

ARTICLE

# Institutional design in commons-based sharing economies: platform, care and place

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(Received 4 September 2024; accepted 5 September 2024; first published online 03 December 2024)

## Abstract

This paper presents an analytical mapping of institutional design possibilities for alternative ways for digital platforms to institutionalise property and corporate form. It builds on the institutional imagination catalysed by three vignettes of experimental sharing economy initiatives presented towards the start of the paper, each of which highlights the imbrication and interdependence between economic and social dimensions of the sharing economy. The paper then interrogates the vignettes through three analytical entry points to the institutional design of commons-based sharing economies: platform, care and place. By remapping the vignettes' practices around these three entry points, the paper shows how they help constitute the incipient formalisation of commons-based approaches to the sharing economy. The prospects for carrying out a redesign of property and corporate forms more generally thereby become more visible, providing a sound foundation for more in-depth empirical and historical work on alternative trajectories of the sharing economy in the future.

**Keywords:** commons; sharing economy; platform economy; digital platforms; property; institutions

## 1. Introduction

The contemporary sharing economy, defined in as pared-back a fashion as possible, refers to the use of digital platforms to facilitate peer-to-peer access to goods and services. The normative contestation that has arisen from this development flows from the disruptive effects of the intermediation provided by the digital platform. The platform in its capacity as infrastructure connects users, producers, consumers and citizens in new ways, making it as much a social as a technological infrastructure. The resulting disruptive effects have been described by a variety of logics, often organised around a binary tension between two dynamics: a transactional dynamic that stresses the capacity of the platform to activate 'idle assets', and a more relational dynamic that highlights the ability of the platform to act as a foundation for shared commonalities. The transactional perspective stresses changes in the economics of peer-to-peer distribution, especially the way in which digital platforms maximise efficient distribution of value to consumers by making it convenient and easy to share previously private or domestic space, objects or skills. The relational approach highlights fresh experiences of reciprocity and mutualism created by the capacity for strangers to come together and interact around the new pathways for shared access.

The degree to which one or other of these perspectives is likely to prevail in the development of sharing economy trajectories has been a core debate in the field since the early stages of the emergence of digital sharing economies. In those early stages, the relatively small scale of initiatives, combined with institutional informality in many cases, brought the relational logic very much to the fore, so much so that the subtitle of Orsi's (2012) then cutting-edge *Practicing Law in*

*the Sharing Economy* was ‘helping people build cooperatives, social enterprise, and local sustainable economies’. A decade later, the more commercial approach to sharing economies dominates both experience and scholarship (think of how Airbnb has eclipsed Couchsurfing in the public eye). As this trajectory has unfolded, many scholars, including myself in earlier work, have continued to analyse it in binary terms, contrasting the on-demand commercial sharing economy with the solidarity-inflected sharing economy, or comparing transactional markets with social relationality (Hugo Guyader in this volume), or setting business-as-usual capitalist variants of the sharing economy against approaches that value localism, building community, alternative legal structures and more sustainability (Schor and Wengronowitz 2017).

However, the scholarly tendency to depict the substantive landscape of sharing economies by reference to a binary division between market and communal approaches has a tendency to over-emphasise the novelty and innovation of digital platforms, in the process obscuring other important dynamics of change that help create collective agency. In particular, this approach tends to paint ‘economic’ and ‘social’ perspectives as static either/or logics that represent alternative outcomes for sharing economy initiatives. This paper is based on a recognition that there have always been plural sharing economies that configure the relationship between transactional exchange and sociality through multiple institutional pathways and diverse forms of politics. Power, politics and history matter: not only is the economic and potentially anti-competitive power of currently dominant commercial platforms deeply contested, but solidaristic sharing economies also have a long history of stable and rich complexity in the context of working-class and poor communities and communities of colour (Nembhard 2014; Stack 1974). Much of that history, as Jessica Nembhard’s magisterial account of African-American co-operative economic thought showed, illuminates significantly more diverse property arrangements and corporate forms than those underpinning more recent trajectories of sharing via digital intermediation.

This paper seeks to extend the appreciation for such diversity into the specific terrain of contemporary sharing economies mediated by digital platforms. In doing so it builds on more recent literature on economic organisations more broadly that is increasingly appreciative of institutional diversity (e.g. Bartl 2022; Boeger 2018; Sjäfjell et al. 2023). This literature emphasises the importance of economic democracy, co-operative forms and stakeholder participation in decision-making. This paper will extend these broader insights specifically through linking to literature on the commons, and thereby making visible alternative ways for digital platforms to institutionalise property and corporate form. It will do so by providing an analytical mapping of institutional design that takes seriously the space *in between* broad-brush binaries, especially the interdependence between economic and social aspects of sharing economy initiatives. By doing so, it provides a foundation for sharing economy participants and policy-makers to strengthen these ‘in-between’ spaces through tinkering with the legal forms of business-as-usual.

Methodologically, the article aims to open imaginative space for new understandings of how economic and social dimensions of the sharing economy interrelate by means of inductive reasoning from vignettes. The term ‘vignettes’ refers here not to semi-fictional typified instances, but to brief sketches drawing on short-form publicly available data about existing experiments in the sharing economy (as contrasted with in-depth primary empirical research), as a way of grounding and enlivening conceptual analysis of institutional diversity.

These vignettes operate as the basis of a conceptual commentary on emergent institutional diversity in the sharing economy. The aim is to filter the import of these experiments into partially abstract terms: to make visible patterns of practices that reappear across diverse initiatives as a way of mapping a field. With this aim to the fore, there is a certain cost to empirical nuance and detail: additional analysis that situates the vignettes in a thicker context of history and political economy would be an important complementary task but one beyond the scope of this paper.

Thus, although historical and politically inflected approaches are especially sensitive to the plurality of ways in which sharing and mutuality have been institutionalised over time, this paper chooses to temporarily strip out thick context in order to clarify a diverse array of elements of

institutional design that can travel across different settings. The goal is to offer a conceptual challenge to common perceptions regarding the institutional inevitability of commercial platforms in the sharing economy. The question of how this conceptual mapping might translate into meaningful economic, political and cultural challenges to commercial platforms is not here addressed: what matters is the opening of an imaginative capacity to redesign the building blocks of platform economies.

