Spatiality of the commons

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Abstract: This editorial sets the scene for the special feature by explaining the importance of geography to the commons and its governance, critically appraising the existing literature on this theme, highlighting important contributions from recent research and mapping out a future research agenda. It begins by reflecting on how little explicit attention has been paid to date to the spatial dimensions of the commons. The author critiques on the one hand the literature on the commons for conceiving of spatiality primarily as the local, physical context of commons use and regulation but also, on the other hand, the spatial science literature for generally neglecting the commons, both conceptually and empirically. The paper then pinpoints important exceptions in the fields of human geography and planning studies, assessing how these works contribute to a more thorough and robust understanding of the relationship between spatiality, the commons and their governance. The analysis of these select works making explicit reference to the commons is complemented with a reflection on how broader debates in the spatial sciences can enrich spatial research on the commons. The final section turns to the papers of the special feature, summarizing each of the papers in order and indicating how they each contribute to the themes developed in the editorial.

Development and Structural Planning (IRS) which made this special feature possible.

1. Introduction

Within the scholarly debate on the governance of the commons[1] the issue of spatiality is curiously under-researched. Whilst many studies refer to the importance of place for the effectiveness of the institutions investigated, few submit this general assumption to critical appraisal and even fewer put the spatiality of the commons and its social construction centre stage in their analysis. The spatiality of the commons is generally addressed implicitly and not subjected to systematic scrutiny.

This is surprising given that, in Mark Giordano's words, "[t]he commons problem is in many respects fundamentally geographic in nature, in that the phenomenon is predicated on the relationships between the spatial domains of resources and resource users" (2003, 365). On the one hand public goods and the institutions which regulate their provision and use invariably affect spatial structures and dynamics. Collectively used goods and services – whether roads, watercourses, lighting or cultural landscapes – are a prerequisite for the quality of life, economic productivity and healthy environment of cities and regions. On the other hand, the social, economic and physical characteristics of a city or region can substantially frame the available options for collective action. The importance of space to the governance of the commons has, moreover, increased as institutional arrangements become more international and local practices more diversified. New international regimes and supranational reforms, such as in the EU, are generating a spatial re-ordering of particular commons, characterised in particular by the need to work across territorial boundaries and scalar levels. This, in turn, is requiring stakeholders to develop more spatially-aware strategies to benefit from the changes. At the same time local actors are developing their own, place-specific solutions for organising and cultivating commons.

The purpose of this special feature in the *International Journal of the Commons* is to explore the multiple, shifting and contested geographies of the commons as a step towards developing a more systematic and fine-grained conceptualisation of the spatial dimensions to their governance. The idea emerged out of an international research workshop, entitled "Territoriality of the Commons: Spatial Perspectives on the Governance of Public Goods in Past and Present", held at the Leibniz Institute for Regional Development and Structural Planning (IRS) in Erkner, Germany, in September 2011. This workshop was designed to promote a dialogue between three strands of research identified as particularly relevant

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1   In this paper the term "commons" is used generically to describe all forms of collectively used goods and services, material and non-material. These include so-called pure public goods, common pool resources and club goods.

to unpacking the spatiality of the commons: firstly, action arenas as loci for organizing local and regional commons; secondly, rescaling the commons and the reordering of power geometries and, thirdly, the relationship between physical and social geographies of the commons. The positive response to the workshop and the discussion it generated prompted the organizers to launch an initiative for a special feature in the *International Journal of the Commons* as an ideal platform for raising interest in the underexplored spatial dimensions to commons research, providing illustration with empirical case work and mapping out a research agenda at the interface between spatial and commons scholarship.

This editorial begins by exploring the ways in which commons research has addressed spatial dimensions in the past. With this analysis I point out the limitations inherent in much of this work, identifying key research needs. In the subsequent section I turn to spatial research – encompassing the fields of human geography, urban studies and planning studies – to explore how this body of work can address these needs. Here, I first point out how little attention has been paid by geographers in general to commons research, then highlight recent work addressing the spatiality of the commons explicitly before pointing out the potential contribution of spatial research to the commons community. In the final section I introduce the four papers included in the special feature, positioning them in the above body of scholarship and summarising their key points.

