(s) or organisational levels conflicts over transboundary resources should be negotiated and resolved (Carmenta et al., 2017; Patt, 2017).

The remainder of the paper consists of four main parts. In the next section, I examine why the relationship between commoning and b/ordering matters for the spatial organisation of transboundary environmental governance. I then consider commoning as a modality, or functional strategy, of transboundary governance. The political uptake of environmental commoning in challenging conventional border controls is then evaluated. In the final section, I bring together key issues in environmental commoning and transboundary governance analysed in earlier sections to show how commoning and b/ordering generate transboundary communities of practice, without which, neither the transboundary commons nor borders could exist. These transboundary communities work

across multiple organisational scales, ranging from neighbourhoods and grassroots associations through to the city, nation-state, region and international level of governance.

## **II Respatialising the transboundary commons**

My approach to understanding the spatial organisation of the transboundary commons centres upon human environmental practice rather than on transboundary resources themselves. This distinction between resources and the people who use and sustain them is important, both in terms of disciplinary orientation and from a governance perspective. Whereas physical geographers and other natural scientists tend to focus on varied types of natural resources, human geographers, with other social scientists, pay more attention to power relations, property rights and scales of environmental governance (Bulkeley, 2005; Reed and Bruyneel, 2010). Of course, it is important to remain mindful that the biophysical properties of transboundary resources such as lakes, rivers and forests shape their geographies of governance. To the extent that the agency of non-human actants has been addressed in human geography, actor-network inspired scholarship (Latour, 2005) has explored the 'potentially transgressive' (Beery, 2016: 94) agency of transboundary resources that lack clear spatial resolution in the sense that they can shift shape to form 'flows of transnational environmental harm' (Mason, 2008). Air, for instance, is regarded as a passive common good until the point when it responds to the multiple stresses inflicted by anthropogenic transformations of nature by transporting gases and particulate matter across borders, transforming into transboundary pollution (Miller and Douglass, 2018). For the most part, however, transboundary environmental governance regimes are driven by human interests that treat common pool

resources as passive entities around which governance processes unfold.

From a governance perspective, transboundary environmental commons involve a diversity of human relationships that selectively exploit the permeability of borders in fluid and flexible ways (Norman, 2014; Cunningham, 2012). These spatially stretched relationships are continually being (re)made by the combined knowledge, technologies, funding, values and actions of jurisdictionally divided communities of resource users. Transboundary commoning relations selectively mobilise across borders as the (geo)political priorities of dispersed environmental collectives are (re)negotiated to assemble around particular environmental agendas, such as privileging indigenous livelihoods over endangered species, or vice versa. Whichever environmental goods are the most highly valued at a given time tend to be the greatest beneficiaries of cross-border flows of human and material resources that are channelled into targeted commoning activities (Gururani and Vandergeest, 2014).

Transboundary environmental commons are thus sites of political flux, ongoing transformation and even conflict (Fall, 2005; Hanson et al., 2009; Duffy, 2006). The establishment of one type of commons, such as a transboundary national park, might generate new forms of enclosure, social displacement and restrictions on movement across borders for indigenous communities, which then give rise to competing claims to communal property rights based on perceived socioecological injustices (Norman, 2014; Dell'Angelo et al., 2017; Sevilla-Buitrago, 2015). Even seemingly stable transboundary frameworks that clearly demarcate inclusive spaces of environmental stewardship across administrative borders are not static or immutable in that they are continually being rescaled around shifting governance priorities and market narratives that differentially value particular resources over time (Hensengerth, 2015; Sneddon and Fox, 2006).

These dynamic cross-border relationships tend to take one of two generalisable spatial forms. First, *multi-sited commoning relations* are needed to coordinate the governance of transboundary resources such as air, water and migratory species that have properties of 'non-stationarity' (Wolkovich et al., 2014) in that they physically move across borders within and between countries. Because these transboundary resources do not respect (geo)political borders as the spatial basis for political action (Dalby, 1992), they cannot be governed at a single scale of human interest. Multi-sited commoning activities such as Payment for Ecosystem Services (PES) are designed to conserve interconnected distant habitats and uphold the collective resource rights of jurisdictionally dispersed users. Multi-sited commons are also required to systematically organise knowledge in transboundary decision-making (for example, about habitat classifications and species quotas) and to coordinate cross-border approaches to sustainable harvesting rates and conservation programs (Armitage et al., 2012; Simpson, 2018). Increasingly, environmental perturbations such as some floods, droughts and transboundary atmospheric pollution linked to dry season biomass fires are inspiring multi-sited transboundary commons around conceptions of sustainable livelihoods, disaster mitigation, resilience-building and adaptation strategies. Floods, for instance, can reconnect waterholes that exist for long periods in isolation, highlighting the 'connectivity potential' of commons between administratively divided users of waterhole resources (Marshall et al., 2006).

