

BERLIN 2019
21 - 23 AUGUST

**COOPERATIVES AND THE TRANSFORMATION OF
BUSINESS AND SOCIETY**

With legibility comes liability? Conceptualizing a register for commons and cooperatives

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Paper prepared for presentation at the ICA - CCR European Research Conference

Berlin 21.08 - 23.08.2019

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Updated version April 2020

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In recent years, the ‘urban commons’ have become a lively site of practice and discourse, and spurred academic and public interest. Urban commons are a broad and diffuse category and call for better insight in what these practices entail and bring forth. The present paper explores how knowledge about urban commons can be made accessible to outsiders, with a particular view on facilitating interaction with government and achieving the commons’ socially innovative potential. It departs from an analogy with the Standard Industrial Classification systems used by statistics offices and chambers of commerce. Can a similar register be envisioned for urban commons and cooperatives? The main argument of the paper is that this ambition is confounded by the pluralistic nature of urban commons. It positions the question for legibility of novel societal agency within the trends of digitalization, data-driven governance and the smart city.

Keywords: big data; legibility; multi-level governance; social innovation; urban commons

Introduction

In recent years, ‘urban commons’ have become a theme of scholarly analysis and debate, thanks to the uptake of the word ‘commons’ by urban activists and their theorists and spokespersons (Foster, 2011; Foster & Iaione, 2015). Others are making a case for what they call ‘new commons’ (e.g. Hess, 2008; Ruiz-Ballesteros & Gual, 2012). These are, on the one hand, *reconceptualizations* of a whole band of goods and practices ‘as commons’, but also include the development of properly *new commons*, for example those that are enabled by new digital technologies (Benkler & Nissenbaum, 2006; Hess, 2008; Husain, Franklin, & Roep, 2019). Researchers such as De Moor (2012) and Berge and Mckean (2015) remark that the past fifteen years or so have seen a surge of non-traditional uses of the term ‘commons’, coinciding with a proliferation of citizen’s initiatives (Holemans, Oosterlynck, & De Moor, 2018; van

Meerkerk, Koppenjan, & Keast, 2015), peer-to-peer platforms (Perren & Grauerholz, 2015) and cooperative enterprises (Geertz, 1973). This paper discusses urban commons and includes cooperatives in the social, civic sense discussed in Mori (2014) and Thomas (2004).

The current interest in commons reflects an increased emphasis on the merits of lateral and 'bottom-up' coordination and, in particular, citizens' role in shaping society and solving problems (Silver, Scott, & Kazepov, 2010). A particular body of research that focuses on citizens' self-management of their lives and needs, as well co-management through multi-stakeholder configurations including (communities of) citizens, is the field of 'social innovation'. Social innovation has been defined as 'innovations that are social both in their ends and in their means' and is argued to be 'an effective way of responding to social challenges, by mobilising people's creativity to develop solutions and make better use of scarce resources' (Therace, Hubert, & Dro, 2010). Closely related concepts are 'participatory governance' (Turnhout, Van Bommel, & Aarts, 2010), 'multi-level governance' (Kern & Bulkeley, 2009; Ruiz-Ballesteros & Gual, 2012) and 'transition management' (Loorbach, 2010). The prism of 'the commons' stands out, however, in the sense that it is being eagerly adopted (or 'idolized'; Berge and Mckean, 2015) as a new (political) movement by non-traditional commons scholars and by practitioners and thinkers outside academia. See for example the works of David Bollier and Silke Helfrich, who, beyond seeing commons as a functional and organizational phenomenon concerning the division of roles and responsibilities between state, market and civil society, take commons to be a 'living social system' that ontologically transcends current economic categories (Bollier & Helfrich, 2019).