2. Spatiality in commons research

Issues of space, place, territory or scale are ubiquitous to the study of the commons, yet have rarely been accorded prime attention. A simple word search of papers published in the *International Journal of the Commons* revealed between 4 and 13 citations for the terms space, place, territory or scale (mostly for the same papers), yet very few of these papers strive to conceptualise the spatial dimension addressed (e.g. Mwangi and Wardell 2012). Spatiality in commons research tends to be treated as a site of collective action, a background context factor or a level of agency. References to it are often implicit and generally under-theorised. This does not mean that spatiality is neglected by this work, but rather that it is rarely subjected to critical reflection. Two prominent schools of commons research can be taken to illustrate this point: work on local collective action inspired by Elinor Ostrom and the Institutional Analysis and Development (IAD) framework on the one hand (Ostrom 1990, 2005) and studies on international environmental institutions informed by Oran Young and the Institutional Dimensions of Global Environmental Change (IDGEC) project on the other (Young 1999, 2002, 2008). Looking across this literature, the following spatial dimensions are prominent:

– *Place-based collective action*: In contrast to hierarchical forms of state intervention, Ostrom's design principles for managing common pool resources (CPR) are reliant on a sound understanding of local context (principle 2), the involvement of affected stakeholders in decision-making (principle 3) and

conflict resolution at a local level (principle 6) (cf. Armitage 2005; Ostrom 2005). How far the action arenas so central to the IAD framework are conceived in spatial terms is open to interpretation. The local contexts of collective action can, though, induce place-based identities around specific CPRs (e.g. Payton et al. 2005).

– *Functional spaces and spatial fit*: The focus of both schools of research on the governance of environmental commons has generated interest in the biophysical boundaries of different natural resources (Ostrom 2005) and the implications these have for institutional design (Young 1999). This work addresses problems of spatial fit between the functional space of an ecosystem (e.g. a river basin) and the territorial remit of the jurisdiction(s) responsible for its management (Young and Underdal 1997; Folke et al. 1998, 2007; Young 2002, 2005; Galaz et al. 2008; Moss 2012b).

– *Problems of scale and multi-level governance:* Both bodies of scholarship have identified issues of scale as crucial for effective commons institutions. The IDGEC literature focuses on how far and under what circumstances successful institutional arrangements can be up-scaled to address the needs of international collaboration (Young 1999; cf. Berkes 2006). The literature on multi-level governance is more interested in identifying optimal scales for particular forms of environmental governance (Hooghe and Marks 2003; Armitage 2008; Mwangi and Wardell 2012). Scalar issues in IAD studies are often informed by the concept of polycentricity, with its focus on the coexistence of multiple centres of decision-making independent of each other (Ostrom et al. 1961; Ostrom 1998).

Commons scholars cannot, therefore, be accused of overlooking spatial dimensions of the commons. The three spatial issues summarised above are widely acknowledged to be central to commons governance, as extensive debates testify in each case. Where commons scholars can be criticised is for being susceptible to three myopic perspectives on spatiality. Firstly, where spatial terminology is used in commons research it is generally as a means of categorisation and selection rather than as an object of analysis in itself. Thus, work on global commons (e.g. Kaul et al. 1999, 2003; Martens and Hain 2002) is more interested in highlighting the distinctive challenges of regulating commons on a global scale than interrogating the notion of the global and what this means for the ways commons are used or abused. The huge body of literature on local commons (e.g. Ostrom 1990; Dietz et al. 2002) treats space primarily as the site of collective action and not as something constitutive to commons regimes. A second critique that can be levelled is that commons research generally conceives of space in physical terms. The locality or region is conventionally treated as a bounded territorial unit identifiable by a distinct physical or political geography. This perspective, however, neglects the economic, social, or cultural geographies which also shape the production, use and regulation of commons. These geographies often cut across political or physical boundaries and are not,

as a rule, readily circumscribable. This leads to a third criticism: the tendency to treat spatiality as a (physical) given. For many commons researchers, terms such as space, place or scale refer to phenomena which are 'out there'; i.e. they exist independent of human perception. The ways in which spatiality is socially constructed – including through collective action over commons management – are largely ignored. This essentialist approach to spatial dimensions also lends itself to a static notion of spatiality, tending to downplay the spatial dynamics engendered by human agency. The message emerging from this brief review is that in governing the commons we need to consider not only the different spatial dimensions of (material) public goods and (immaterial) services, of institutional arrangements and modes of collective action, but also of their social and political construction. In short, we need greater scholarly sensitivity towards the multiple geographies of the commons.