A second, related way in which transboundary commons are spatially and socially constructed is via multi-stakeholder, multi-scalar governance coalitions that work through communities anchored in localities. These *situated transboundary commons* require hybrid forms of governance involving multi-sector collaborations that function at different organisational

scales. In their most productive application, situated transboundary commons could be conceived as a potential panacea for the deficits produced by binary models of 'top-down' and 'bottom-up' environmental governance arrangements (Gluesing et al., 2017). Whereas hierarchical, centralised environmental governance regimes have often proven insensitive to traditional knowledge systems and ways of life, community-driven approaches tend to overlook the contributions of local actions to larger scales of environmental processes and wider collaborative opportunities (Cash et al., 2006; Norman, 2014).

Hybrid governance coalitions situated in localities are thus challenging conventional understandings of what constitutes the transboundary commons. The contributions of outside actors and resources in provisioning situated commons around reforestation and watershed management generate specific spatial forms and new social norms, often involving asymmetrical power relations, across sectors and scales of environmental governance (Andonova et al., 2009; Ansari et al., 2013; Gururani and Vandergeest, 2014). Mangrove ecosystems might be physically located in a single jurisdiction but governed by a transboundary coalition comprising farmers, conservation activists, big plantation companies, government agencies and (inter)national NGOs. Because these transboundary relationships collectively transform pre-existing governance arrangements, situated transboundary commons could either be understood as transboundary regimes of environmental governance in their own right or as component parts of multi-sited commons that contribute to the health of distant ecosystems.

Both multi-sited and situated transboundary commons are operationalised by *communities* of commoning. Here, I use the term communities rather than networks to suggest the environmental solidarities, collective practices and mutual interests that go into cross-border commoning activities (Featherstone, 2003). It is,

of course, important to recognise that the assumption of community homogeneity underscoring the commons literature is problematic in that it overlooks or downplays complex layers of unequal power relations within and between communities that (re)produce differentiated capacities along class, gender, religious and other demographic lines. Yet the concept of community remains useful in directing attention toward the generative bonds that unite us 'not by what we *hold* in common but perhaps rather what we *owe*, our obligations' (Amin and Howell, 2016: 11) to the wider habitats that sustain us across bordered spheres of human interest.

Environmental geography has only begun to address the ways in which communities of commoning are breaking down traditional barriers to cross-border cooperation at different scales of governance. The prevailing emphasis on balancing resource interests among blocs of national actors at the supranational scale of analysis has often come at the expense of understanding how, when and why communities enact commons across borders at national and sub-national scales of environmental governance (Hirsch, 2016). Yet even at higher levels of governance, transboundary commons could not function for practical purposes without cross-border collaborations between communities at lower organisational scales.

These smaller scales of cross-border communities become notable when transboundary issues are at stake. In riparian regions, for instance, the upstream construction of a large hydropower dam disrupts the smooth movement of aquatic life and interrupts the river's flood pulse, creating downstream blockages in sediment and nutrients that are necessary for riverbed regeneration. Hydropower dam impacts are unevenly experienced between upstream and downstream countries, so responses to basin-wide problems are primarily articulated and activated at the national and sub-national scales where they are most acutely felt.

Multi-sited riparian livelihoods that rely on transboundary river resources are especially vulnerable to the degrading effects of large hydropower projects (Thapan, 2017; Grundy-Warr, 2017). Transboundary governance frameworks around the concept of ‘integrated river basin management’ (Bréthaut and Pflieger, 2015) have made little headway in delineating enforceable domains of responsibility for conserving river commons at the basin scale, just as major perpetrators of transboundary water pollution and hydropower dam impacts often escape punitive action.

