Article

How Sharing Can Contribute to More Sustainable Cities

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Abstract: Recently, much of the literature on sharing in cities has focused on the sharing economy, in which people use online platforms to share underutilized assets in the marketplace. This view of sharing is too narrow for cities, as it neglects the myriad of ways, reasons, and scales in which citizens share in urban environments. Research presented here by the Liveable Cities team in the form of participant workshops in Lancaster and Birmingham, UK, suggests that a broader approach to

understanding sharing in cities is essential. The research also highlighted tools and methods that may be used to help to identify sharing in communities. The paper ends with advice to city stakeholders, such as policymakers, urban planners, and urban designers, who are considering how to enhance sustainability in cities through sharing.

Keywords: sharing; cities; sharing cities; workshops

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1. Introduction

Sharing can be viewed as a means to reduce the carbon and resource intensity of cities. As [1] points out, the more a resource is used or shared, the lower the environmental impact (e.g., car-pooling with four people is four times more efficient than four, single-occupant trips). In fact, scholars have suggested that, 'building a sharing infrastructure and culture is quite simply one of the most important things cities can do to contribute to a fair and sustainable world' [2] (p. 23).

Despite this claim, the scholarly literature that examines how a city can achieve or facilitate sharing is fragmented and thin. Much exposure surrounds the sharing economy movement [3,4], expounding its potential economic benefits on cities [5] alongside its legal implications. There also is an enormous amount of grey literature on the potential size, benefits, and disadvantages of the sharing economy, largely due to the emergence of Web 2.0 initiatives that provide a platform to enable users to connect, contribute, and exchange content (According to [6], the sharing economy will be a $670 billion dollar industry by 2025). The UK government has welcomed the entrepreneurial output of the sharing economy, describing the 'emergence of the everyday entrepreneurs. They are the challengers, the innovators and the agitators—constantly seeking to shake up the market by solving other people's problems' [7].

While the sharing economy offers potential to cities and their citizens, we argue that it is only one mechanism through which sharing is, and could be, enacted in a city. The sharing economy presents a very narrow view of the potential of sharing to contribute to more sustainable cities. To that end, this paper proposes to do two things: (1) From a conceptual perspective, the background literature aims to outline how sharing as a principle could be utilized in different domains to enhance the sustainability of a city; (2) From a practical perspective, the use of co-design workshops aims to help explore the current state of sharing in cities and how it could be strengthened. The insights gained from these two perspectives enabled us to consider how the broader notion of sharing may be advanced by policy makers, urban planners, and urban designers.

2. Background

2.1. Describing the Sharing Economy

Put simply, the sharing economy may be viewed as an economic model wherein people borrow or rent assets owned by someone else [8]. Inherent in this definition is that the sharing economy is a social and economic system, constructed around the sharing of human, physical, and intellectual resources [9]. In this respect, the sharing economy encompasses shared creation, production, distribution, trade, and consumption of goods and services by different people, groups, and organizations. Fundamental to how the sharing economy works is its use of online platforms, web-based services, information and communication technology, and 'social commerce' that give people shared access to things, such as resources, time, and skills [10–13]. Emphasis also is placed on the potential for high-impact capital within a largely market-based approach that favors networks over centralized hierarchies and the blurring of lines between personal and professional, full-time and casual labor, and independent and dependent employment [14].

In explaining the different types of activities that encompass the sharing economy, [15] uses four categories:

- Re-circulation of goods: taking unwanted goods and selling or giving them away via online marketplaces. Examples: eBay, Freecycle.
- Increased utilization of durable assets: taking durable goods or assets that are not being used to their fullest potential and utilizing them more intensively. Examples: Airbnb, tool libraries.
- Exchange of services: bartering sites in which services are traded for other things, such as time, money, or other services. Examples: Task Rabbit, time banks.
- Sharing of productive assets: involves sharing assets or spaces that foster production, rather than consumption. Examples: Skillshare.com, cooperatives.

Other scholars have developed typologies and taxonomies to help make sense of the sharing economy and related terms, including collaborative consumption and peer economy [10]; mesh economy [16]; functional- or access-based economy and asset-light lifestyles [10,13,17,18]; solidarity economy [19]; moral economy [20,21]; alternative economies [22,23]; and gift economy, gifting, and altruism [24,25]. For example, [10] uses collaborative consumption as an umbrella term that covers three distinct areas of sharing and which mostly overlap the sharing economy categories of [15]:

Product service systems: occurs when people pay to benefit from a product but they do not own it outright. Example: hiring a floor sander.