3. Commons in spatial research

How far can spatial research – encompassing human geography, urban studies and planning studies – contribute towards addressing these deficits in the commons literature? One might expect these disciplines to be active in promoting a richer conceptualisation of the spatial to commons research. Public goods are, after all, critical for spatial development; assuring their provision is a central tenet of spatial planning, land-use policy and regional development programmes. However, as Emily Young has rightly criticised, geographers "have devoted surprisingly little attention to the role of the commons and their management" (2001, 284). This critique is echoed by geographers themselves. Mark Giordano, in his paper "The Geography of the Commons", laments the silence of geographers in debates on the commons, despite their long tradition of scholarship on issues of direct relevance, such as resource management (2003). This applies particularly to the dearth of theoretical work on the spatiality of the commons (Blomley 2008). It is only recently that geographers have begun to engage critically and constructively with issues surrounding commons and their use (e.g. Blomley 2008; Harvey 2012; Jeffrey et al. 2012). These works, however, have yet to be acknowledged and appraised in the commons research community (Moss 2012a). In this section I introduce three explicit inputs to commons research from the fields of human geography and spatial planning, outline potential contributions stemming from broader debates in the spatial sciences and then summarise how these inputs can provide guidance for future research on the spatiality of the commons.

Firstly, Giordano himself has developed what he terms a "scale- and space-explicit theory of the commons" (2003, 365). Addressing solely environmental resources, he distinguishes four categories of spatiality. The first relates to private resources, where a resource domain coincides with the rights domain of one user but not another (e.g. oil resources in one country only). The second relates to open access resources, where a resource domain intersects with the rights domains of several users (e.g. common grazing lands). The third relates to fugitive resources,

where the movement of a resource is unidirectional (e.g. river pollution), benefiting one user at the expense of another. The fourth relates to migratory resources, where the movement of a resource can be in both directions at different times (e.g. waterfowl breeding). These differences in geography, Giordano argues, can help explain problems of collective action and target issues needing particular consideration in commons regulation. The geography he refers to, however, addresses purely issues of physical positioning, whether of a (natural) resource or of a resource user. There is no acknowledgement in this explanation of how the geography of the commons can also be social, political or cultural and itself the product of social construction.

Secondly, there is an emergent debate in human geography and urban studies around the theme "reclaiming the commons" (Klein 2001; Harvey 2003; Lee and Webster 2006; Bakker 2007; Foster 2011). In marked contrast to Giordano's approach, it is the political and social dimensions to the "multiple geographies of the commons" (Blomley 2008, 320) which characterise this body of literature. Interest in the commons stems here on the one hand from a critique of what David Harvey calls "a new wave of 'enclosing the commons'" (2003, 148; cf. Jeffrey et al. 2012), such as land-grabbing and the depletion of global environmental commons, and on the other from the growing importance of commons to political movements, whereby worldwide oppositional networks are inspired by "a radical reclaiming of the commons" (Klein 2001, 82; cf. Hardt and Negri 2009). Nicholas Blomley (2008) has been prominent in developing the concept of urban commons in this context, setting it up in distinct contrast to notions of spatiality which underpin the IAD framework. Analysing a social protest movement against the development of a site in Vancouver's Downtown Eastside, Blomley argues that the IAD approach – with its assumptions of self-interested rationality, rule-guiding behaviour and maximising strategies – is inadequate for capturing the ethical and political issues involved in resolving conflicting understandings of public interest and public ownership among local actors. The point he makes is not just about the absence of certain dimensions, such as political contestation, from much commons research, but about how commons are the product of social interaction. In his words, "commons [are] not so much found as produced" (Blomley 2008, 320). This process of commons creation, or "commoning" (Linebaugh 2008; Bollier and Helfrich 2012), has, moreover, significant spatial implications. Rather than viewing space simply as a site of commons provision and use, this perspective entertains the notion of commons shaping socio-spatial structures and dynamics. To quote Blomley again, "[i]f [it] is true to say that place helps make the commons, it is equally the case that the commons is a form of place-making" (2008, 320). This resonates with work in planning studies on place-making processes in the collective management of cultural landscapes as commons (e.g. Fürst et al. 2005, 2008). In a similar vein, Jeffrey et al. argue that if enclosure represents a seizure of the commons, then the commons can be perceived as "generative spacing" (2012, 1249).

Thirdly, from a planning studies perspective Benjamin Davy explores the complex relationship between public and private goods in urban development

(2009, 2012). In his view, "without spatial commons, cities would be unfit for use" (Davy 2009, 294, translation by the author). Privately owned property is, he argues, dependent on commons to function and flourish. These spatial commons can be material – such as a public road enabling access or a park for recreational purposes – or non-material – such as a town's image or a low crime rate. Davy presents four ways of conceptualising the relationship between public and private goods in urban development (2009, 310–312): firstly, public goods as precondition (e.g. technical infrastructure enabling the use of a private building), secondly, public goods as improvement (e.g. neighbourhood schools increasing the value of private housing), thirdly, public goods as cooperation (e.g. a garden landscape emerging out of the use of multiple individual plots) and, fourthly, public goods as accumulation (e.g. a cultural landscape resulting from a combination of private and public land uses). The task of land-use and urban planners, from this perspective, is to ensure a complementary balance of private and public goods in the city capable of benefiting all inhabitants. This idea of plural property relations is developed further in this special feature (Davy 2014).