Here, Ostrom’s ‘design principle’ (1990) for resolving resource conflicts, in which transboundary users of the same resource can effectively monitor and sanction other users of the same resource, becomes difficult to implement. If informed consensus about collective resource rights and associated responsibilities are lacking across organisational scales of governance, then efforts to enact transboundary spaces for environmental action will invariably be compromised at particular scales. Experiences of hydropower governance in the Mekong River of Southeast Asia show that re-scaling the transboundary commons can be a vexing challenge. In this case, the basin-scale institutional framework that defines the Mekong River as a transboundary commons for the sustainable use of its resources is being denuded by the impacts of China’s hydropower hegemony over the Mekong basin on multi-sited downstream geographies of situated transboundary commons centred on riverine livelihoods (Sneddon and Fox, 2006; Li, 2013; Middleton and Dore, 2015).

The current inability of traditional forms of state-led governance to deal with transboundary environmental issues makes it necessary to better understand the multiple levels at which environmental collectives can, or could potentially, mobilise across borders. This need to spatially reconfigure the transboundary commons has been spurred by the expanding ‘scalar agency

of enclosure’ of capitalist value regimes which produce accumulation by displacement without any ‘parallel process of proletarianisation’ (Sevilla-Buitrago, 2015: 1007–8). Examining the multiple organisational levels at which transboundary commoning activities connect across scales of governance as well as ecologically is therefore necessary to deal with increasingly complex environmental problems that cannot be neatly addressed within territorial containers or settled at a single scale of political decision-making.

### III Transboundary governance

In line with earlier work that distinguishes governance from management, I locate the interactive processes of commoning and b/ordering within the realm of transboundary governance (Bakker, 2007; Armitage et al., 2012). Transboundary environmental governance, then, is defined here as the collective (state, private sector and societal; formal, semi-formal and informal) decision-making, norms and actions across territories and timeframes that shape the (re)distribution of environmental benefits and costs (Miller and Douglass, 2018). While both managerial models and governance frameworks have policy value, the concept of commoning resonates more strongly with governance. With its organising ethos around equitable, inclusive and informed decision-making, commoning strives toward the broadly fair allocation of common pool resources. In a similar vein, the term governance is usually associated with a diversity of stakeholders involved in collective decision-making. In practice, however, both governance and commoning arrangements are not equally well designed and may be undermined when contradictory imperatives expose the limits of participation, exacerbating operational confusion (Lockie and Higgins, 2007).

Commoning, as a strategy of transboundary governance, is inherently political. Whereas managerial frameworks tend to downplay

power relations by prioritising sector-driven expertise and (infra)structural solutions, governance highlights the political actors and spaces within which the uneven terrain of resource access is continually negotiated and contested (Armitage et al., 2012). By transcending sectors and silos of knowledge production and the exclusivity of public and private property boundaries, the concept of transboundary governance thus allows consideration of a wide array of commoning relations across mixed landscapes and regulatory regimes.

Power relations play a key role in shaping struggles for common property in transboundary environmental governance because plural legal frameworks and overlapping spheres of authority at different scales of transboundary governance tend to produce highly unequal beneficiaries of resource rights (Brown, 2007; Hall et al., 2011). Inconsistencies in legislation on mining, forestry and water can create legal loopholes within and between jurisdictions that are exploited by powerful actors to displace commoners from their lands and livelihoods, with no clear recourse to distributive justice (Peluso and Lund, 2011; Perrings, 2012). More positively, traditional power relations in the form of kinship and patronage ties have sometimes been used in parts of Southeast Asia such as Laos and Indonesia to sustain forest commons in partnership with governments and private companies, allowing communities retain communal rights to forest resources that traverse administrative boundaries (Agrawal, 2007; Agrawal and Lemos, 2007; Kenney-Lazar, 2018; Lund and Rahman, 2018).

Because the political dimensions of transboundary environmental governance are driven by flexible relationships among diverse actors, efforts to encapsulate these relationships within formulaic sets of governance principles have frequently encountered operational difficulties. There is a prevailing assumption in work on transboundary environmental governance that power and territoriality function in stable state

contexts, in which change is perceived to be incremental and cross-sectoral and multi-stakeholder dynamics are mainly evaluated in philosophical or abstract terms. Yet transboundary conservation agendas and sustainable development programmes are often enacted by actors with different backgrounds and contrasting worldviews who may share little in common beyond their commitment to a particular environmental good. David Featherstone powerfully makes this point in his study of the Inter-Continental Caravan project (2003), in which activists from diverse political traditions disputed the meaning of ‘environmentalism’, a foundational concept that united their joint political activities against neoliberal institutions and biotechnology.