Regardless of how transformative they may or may not be, many of these urban commons, as reimagined or new forms of collective action, are searching. What *are* they exactly, and how can they be made more recognizable and identifiable? Based on the personal experience of the author, commons practitioners are typically concerned with the questions how their initiative can be made sustainable; what relations (not) to maintain with institutional stakeholders; what organization model

to choose; how to recruit members; and how to manage and stimulate volunteers. Institutional stakeholders have similar questions with regard to these new commons. Governments and (semi)public institutions increasingly meet them with welcoming anticipation, but also with political and managerial apprehension. How do citizen's initiatives, certainly those that seek to influence public amenities such as streets or parks or wifi or neighborhood centers, relate to the decisions made and 'winners picked' by elected officials in the prevailing representative democratic system? What types of organization are we actually looking at and who is representing them? When are commons suitable and eligible for public procurement? What are their values and principles and can we hold them accountable for their actions? These are all valid questions, going both ways. Many urban commons, if not most, are looking for some form of active support from, or coordination with, the (local) authorities. And even if some of these commons identify as 'autonomous' and wish to remain so, they minimally need implicit endorsement by the authorities, to the degree that they are allowed to run as desired and not be interfered with.

A natural first response to this question is to *survey* these urban commons: to start giving labels that may help shape the type of interaction that is appropriate from the point of view of the local authorities. This is, in the words of Hannah Arendt, a matter of 'giving a stray dog a name' – and next, a ticket and a contact person. Commoners, similarly, want to know what they can expect from the local government – whether they are looking for tacit non-interference or active support – and whether that will reliably carry over to the next administrative term. This raises the question: how can we formalize 'urban commons' in the sense that there can be appreciation and a fruitful interaction with local authorities, respecting the commons for what they are, rather than for what governors might want them to be?

Towards a classification of urban commons?

Commons, as taken in this paper, are initiatives and organizations that, like any other organization, engage in economic activities, employ entrepreneurial activity or organize members' matters. Here I preclude commons in the definition of goods, be

they public or private in juridical terms, that may be ‘rediscovered as commons’ (i.e. when ‘people come to understand or recognize that a resource is a commons’; Hess, 2008, p. 40) but are not organized as such. Following from this paper’s ‘concrete’ definition, then, many urban commons are entities that are liable, or even required, to be registered at the national company register. These registers are typically maintained by courts, government offices or chambers of commons. Across the world there are a limited number of systems of Standard Industrial Classification, and they have been made to look very similar. These classification systems boast hundreds of categories for the production and service sectors, and dozens of categories for (semi)public institutions, but a mere handful for non-profit organizations.¹ Urban commons would benefit from having the same degree of visibility, recognition, and sophistication of the legal ‘vocabulary’ as commercial entities do. To this end, a taxonomy would be expected to help third parties to more readily identify commons initiatives and understand how they operate. While cooperatives are typically readily identifiable because they are registered as such,² there is currently no way of unequivocally calling ‘Commons of the world, unite!’ and expect a representative turnout – they are too dispersed, interpreted in multifarious ways, and resist easy classification.

One subtype of urban commons are urban community gardens, which are ‘communally provided resources, self-managed mostly without local government intervention in management, and established to meet several social needs’ and as such fit the commons framing (Rogge & Theesfeld, 2018). Rogge and Theesfeld, who

¹ In NACE’s category ‘S: Other services activities’, interest and ideological organizations are grouped under ‘S94.9 - Activities of other membership organizations’ with three sub-classifications: ‘religious organizations’, ‘political organizations’, and ‘other membership organizations n.e.c. [not elsewhere classified]’. Some national registrars provide further granularity, such as the Dutch Standard Industrial Classification, which offers as options: ‘social clubs’, ‘hobby clubs’, ‘funds (not for welfare)’, ‘circles of friends in the field of culture’, ‘umbrella organizations, cooperative and advisory bodies (not in the field of health care, welfare, sports and recreation)’, ‘other idealistic organizations n.e.c.’ and ‘other interest organizations n.e.c.’ (Statistics Netherlands, n.d.). The latter three classifications basically cover the field of ‘new commons’. This stands in stark contrast to the tremendous granularity for the productive and commercial service sectors.