Redistribution markets: these use social networks or the Internet to redistribute things either for a fee or for free. Example: eBay.

Collaborative lifestyles: happens when people come together to share things. Example: co-housing.

In both of these typologies, the mechanics of how things are shared remain unaddressed. Further detail is provided by [2] to consider different methods of production and consumption (i.e., communal and collective production, or co-production and co-consumption; through individual, organizational, and peer-to-peer networks). They also acknowledge that sharing requires both inputs (e.g., water) and outputs (e.g., wellbeing), and provide information about what gets shared in exchanges (e.g., materials, products, services, wellbeing, capability). Additional typologies and taxonomies may be found in the collaborative economy within the business sector [26], the public goods literature [4], spectrum sharing in the telecommunications industry [27], and food sharing [28]. These latter categorizations have introduced concepts like rivalry, or the use of a product that removes availability of that product to other consumers, and exclusivity , which involves accessing a product that can be controlled and restricted because of specific criteria placed on a group of consumers [4]; notions of geography, temporality, and coordinated and uncoordinated rule-based sharing [27]; and the importance of considering the modes of exchange alongside the overall mission, goal, and intended outcomes of sharing [28].

2.2. Sharing is Broader than the Sharing Economy

While the sharing economy is viewed as part of a larger social system, its focus is narrow and primarily concentrated on economic transactions [29], using online platforms. Examples of the sharing economy in cities also tend to focus on global, international, or national initiatives, with little attention paid to smaller, more grassroots and hidden examples of sharing. This section examines the notion of sharing and demonstrates that sharing in cities is broader than just the sharing economy; it encompasses non-economic and communal forms of sharing as well.

One of the most-cited definitions of sharing comes from [30]: 'the act and process of distributing what is ours to others for their use and/or the act and process of receiving or taking something from others for our use' (p. 126; see also [31]). Implied by this definition is that sharing is a social act that takes place between at least two people. The act does not need to involve an economic exchange, but may be shaped by cultural, political, and social norms and motivations [29]. Moreover, the definition

incorporates a distributive element in which something that is owned by one person may be dispersed for use by someone else [32].

What this definition suggests is that sharing can involve a hugely diverse set of things, services and activities or experiences that may be co-produced and co-consumed at the same time or at different times [29]. Sharing can be informal or mediated through digital or other means, and may have communal and/or commercial benefits. Sharing also can be viewed as being more than the commercialisation or marketization of assets; it involves alternative ways of knowing, valuing, and living that promotes social and spatial equality, and regards all assets as priceless (Opponents of the definition by [30] suggest that trust, willingness to collaborate, and motivation to share are not always the same and should not be assumed for those involved in an exchange (see [29,33,34]. Moreover, [2,24,29] suggest that discussing the dimensions of sharing beyond basic dichotomies might have greater utility).

2.2.1. Examples of Sharing Alongside the Sharing Economy

To explore the diversity of sharing in cities, the authors, who are part of the Liveable Cities team, found examples from within their thematic research areas of aspirations, governance, and finance, ecosystem services, energy, futures, metabolism of flows, mobilities, resource use, and wellbeing (see liveablecities.org.uk for more details about the project.). Three sets of examples are discussed below, which are situated in different themes: energy provision (energy), wellbeing (wellbeing), and food (mobilities). (A co-produced research blog of grey literature and five, thematically-based discussion papers with our examples may be found here: shareableandliveable.wordpress.com.) The examples are illustrative of the different kinds of non-economic and communal forms of sharing that may be found in cities, ranging from smaller, more grassroots initiatives, to larger-scale, formal ones.

Energy Provision

Three, internationally-progressive, energy sharing examples are used to illustrate the radical business approaches that address the current challenge of reducing CO_{2e} emissions and utilising the latest technological advancements to create low-carbon energy infrastructure paradigms (e.g., combined heat and power, photovoltaics). Doing so has meant moving from a centralised, static model with the consumer at the heart to more decentralised, dynamic models where individuals or businesses contribute to shared resources as the 'prosumer'.