For the above reasons, I take the view that policy prescriptions for transboundary governance are ultimately incapable of accurately mapping the contextual variables and plural possibilities for environmental action at different organisational scales (Agrawal, 2001). As an alternative to proposing a guiding framework for transboundary environmental governance, I draw attention in the next section to the ways in which emerging spatialities of commoning are engaging with bordering practices. This is a worthwhile exercise in exploring some of the less tangible aspects of the emerging terrain of transboundary environmental governance that can lend insights into the limits of, and prospects for, cross-border environmental cooperation and coordination.

#### **IV Challenging borders through commoning**

In modern statehood, the functional role of the border has fluctuated alongside shifts in the production and reproduction of assemblages of commons. These changes manifest in the degree to which borders adjudicate the jurisdictional realm of governmental environmental protection or obscure state responsibility for

denudation of the commons (Mason, 2008). What constitutes transboundary commons varies between countries and at different historical junctures. Many of the resources we regard as transboundary commons, such as fisheries and airspace, remain a function of border control in that they are governed by the laws of sovereign states and their representative bodies. Despite the historical emergence of commoning as an active strategy of resistance against the threat of enclosure (Holder and Flessas, 2008), ‘borderwork’ (Lamb, 2014) continues to inform and define the governance of commons in direct and subtle ways. The extent to which commons can take root and flourish within a particular jurisdiction may depend as much on the defence and protection of communal resource rights within that territory as it does upon the combined capacities of communities to create and cultivate commons (Ryan, 2013). Conversely, the construction of borders can erode the social and ecological richness of commons when state priorities and private development interests privilege modernisation projects at the expense of environmental protection, a foundational principle of environmental commoning (Brambilla, 2015).

Transboundary commoning activities are challenging conventional border controls in environmental governance in at least four inter-related ways. They are doing so by: (1) raising awareness of the socially and ecologically interconnected nature of transboundary resources; (2) drawing attention to the increasing prevalence of cross-border environmental disasters; (3) mobilising emerging technologies in the service of cross-border commoning activities; and (4) subordinating territoriality to ecological concerns in transboundary communities of practice. Closer examination of these four dimensions shows that, in the *first* instance, transboundary commoning activities are at the forefront of efforts to realign environmental governance regimes more closely around the rhythms of earth and its subsystems

(Grundy-Warr, 2017). In part, this ‘worlding’ spatial politics is driven by the moral position that environmental commons can only be sustained in the long term if we, as humans, recognise that our interconnected resource dependencies require ‘planetary stewardship’ to reform governance systems by searching for shared solutions to ongoing biodiversity problems (Andersson et al., 2014; Johnson et al., 2015; Galaz et al., 2012; Butler, 2017). Partly, too, efforts to (re)connect commons across administrative borders derive from historical experiences of de-commoning and socioecological injustice. Across the Global South, legacies of colonisation followed by decolonisation have artificially mapped the borders of religiously and ethnically divided societies onto major rivers and complex ecosystems (Miller, 2012). Indigenous and ethnic minority calls for the democratic reallocation of resources and the restoration of traditional lifeways have tapped into regional and global environmental networks to resist social displacement and their continued marginalisation by advancing claims to communal property and environmental justice (Tengo et al., 2014; Yanagisawa, 2015). Gendered, class, eco-religious/spiritual, urban, and rural poor struggles have similarly worked to break down traditional barriers to equitable resource-sharing arrangements by forming cross-border partnerships with (I)NGOs and the private sector in the pursuit of more inclusive and sustainable outcomes (Adams et al., 2003).

*Second*, the increasing cost and frequency of anthropogenic environmental disasters with complex causalities and cascading consequences has done much to expand our understanding of the nature of the commons problem as being inherently transboundary. Converging megatrends such as urbanisation, climate change, population growth and unrestrained development are incubating environmental crises at a rate that is outpacing our collective capacities to adapt to a changing biosphere. These developments are ushering in new

transboundary commoning efforts that are recasting compound disasters as a problem requiring transboundary solidarity and geographically dispersed coordinated activities (Miller and Douglass, 2018). National governance regimes around the world remain critically underprepared to deal with transboundary environmental conflict and displacement and associated 'survival migration' (Betts, 2013) by vulnerable peoples who are forced to leave their homes because of an existential threat such as food insecurity or livelihood collapse. With no policy remedy in sight for these critical transboundary problems, there is growing awareness that alternative cross-border governance arrangements need to be enacted at multiple organisational levels and across sectors of segregated knowledge and expertise (Popescu, 2012).