² Standard Industrial Classification systems classify the content of an enterprise, not its form. The legal structures of these enterprises are registered in separate tables at the registrar. Data about the number of cooperative enterprises and associations is generally accessible. Note, however, that there are cases of ‘new commons’ and ‘social economy’ initiatives that refer to themselves as cooperatives (or often ‘coops’ in short) but may not be actually organized as such.

provide a typology for urban community gardens, write that “[d]espite the international importance of community gardens, there is a recognized lack of statistics and academic research on international and national level” (ibid.: 252). In the same article they provide an important argument why the classification of commons requires attention. They write that community gardens “provide not only locally-produced food for urban residents, but rather additional benefits ... such as agricultural knowledge and education, community cohesion and development, new experience inherent to democratic forms of governance, well-being, ecosystem services or green infrastructure” (ibid.).

It is exactly this multifaceted nature of commons, pursuing a multitude of values (e.g. social cohesion, health, sustainability) and employing the intrinsic motivation of the community involved or affected, that make urban commons relevant and interesting from the viewpoint of public value creation. Commons may help to reach social and governmental objectives. But it is the same multifaceted nature that stands in the way of easy classification. The urban commons have so far evaded clear-cut definitions, and do so for a reason. There are many interpretations of what is/are commons, commons-based practices, the common good, and so forth. Indeed, the lopsided design of Standard Industrial Classifications is probably not the result of mere indolence on the part of the statistics office. The activities undertaken by ‘membership organizations, not elsewhere classified’ are the private concern of the members; and if they are of public concern, openness should be achieved through other means: the intricacies go beyond what an industrial classification system could do. In general, systems of naming, defining and classifying social and economic activity can come at the cost of reducing the attention spent on diversity and ‘thickness’ (Geertz, 1973; Scott, 1998). The prism of the commons is often brought forward precisely in order to *reintroduce the qualitative*, recognizing that commons qualities – again, being of a highly plural, local character – are generally difficult to capture. Indeed, commons are often brought forward as a countermovement pushing back against the capitalist-bureaucratic system that has the tendency to absorb more and more aspects of social life into its framework (Caffentzis & Federici, 2014; Cumbers,

2015; Harvey, 2011). Therefore, discourses in which ‘communities’ are advanced as ‘partners’ for achieving, in effect, a neoliberal government’s goals, have been widely criticized (e.g. Aiken, 2015; de Wilde, Hurenkamp, & Tonkens, 2014; McShane, 2010; Swyngedouw, 2005). Similarly, when it comes to the conservation and management of nature and natural resources – the home base of traditional commons – the assimilation of these resources into the capitalist-bureaucratic framework as measurable (and worse: bankable) ‘natural capital’ has met vocal resistance (Fletcher, 2010; Fletcher, Dressler, Anderson, & Büscher, 2019; Sullivan, 2018). These authors center their critique on the neoliberalizing ‘governmentality’ (Foucault’s famous term, e.g. Foucault, 1991) manifested in these projects; in short, the interests of capital overshadowing the commons, supported by the panoptic gaze and iron arm of the state.

At the same time, it is a basic human tendency, and an administrative and economic necessity, to structure and simplify complex social and economic information. Furthermore, the mounting complexity of the state bureaucracy and of the society it is trying to service, pulls participatory economies such as commons out of their niches, urging them to become an actionable social and economic field that interfaces well with mainstream society (i.e. public and private sector).³ Even if this sounds too instrumental to the ears of critical commons scholars, the opposite scenario – a complete lack of recognition of, and coordination with commons by the local authorities – would neither be helpful. This would thwart the accessibility and viability of a society that carries the commons on its hands. As commons historian Tine De Moor puts it in an interview: ‘A lot of the commons are grounded very locally and thus are rather invisible ... the first thing these initiatives have to do is make themselves visible’ (Green European Journal, 2016).