The remainder of the paper is structured as follows. The second section offers a brief discussion of property relations and corporate form in relation to the sharing economy, arguing that they constitute key institutional foundations shaping the trajectory of contemporary sharing economies. A strong thread of this opening argument is that the seemingly inexorable dominance of the commercialised sharing economy may be occurring precisely because fledgling solidaristic sharing economy initiatives so often depend on mainstream deployments of property and corporate form. It is thus important to make visible alternative and pluralistic social practices around property and corporate form: these are sometimes present though formally invisible, or at other times their counter-hegemonic potential is choked by the use of existing institutional design and forms.

This choking or invisibility is not, however, inevitable, particularly if we activate the institutional imagination that Roberto Unger has insisted is endemic to the nature of law (Unger 1996). The third section of the paper presents three vignettes of initiatives which have formally designed their platforms to include features that might have remained informal and pluralistic in earlier solidaristic sharing economy initiatives. All three vignettes illustrate how digital platforms can institutionalise more democratic, direct and distributed ways of organising and co-ordinating the allocation of resources compared to corporate platform structures. They do not necessarily all use formal-legal co-operative structures to that end, however, and are thus better understood as commons-based initiatives that illustrate a diverse array of institutional design choices.

The fourth section of the paper begins the work of conceptual mapping by interrogating the vignettes through three analytical entry points to the institutional design of commons-based sharing economies: platform, care and place. By remapping the vignettes' practices around these three entry points, the paper shows how these 'keywords' help constitute the incipient formalisation of property and corporate form in ways that support commons-based approaches to the sharing economy. The prospects for carrying out a redesign of property and corporate forms more generally thereby become more visible.

The fifth and final section of the paper, building on the pathways shown by the vignettes for reframing property and corporate forms through platform, care and place, considers the wider implications of reframing formal-legal instruments through a more detailed engagement with commons literature. It argues that when sharing practices are conceptualised in ways that foreground the necessary interdependence between 'economic' and 'social' approaches to sharing economy initiatives, then commercial and commons practices around sharing appear not as oppositions, but as different aspects of the same activity. From this perspective, it becomes clear that the current dominance of commercial approaches to sharing economies is grounded in existing institutional design choices. Redesigning these choices is as much, if not more, a question of how to institutionalise commoning as it is of commoning a corporation, although both will be relevant.

## 2. Property and ownership

The focus on property in this article, as across this whole special issue, is less about land or physical public space and more about property as a set of socio-economic practices and processes. Property institutions are understood as a form or means of distributing and allocating resources. As Sally Zhu argues in her introductory article to this issue, sharing economy infrastructures

embed emergent property practices of use, participation and mutuality into *both* commercialised and relational platforms, drawing on these dynamics for *both* market and communal patterns of sharing. The extent to which a different subset of property concepts – exclusion, rights and individual autonomy – end up dominating is not an inevitable outcome of the nature of property rights, but a function of the institutional design for exercising plural property rights and its effects over time.

The constitutive nature of property and ownership serves as fertile ground for reframing overly simple distinctions between mainstream and commons-based sharing economy perspectives. Making visible an array of existing plurality in design choices is thus an important avenue for illuminating the way in which sharing economy infrastructure could, if redesigned, promote commons-based aspects of property and corporate form. Where resources are generated for profit but with a community purpose orientation, hybrid logics blurring market and communal approaches arise, and in this context, the platform – in the sense of the digital infrastructure at the core of contemporary sharing economy initiatives – is the critical interface for allocating and distributing resources.

Specifically, the enterprise structure by which digital platforms acquire legal personality is the crucial context for activating property relations understood in this processual sense. For example, a for-profit platform funded by venture capital, a private proprietary for-profit platform, a not-for-profit platform and a co-operative member-owned platform will allocate property rights in shares and decision-making processes around value very differently. While much of the literature on the sharing economy explores for-profit initiatives funded by venture capital, the vignettes in the next section actively select more diverse forms of legal entities that embody institutional imagination. This dimension of redesigning property relations through corporate form will be particularly addressed in the discussion of the first keyword: platform. Here the question is one of how to common a corporation, in effect.

Beyond a focus on formal enterprise structure, however, it is important to document and appreciate property and corporate form in ways that move beyond the choice of formal legal models and the specifics of formalised property rights. Formal and informal dimensions of property practices are intermingled and informal practices can be just as important as formal ownership. As Amelia Thorpe argues, the ‘sense of ownership’ generated by ‘do-it-yourself’ interventions in public space reconfigures its use for unexpected shared and communal activities not envisaged by formal planning. A sense of ownership, she argues, ‘refers to something other than legal title: something less formal, more akin to belonging [that ...] tends to be linked with more inclusionary, democratic and environmentally sustainable participation [and ...] typically connotes stewardship and responsibility’ (Thorpe 2018).

Platform economies, then, are crucially shaped by the broader value(s) and ethos which animate specific platform dynamics in more tacit ways. This is especially salient when hybrid enterprise structures blend for-profit and non-profit elements, as the informal norms, practices and habits that bring to life the formal rules will steer the governance outcomes just as powerfully as the formal rules themselves. It is in this spirit that the second and third keywords – care and place – play a central role in re-imagining property relations within the sharing economy. Both keywords, along with a more experiential perspective on how diverse platforms feel to use on an everyday basis, add a crucial processual and relational perspective to the analysis of formal institutional design.

Overall, then, the three keywords I explore in the fourth part generate questions that bring out this tacit normative sense of ownership as follows: does the platform support practices and processes that foster mutual reciprocity and relationality in relation to property norms and institutional routines? Second, does the platform design of ‘who pays who for what’ do so in ways that make care central, supporting a more relational ethos of interaction and more sustainable outcomes? Finally, does the platform design foster place-based processes of accountability, conditionality and monitoring that are conducive not just to more sustainable outcomes but also

to different kinds of sociocultural relations between nature and people? These implications, teased out in the fifth section of the paper, suggest that commoning itself can become an infrastructure. Different configurations of platform, care and place will shape the degree to which exchange patterns are transactional or relational. Elements of institutional design can be re-ordered to support particular directions of institutional change. Platform design determines formal property rights, which in turn determine the generation of value and livelihood within a sharing economy initiative, while care and place animate practices and processes that shape property rights in a sociological sense. Platforms that institutionalise commons-based norms and design features (e.g. distributed and democratic governance over its terms and forms, and with practices and processes that prioritise care and the protection of place) have the potential to facilitate ongoing forms of commoning that enable distributed access by users, and to generate collective agency across many diverse smaller initiatives.