*Third*, new technologies are increasingly being deployed to connect environmental agendas and activities across borders. Spatial information technologies are being utilised by indigenous communities in an effort to retain access to their communal homelands by mapping lifeways that were previously conveyed as mental images via the fluid oral traditions of intergenerational knowledge systems (Fox, 1998; Rye and Kurniawan, 2017; Berkes, 2018). These counter-cartographies are highly politicised because of their application in striving to establish the legitimacy of indigenous territorial claims that are at odds with postcolonial borders by demonstrating evidence of spiritual, economic and residential continuity in human-nature relations. Somewhat differently, the current era of 'cyber-commons' is empowering de-territorialised online communities to attract distant support for situated environmental agendas. The capacities of transnational activists to bring regional and even global attention to localised threats and crises through the 'early warning system' of the internet is challenging bordered official discourses while establishing less easily regulated networks of association

(Cumbers et al., 2008: 188). Set against these initiatives, however, emerging technologies are being put to the service of destroying vast tracts of common pool resources in the search for new frontiers of resource exploitation in remote hinterlands, oceans, the Antarctic and outer space (Vogler, 2012). An estimated 90 per cent of predatory fishes have been lost from the global ocean, with 80 per cent of this loss occurring within 15 years of the onset of the industrialised exploitation of fisheries (Dietz, 2017; citing Myers and Worm, 2003). When new technologies help to open up spaces for 'commons grabbing', these de-territorialised 'borderlands' become ripe for 'ecolonisation' (Carmody and Taylor, 2016), or the acute expression at the periphery of neoliberal global development agendas that exclude local interests while obscuring the major perpetrators of environmental harm (Eilenberg, 2014; Mountz and Hiemstra, 2012).

*Fourth*, the deliberate subordination of territoriality to environmental and economic concerns has become an ideological and tactical strategy in the repertoires of transboundary communities of commoning. While decisions about the conservation and sustainable commodification of common environmental goods are inherently political, transboundary coalitions and partnerships tend to downplay the border politics of commoning by focusing on mutual economic (sustainable development) and conservation interests. Non-confrontational approaches to transboundary environmental commoning are essential in many postcolonial countries, such as member states of the African Union and the Association of Southeast Asian Nations (ASEAN), where sensitivities about outside interference have ushered in political cultures of 'engaged non-indifference' (Pelling, 2011: 85) in transboundary environmental cooperation (see also Strydom, 2015). The growing emphasis on economic aspects of commoning through sustainable development has afforded a more prominent role to the private

sector in transboundary commoning activities centred on public-private and private-societal partnerships. We see the expanding role of markets in transboundary commoning initiatives in the worldwide trend toward green growth partnerships aimed at protecting common pool resources against climate uncertainty and crises of resource sustainability (Gilson, 2018), albeit with highly mixed results.

The growing diversity of transboundary communities of commoning at different organisational levels of governance is considered in the next section. It is worth reiterating here, however, that transboundary communities of commoning are generating new forms of environmental governance, which, to varying degrees, bypass the legislative constraints of bounded jurisdictions. By actively decentring and limiting traditional border controls in the service of sustaining particular common environmental goods, transboundary communities thus represent an active effort to carve out more inclusive, informed and equitable spaces for collective environmental decision-making.

## V Transboundary communities of commoning

Transboundary communities of commoning socially and materially reconstitute borders. They do so through generative practices that extend *outwards* across boundaries of private and public property as well as *upwards* and *downwards* to connect local interests with wider environmental agendas. The potential of these flexible cross-border governance arrangements – overlooked in Hardin’s rational-choice formulations of society as an alternative solution to the commons ‘tragedy’ (1968) – warrants further investigation as a viable alternative to traditional state and private sector-led forms of environmental stewardship. Notwithstanding the potential for the commons to be captured by capitalist agendas or to emerge as a crude reaction against capitalism without an

alternative solution (Turner, 2017), transboundary communities of commoning that involve diverse stakeholders at different scales are creating new tools and pathways through which to conceive of, and pursue more coordinated and potentially inclusive forms of environmental governance. Consideration of the political activities of these communities across organisational levels, ranging from grassroots and neighbourhood associations through to the city, country, and regional/international level, can lend insights into the sorts of alternative participatory pathways that are shaping the emerging landscape of transboundary environmental governance.