Local authority as a charitable energy provider. Woking Council (UK) established a not-for-profit, local authority-owned energy company (Thamesway) to distribute combined heat and power to Council buildings and local customers, offering a range of business-to-business (B2B) and business-to-consumer (B2C) arrangements [35]. They also share heat and the pipes used to transport energy via a small, local grid in a defined neighbourhood. Although sharing is set up on a formal basis, the model of sharing is both top-down and bottom-up, allowing customers to engage with the local authority about the service.

City of Sydney master plan. In Sydney (Australia), the City Council brought together a limited number of organisations that own the majority of the central business district to develop a strategic master plan to reduce drastically the city's emissions. A tri-generation (electricity and thermal energy) network formed a central element to this plan in which heat and cool air pipes would be shared via a small, local grid in a defined neighbourhood. Sharing of energy would be formal, but also bottom-up. To progress this B2B plan requires multiple changes to state and federal legislation to enable decentralised energy production and B2B sharing within the city [36].

Smart local grids. In Rose Hill (UK), Oxford City Council and Bioregional have experimented with storing and trading solar-generated electricity within a 30-strong, local community using rooftop-scale photovoltaics (PV), batteries, direct current (DC) appliances, and 'smart DC' technology to control the flows of power. Locally-generated energy can be stored and consumed locally within the neighbourhood, circumnavigating complicated grid upgrades and bureaucracy associated with feeding

renewable energy back into the grid for an increasingly low tariff [37]. Decision-making is bottom-up and involves the whole community.

The energy provision examples illustrate the critical role of managing stakeholders, the importance of governance and the role that new business models may play in enabling a transition to sharing resources. While sharing seems inherently positive, the disruptive nature of the 'prosumer' model needs to be managed carefully to ensure that it does not compromise outcomes that are valued from the centralised energy system, such as equity of access to energy across the population and a resilient source of reliable and safe energy able to meet demand.

Wellbeing

One example of 'sharing wellbeing' may be found in the One Brighton (UK) development, which builds on the lessons of BedZED and espouses the principles of One Planet Living [38]. (Wellbeing can be viewed as an indirect consequence of a number of opportunities that involve using shared space for different purposes, such as active commuting [39–42]; sharing work to increase economic wellbeing [43]; and sharing experiences to increase or improve social interactions.) Here, a range of spaces and artefacts are shared across and between residents, including rooftop allotment gardens, car club membership, and a café. While some schemes within One Brighton involve formal sharing (e.g., car club), other initiatives are more informal, such as sharing common space in the community centre. To help with general governance issues, the development has a bottom-up, appointed panel to work with the developer. Anecdotal evidence suggests that One Planet Living communities know more neighbours than in standard communities and that crime and fear of crime may reduce as a result, with suggestions of better health outcomes [38]. One Brighton demonstrates that, at the scale of the local neighbourhood or large block, concepts of sharing have been integrated via urban planning and are designed to facilitate positive lifestyles and wellbeing.

Food

Three examples of food sharing offer different ways of considering the important role of food in our lives and our mobilities (For a discussion of mobilities, see [44]). One of the examples, Claver Hill Community Farm, was mentioned in the workshop.

Urban Harvest. This example sees members of a local community in Birmingham (UK) pick fruit from trees in people's gardens. The produce is shared among pickers and growers, often for the production of jams that are circulated and shared among members. The bottom-up, largely informal process of sharing occurs at the neighbourhood-city scale and is limited to residents who have land and fruit trees, people who want to pick fruit, and the seasons.

Claver Hill community farm. Established by local activists in Lancaster (UK) to preserve surrounding farmland and provide access to local food. Knowledge and food are exchanged for volunteering from community members. Although this is a bottom-up example, the terms of sharing are formal, between a formal trust who owns the land and community members who share time.

Incredible Edible Lancaster (UK). A local chapter of Incredible Edible, which is a local food movement that encourages community building through growing, food education, and support for local commerce. The Lancaster branch has established, community-managed gardens in town and on the Lancaster University campus that are open for anyone to harvest. Like the previous two food examples, this one also is bottom-up; however, the arrangement is largely informal in that anyone can join and anyone can pick the food grown in the gardens and common spaces.