Seen from the point of view of its capacity to ground relationships, property and ownership design facilitates a particularly pointed engagement with the blurred boundaries between social and economic dimensions of sharing economies. Critiques from the left that view the commercialised approach to sharing economies as a privatisation of the commons can sometimes obscure the importance of a sphere for preserving intimacy, identity and autonomy (both collective and personal) (Morgan 2018). And scholars do argue that contemporary formal property law is quite consistent with much more solidaristic approaches: Marella (2017), for example, argues that the combination of a bundle of rights approach to property together with recognition of its social function means that use, access and decision-making can be democratised and shared without violence to formal property law. Thus, just as sharing economies are not as binary as often presented, so too ideas about property are deeply pluralistic, especially from the perspective of institutional design. This paper will gradually integrate more commons literature as its trajectory unfolds, in order to take forward this pluralism of property relations and corporate form. First, however, it is important to foreground concrete experiments in commons-based sharing platforms that show how alternative property arrangements can provide a very different kind of institutional foundation for the sharing economy.

### 3. Three vignettes

This section is a descriptive elaboration of three initiatives, drawing solely on material available in the public domain to sketch a picture of their main operational lines before further conceptual analysis. By design, each vignette illustrates innovative uses of property relations and corporate form in ways that challenge existing embedded assumptions of the dynamics of sharing economies. In particular, they design shared or distributed access *as a form of ownership*, one where economic dynamics are interdependent with social dynamics. They also illustrate a diverse array of different legal entity choices that illustrates creative tinkering with the standard for-profit/non-profit division in the design of economic enterprise.

#### 3.1. Platform co-operativism

Platform co-operativism is an approach to the platform economy which as a whole challenges corporate approaches. It seeks to mitigate the negative effects of those approaches, especially in relation to labour precarity and data privacy, by infusing digital platforms with the long-standing principles and institutional design features of the co-operative economy. The institutional design element is crucial: by not using standard corporate legal structures for participating in the sharing economy, a platform alters the salience of shares-as-property. Instead of allocating decision-making power according to proportion of financial investment in shares, co-operative platforms emphasise membership and participation on a one-person, one-vote assumption, as well as (in multi-stakeholder designs) the active contributions of users or workers.



Although primarily developed and supported by a mix of innovative start-up founders, civil society and action research (Platform Cooperativism Consortium), platform co-operativism has more recently attracted state support via the 5-million-euro European Union ‘Decode’ project (Institut Municipal d’Informàtica de Barcelona 2016–2019), which aims to ‘create a decentralised innovation ecosystem that will attract a critical mass able to shift the current centralised data-driven economy towards a decentralised, sustainable and commons-based economy’. The Decode project describes platform co-operatives as ‘developed on the ground of [...] mutualism, solidarity, self-organisation of work and production [and aiming to] connect and integrate [...] techno-political networks and cooperative platforms, thus intertwining political democracy and economic democracy in the redesign of urban and metropolitan space as an alternative to the *Smart City* model’ (Carlo Vercellone (Dir. CNRS-CEMTI) et al. 2019, 138). Theoretically, the Decode project characterises platform co-operativism as a commons-based alternative to platform capitalism representing ‘exit’ rather than ‘voice’, referencing Albert Hirschmann’s 1970 trilogy of voice, exit and loyalty (Hirschman 1970). From this perspective, platform co-operatives depart from ‘voice’-based efforts to resist and alter the mainstream platform economy model (e.g. through class actions against data privatisation or labour disputes and strikes by gig economy workers (Carlo Vercellone (Dir. CNRS-CEMTI) et al. 2019, 74–76)). Instead, they are an example of exiting mainstream markets via positive provision of an alternative, one which provides a constructive foundation for shifting loyalty from large business-as-usual platform economy participants.

Nonetheless, the viability of platform co-operativism can be fragile, as illustrated by the heartfelt collective call by a wide range of European platform co-operatives for support for their model in the context of the Covid crisis, appealing explicitly to values-based loyalty (Batiot et al. 2020). The infrastructure supporting the long-term viability of platform co-operatives goes beyond the design of hybrid corporate forms which are run for mutual interest rather than investor value. As Muldoon (2020) argues, for platform co-operatives to successfully challenge the precarious labour and hidden forms of data capture inherent in the corporate platform economy, they need policy and regulatory support to overcome limits to their capacity to act as agents of broader social transformation. Technical, legal, business development and financial capital support are all needed, he argues: specifically, new municipal-level digital centres to nurture new platform co-operatives; a new co-operative-friendly legal and regulatory framework; the creation of a national platform co-operative incubator; and a Digital Innovation Fund for the co-operative sector to provide capital for scaling. Much literature on platform co-operativism and institutional design comes to a descriptive stopping point at the level of generality illustrated by this policy argument. In effect, however, this argument is a way of requesting time and money resources to develop platform co-operativism as an alternative business model. It begs the question of the detailed *content* of the platform code, legal frameworks, business and financial models that would be deployed by successful platform co-operatives.

A brief illustration of one particular platform co-operative, Fairbnb, shows the importance of creative institutional imagination in relation to corporate form and property relations *internal* to the platform initiative. Fairbnb links guests and hosts for accommodation using a number of intentional design elements that are salient to a commons-based sharing economy. Its manifesto commits to four key values: two that directly shape institutional innovation in relation to property rights and income flows (collective ownership and social sustainability), and two process values (democratic governance and transparency/accountability) that are fleshed out with a strong emphasis on membership and deep participation. The legal entity underpinning Fairbnb is a registered social co-operative based in Italy with a multi-stakeholder dimension: the co-operative currently includes founding, funding and worker members and there are plans to include additional categories of owner-members from hosts, guests, local projects and municipal authorities. As Damiano Avellino, one of the key founders of the company, put it in explicitly commons-based terms in explaining these plans: ‘What is really important is to make sure the

platform is governed as a commons and can act as a positive force for change in local communities.’ (Muldoon 2020)

The co-operative structure means that democratic membership has greater sway than the property rights attached to shares. This is supplemented by channelling surplus value to local communities: Fairbnb distributes 50% of its 15% commission (itself less than the typical 20% taken by Airbnb) to fund community projects. Municipalities and hosts can submit projects to be funded to Fairbnb and guests can choose which projects they wish to support. This puts a high value on place, and one that supports visiting guests to relate to the region they are visiting as a place to dwell and inhabit, rather than to consume or pass through. As their website insists:

‘sustainable tourism [...] is [...] respect for the people and the places we visit and for the customs we observe [...] and] it is also about the visitor. It is a feeling that you belong to the place, it grows on you like you’ve been living there for some time already’ (Tokic 2020).