*At the grassroots level*, indigenous, gendered/feminist, rural and urban poor, eco-religious/eco-spiritual, and Marxist voices have invoked the universalising politics of commoning to forge communities across borders. What many of these diverse communities share in common is their assignment of a cultural logic and more-than-economic values to natural resources, as opposed to market neoliberalism with its flagrant disregard for notions of socioecological interdependence (Antonio, 2013). Situating these commons within a ‘gift economy’ that is distinct from a ‘market economy’, Nagarajan (2017) ascribes the cultural properties of non-reciprocity and non-anthropocentrism to many situated commoning activities that function ‘within a wider community, including humans and animals and inanimate nature subjects’ (p. 50). Because grassroots communities share unique histories and identities deriving from their relationships with particular resources, their views on access rights and entitlements may be at odds with those of other communities, even within the same jurisdiction. Cognisant of this discrepancy, the 2003 UNESCO Convention for the Safeguarding of Intangible Heritage signalled the importance of embedding oral traditions and localised knowledge systems within wider political and legal discourses to protect common

pool resources that have an equivocal status on account of their designated value as cultural goods as well as commodities (UNESCO, 2003).

The circumstances that originally give rise to grassroots communities of commoning are often the same conditions that lead local activists to seek out transboundary support. Grassroots actors tend to initiate transboundary communities of commoning when no domestic remedy is readily available to resist the threat of commons enclosure or to achieve legal redress for the real or perceived injustices wrought by the invasion or capture of communal property regimes (Trawick, 2003; Larson et al., 2015). In post-colonial societies where localised claims to commons surface, the experiences of colonisation and re-colonisation are deeply rooted in the spatial and social reproduction of unequal resource geographies, with their legacy of denying traditional resource rights and the dispossession of communal homelands for the benefit of metropolitan expansion (Carmody and Taylor, 2016). Emerging from a position of marginality, situated communities of commoning thus forge transboundary alliances as a means of uniting and empowering the disenfranchised. These commons of resistance sometimes include the invocation of what Shangrila Joshi (2011) calls a 'postcolonial politics' that is liberated from North-South binaries in that it does not critique modernisation as a Western construct. Such politics of resistance have gained traction among Marxist scholars and activists seeking to break down borders produced by class interests through the nurturing of post-capitalist subjectivities and localised forms of distributional justice (for instance, by cultivating alternative forms of production such as urban gardening, food coops and community supported agriculture; Caffentzis and Federici, 2014; Thompson, 2015).

*At the level of cities and extended urban regions*, a multidisciplinary literature on transboundary ecological commoning has evolved, in part, in response to the worldwide transition

from rural to more urban societies. Rural-urban migration has exacerbated unequal urban geographies and associated vulnerabilities as cities swell to incorporate burgeoning populations through unsafe planning and inappropriate development. The attendant loss of rural agrarian livelihoods and communal lands has added political fuel to the viewpoint that ordinary people (commoners) can (re)claim a sense of community and ownership by commoning urban resources. Urban sociologist D. Parthasarathy (2011), in work on Mumbai, shows how rural migrants to the city 'hunt, forage and gather' to sustain traditional livelihoods by 'commonising through encroachment' in privately or publicly owned resource-rich sites, thereby creating an alternative map of the 'transhuman city' (p. 60). Although Parthasarathy observed that such informal practices typically function below the community level, his treatment of the transboundary rural migrant subject in remaking the city from below through inputs into domestic and transnational commodity chains provokes questions about collective rights of access to city commons. This question, taken up by urban geographer Anant Maringanti (2011), recasts David Harvey's (2003) 'right to the city' via commoning as an alternative to formal discourses of inclusive growth (which, Maringanti argues, essentially incorporates the poor and their properties into market regimes) and insurgent citizenship. Somewhat differently, Karen Bakker (2007) explores pathways by which activists and urban communities are deliberately leveraging public-private partnerships and public-public partnerships across multiple scales of environmental governance to oppose the corporate exploitation of water resources, testing the boundaries of city authority.