The food examples broach a diverse range of concerns about the current state of the food system, such as loss of growing skills, limited access to affordable local produce, nutrition and the loss of farmland for alternate developments. The examples also illustrate the multiplicity of approaches to food sharing, with some viewed as quite niche and hidden from mainstream food practices.

2.3. Background Summary

As can be seen from the above examples and the background literature, sharing can span a range of foci, from local to national. Sharing also involves a spectrum of bottom-up, top-down, and hybrid processes, and contains elements of digital, physical and 'phygital' [45,46] platforms. These examples reflect the non-economic and more communal aspects of sharing [29] and sit alongside those typically discussed in the sharing economy, which tend to focus on more national, international, and global organisations that use more top-down/less bottom-up approaches (e.g., Uber, Airbnb, TaskRabbit) and to achieve a financial return on investment. They also highlight two issues about sharing in cities worth considering.

First, sharing is not always an issue of ownership, which is central to the making and understanding of contemporary, individualistic consumer societies [47]. For example, a group of people may share a train journey, yet the train does not belong to any of these passengers. Likewise, sharing may relate to communication that is not always reciprocal: a person may share an emotion with someone else on the train, but the sharer does not, necessarily, own that emotion, nor should the receiver feel pressured into sharing an emotion in return [32].

Second, sharing can involve two people or many people. Sharing has a community-based orientation as well as a macro-scale orientation in the form of sharing the commons [24]. Thus, different scales of sharing occurs in cities: 'sharing in', which happens between close kin; 'sharing out' which happens outside close kin and involves other individuals, groups, or communities; and 'commoning', which involves sharing what is owned by the public or that no one owns.

The above discussion helped us create a more nuanced picture of sharing in cities, suggesting that both the sharing economy and non-economic or communal sharing can co-exist alongside one another. We were interested in seeing if this held true in practice by exploring the landscape of sharing in two UK cities. The next section outlines our approach to the research that we undertook on sharing in cities.

3. Methodology

To better understand how sharing occurs with 'on-the-ground' experts who could bring knowledge about their day-to-day sharing experiences to the research team, we conducted two workshops with local residents of the city of Lancaster and the Moseley and Kings Heath ward within Birmingham (UK). We recognise that holding only two workshops might be viewed as a limitation. However, we feel that strong messages emerged clearly from both workshops and that the findings make a valuable contribution to the scant academic literature to-date. Moreover, our research offers other researchers innovative tools and methods to take the work further.

The workshops had two aims: (1) To map current examples of sharing to reveal what sharing looks like and how it functions in cities; (2) To consider what needs to done in cities to develop and encourage sharing whilst also improving sustainability. In order to achieve these aims, we undertook two co-design workshop activities, which are explained in the next section.

3.1. Co-Design Workshops

We chose to conduct our day-long workshops in local community centres in Lancaster (in March 2015) and Moseley and Kings Heath (in September 2015) because this is where the Liveable Cities project team focused their research efforts within the UK. For Birmingham in particular, we selected a smaller area than the city scale because it would have been difficult to comprehensively map examples of sharing and consider what needs to be done to encourage sharing. Moseley and Kings Heath was chosen because Birmingham City Council was hoping to regenerate the area and considered sharing as one approach to achieving their goal.

3.1.1. Recruitment and Participants

Workshop participants were recruited via a locally-relevant flyer that was distributed within each city, via email and online advertisements on Facebook, Twitter, and the Liveable Cities website. The flyer invited people to a 'thought experiment' in which sharing would be debated and discussed, including an exploration of whether the boundaries of sharing could be expanded to ensure sustainability. Participants did not need to be involved in a sharing project or initiative to attend the workshops.

Based on our recruitment, 40 participants attended the Lancaster workshop and 22 participants attended the Birmingham workshop. Given that the workshops took place over two weekdays, we acknowledge that our participants may not be representative of all residents in these areas (e.g., schoolchildren, people working during the day). Moreover, because the workshops related to sharing, we may have unintentionally excluded those people who felt as though they did not share.