Valuable though these three contributions are in promoting a more differentiated, wide-ranging and socially mediated understanding of the spatiality of the commons, they cannot represent the full potential of the spatial sciences to conceptualise this relationship. To this end we need to look beyond such explicit references to the commons to broader debates in human geography, urban and planning studies which can help systematise this task. In the context of this editorial it is only possible to highlight a selection of relevant debates on the ways space is constituted and governed. Of particular interest are the literatures on a) the social construction of space, b) the relationship between social and physical space, c) spatial scales and processes of rescaling and d) functional action spaces.

a) That space is socially constructed is, today, widely acknowledged in all social science perspectives on spatiality (Soja 1989; Marston 2000; Löw 2008). This departure from an essentialist notion of space as being something 'out there' has several implications for research on the spatiality of the commons. Firstly, what a place, territory or scale is – or can be – is always the product of actors' perceptions and agency. Secondly, space is not merely a physical or territorial category, but can also be socio-economic, symbolic, historical etc. Thirdly, these multiple geographies interact, making a relational understanding of space unavoidable. Conceiving the commons merely in terms of one spatial dimension is, therefore, inadequate.

b) The importance of social construction to the study of space has raised the question of the relationship between the social and the physical world. The danger of subsuming material elements purely to objects of human perception and thereby disregarding their intrinsic and distinctive attributes, as prominently critiqued by Actor-Network Theory (Latour 2005), is an issue of contention in the social sciences. Many geographers are arguing

for a more nuanced understanding of complex and dynamic socio-material configurations and their spatial embodiments (Swyngedouw 2004; Kaika 2005; Heynen et al. 2006; Farías and Bender 2010; McFarlane 2011). This work can be inspirational for commons research exploring relationships between the social, the environmental and the technical.

c) The debate in human geography on the politics of scale can enrich commons research substantially by generating greater appreciation of the ways in which scales are socially produced and politically contested (Swyngedouw 1997; Brenner 2004; Smith 2008 [1984]). Scale, to these authors, is neither given nor static, but both the product and medium of social struggles for power and influence and, consequently, subject to continuous adaptation (Smith 1995; Swyngedouw 1997). Processes of rescaling, whereby actors alter the significance of existing scalar configurations or generate new ones, are an expression of this dynamism and deliberation. Of particular relevance to commons researchers are recent works applying the rescaling concept to environmental goods (Swyngedouw 2004, 2010; Bulkeley 2005; Lebel et al. 2005).

d) Inspired by work in the political sciences on the emergence of new functional spaces and their (often problematic) relationship with political-administrative territories (Hooghe and Marks 2003) as well as problems of fit and interplay (Young 1999), recent studies in the planning sciences are exploring new spatial configurations for the management of regional commons (Fürst et al. 2008; Gailing 2012). Taking examples such as regional parks, tourism regions and biosphere reserves, these studies are exploring how these action spaces get constituted around a particular issue, how they generate a sense of regional identity and how they affect the ability of stakeholders to shape regional development.

Looking across both the three explicit contributions to the commons and the implicit inputs from the broader spatial science literature, we can draw the following conclusions on what these literatures can contribute towards a more advanced understanding of the spatiality of the commons (cf. Moss 2012a). Firstly, adopting a social constructivist perspective on space can avoid narrow, essentialist presumptions about the spatial dimensions at play in using, producing or regulating the commons. It enables us to consider how the spatiality of the commons is not only the product of societal interpretations, preferences and power constellations, but also, conversely, shapes the options for managing the commons. Secondly, considering the multiple geographies of the commons allows us to look beyond the visible physical dimensions of their spatiality to less visible, bit equally significant, socio-economic, cultural or symbolic dimensions. This broader perspective opens up avenues of enquiry into, for instance, the relevance of regional identity to collective action or the spatial distribution of commons as an expression of socio-economic inequalities. Thirdly, the importance of social construction should not blind us to the significance of materiality in the spatial

organisation of the commons. This applies not only to commons whose materiality is obvious (e.g. water resources or public spaces), but also to 'intangible' commons such as education, information and identity. Fourthly, research on the politics of scale and rescaling can introduce a more critical and dynamic perspective to the multi-level governance of the commons. Here, the focus of study would shift from determining what institutional arrangements are suitable at what spatial scales to identifying how scalar dimensions of the commons are constructed, contested and configured. Finally, the action spaces approach emerging from the planning sciences offers insight into how commons get actively organised around particular functional spaces in processes of regional identity-building and place-making. This work can help substantiate the spatiality implicit in the action arenas concept of the IAD framework.