³ Note that this is a different realm from that of academic taxonomic frameworks, such as the Institutional Analysis and Design framework (Ostrom, 2011): those taxonomies principally serve the purpose of furthering knowledge, while governmental classification systems serve purposes of security, taxation and governance.

On maps and censuses

Let's briefly consider a few examples that might be considered cousins of a hypothetical 'commons register'. The Peer to Peer Foundation Wiki, launched in 2006, is a global knowledge base covering articles, insights and data about topics that are related to the 'peer to peer' economy, which overlaps to a large degree with the 'new commons' thematic (P2P Foundation, 2019). It is a semi-structured wiki website that contains many crowdsourced examples of concrete commons/p2p initiatives. As such, it is one of the main resources on actual commons-based organizations, even if this particular category seems to be less well maintained than the theoretical sections.

Landmark (www.landmarkmap.org) is an online global platform that provides geographical data and other resources about indigenous and community-held lands. By providing different data layers and categories to show the land tenure situation, land assets and potential pressures, users can visualize land officially or informally held by communities, and overlay it with geographical data on mining, oil palm and forest concessions and on dam construction. As of August 2019, the indigenous and community lands listed on LandMark cover 12.4% of the world's land, out of an estimated 50% or more that is held by Indigenous Peoples and communities globally (Alden Wily, 2018; LandMark, 2019).

Civics.cc is an online platform collecting civic or social initiatives across 'Ibero-America', i.e. the Iberian peninsula and Latin America. According to the website, it is 'a digital self-mapping tool in geolocated address book format, where you can find and add all the civic innovation happening in our cities, locate their associated events and take part in them'. The platform aims 'to highlight the power of critical, active citizens who have created new environments of possibility, through self-management and participation'. It lists 5,005 initiatives across 17 countries, that can be navigated and filtered by Sustainable Development Goal (SDG), 'space' (such as community centers, urban gardens, and maker spaces) and 'agent' (such as ngo, university, or civic initiative). Its range arguably exceeds that of 'commons', although by what margin will remain a topic of semantic debate.

Maps like Landmark and Civics.cc are straightforward tools to create an overview of those commons where location or geography is meaningful. Facilitated by the availability of online mapping platforms and easy-to-use tools for collecting data, there are or have been numerous small-scale mapping projects that relate to commons. Friedman (2015) provides an overview of commons-related mapping projects, but many of the examples listed were offline by August 2019. On the other hand, there may be still many more live maps that deal with similar initiatives but are not referring to them as commons. An example is found in the Utah Resilience Map, discussed by Nicolosi, French and Medina (2019). The authors conclude that ‘digitally mediated participatory mapping ... represents a potentially great boost for engendering sustainability transitions. It allows communities to participate in the process of mapping grassroots sustainabilities and has low resource requirements (e.g., time, skills, expertise). [It] helps bring visibility to projects and resources that can be used to further community goals.’ Overall, maps may function to create an overview and an engaging insight in the extent of a phenomenon and build a movement; but also to provide documentary information and to facilitate contacting and contracting.

Of course, maps are seldom complete and never neutral. Data gaps are a common problem for mapping and inventory projects in the social realm. Most data collections are initiated by academics or activists and in some cases research institutions, often but not always funded by research subsidies. Sometimes these initiatives depend on web scraping to gather data. Modelling can be a substitute when documentary data is sorely lacking. But more to the point, and as alluded to above, maps and inventories are simplifications of the world they are describing and promote certain ‘facts’ over others. In the case of small-scale maps that are sourced within the ‘target’ community, such as the Utah Resilience Map (utahresiliencemap.org), the benefits of mapping may easily outweigh the risks. A map like Landmark is already riskier. Landmark has a high standard of governance and data verification, and its mission is clearly aligned with the interests of the groups it is mapping. But Landmark collects data about a sensitive subject nevertheless and

does so globally, in a centralized location. If a map or survey or register is to be made to facilitate coordination between urban commons and local authorities, what risks may ensue?