Beyond the element of individual choice embedded in this design feature, the community projects dimension of Fairbnb is very much about generating *collective value* to supplement the more individualised value flows that pass between host and guest. Where a corporate model would extract that surplus to reward external shareholders, here 50% of it returns to the local node. As Nannelli, Franch and Della Lucia (2019, 283) comment:

‘[O]wners/providers on the one hand create economic value by making their assets available at fair prices; on the other they create [...] social and /or environmental value thanks to their active involvement in projects that reduce impacts on the territory. The cooperative system is built on a participatory system that on the online level creates economic value, [and] on the territory [level] creates social and environmental value.’

Furthermore, the platform imposes a ‘one-host/one-house’ policy, which constrains the level of surplus extraction possible for any one member, ties the sharing of space more closely to the local physical context of hosts and supports a trajectory for growth and economic viability *by replication rather than scaling*. In other words, Fairbnb aims to extend its reach through a network of delegated local entities that will each subscribe to the co-operative values and the Fairbnb Manifesto as well as contribute funding to the core co-operative, but will adapt the broader business model *and regenerative formula in their territories, localising it and making it compatible with the local regulations and culture* (Fairbnb 2020). In the company’s terms:

‘Local Nodes are at the core of Fairbnb.coop and are the key for an inclusive and connected network that is able to change the world starting from our neighbourhood. Local nodes meet regularly to plan initiatives, decide policies and to organize events and activities connected to their territory. In the Local Node it is possible to experiment, discuss and learn with the aim of rethinking how the so called sharing economy should work **FOR** our communities and not **IN** our communities [...] Community projects will have to satisfy three conditions: be intended to help residents and/or promote sustainable tourism; be linked to the same community or location where the guest/funder will travel to; and the recipient of the grants will have to be a legal entity that will provide accountability and inform the platform and the funders on the state of the project.’ (Fairbnb n.d.)

In short, local nodes are a crucial element of the overall institutional design where shared ownership by members intersects with localised resource flows, deliberative decision-making and a live sense of care for place.

Fairbnb in this way helps to bring alive key features of platforms that are important for commons-based sharing economies: a co-operative legal structure, caps on scaling, distributed

sharing of surplus and the achievement of economic viability by replication through multiple local nodes.

### 3.2. *DisCO*

The second vignette that helps activate institutional imagination in relation to commons-based sharing economies draws on aspects of the design of DisCOs: Distributed Community Organisations. DisCOs use creatively customised non-profit legal structures as a model for organising a co-operative and commons-oriented workplace rooted in feminist economics and prioritising trust, care and human relationships. DisCOs' approach to digital platform design provides an alternative to the tech-centric world of blockchain and distributed ledgers (DisCO Coop 2020; Troncoso and Ultratel 2020; Troncoso and Ultratel *n.d.*). The model grew out of the practices of the Guerrilla Media Collective, a co-operative based in Spain which provides translation and design services in accordance with a set of principles and operational practices that catalysed the DisCO framework as a whole. The umbrella DisCO organisation is a worker-owned, non-profit socially oriented co-operative, but the framework it promotes can be applied to a range of legal structures provided they adopt the principles and a non-profit orientation. The framework has been applied to a range of projects in the arts, textile recycling/reuse, permaculture, education, makerspaces, online marketplaces and medicine.

The DisCO framework builds on innovations in the commons, peer-to-peer governance and open co-operativism to construct a practical working model which aims to support an economically viable organisation that prioritises the provision of social value to its community. The 'DisCO Manifesto' (Troncoso and Ultratel, 2020) provides the key principles, while the DisCO Elements (DisCO Coop 2020) is more practical, working through the concrete aspects of how the principles operate. The framework as a whole blends the century-old principles of the International Cooperative Alliance and adds seven new principles. These focus on the centrality of whole-community governance; the creation of commons, both digital and physical; care as the core; open access products; federated structures for replication; and an emphasis on local scales for all physical processes while knowledge is globally shared.

Novel accounting techniques are an especially critical element of institutional design of DisCOs, and in particular the collective shared time-tracking of 'care work' as one of a trio of different work genres articulated by the model. 'Livelihood work' is essentially commercial work; 'lovework' is pro bono work done at reduced or free rates for projects with shared values or significant economic need; and 'carework' is DisCO terminology for the frequently invisible work of social reproduction within and around formal duties. Carework is 'affective work, it's practical and administrative work, but it's also our emotions and all of the invisible work we put into the team (the cooperative) in order to keep everyone sane and emotionally well' (DisCO Coop 2020, 15). It has two dimensions, the first nurturing the health of the collective as an organisation (e.g. co-op and business development, seeking and attending to clients, making sure financials are up to date and paid, maintaining active relationships with contractors) and the second nurturing the health of the collective members (via mentoring, mutual support including dispute resolution, and a formal 'dating phase' for new members). Carework practices are shared by all with no tie to expertise or role, and are tracked and recorded through handbooks, wikis and modular workflow items in overlapping working circles.

What is striking about DisCO's commitment to 'care before code' is that all three types of work feed into the value flows within the organisation, so that otherwise invisible labour is fully recognised in the overall balance of value and labour flows. Instead of a typical bifurcation between financial flows tied to formal productive work while informal reproductive work attracts no recognition, the DisCO model blurs the boundary. Principles of economic democracy are made vivid through socially embedded collective agency, but in ways that run with the grain of *both* the 'economic' and the 'democratic' aspects of institutional design.



DisCOs also propose ‘radical economic subsidiarity: distributed production and economies not of *scale*, but of multi-faceted *scope*’ (DisCO Coop, 2020, 88). Rather than enclosing their approach in intellectual property rights and then expanding through ‘scaling’, they aim to *replicate* the model by open-source sharing of their documentation, which can inspire imitation. Imitation is catalysed when practices of sharing are embedded in relational networks founded on shared values. The emphasis in DisCOs is on relationship and interpersonal trust, whether established internally to each DisCO organisation (e.g. via well-documented ‘community rhythms’ of daily check-ins), or externally to other organisations with resonant values and design (e.g. Fairbnb has expressed interest in following the DisCO model).