The growing prominence of urban-based transboundary communities of commoning has policy implications that extend well beyond the specific concerns of urban sustainability. Cities are emerging as progressive spaces for the cultivation of transboundary communities of

commoning due to their relative density of knowledge systems, ideas, and technologies, around which a vast array of relationships take seed and flourish, including through non-capitalist, non-hierarchical social structures (Huron, 2015; Chatterton, 2016; North and Longhurst, 2013). The trend towards decentralised governance across much of Asia, Africa and Latin America has seen city governments, rather than nation-states, emerging as centres of policy innovation in responding to cross-border environmental disasters and as strident advocates of climate protection (Chatterton et al., 2013). City-level transboundary activism has even offered redress for higher scales of ecologically unsustainable behaviours. In 2017, for example, 70 mayors of American cities responded to the decision by US President Donald Trump to withdraw from the Paris Agreement on Climate Change by vowing to uphold targets of the Paris accord within their own jurisdictions, while 30 city administrations pledged to work towards obtaining 100 per cent of their energy from renewable sources (Worland, 2017).

*At the national scale*, transboundary communities are distinguishable from lower tiers of cross-border commoning collectives in at least two ways. First, countries seek to open up borders as a means of *strengthening sovereignty* by establishing cooperative bilateral and transnational relationships aimed at smoothly managing shared or overlapping resources that are seen as national assets on both sides of the border. By contrast, grassroots and urban-based transboundary communities of commoning, which often emerge through struggles of situated resistance, strive to unsettle or *subvert sovereignty* when jurisdictional barriers threaten to enclose, degrade, or destroy commons. Second, national governments, unlike transboundary communities at lower spatial scales, are automatically conferred international legitimacy as brokers of societal interests within their

borders and in regulating resource externalities of the state system.

These two unique features of communities of commoning at the national organisational scale have tended to produce commons that are afforded formal protections in transboundary agreements. Spatially designated transboundary protected areas (TBPA), otherwise known as transfrontier conservation areas (TFCA) or peace parks, offer examples of how neighbouring countries work together to neutralise sections of their borders by creating national border-parks in the service of conserving shared natural resources (Roga et al., 2017; Schlesinger et al., 2017). A variety of transboundary governance frameworks have also been established between nation-states that share marine and river commons, both as a means of reducing the geopolitical tensions that inevitably surround transboundary water resources and to protect their sustainable development (Menga, 2017). Growing awareness of the social and ecological interconnectedness of transboundary resources has also facilitated national-level initiatives such as the Intergovernmental Platform on Biodiversity and Ecosystem Services ([www.ipbes.net](http://www.ipbes.net)), established in 2012 by more than 100 national governments to build collective capacities for strengthening biodiversity and sustaining ecosystem services. In governing migratory taxa, transboundary communities are enacting commons through spatial subsidies such as Payment for Ecosystem Services (PES) that target specific groups in different countries to conserve the health of distant habitats that are ecologically as well as socially connected (Semmens et al., 2011; López-Hoffman et al., 2017).

*At the international scale* of transboundary governance, communities of commoning tend to be more diffuse, intangible and hard to recognise. A critique of higher scales of conservation efforts is that they lack coherent communities comprising real people who attend to the everyday labour of making and maintaining

environmental commons. Too often, regional and global ‘communities’ are reducible to signatories of international agreements and regulatory frameworks that lack sufficient detail and contextual specificity to be readily operationalised or enforced. This means that the commoning work of regional and international organisations finds meaning, relevance and ‘community’ through its engagement with local partners. To succeed in this process, international organisations must adapt their language and programmes in line with contextual specificities, just as situated commoning communities in search of transboundary support need to be ideologically or tactically open to acknowledging areas of compatibility with outside agendas (Nagarajan, 2017). For example, in the aftermath of the 2004 Indian Ocean tsunami, which devastated Indonesia’s almost homogeneously Muslim province of Aceh, Acehnese eco-Islamic groups worked together with the secular World Wildlife Fund (WWF) to rehabilitate mangrove commons and other damaged coastal ecologies. The WWF in turn consulted the Birmingham-based Islamic Foundation for Ecology and Environmental Sciences (IFEES) to ensure that its Aceh programmes were sensitively articulated through the lens of Islamic values. This was essential within the context of Aceh’s then transition to an Islamic legal system (*Shari’ah*), which occurred at a critical juncture when Acehnese civilians were struggling to make sense of their legacy of loss and social trauma within an Islamic worldview (Miller, 2009). Without the unifying ‘glue’ of Islam, the WWF conceded that its post-tsunami programmes could not have involved the active participation of Acehnese people in decision-making processes or fulfilled its longer-term objective of building local resilience capacities to respond to future environmental threats (Miller, 2010).