Legibility and 'data justice' in the datafying society

In his classic *Seeing like a State* (1998), James C. Scott analyzes the ways through which states attempt to survey their territory and its inhabitants. States, Scott writes, attempt to make society 'legible': 'to arrange the population in ways that simplified the classic state functions of taxation, conscription and prevention of rebellion' (Scott, 1998, p. 2). They do this by means of cadastral maps or through other abstractions, which importantly have had the cumulative effect of shaping society and its residents. Scott thus analyzes the effects of German scientific forestry (creating the 'Normalbaum', the standard tree, and transforming 'messy' jungles into neat monocrop plantations), and the introduction of permanent last names and of standard measures, through to forced villagization of nomadic peoples, high modernist cities such as Brasilia and Chandigarh and the project of 'taming nature' that the world came to know as the 'Green Revolution'. In other works, Scott documents and theorizes the resistance of peoples against these intrusions and insubordinations by the state.

What is the relevance of Scott standing on the brink of the 2020s? In the introduction of *Seeing like a state*, Scott writes that '[a]s I finished this book, I realized that its critique of certain forms of state action might seem, from the post-1989 perspective of capitalist triumphalism, like a kind of quaint archaeology' (ibid., p. 7). Twenty years on, this statement seems all the more true. In the era of digital platform corporations that radically atomize and commoditize social life, it is hard to imagine a society that embraces the commons that does not strongly rely on active support of the state. Indeed today, the state is imagined to be socially innovative, abundantly experimenting with civic participation and multi-level governance. But it is also a state that ardently chases the big promise of our time: digitalization. Under the heading of data-driven governance and the smart city, the state aims to gain efficiency

(and realize budget cuts) through customization of its policies, mimicking the strategy pursued by platform corporations.

The nexus between digitalization and collaborative governance is relevant for this paper's exploration in a number of ways. First, the availability of big data (technologies) steers human interaction and governance further in the direction of (dynamic) codification and systematic analysis. If today there is no register for the commons, tomorrow there will be, in some way or another. Second, greater quantity, granularity and quality of data means a higher legibility of social life for the state. Brewster and Hine (2014) provide a compelling discussion of Scott's work in today's datafied society, comparing the notions of (il)legibility and privacy. They state that 'of far greater concern than the loss of privacy is the loss of the illegible', 'the space where things have not been named, where ambiguity and vagueness can be found, where artefacts and ideas can be mixed, re-mixed, re-created, *ab initio*' (ibid., p. 2). To them, privacy is a 'historical anomaly', a phenomenon to be found mostly in large modern cities. In village life privacy was and is absent, and now that the world is becoming a digitalized 'global village' privacy again is lost. Brewster and Hine warn against simplistic notions of privacy as being affordable through technological and practical interventions, arguing that anonymized data may be de-anonymized when enough of it is being combined. But beyond looking at personal data, their analysis deals with the representation of things and artefacts through 'Internet of Things', the 'Semantic Web' and 'Linked Data' technologies. Pertinent to this paper's thesis is their point that '[w]hat needs to concern us is the unintended consequence of a society based on total surveillance on the one hand, *but also total classification or knowledge representation, on the other hand*' (ibid., p.9-10, emphasis added). Indeed, progressive classifications of social life and the knowledge that is its currency have the unintended effect of hermetically defining and thus asphyxiating the things they represent. But at the same time the authors recognize the potential of these technologies to 'provide other "freedoms" or at least other types of opportunities for action' (ibid., p. 11); indeed the 'legibility' project of the state has not merely served to suppress peoples but significantly to create a society where new rights and freedoms emerge. In all, the

authors' hopes are in maintaining and enhancing the *spaces* – notably cities, but also places online – where privacy, or rather illegibility, can still be found.