The overall design of the DisCO model is one where incentives grounded in property rights are consciously embedded in a sense of collective identity and an energy of shared process. The resulting quality of productivity is communicated quite viscerally and with a strong sense of joyful play in their documentation. For example, in introducing the key foundational idea of ‘care before code’, they say ‘Care work is time-work: it’s both material and immaterial at the same time (it’s magic, it’s physics [ . . . ] it’s Feminist Economics!)’, and go on to reference David Graeber’s (2014) treatise ‘What’s the Point if We Can’t Have Fun?’ as well as include a pointed reference to how ‘the lack of care work in lefty circles has helped capitalism undermine progressive movements, and also witches!’ (DisCO Coop 2020, 71, with a reference to Silvia Federici’s work). As well as play, there is a strong emphasis on praxis, experience and craft over and above abstract knowledge and expertise – co-operation depends more on ‘attitudes, goals and care’ than on ratified abstract expertise or even professional experience (DisCO Coop 2020, 89).

Beyond internal organisational design, there is significant overlap between the elements of a supportive policy framework for DisCOs and those articulated for platform co-operatives, particularly as regards tax incentives, commons-public partnerships and co-operative development funds. However, the DisCO framework places more emphasis on the contribution made by physical community spaces such as co-working spaces, hackerlabs and makerspaces. Overall, DisCOs foster commons relationalities by combining a robust and accessible governance philosophy with creative micro-techniques of accounting that entwine the affective and material dimensions of both care and place into the formal institutional design.

### 3.3. Regen Network/Regen Foundation

The third and final vignette demonstrates an initiative which creatively complements private for-profit enterprise design (Regen Network) with commons-based elements embedded in a sister non-profit trust (Regen Foundation). It thus provides another dimension of variation on underlying legal structure, as well as an additional variable in that its social goals include overtly ecological purposes.

Regen Network, structured as a for-profit legal entity, provides nature-based carbon and biodiversity credits to landowners, using a blockchain system based on a self-consciously ecological and socially just value system that accounts for a wider range of stakeholders than would usually be involved in a for-profit eco-credit project. These additional stakeholders are accommodated via a non-profit foundation structure that works in parallel with the for-profit initiative.

The for-profit aspect of the project works as follows. Investors pledge money to farmers, indigenous communities and enterprises around the world to help regenerate the land. The regeneration practices are measured, monitored and verified using data from satellite images and AI, with smart contracts paying out rewards to those farmers and enterprises who meet the predetermined conditions over a set amount of time. For example, initial projects in northern New South Wales, Australia, invest in managed grazing practices that help to reverse land degradation, enhance carbon sequestration and improve soil and ecosystem health, and are paid to do so by

contractual agreements funded by Microsoft's net-zero commitments, with the details monitored via blockchain and AI and overseen by Regen Network.

While the proof-of-stake blockchain ecosystem aims to enhance efficiency, the overall aim of the umbrella framework is more social, focused on community-led governance that extends the power to participate meaningfully in network governance to underrepresented community members such as land stewards, scientists, pro bono developers and indigenous communities. To do this the initiative has created a second separate legal entity, Regen Foundation, explicitly aimed at sharing ownership and decision-making with these less represented stakeholders. Regen Foundation is a charity with tax-deductible gift status which aims to distribute 30 per cent of its digital tokens to non-commercial stakeholders as a basis for participation in decision-making. This social goal of linking money, power and AI is capable of replication in ways that can help to bridge the digital divide to empower deep inclusive access to the benefits of decentralised ledger technologies. The social goals also encompass ecological aims: Regen Foundation is developing Ecological State Protocols (automated algorithmic processes that determine a specific ecological change of state) as part of the collaborative open-source tools needed for the public infrastructure of regenerative stewardship.

The core practices related to financial assets differ between Regen Network and Regen Foundation in that the digital tokens issued by the former are liquid and can be traded freely in the market including cashing them out in fiat currency. By contrast, the tokens allocated to community stakeholders are locked, such that they can only be used either as a basis for voting on the content of governance proposals or for a complex process called 'staking', which allows the underrepresented stakeholders to earn limited liquid rewards as a proportion of the compensated effort that validators receive for maintaining the integrity of the blockchain (Roberts et al. 2022). Community stakeholders thus participate through a mix of voice and constrained financial benefit. They are typically selected by choosing regionally based local organisations working on regenerative initiatives in relation to their bioregion, whether focused on soil, habitat, biome or watershed. Bioregional and ecological issues for each of these regions are decided by governance decisions internal to the community stakeholder organisation, but the constrained tradeability of Regen digital tokens allows different initiatives to link the benefits generated across initiatives through verified eco-credit methodologies such as the Ecological State Protocols (Roberts et al. 2022). There are some significant barriers involved in enabling these processes to run smoothly, particularly relating to technical knowledge and language. Educational and communication capacity-building is therefore essential for establishing the relations and practices that underpin ongoing viability for the Regen Network initiative. In particular, the social relations that animate the non-profit entity are as important as the digital technology streamlining the financial flows of the for-profit entity.

#### 4. Institutional redesign

How do these vignettes illustrate the possibilities of institutional redesign in relation to property? In this section, the goal is to highlight the threads of property relations and corporate form descriptively summarised above and to link them, via inductive conceptual analysis, to the three keywords: platform, care and place. This approach builds a nuanced foundation for a commons-based perspective on property and corporate form in the sharing economy: one that moves beyond binary juxtapositions of a relational ethos of co-operativism with a transactional logic of exchange. The keywords are understood in processual terms as sets of practices that generate a guiding question for each keyword. The first is: does the *platform* support practice and processes that foster mutual reciprocity and relationality in relation to property? Second, does the platform design of 'who pays who for what' operate in ways that make *care* central, supporting a more relational ethos of interaction and more sustainable outcomes? Finally, does the platform design foster *place-based* processes of accountability, conditionality and monitoring that are conducive

not just to more sustainable outcomes but also to different kinds of sociocultural relations between nature and people? In each case these questions are posed by reading *across* the three vignettes already described and expanding their insights by reference to broader literature on the commons: the aim is to catalyse the outlines of an ongoing dialogue and conversational space for exploring commons-based approaches to sharing economies.

#### 4.1. Platform

The earlier vignette on platforms provided the descriptive outline of platform co-operativism as one possible trajectory for institutional design in platform economies, and if we enquire into, as adverted to above, ‘practices and processes related to property that support mutual reciprocity and relationality’, then one important cluster of practices and processes are those that enact commons principles. The question then becomes: how can a commons-based approach help to re-imagine digital platforms as sites for economic action which, rather than prioritising individualised efficient exchange by individual and corporate entities, function as a catalyst for experiments in collective agency?