Workshop Activities

Using co-design [48], futures [49], and social innovation discourses (e.g., [50,51]), both workshops involved the same two sets of activities:

1. *Mapping current initiatives of formal and informal sharing*. Upon entering the workshop space, participants were given a card and asked to write down an example of sharing. Participants then attached their card to a large piece of paper on a wall that already contained categories of sharing (e.g., sharing food, sharing knowledge); the idea was to place their card next to the category that best reflected their sharing example (see Figure 1). Once completed, participants shared their examples with 4–7 other participants at tables, providing more detail such as who shares, what and how is being shared, and so forth. Participants then were encouraged to make connections between their sharing examples. The research team, seated at each table, facilitated this discussion by probing for existing, missing, and potential connections.

2. *Envisioning sharing city scenarios*. This section of the workshop began with an opportunity to quickly remove negative thinking ahead of the final design activity. Participants were asked to think what could be the worst-case scenario affecting sharing in their area. They wrote their concerns down, shared it with those at their tables and put the concerns in a box, which then was hidden out of sight. Subsequently, participants were tasked with designing a future city or neighborhood that encouraged sharing. To help them out, participants were given an array of materials and tools, including colored tissue, maps, wooden blocks, miniature people, pens, and string. We also equipped participants with small signs containing the words, 'create', 'amplify', or 'destroy', inspired by the position that design for sustainability requires consideration for what futures we choose to sustain, create, or destroy [49], and the desire to 'use what exists' in amplifying promising solutions that offer potential [52,53] (It can be argued that the notions of creating, amplifying, and destroying overlaps with the three different approaches to creating system change in cities, respectively: re-invention, subversion, and revolution [29]). These terms were to be used when they wanted to produce something that was not currently available (create), they wanted more of something (amplify), or they wanted to remove something they currently did not like (destroy) in relation to sharing.

Figure 1. The map of sharing at the Lancaster workshop, March 2015. Source: Author.

4. Results

4.1. What Examples of Sharing Exist in Cities?

The mapping of sharing examples from the Lancaster and Birmingham workshops is provided in Tables 1 and 2. Participants identified 41 different sharing examples that cover a diversity of themes, including: allotments, art, care, clothes, energy, food, friendship, knowledge, language, material, parks, sheds, spaces, 'stuff', time, and transport. Many of the sharing examples identified also pass as examples of creative communities [54] or social innovations [51], which have emerged through grassroots efforts (Social innovation is 'a complex process of introducing new products, processes or programs that profoundly change the basic routines, resource and authority flows, or beliefs of the social system in which the innovation occurs' [55] (p. 2)).

Table 1. Overview of sharing examples identified by participants in the Lancaster workshop.

Sharing Example	Who Shares?	What Is Shared?	How Is It Shared?	Why Is It Shared?
Ideas in education, networking with civic society	Educators, academics, students, parents	Knowledge, skills, methods, ideas	Formally, through the education system	To help enhance education for everyone involved; general curiosity
Entrepreneurial experiences	Local entrepreneurs	Practical tips	Business networks and informal learning	Potential opportunities may arise to work together; the journey feels less lonely
Lancaster Library with its Friends group	Local authority, community volunteers	Venue, facilities, funds	Organised group with a constitution	To increase cultural activities in the community; to support public services
Lifts to school	Neighbours	Car journeys	Turn-taking	To save time and petrol; act is better for the environment