A useful tool that may help to productively connect the concerns discussed above and the prospect of a commons register is Taylor's (2017) data justice framework. She asserts that 'research and praxis on the ways in which datafication can serve citizenship, freedom and social justice are minimal in comparison to corporations and states' ability to use data to intervene and influence' (ibid., p. 2). She then argues that much of the work done on social justice in the datafying world has remained limited to a rights-based approach, which offers individually conceived 'rights' such as 'data protection, framings of informational privacy and the right to free speech and communication' (ibid., p. 4). Because of the increasingly 'many-to-many' nature of 'seeing through data technologies' (ibid.), with private sector organizations in effect executing 'many of what we perceive as public-sector functions (counting, categorizing and serving our needs as citizens)' (ibid., p. 3) and the effects of this public-private datafication playing out on 'the group as much as the individual level' (ibid., p. 4), simple privacy and data protection approaches do not suffice. Moreover, people are not served by negative attitudes towards data only. Taylor's framework is meant to 'take into account the need to be represented but also the possibility of the need to opt out of data collection or processing, the need to preserve one's autonomy with regard to data-producing technologies and the need to be protected from and to challenge data-driven discrimination' (ibid., p. 8). The three 'pillars' thus presented – (in)visibility, (dis)engagement with technology, and non-discrimination – provide useful reference points for further theorization of the classification of urban commons for purposes of activation and collaborative governance. Visibility and engagement are key objectives of any agenda that embraces commons as factor of society but at the same time foreshadow the means by which society can (inadvertently) smother or commoditize them. The last pillar, of bias and 'discrimination', applies in the sense that any attempt at 'recording' or 'registering' part of social life, i.e. commons-oriented initiatives, will necessarily be an incomplete and skewed inventory; therefore they will need to be contestable by design.

Conclusion

This paper collected initial thoughts on the question of how to disclose insight into commons to outsiders – ranging from fellow citizens to government representatives to the private sector. It has sought to address notions and concerns both from a critical perspective, in which the state is involved in a project of governmentality and legibility, and a positive ‘social innovation’ perspective in which multi-level governance can genuinely empower all stakeholders involved. Drawing on Taylor’s (2017) points about (in)visibility and (dis)engagement in the datafying society, it is clear that a commons register will need to strike a balance: on the one hand, providing the ability to connect and cooperate (with each other and with other actors), and on the other, to preserve autonomy and (referring to Brewster and Hine, 2014) preserve the places of illegibility and creativity that were associated with the city and the Internet in the days before ‘surveillance capitalism’ (Zuboff, 2019).

The commons are both taken to be a struggle against neoliberalism, but they are also criticized to have become too friendly with the very same actors that ‘reproduce’ neoliberalism. To me, the basic pathology that the commons respond to – but perhaps not always successfully or without error and contradiction – is that ‘we have lost grip’ on our world, associated with the complexity of present-day society and the opportunities that brings for neoliberal responses. Against this backdrop and confounded by the pervading effects of digital ‘big data’ technology, the commons need to find a way to be vocal, visible and coordinate with other stakeholders, and remain a transformative countermovement all at the same time. This paper sought to add to this debate in an exploratory way by projecting the vision of a commons register. Presently, urban commons might not need much more than creating resources that demonstrate the relevance of a new ‘sector’ and build movement. Basic solutions like a map, bringing forth outside visibility and collective (self-)awareness, and a wiki for knowledge exchange based on a fluid ontology, will achieve most of these things.