In forging transboundary relationships across vertical and horizontal scales of socio-ecological interests, communities of

commoning are thus reframing the problem of the commons while expanding the range of tools that might be deployed to address it. Yet such communities are also extending across territories out of necessity. The work of creating and connecting commons cannot properly function in organisational silos, just as commoning activities do not naturally fit into bordered spaces. Transboundary communities of commoning, therefore, represent a logical organisational formation through which to theorise and frame policy responses to cross-border environmental threats and crises of resource sustainability in our interconnected world.

## VI Conclusion

This article has brought two streams of research that are not well integrated into conversation with a view to highlighting emerging forms of transboundary environmental governance. Examining the interactive relations between commoning and b/ordering offers a useful entry point for exploring how spaces of transboundary environmental action are negotiated, contested, operationalised and maintained by geographically dispersed communities of practice. These flexible communities are neither internally cohesive nor bound by fixed values ‘in common’. Stretching across jurisdictions, sectors and organisational scales of governance, the members of transboundary communities often share little in common beyond their commitment to a particular environmental good or interest in mitigating a transboundary environmental problem.

In directing attention toward the organisational scales and social practices involved in transboundary environmental governance, this paper contributes to an ongoing agenda to better understand the diversity of relationships involved in sharing resources that defy borders and fixed spatial imaginaries. Existing work on the environmental commons in the economics-focused traditions of Ostrom and Hardin makes

this difficult, with its emphasis on common property domains with clearly delineated boundaries between well-defined resources and established collectives of users. Approaching the commons problem from a transboundary governance perspective, however, requires addressing messy political realities as represented by plural legal frameworks, overlapping regulatory systems and asymmetrical power relations within and between administrative boundaries and land use regimes.

With regard to the relationship between environmental geography theory and practice, understanding the processual relations between commoning and b/ordering is important precisely because both sets of practices function as modalities, or strategies, of transboundary governance. Practices of commoning and b/ordering do not operate in isolation from each other, but instead dance in perpetual negotiation and contestation. Commoning activities selectively exploit border porosities to sustain common environmental goods through broadly equitable resource-sharing arrangements centred on inclusive knowledge-sharing and informed decision-making. Performances of b/ordering similarly mediate spatial practices of commoning, either by upholding communal resource rights within a given territory or by enclosing, commodifying or degrading environmental commons in the service of neoliberal development.

From a transboundary governance perspective, these generative practices of commoning and b/ordering function at and between particular organisational scales of governance. I have shown how the tensions between sharing and enclosing nature play out at multiple scales, ranging from the neighbourhood and grassroots communities through to the city, nation-state and international levels of governance. Transboundary communities of environmental practice extend both horizontally across sub-national and national borders as well as vertically to connect grassroots actors with higher scales of knowledge, expertise, funding and

technologies. These vertical and horizontal arrangements frequently come together in environmental practice because resources that physically move across borders require the transboundary coordination of multi-sited commoning activities undertaken by communities anchored in localities.

The current inability of national governments and blocs of nation-states to deal with the pace and magnitude of anthropogenic environmental change requires new ways of thinking about different scales at which transboundary communities of environmental practice are, or might be, enacted. I have demonstrated why flexible, multi-scalar commoning arrangements matter in bridging policy gaps in formal governance regimes that cannot easily overcome hard administrative boundaries or address complex environmental issues at a single scale of interest. Multi-scalar commoning interventions at specific scales could also better accommodate the social complexities that underpin transboundary environmental governance regimes. These scalar considerations are imbued with moral considerations that I have not had room to deal with here, such as when it makes ethical and common sense for commoning efforts to jump scale 'upwards' or 'outwards' across borders or when transboundary coalitions should connect 'downwards' to work with localised communities (North, 2005; Bulkeley, 2005). While strategic and spatial adjustments are necessary to better support communities engaged in the everyday struggle to (re)connect commons across borders, the political dynamism of b/ordering and commoning relations also suggests that transboundary communities of environmental practice should be closely evaluated by human geographers working in a variety of empirical contexts.

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