The ownership of the digital commons is crucial here. Nicoli and Paltrinieri (2019, 803) argue that the early open access movement was a blind alley, undermined by the ‘legal void surrounding the platform’, which led to the exploitative monopolies of ‘unicorns’ like Uber and Airbnb. They argue it is not access but ownership which matters, understood through the prism of the commons as more process-oriented and holistic rather than just a bundle of rights (Nicoli and Paltrinieri 2019). Instead of being primarily embedded in the architecture of abstract property rights, they argue that ownership from a commons perspective resides in the democratic governance of an ecosystem, the instituting of a co-operative ecosystem *in and through* democratic governance. Material practices bring into being ties of reciprocity within real communities of workers (Nicoli and Paltrinieri 2019, 809) rather than a cluster of atomised contractual relationships, creating what they call a common firm (Nicoli and Paltrinieri 2019).

The common firm mixes Taylorism and start-up culture with technological tools to embed democratic decision-making into the heart of the platform. As a result, management is not secured through top-down hierarchy but by a deliberative process drawing on collective decisions that delegate power to associations that blend the roles of user, producer and consumer (Cohen 2020; Nicoli and Paltrinieri 2019, 814). This resonates strongly with Fairbnb’s distributed financial model of local nodes and multi-stakeholder involvement in surplus-funded community projects.

Moreover, the possibilities here go beyond collective agency per se. There is also potential for the platform to function less (or not only) as a site for economic transactions and more as a public space – what Ivan Illich has referred to as a ‘dwelling place’ (Illich 1992), a site that reframes economic action as always and necessarily emplaced, relational and publicly shared (Morgan and Goldblatt 2022). This approach views the platform as a *decommodified* site of collective agency: this is the quality that analogises it to public space. Early work by Benkler (1994), the influential scholar of peer governance in the digital domain, illuminates the resonance with public space. Benkler developed some of his insights in his early research on the possibility of the American West as a physical site for decommodifying land labour. He reinterpreted the US Homestead Act of 1862 as a failed effort by labour advocates in the 1840s and 1850s to use the public domain, the unsettled West, to decommodify land and labour. He argued that these nineteenth-century reformers pursued, through creative reconfigurations of tax and property law, a Jeffersonian vision of liberty by making freehold farming a viable alternative life plan for industrial wage labourers. Just as Benkler documented creative reframing of tax and property, so in the context of platform design the alternative legalities of reframed corporate form and internal property relations can support what William Simon labels ‘social-republican property’ (Simon 2005), where the incidents of corporate form are infused with social and republican values by way of legal restraints on the ability of owner-members to fully liquidate their holdings, or to sell the assets of the platforms

(Simon 2005). Such restraints could supplement features such as those illustrated by Fairbnb, and thereby enhance decommodification of platform dynamics. Moreover, as we shall see in the next two sections, the contribution of legal decommodification devices to creating a site for alternative life plans can also be perceived at the micro-level in the way in which DisCOs enact relations of care, and at the macro-level in the place-based facets of the Regen Network/Regen Foundation project.

The wider import of recovering a sense of a platform as a dwelling place is significant. Debates around data privacy and the legitimate province of artificial intelligence tend to be dominated by assumptions that venture-capital-funded corporate models will be at the centre of institutional design, supplemented by debates about how much or how little to regulate such entities (Srnicsek 2016). In comparison, the notion of intentional institutional design for a platform as a dwelling place underpinned by shared ownership and governance realises a more regenerative potential of the economics of platforms. This is further enriched by exploring the conceptual contributions of factoring care into property relations within enterprise design: the focus of the next keyword to be explored.

## 4.2. Care

Care matters because it is the most important aspect of the practices and processes that enable property to operate as a form of relational infrastructure grounded in feminist roots that value social reproduction and informal practices. Federici (2019) articulates the commons as including shared resources that support reproduction, the capacity to exercise control over everyday life and the entitlements won to dignify work. While struggles over work entitlements have defined traditional left-right politics for decades, the visible erosion of ecosystems of social reproduction and the capacity to control everyday life have accelerated and expanded significantly in recent times. Do the platform design choices in the vignettes reframe who pays who for what in ways that make *care* central, supporting a more relational ethos of interaction and more sustainable outcomes?

DisCO organisations are most clearly structured in this manner. By making social reproduction part of the repertoire of formal governance routines within DisCO entities, and by connecting it to financial flows, acting with care is recognised and made visible, enabling participants in the sharing economy to enhance their control over power dynamics and to gain dignity through the recognition of formerly invisible labour. This is a very interesting move. Care is often characterised as constitutive of relationships in contrast to market exchange, but the DisCO approach reformulates it as *part of* market exchange frameworks. Care in DisCOs generates a stream of income and value and is therefore not unlike a share: its regular performance generates property rights to a flow of income.

Care is also often characterised as quintessentially embedded in *informal norms*, but again DisCOs' relative formalisation challenges this, bringing care out of an invisible zone of unrewarded practices. The norms of care might be thought of as exemplary instances of vernacular law (Bollier and Helfrich 2019, 90): 'a form of law that originates in informal, unofficial zones of society as an instrument of moral authority and social order [...] expressing the practical judgments, ethical wisdom, and situated knowledge of people rooted in a particular place or circumstances'. But DisCOs formalise these norms and connect them to flows of financial value capable of being stored. As the sixth DisCO principle argues:

'Tracking and revealing the often invisible, even dismissed, strands of value-producing labor is structurally different from purely quantifying work. By having the ability to track flows of value produced for both the internal operations and also for external exchanges between clients and the DisCO members, we can hack the neoliberal labor classification, hence value

exploitation. Seeing, naming and tracking the value of Love and Care work lets us reclaim these contributions with the same level of respect afforded to the provision of goods and services (DisCO Coop 2020).'

This form of recorded mutuality makes care an economic resource as well as a social infrastructure. The reciprocity is central – care as relationship among members of a community, not as a delivered service from a provider to a client. The way in which DisCOs' calculative practices prioritise care is very much embedded in an explicit commitment to feminist economics and resonates with wider arguments in favour of a basic income (DisCO Coop 2020). The community-staked digital tokens issued by the Regen Foundation have similar potential, especially given the mix of deliberative voice and financial clout encouraged by the overall governance structure which allows mutual learning across and between community stakeholders participating in the project. And Fairbnb's focus on relationality in the tourism experience also resonates with care more broadly, although the mechanism for this is more externally focused via the community project donations.