Table 1. *Cont.*

Sharing Example	Who Shares?	What Is Shared?	How Is It Shared?	Why Is It Shared?
Rosemere Cancer Foundation café	Retired women	Time	Once a week, they go to the café and help with all the tasks, including supporting patients	To help people in different ways who are suffering with cancer
Freegle (online gifting of unwanted items instead of throwing away)	Anyone with access to the Internet	Tangible items that would otherwise end up in a landfill	Re-using/re-purposing things	To save things from being thrown into landfills; to gift items to those who might need them
Food and time	Anyone who volunteers	Fresh vegetables	People pick what they need and take it home	The people who volunteer like fresh vegetables and fresh air, exercise, socialising, and friendship
Time	Between friends, one of whom it unwell and one who is well	Time to spend with housebound person, doing household chores	Specific times are set to stop by and help	For reasons of friendship, community spirit, and resilience
Morecambe Library	Library/Young People's Service (YPS)	Space/bills	YPS have own area within the building and contribute to paying the bills	Budget cuts; to allow the building to be used sustainably
Library	Lancaster County Council library staff	Library venue and resources	The space is shared; books and other resources are used by patrons; community groups are supported	A commitment to serve the local area
Lancaster Arts City	The Dukes, Green Close, Lancaster Music Festival, Litfest, Lancaster Arts at Lancaster University, Ludus Dance, More Music and Storey G2	Joined-up governance to champion and promote the strategic development of arts activities in Lancaster	Governance; operational delivery	To promote the arts; advocacy and outreach
Fair Trade Towns (FFT) International	Whole communities who are a part of the FTT initiative	Ideas, best practices examples, and networks	Through networking via the FFT website, social media, national campaigns, steering committees, and events	To support Fair Trade; to use Fair Trade products; to attract media coverage and popular support for the campaign
Altruistic care in communities	People living in urban communities	Resources, time and care	Through exchange within a loose network of people	To help children and their families
Claver Hill Community Food Project	Members of group plus any public volunteers or attendees at events	Skills, friendship, knowledge, food, work, and photos (via Facebook)	Through participation; payment for food; membership; volunteering; conversations with others	For fun; to commit to a 'good thing'; for exercise; to learn how to grow; to be involved in the transition town movement
'Digital schools' such as the digital inclusion experiment for HelpAge India	Older adults potentially feeling isolated and adult students from an Indian university	Conversations, experience, and knowledge through language	Online, by speaking English	For older adults, to meet new people and to help out; for adult students, to learn the English language and to help out
A hillside	40 households	A hillside containing two allotment areas, open pasture, woodland and an orchard	Legally, via a right to use/obligation to maintain in deeds to houses; practically, via work undertaken via contractors and volunteering	To be part of a healthy living concept
'Friends of' park groups	Mainly local residents and some users from further afield	Open spaces for different uses, like sports, dog walking, and cycling	Developing networks between different users; sharing activities among members of the group	To preserve open space in a city for the community; to enjoy nature and wildlife; to promote physical, mental, and emotional wellbeing
Building community	People from many different backgrounds and (dis)abilities	Times, skills, and lives	In conversations over food	To build a better world

Table 1. *Cont.*

Sharing Example	Who Shares?	What Is Shared?	How Is It Shared?	Why Is It Shared?
The Ethical Small Traders Association (ESTA)	Various, small businesses trading locally and ethically in Lancaster	Ethical business services to the community	Promoting various businesses and local services; supporting each other	To benefit the Lancaster community as a whole where businesses are interdependent and interlinked
Lancaster Community Car Club	Members of Lancaster Cohousing and anyone who lives or works in the Lancaster area	Cars and journeys	Owning and maintaining a small number of vehicles that any member can book out	For environmental reasons
Lancaster Cohousing	Residents living in the cohousing project	Common areas, food, governance and tasks	By living in the cohousing project, one understands that various things will be shared	For environmental reasons; for community involvement and cohesion
Green Lancaster	Lancaster University students and staff; the wider Lancaster community; school children; international visitors	Space, growing projects, vegetables, knowledge, skills, and food they have grown	Through 2-hour volunteer sessions on-site; their online presence on Facebook; cooking events on campus; and special topic workshops	To learn how to cook; to spend time outdoors; to get physical exercise; to have a hands-on experience
The Friendship Centre	People over 55 who feel isolated	Companionship and activities	Three mornings a week	To have more opportunities for companionship
Judges' Lodging garden group	Able-bodied and learning-disabled volunteers	Gardening, exercise, and turning wilderness into a garden	Once a week	To use and enjoy the space
Fairfield Gardens	Residents	Fruit (apples and plums), events, and activities	By working as volunteers; by using the land; by participating in events	To increase community spirit; to protect the environment and green space
Research on Lancaster food groups	Anyone who wants to get involved	Ideas, hopes and dreams, linked to research	One-to-one interviews and final meeting with all the groups	A desire to be better connected with one other

Table 2. Overview of sharing examples identified by participants in the Birmingham workshop.