4. The contributions to this special feature

The four papers in this special feature address the critical relationship between the spatiality of the commons themselves and the spatiality of the practices and institutions which produce, deplete or regulate them. Together, they cover a broad, but complementary range of spatial dimensions to the commons, including their biophysical spaces and boundaries, the scales and levels of commons governance, the fit/misfit between political-administrative territories and functional spaces, place-based identities, spatial inequalities of access and spatial reconfigurations of commons use and management. They also address a wide range of different commons, from the tangible (e.g. urban streets) to the less tangible (e.g. cultural landscapes), from the environmental (e.g. wild reindeer) to the social (e.g. basic education). They all share an interest in broadening perspectives on commons research through the lens of spatiality, whether by highlighting how commons are perceived and valued differently in different places, how actors seek to manage commons across multiple scales or how local practices of commons use inform institutional arrangements.

The first paper, by Benjamin Davy, explores the plural property relations involved in the practice of enabling diverse land uses in human settlements (2014). Its point of departure is that simple distinctions familiar to theories of property rights and land policy, such as between "common property" and "private property", fail to capture the real-world diversity of land uses and the complexity of property relations. Davy introduces the term "spatial commons" to describe shared land uses typical of urban settlements. These he subsequently categorises in a typology of four shared and four restricted land-use types. His principal argument is that spatial commons and private property are inherently interdependent. Private land use is heavily reliant on spatial commons, for instance on air quality or road access. Conversely, some spatial commons – such as a neighbourhood garden landscape – are the product of multiple private land uses. It follows that spatial planning and land policy – as the principal instruments regulating urban land use – need to account for these "plural rationalities" of land use by entertaining

a mix of ownership types and devising optimal combinations of diverse rules. Here, spatial planning is revealed to be about more than just restricting private land use, as is popularly assumed. On the contrary, it can greatly increase the value of private property by planning the spatial commons on which private land use depends. The paper thus sensitises us to the diversity of urban commons, the close relationship between shared and restricted land use and how this interplay can – with good planning – produce viable urban structures. In so doing, it makes a valuable contribution to understanding the complex relationship between public and private goods in urban development and the need to consider both material and non-material dimensions to spatial commons.

The second paper, by Mikaela Vasstrøm, appears at first sight a conventional study of an environmental planning initiative to protect an endangered species – in this case, wild reindeer in Norway (2014). However, the enormous space required for reindeer to live wild renders impossible the usual procedure of designating a protected area entailing major land-use restrictions. The attempt by the Norwegian planners to do just this sparked off such protest from inhabitants of this large-scale area that an intensive participatory process was launched to reach agreement. The author, who studied this process as a participatory observer, explores this conflict and its resolution through the lens of different perspectives of the commons. On the one hand is the institutional perspective of commons – shared by the planners – as designing an institutional arrangement (the protected area and environmental plan) to manage a resource (wild reindeer) within a defined territorial boundary (the reindeer's habitat) and according to national government regulations. On the other hand is the everyday perspective of commons – held by inhabitants of the area – as a complex relationship of human-nature relations embracing socio-economic (tourism), cultural (hunting) and historical dimensions and which is not limited to one resource or to any fixed territory. The author concludes from the case study that participatory processes in environmental planning need to strive for institutional arrangements capable of spanning diverse commons perspectives and different scales of commons thinking and governance, from formal legal frameworks to the everyday rationalities of citizens. In this way the paper illustrates how notions of the commons can be socially constructed in very different ways – ranging from the environmental to the cultural and socio-economic – and how these notions draw on diverse spatial dimensions and scales.

The third paper, by Angela Jain and Massimo Moraglio, analyses urban streets as commons (2014). With a comparative study of experiences in European and Indian cities they explore the multiple uses of streets, the conflicting interests over street use and the institutions – formal and informal – devised to regulate these competing claims to street space. Departing from the assertion that urban streets are a non-excludable but rival good, they show how the emergence of motorised transport in European cities was marked by attempts to organise streets according to categories of velocity. Although open to all users, streets became spatially segregated into "fast spaces" (for cars) and "slow spaces" (for pedestrians), as institutionalised in highway codes and materialised through physical barriers.