Overall, the vignettes show that the more closely institutional design integrates membership-based decision-making power with the recognition of care and the flow of financial resources, the greater the influence of care on property-related processes and practices within sharing economy initiatives, and the stronger the foundation for mutuality and reciprocity as core elements of property-related processes.

#### 4.3. Place

In reflecting on the extent to which commons-based sharing initiatives embed place into their institutional design, one key dimension is the presence of mechanisms that value place either through allocating decision-making to locally based members, or through the use of contextually sensitive knowledge frameworks. There is evidence of this across all three vignettes. Fairbnb's system of local nodes and the financial surplus flows dedicated to local community projects is a clear marker of this, and constitutes one of its key claims to push back against the model of Airbnb. The link between place and financial flows for Fairbnb resonates with the link between care and financial flows embedded in DisCO architecture. Both value physical place even while they centrally embed digital processes and sites. The features of Fairbnb's institutional design shape the ethos of the platform in a holistic way, such that the platform becomes an outgrowth of a particular area or neighbourhood – a place to dwell, rather than a launch pad for matching supply and demand. Both Fairbnb and DisCO prioritise radical economic subsidiarity, and a key principle of DisCOs is to localise any physical production aspects. Finally, Regen Network/Regen Foundation designs ecological viability into all its projects both by virtue of its macro-focus on ecological and biosystem health as the overall enterprise purpose, and in the micro-detail of the Ecological State Protocols that will monitor and verify changes in the physical environment of organisational participants.

While the vignettes used here clearly prioritise place in distinctive ways, this is in tension with the broader 'placelessness' of sharing economy models built on digital foundations, and the reasons run deep. The focus on place of commons-based sharing economies is potentially vulnerable to the effects of the formal-legal infrastructure of free trade and standard procurement laws that typically aim to eliminate local preferences or considerations other than cost-efficiency. For this reason, the redesign of macro-systems will be crucial to a thriving ecosystem of commons-based sharing economy initiatives. Interaction protocols that factor place, care or ecology into the pricing of 'services' so as to highlight networks of relationships between humans (or between humans and non-humans) can reframe property and corporate relations and concepts at the micro-level. But these developments will need broader support from organising frameworks such as circular economies (Lesniewska and Steenmans 2023), doughnut economics (Raworth 2017)



and ecosystem services (Jackson and Palmer 2015). It is arguably on this macro-level that the capacity of commons-based sharing economies to become viable models will hinge, given that the replication of successful initiatives may otherwise be challenged by commercially designed competitors invoking legal frameworks of free trade and procurement.

Place-based experiments in commons-inspired sharing economy initiatives thus invoke the role of supportive policy frameworks, which have been mentioned directly in both the Fairbnb and the DisCO vignettes. One could argue that at the local level, local and state government policies play a role in relation to commons-based sharing economy initiatives analogous to the one the courts have traditionally played in relation to mainstream private individual property rights. Just as courts enforce those rights, local government politics facilitate shared access through the array of tax, fiscal, business development, technical, legal and site-specific assistance they are able to provide. We already know from existing scholarship on sharing economies that they are sensitive to place dynamics at the national level: Rashmi Dyal-Chand has shown how supporting policy frameworks for sharing economy initiatives respond to different national varieties of capitalism (Dyal-Chand 2015). Germany, for example, is a 'coordinated market economy' that provides strategic support for microbusinesses by co-ordinating unions, platforms and different levels of government to craft facilitative modes of policy and legal support for models of shared ownership and control (Dyal-Chand 2015). The analogue of this at the local level is the increasing influence of urban city policy choices for experimentation with the sharing economy (Sharing Cities Network). Chosen carefully, policy frameworks can support the creative enterprise and governance elements of commons-based sharing economy initiatives in place-sensitive ways, such that they are able to co-exist without undue tension with the standard property assumptions underpinning commercial business-as-usual. Amsterdam, for example, is aspiring to steer 'smart city' policy processes in the direction of regenerative economies by combining a vision of the city as shared services with a local application of the doughnut economics framework (Doughnut Economics Action Lab *et al.*, 2020). Challenges will of course still exist, as a multilevel response will be necessary to ensure legal and effective replication of such experiments. But the outline of ways to combine platform, care and place at the policy level are clearly discernible.

## 5. Commons-based sharing economies

The cumulative effect of this inductive analysis is to illustrate emergent property relations in which economic and social dimensions are deeply interdependent, and sensitive by overall design to ecological goals. The paper first catalysed institutional imagination through narrating three vignettes that challenge, by design and through performative construction, assumptions and boundaries about the economic and social dynamics of sharing economies, as well as indirectly raising the question of ecological effects through the ways in which economic and social dimensions are tied to place. The paper then linked a generalised inductive account of the vignettes to an understanding of a *platform* as a dwelling place rather than a launch pad, a site that rewards reciprocity-embedded *care* and values *place*, especially when governed or controlled by local residents, or on behalf of future generations.

The inductive analysis through the keywords of platform, care and place has drawn increasingly on commons literature as the paper's trajectory unfolds, and this section deepens and broadens that analysis. The salience of the commons has risen in response to the triple crisis of environment, economy and society that has intensified in recent years. Ideas about the commons provoke and challenge binaries between market-based and state-based responses to these crises, and are especially adept at capturing the importance of tacit values and the limits of monetary or quantified outcomes. Classic literature on the commons stemming from Elinor Ostrom's work tended to focus on the management of common-pool natural resources, and as Mattei and Mancall (2019) argue, her contexts were usually small scale and relatively niche, leaving mainstream property rules unchallenged and limiting commons management to 'special

economic circumstances'. But contemporary commons literature has a much broader political vision which houses the potential to challenge property more fundamentally. This is in part because it is rooted in urban contexts and politics and touches on the way people in cities use and control their everyday resources, including through the rising popularity of sharing platforms.

The more contemporary literature also stresses the non-material and political implications of commoning, extending the salience and reach of Ostrom's recognition that common-pool resources were 'managed on the basis of rules that emerged from the bottom up as a result of common activity', in effect 'customary law highly adaptable to local circumstances' (732). Experiments in urban commoning typically try to reclaim both public space and collective cultural practice from commodification by the market, or enclosure by the state, and in the process the participants seek to re-imagine bureaucratic state forms and municipal politics away from party politics and formal institutions and towards 'radical municipalisms' (Thompson 2021). Although legal studies are little represented in this field, one prominent work is that of Foster and Iaione (2015), which maps a myriad uses of planning, property and public law as vital to re-imagining the city as a commons. Foster and Iaione emphasise the concrete experiments (and their pragmatic legalities) that make up commoning the city.