References

- Aiken, G. T. (2015). (Local-) community for global challenges: Carbon conversations, transition towns and governmental elisions. *Local Environment, 20*(7), 764–781.
- Alden Wily, L. (2018). Collective Land Ownership in the 21st Century: Overview of Global Trends. *Land, 7*(2), 68.
- Benkler, Y., & Nissenbaum, H. (2006). Commons-based Peer Production and Virtue. *Journal of Political Philosophy, 14*(4), 394–419.
- Berge, E., & Mckean, M. (2015). On the commons of developed industrialized countries. *International Journal of the Commons, 9*(2), 469–485. Retrieved from JSTOR.
- Bollier, D., & Helfrich, S. (2019). *Free, Fair and Alive: The insurgent power of the commons*. Canada: New Society Publishers.
- Brewster, C., & Hine, D. (2014). Legibility, privacy and creativity: Linked data in a surveillance society. In S. Decker, J. Hendler, & S. Kirrane (Eds.), *PrivOn 2013: Society, privacy and the semantic web*.
- Caffentzis, G., & Federici, S. (2014). Commons against and beyond capitalism. *Community Development Journal, 49*(suppl_1), i92–i105.
- Cumbers, A. (2015). Constructing a global commons in, against and beyond the state. *Space and Polity, 19*(1), 62–75.
- De Moor, T. (2012). What Do We Have in Common? A Comparative Framework for Old and New Literature on the Commons. *International Review of Social History, 57*(2), 269–290.
- de Wilde, M., Hurenkamp, M., & Tonkens, E. (2014). Flexible relations, frail contacts and failing demands: How community groups and local institutions interact in local governance in the Netherlands. *Urban Studies, 51*(16), 3365–3382.
- Fletcher, R. (2010). Neoliberal environmentalism: Towards a poststructuralist political ecology of the conservation debate. *Conservation and Society, 8*(3), 171.
- Fletcher, R., Dressler, W. H., Anderson, Z. R., & Büscher, B. (2019). Natural capital must be defended: Green growth as neoliberal biopolitics. *The Journal of Peasant Studies, 46*(5), 1068–1095.
- Foster, S. R. (2011). Collective Action and the Urban Commons. *Notre Dame Law Review, 87*, 57.
- Foster, S. R., & Iaione, C. (2015). The City as a Commons. *Yale Law & Policy Review, 34*, 281.

- Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: Studies in governmentality* (pp. 87–104). Hemel Hempstead: Harvester Wheatsheaf.
- Friedman, E. (2015). Mapping Our Shared Wealth: The Cartography of the Commons. In D. Bollier & S. Helfrich (Eds.), *Patterns of Commoning* (pp. 218–222). Commons Strategy Group and Off the Common Press.
- Geertz, C. (1973). Thick description: Toward an interpretive theory of culture. In Y. S. Lincoln & N. K. Denzin (Eds.), *Linking Past, Present and Future: An Introduction to Cooperatives and Community Development* (p. 22).
- Green European Journal. (2016, November 28). The Time Is Now! Commons From Past to Present: An Interview with Tine De Moor. *Green European Journal*, 14. Retrieved from <https://www.greeneuropeanjournal.eu/the-time-is-now-commons-from-past-to-present-an-interview-with-tine-de-moor/>
- Harvey, D. (2011). The Future of the Commons. *Radical History Review*, 2011(109), 101–107.
- Hess, C. (2008). *Mapping the New Commons* (SSRN Scholarly Paper No. ID 1356835). Retrieved from Social Science Research Network, website: <https://papers.ssrn.com/abstract=1356835>
- Holemans, D., Oosterlynck, S., & De Moor, T. (2018, April 16). *Appraisal of the new wave of commons in the light of Polanyi's double movement: A case study of newly established commons in Belgium*. 1–19. Retrieved from <http://www.dirkholemans.be/wp-content/uploads/2018/09/NOT180531-Paper-EMES-conference-DEF.pdf>
- Husain, S. O., Franklin, A., & Roep, D. (2019). Decentralizing Geographies of Political Action: Civic tech and Place-Based Municipalism. *Journal of Peer Production*, 13. Retrieved from <https://pureportal.coventry.ac.uk/en/publications/decentralizing-geographies-of-political-action-civic-tech-and-pla>
- Kern, K., & Bulkeley, H. (2009). Cities, Europeanization and Multi-level Governance: Governing Climate Change through Transnational Municipal Networks*. *JCMS: Journal of Common Market Studies*, 47(2), 309–332.
- LandMark. (2019). Global Platform of Indigenous And Community Lands. Retrieved August 13, 2019, from LandMark website: <http://www.landmarkmap.org>
- Loorbach, D. (2010). Transition Management for Sustainable Development: A Prescriptive, Complexity-Based Governance Framework. *Governance*, 23(1), 161–183.