This spatial "slicing" of streets was not only a response to increasing congestion and accidents, but also an expression of status and power relations in the city, especially in the early days of the motor car. In Indian cities today those in power are trying to introduce similar modes of spatial segregation to streets in the interest of promoting motorised transport. Here, the uses and users of urban streets are much more varied than in modern European cities and informal modes of (self-) governing street space remain strong. However, without adequate formal rights the weaker street users are at a distinct disadvantage in competition with the car driver. In terms of the key themes of the special feature this paper contributes to research on inequalities in access to the commons, as expressed in the spatial segregation of streets, and collective action to reclaim the urban commons, in the form of protests against the transformation of streets into mere traffic lanes.

The fourth paper, by Ferenc Gyuris, investigates basic education as a social commons from a geographical perspective (2014). The author positions the paper in the emergent literature on 'knowledge commons', analysing not knowledge generation and access *per se*, but the public services involved in the provision and dissemination of knowledge. Choosing basic education as a form of knowledge dissemination all children are expected to have access to, he examines the services provided, the physical buildings required for these services and the organisational structures behind both. The spatial dimension studied is geographical accessibility to basic education. Rather than study a capitalist society, in line with most recent research on commons and their (neoliberal) enclosure, the author conducts a case study of the communist regime in Hungary between 1945 and 1990. Here, he applies Ostrom's eight design principles to assess how far basic education in different eras of communist rule met the political goal of providing a spatially even and equitable service. He concludes that, despite an array of centralised and decentralised models of service provision across the period of communist rule, access to, and the quality of, basic education in Hungary varied hugely across the country. With respect to debates on the spatiality of the commons this paper contributes to our understanding of socio-economic geographies in the provision of commons and provides insight on policy reforms as attempts to rescale institutional arrangements, in this case for basic education.

Overall, the four papers point the way towards a future research agenda which reaches beyond mere physical, territorial or essentialist notions of spatiality and encompasses the multiple geographies of the commons. This will involve – to cite the most promising avenues of research – studying the spatiality of commons use and production, of commons perceptions and constructions, of political action around commons, of commons values and identities and of commons policy and governance.

Literature cited

Armitage, D. 2005. Adaptive Capacity and Community-Based Natural Resource Management. *Environmental Management* 35(6):703–715.

Armitage, D. 2008. Governance and the Commons in a Multi-Level World. *International Journal of the Commons* 2(1):7–32.

Bakker, K. 2007. The "Commons" Versus the "Commodity": Alter-globalization, Anti-privatization and the Human Right to Water in the Global South. *Antipode* 39(3):430–455.

Berkes, F. 2006. From Community-Based Resource Management to Complex Systems: The Scale Issues and Marine Commons. *Ecology and Society* 11(1):45. http://www.ecologyandsociety.org/vol11/iss1/art45/.

Blomley, N. 2008. Enclosure, Common Right and the Property of the Poor. *Social Legal Studies* 17(3):311–331.

Bollier, D. and S. Helfrich, eds. 2012. *The Wealth of the Commons. A World Beyond Market and State*. Amherst MA: Levellers Press.

Brenner, N. 2004. *New State Spaces. Urban Governance and the Rescaling of Statehood*. Oxford/New York: Oxford University Press.

Bulkeley, H. 2005. Reconfiguring Environmental Governance: Towards a Politics of Scales and Networks. *Political Geography* 24(8):875–902.

Davy, B. 2009. Parzellen, Allmenden, Zwischenräume – Raumplanung durch Eigentumsgestaltung. In *Im Interesse des Gemeinwohls. Regionale Gemein-schaftsgüter in Geschichte, Politik und Planung*, eds. C. Bernhardt, H. Kilper, and T. Moss, 293–329. Frankfurt/New York: Campus.

Davy, B. 2012. *Land Policy: Planning and the Spatial Consequences of Property*. Farnham: Ashgate.

Davy, B. 2014. Polyrational Property. Rules for the Many Uses of Land. *International Journal of the Commons* 8(2):472–492.

Dietz, T., N. Dolšak, E. Ostrom, and P. C. Stern. 2002. The Drama of the Commons. In *The Drama of the Commons*, eds. E. Ostrom, T. Dietz, N. Dolšak, P. C. Stern, S. Stonich, and E. U. Weber, 3–35. Washington, D.C.: National Academy Press.

Farías, I. and T. Bender, eds. 2010. *Urban Assemblages. How Actor-Network Theory Changes Urban Studies*. Abingdon: Routledge.