Legal literature on co-operative and democratic economics has also expanded considerably in recent years (Boeger 2018; Miller 2019; Scanlan 2017; Schneider 2024; Scholz 2023) but the commons contributes a distinctive process-based understanding that elaborates the idea of commons more as a verb ('commoning') than a set of 'objects', where a critical facet of commoning is deep democratic self-governance. Bollier and Helfrich (2019) define the commons as 'a robust class of self-organised social practices for meeting needs in fair, inclusive ways' that are 'mutually agreed upon'. Three key points are central. First, commoning happens when distributed access and governance are arranged in such a way that the commons becomes a *kind of infrastructure*, a platform, something that enables other things to happen – especially around making other things possible. Second, this infrastructure is capable of realising different forms and values of exchange and sociality from that of private property, particularly with respect to the social and ecological functions of property, as well as its imaginative and affective dimensions. Third, and as a result, it opens possibilities for distributing, on a more egalitarian basis than private property would allow, the capacity to access, extract, manage, transfer, use and even exclude. These three aspects of commoning all create property relations that support, rather than undermine, deep participatory democracy.

Institutional design specifically intended to create commoning infrastructure has the potential to bring to life collective economic agency and foster commons-based sharing economies. Mattei and Mancall argue that the commons challenges property in the context of environmental crisis, neoliberal economic theory in the context of economic crisis, and the Lockean liberalism underpinning the social contract in the context of social crisis (Mattei and Mancall 2019). All three of these perspectives infuse commons-based sharing economies, ecologies of pluralistic value(s) in which place and care provide the natural ecosystem of platform dwelling places. This perspective makes visible emergent property norms that entangle access and ownership, bringing to the fore questions of how enterprises can explicitly design *distributed access as a form of ownership*: one that reframes economic dynamics as interdependent with and embedded in social (and implicitly also ecological) dynamics. Designing attention to care and place into platforms will shape the commons as relational infrastructure, highlighting perspectives grounded in feminist roots that value social reproduction and informal practices (Federici 2019), but also helping to institutionalise the tacit aspects of commoning in ways that help commons-based sharing economies to endure.

## 6. Conclusion

To conclude, it is instructive to consider what the three vignettes, and their conceptual implications, cumulatively teach us about the appropriate role of law in relation to the sharing

economy. There are several stories about law, understood as a complex of professional and vernacular practices of ordering and regulating, potentially buried in here. One story might be that formal law stands in a relationship of studied neglect with commons-based sharing economies, a species of self-restraint resonant with the small 'I' liberalism of liberal legalism: an orientation that wishes to encourage flourishing by declining to interfere. While this might resonate for certain aspects of private law doctrine, it sits uneasily with the deployment of supportive policy frameworks drawing not only on socio-political but also legislative and regulatory support, and this has emerged as an important facet of commons-based sharing economies. A second account might be to stress that formal law has blind spots in relation to commons-based sharing economies: it works well, almost symbiotically, in structuring and facilitating individualist private property-based market relations but not for other more solidarity-based forms of exchange or relationality. This could be a heedless blind spot, or in a minor variation a more wilful blindness, suggesting formal law as *necessarily* suffocating the deeper systemic change sought by commons-based sharing economies. As one scholar has argued in response to Roberto Unger's faith in law's institutional imagination: 'if law does harbour transformative opportunities it is because there are limits to law's institutional imagination that take the form of reductions which, at a deep level, cannot but remain in place' (Christodoulidis 1996, 378). A third interpretation would be one that is more optimistic about the plasticity of law, especially the capacity to rearrange its formal elements and to animate them with plural legalities of place and care. In this account, 'formal law' is always incomplete: its socio-legal aspects of becoming are necessarily a part of its formal existence and always in flux. As such, the possibilities for institutional redesign envisaged by this paper are inherently always present.

It is not possible within the scope of this paper to point to the 'correctness' of one or other of these possible stories. Their interrelationship engages questions of both normative substance and methodological commitments that are broader than the current enquiry. As far as normative substance is concerned, the nagging provocation is that commons-based sharing economy experiments are variations on familiar forms of co-optation within the broader commercially extractive landscape (in line with the second story). Methodologically, a related question is whether the emergence of the experiments outlined in this paper assume that law is primarily a complex of more or less self-executing constraints, in line with the first story. Nothing decisive could be said about either of these questions, however, without a more comprehensive and empirically in-depth enquiry into the trajectory of the initiatives, taking deeper account of their history, and the power relations in which they are embedded. In short, it may well be conceptually possible to rearrange the property-related elements of institutional design in sharing economies so as to foster commons-inflected trajectories, and this paper is a first step towards opening such conversations. But it would require historically and politically contextual engagement to assess the *effective* viability of such a prospect.

Notwithstanding the above caveats, the provision of stripped back conceptual tools for possible pathways for change provided by this paper helps to broaden the debate, garner additional participants and open up shared landscapes of institutional imagination. In that landscape, the interaction of norms and practices around platform, care and place in these vignettes gives fresh prominence to the social function of property and the ways in which it is embedded in a relatively plastic infrastructure of rules. This reframes the economics of platforms from a 'focus on individual behaviour as an equilibrium of a set of individual incentives, [to] one on system-level behaviour as an equilibrium of interaction protocols' (Cottica 2018). Creating commons-based sharing economy initiatives shifts understandings of property relations and corporate form, and emphasises their capacity to enact interaction protocols rather than linking and matching individual incentives. Making collective economic agency institutionally real is at heart of the commons-based sharing economy. And this is happening not only in the project-specific initiatives on which the paper's vignettes have focused, but also in broader settings of current experiments in urban political economy reform.

Other articles in this special issue also contribute to fleshing out the substance of these interaction protocols, building on a sense of the ‘productive trouble’ of mixing practices driven by solidarity and altruism with essentially business-like transactions. Sally Zhu’s exploration of risk management in sharing economy platforms builds a bridge from webs of individual incentives to the affordances offered by mutualism. In the process, she widens the array of institutional solutions to risk management that should be borne in mind when studying sharing economies. These final reflections raise a closing question: do the abstract features of shared ownership as articulated in this exploration of commons-based sharing economies move towards a radical reframing or even elimination of mainstream property, or do they catalyse a parallel niche that usefully provokes deeper reflection on our wider assumptions about sharing economies? Ongoing exploration of this fertile terrain is important, whichever trajectory is more likely.

**Competing interests.** None.

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