- McShane, I. (2010). Trojan Horse or Adaptive Institutions? Some Reflections on Urban Commons in Australia. *Urban Policy and Research*, 28(1), 101-116.
- Mori, P. A. (2014). Community And Cooperation: The Evolution Of Cooperatives Towards New Models Of Citizens' Democratic Participation In Public Services Provision. *Annals of Public and Cooperative Economics*, 85(3), 327-352.
- Nicolosi, E., French, J., & Medina, R. (2019). Add to the map! Evaluating digitally mediated participatory mapping for grassroots sustainabilities. *The Geographical Journal*, 0(0).
- Ostrom, E. (2011). Background on the Institutional Analysis and Development Framework. *Policy Studies Journal*, 39(1), 7-27.
- P2P Foundation. (2019). P2P Foundation Wiki. Retrieved August 13, 2019, from <https://wiki.p2pfoundation.net/>
- Perren, R., & Grauerholz, L. (2015). Collaborative Consumption. In J. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (2nd ed., pp. 139-144).
- Rogge, N., & Theesfeld, I. (2018). Categorizing urban commons: Community gardens in the Rhine-Ruhr agglomeration, Germany. *International Journal of the Commons*, 12(2), 251-274.
- Ruiz-Ballesteros, E., & Gual, M. A. (2012). The Emergence of New Commons. *Human Ecology*, 40(6), 847-862.
- Scott, J. C. (1998). *Seeing like a state: How certain schemes to improve the human condition have failed*. Yale University Press.
- Silver, H., Scott, A., & Kazepov, Y. (2010). Participation in Urban Contention and Deliberation. *International Journal of Urban and Regional Research*, 34(3), 453-477.
- Statistics Netherlands. (n.d.). Standard Industrial Classifications (Dutch SBI 2008, NACE and ISIC) [Webpagina]. Retrieved August 13, 2019, from Statistics Netherlands website: <https://www.cbs.nl/en-gb/our-services/methods/classifications/activiteiten/standard-industrial-classifications--dutch-sbi-2008-nace-and-isic-->
- Sullivan, S. (2018). Making nature investable: From legibility to leverageability in fabricating "nature" as "natural capital." *Science and Technology Studies*, 31, 47-76.
- Swyngedouw, E. (2005). Governance Innovation and the Citizen: The Janus Face of Governance-beyond-the-State. *Urban Studies*, 42(11), 1991-2006.

- Taylor, L. (2016). The ethics of big data as a public good: Which public? Whose good? *Philosophical Transactions. Series A, Mathematical, Physical, and Engineering Sciences*, 374(2083).
- Taylor, L. (2017). What is data justice? The case for connecting digital rights and freedoms globally. *Big Data & Society*, 4(2), 2053951717736335.
- Therace, A., Hubert, A., & Dro, I. (2010). *Empowering people, driving change: Social innovation in the European Union* (p. 176). Retrieved from Bureau of European Policy Advisors (European Commission) website: <https://publications.europa.eu/en/publication-detail/-/publication/4e23d6b8-5c0c-4d38-bd9d-3a202e6f1e81/language-en/format-PDF/source-31731269>
- Thomas, A. (2004). The Rise of Social Cooperatives in Italy. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 15(3), 243–263.
- Turnhout, E., Van Bommel, S., & Aarts, M. N. C. (2010). How Participation Creates Citizens: Participatory Governance as Performative Practice. *Ecology and Society*, 15(4), 26–41.
- van Meerkerk, I., Koppenjan, J., & Keast, R. (2015, April 30). *New citizen collectives, their democratic potential and their implications for public management*. Presented at the IRSPM Conference, Birmingham. Retrieved from <https://repub.eur.nl/pub/79598/>
- Zuboff, S. (2019). *The Age of Surveillance Capitalism: The fight for a human future at the new frontier of power*. London: Profile Books.