Folke, C., L. Pritchard Jr., F. Berkes, J. Colding, and U. Svedin. 1998. *The Problem of Fit between Ecosystems and Institutions. IHDP Working Paper No. 2*. Bonn: International Human Dimensions Programme.

Folke, C., L. Pritchard Jr., F. Berkes, J. Colding, and U. Svedin. 2007. The Problem of Fit between Ecosystems and Institutions: Ten Years Later. *Ecology and Society* 12(1):30. http://ecologyandsociety.org/vol12/iss1/art30/.

Foster, S. R. 2011. Collective Action and the Urban Commons. *Notre Dame Law Review* 87(1):57–133.

Fürst, D., M. Lahner, and K. Pollermann. 2005. Regional Governance bei Gemeinschaftsgütern des Ressourcenschutzes: das Beispiel Biosphärenreservate. *Raumforschung und Raumordnung* 63(5):330–339.

Fürst, D., L. Gailing, K. Pollermann, and A. Röhring, eds. 2008. *Kulturlandschaft als Handlungsraum. Institutionen und Governance im Umgang mit dem regionalen Gemeinschaftsgut Kulturlandschaft*. Dortmund: Rohn-Verlag.

Gailing, L. 2012. Sektorale Institutionensysteme und die Governance kultur-landschaftlicher Handlungsräume. Eine institutionen- und steuerungs-theoretische Perspektive auf die Konstruktion von Kulturlandschaft. *Raumforschung und Raumordnung* 70(2):147–160.

Galaz, V., T. Hahn, P. Olsson, C. Folke, and U. Svedin. 2008. The Problem of Fit among Biophysical Systems, Environmental and Resource Regimes, and Broader Governance Systems: Insights and Emerging Challenges. In *Institutions and Environmental Change: Principal Findings, Applications, and Research Findings*, eds. O. R. Young, L. A. King, and H. Schroeder, 147–186. Cambridge, MA: MIT Press.

Giordano, M. 2003. The Geography of the Commons: The Role of Scale and Space. *Annals of the American Association of Geographers* 93(2):365–375.

Gyuris, F. 2014. Basic Education in Communist Hungary. A Commons Approach. *International Journal of the Commons* 8(2):531–553.

Hardt, M. and A. Negri. 2009. *Commonwealth*. Cambridge, MA: Harvard University Press.

Harvey, D. 2003. *The New Imperialism*. Oxford: Oxford University Press.

Harvey, D. 2012. *Rebel Cities: from the Right to the City to the Urban Revolution*. London: Verso.

Heynen, N., M. Kaika, and E. Swyngedouw, eds. 2006. *In the Nature of Cities. Urban Political Ecology and the Politics of Urban Metabolism*. London/New York: Routledge.

Hooghe, L. and G. Marks. 2003. Unraveling the Central State, But How? Types of Multi-Level Governance. *The American Political Science Review* 97(2):233–243.

Jain, A. and M. Moraglio. 2014. Struggling for the Use of Urban Streets: Preliminary (historical) Comparison between European and Indian Cities. *International Journal of the Commons* 8(2):513–530.

Jeffrey, A., C. McFarlane and A. Vasudevan. 2012. Rethinking Enclosure: Space, Subjectivity and the Commons. *Antipode* 44(4):1247–1267.

Kaika, M. 2005. *City of Flows. Modernity, Nature, and the City*. New York/London: Routledge.

Kaul, I., I. Grunberg, and M. A. Stern, eds. 1999. *Global Public Goods: International Cooperation in the 21st Century*. New York/Oxford: Oxford University Press.

Kaul, I., P. Conceição, K. Le Goulven, and R. U. Mendoza, eds. 2003. *Bereitstellung globaler öffentlicher Güter. Globalisierung gestalten*. UNDP. New York/Oxford: Oxford University Press.

Klein, N. 2001. Reclaiming the Commons. *New Left Review* 9(3):81–89.

Latour, B. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.

Lebel, L., P. Garden, and M. Imamura. 2005. The Politics of Scale, Position, and Place in the Governance of Water Resources in the Mekong Region. *Ecology and Society* 10(2):18. http://www.ecologyandsociety.org/vol10/iss2/art18/.

Lee, S. and C. Webster. 2006. Enclosure of the Urban Commons. *Geojournal* 66(1–2):27–42.

Linebaugh, P. 2008. *The Magna Carta Manifesto: Liberties and Commons for All*. Berkeley, CA: University of California Press.

Löw, M. 2008. The Constitution of Space. The Structuration of Spaces Through the Simultaneity of Effect and Perception. *European Journal of Social Theory* 11(1):25–49.

Marston, S. A. 2000. The Social Construction of Scale. *Progress in Human Geography* 24(2):219–242.

Martens, J. and R. Hain. 2002. *Globale öffentliche Güter. Zukunftskonzept für die internationale Zusammenarbeit?* World Summit Papers Nr. 20/2002. Berlin: Heinrich Böll Stiftung.

McFarlane, C. 2011. Assemblage and Critical Urbanism. *City* 15(2):204–224.

Moss, T. 2012a. Geographien von Gemeinschaftsgütern. Erklärungsansätze aus der neueren institutionen-, handlungs- und raumtheoretischen Forschung. *Geographische Zeitschrift* 100(4):208–227.

Moss, T. 2012b. Spatial Fit – From Panacea to Practice: Implementing the EU Water Framework Directive. *Ecology & Society* 17(3):2. http://www.ecologyandsociety.org/vol17/iss3/art2/.

Mwangi, E. and A. Wardell. 2012. Multi-Level Governance of Forest Resources. *International Journal of the Commons* 6(2):79–103.

Ostrom, E. 1990. *Governing the Commons. The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.

Ostrom, E. 1998. Scales, Polycentricity, and Incentives: Designing Complexity to Govern Complexity. In *Protection of Global Biodiversity. Converging Strategies*, eds. L. D. Gumuwamy and J. A. McNeely, 149–167. Durham, NC: Duke University Press.

Ostrom, E. 2005. *Understanding Institutional Diversity*. Princeton: Princeton University Press.

Ostrom, V., C. M. Tiebout, and R. Warren. 1961. The Organization of Government in Metropolitan Areas: a Theoretical Inquiry. *The American Political Science Review* 55(4):831–842.

Payton, M. A., D. C. Fulton, and D. H. Anderson. 2005. Influence of Place Attachment and Trust on Civic Action: A Study at Sherburne National Wildlife Refuge. *Society & Natural Resources* 18(6):511–528.

Smith, N. 1995. Remaking Scale: Competition and Cooperation in Prenational and Postnational Europe. In *Competitive European Peripheries*, eds. H. Eskelinen and F. Snickars, 59–74. Berlin: Springer.

Smith, N. 2008 [1984]. *Uneven Development. Nature, Capital and the Production of Space*. Oxford: Basil Blackwell.

Soja, E. W. 1989. *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. London: Verso.

Swyngedouw, E. 1997. Neither Global nor Local. "Glocalization" and the Politics of Scale. In *Spaces of Globalization*, ed. K. Cox, 137–166. New York/London: Guilford Press.

Swyngedouw, E. 2004. Scaled Geographies: Nature, Place, and the Politics of Scale. In *Scale and Geographic Enquiry. Nature, Society and Method*, eds. E. Sheppard and R. B. McMaster, 129–153. Oxford: Blackwell.

Swyngedouw, E. 2010. *Place, Nature and the Question of Scale: Interrogating the Production of Nature*. Discussion Paper 5, Interdisciplinary Working Group "Global Change – Regional Development". Berlin: Berlin-Brandenburgische Akademie der Wissenschaften.

Vasstrøm, M. 2014: Rediscovering Nature as Commons in Environmental Planning: New Understandings through Dialogue. *International Journal of the Commons* 8(2):493–512.

Young, O. R. 1999. *Institutional Dimensions of Global Environmental Change. Science Plan*. IHDP Report No. 9. Bonn: International Human Dimensions Programme.

Young, E. 2001. State Intervention and Abuse of the Commons: Fisheries Development in Baja California Sur, Mexico. *Annals of the Association of American Geographers* 91(2):283–306.

Young, O. R. 2002. *The Institutional Dimensions of Environmental Change. Fit, Interplay, and Scale*. Cambridge, MA/London: MIT Press.

Young, O. R. 2005. *Science Plan. Institutional Dimensions of Global Environmental Change.* IHDP Report No. 16. Bonn: International Human Dimensions Programme.

Young, O. R. 2008. Institutions and Environmental Change: The Scientific Legacy of a Decade of IDGEC Research. In *Institutions and Environmental Change. Principal Findings, Applications, and Research Frontiers*, eds. O. R. Young, L. A. King, and H. Schroeder, 3–45. Cambridge, MA/London: MIT Press.

Young, O. R. and A. Underdal. 1997. *Institutional Dimensions of Global Change.* IHDP Scoping Report. Bonn: International Human Dimensions Programme.