Sharing Example	Who Shares?	What Is Shared?	How Is It Shared?	Why Is It Shared?
Land and growing	Growers, local authority, NHS and the water company	Expertise, land, facilities, and 'waste'	Informally, to develop new ideas	To increase sustainability and productivity; to be healthier; to reduce waste
Land, energy, utilities	Residents, local authority, NHS, the water company	Land, energy, and utilities	Informally, to develop new ideas	To solve known problems in food production and energy/waste management (e.g., repurposing waste)
A sustainable development course at Yokohama University, Japan	A whole year's cohort of students	A process, their understanding, and food	Through teaching; through an end-of-year meal with other students	To 'make real' the learning through food sharing
14 chickens	About 10 households	The eggs	Each household is responsible for one day a week or a fortnight of chicken care—they clean, feed, and open/shut the coop on that day, and they keep the eggs	To be able to have 10 to 12 eggs once a week
Outdoor learning resources	Session leaders from Highbury Orchard community and Muddy Puddles	Ideas, skills, materials, and outdoor space	Through periodic meetings; via Facebook; through the co-delivery of outdoor sessions	To broaden a skills base; to increase contacts; to offer more to the local community
Clothes swap	Friends and neighbours	Clothes that the owners no longer want	Through a bi-annual gathering	To replenish one's wardrobe in an efficient and cost-effective way

Table 2. *Cont.*

Sharing Example	Who Shares?	What Is Shared?	How Is It Shared?	Why Is It Shared?
Bringing culture to the public	People working, engaging, and/or interested in Birmingham's art and culture scene	Ideas to improve the promotion and physical presentation of art and culture in Birmingham	Through a world café brainstorm and debate with key figures from the city's flagship and independent arts initiatives	To have a say in improving the operations and the success of Birmingham's culture scene; to boost Birmingham's reputation; to help establish the city as a cultural hotspot
Borroclub.co.uk	Members	Household items	The website	To be charitable; to save money; to earn money; to try before you buy; for environmental reasons; to connect with the community
Distributed energy networks	Anyone connected to the networks	Energy and heat	Through a heat network	To reduce costs
Ort Café	Local community within Balsall Heath, Kings Heath and Moseley; artists, musicians, and craft practitioners	Skills, time, ideas, and things	Through bartering; through making time for skills; having a swap shop	To access things that could not be accessed otherwise; to help people out who are facing financial, time, or resource restrictions
Giving allotment produce to The Real Junk Food Project	Person giving the example and The Real Junk Food Project	Surplus allotment of vegetables	By taking food to The Real Junk Food Project	To put surplus food to good use; to have a positive impact on austerity
Food	Various community groups and volunteers	Food, advice, and support	By having food available in places where it is most needed	To help those who are not currently being helped
Food Forest Brum	Disparate groups across Birmingham	Food plants, knowledge, and expertise	Through open days in various sites; through workshops and skill sharing days	To create a vision of local and wild food provision
Workshop space and expertise/skills	Moseley and Kings Heath and South Birmingham 'Tools for Africa'	Workshop space, expertise, materials, and practical skills	By working closely and cooperatively together; by supporting both organisations informally	To foster strength in unity; to foster individual, practical, and intellectual strengths in both organisations
Active Parks	Community, Birmingham Open Spaces Farm, Friends of parks groups, local authority, national governing bodies of sport, sport clubs, and residents groups	Design and delivery of the Active Parks scheme	Through co-production, training, and strategy	To deliver better outcomes around being active and healthy

When reviewing Tables 1 and 2, the tangible and physical nature of the sharing examples was noticeable: of the 41 examples, 33 depend on physical assets. Many of these examples are run via word of mouth, often informally and communally, and without economic exchange. In contrast, three examples identified were dependent on digital platforms to enable sharing activities to take place: Digital Schools, Freegle, and Borroclub. Of these, Borroclub—alongside Lancaster Arts City and Fair Trade Towns International—could be viewed as examples of the sharing economy, as they adopt economic models that allow people to borrow or rent assets from them. Other organisations mentioned, such as the Ethical Small Traders Association, Lancaster Community Car Club and Food Forest Brum, are Community Interest Companies; as such, they adopt a business model with primarily social, rather than purely economic, objectives [56], making them more like social innovation examples, rather than sharing economy examples.

Finally, examples that focused on food were popular, with 23 of the 41 examples relating to, or encouraging, food sharing in some capacity, through food production or consumption. The food sharing examples broach a diverse range of concerns about the current state of the food system, such as loss of growing skills, limited access to affordable local produce, nutrition and the loss of farmland and peri-urban areas for alternative developments. The examples also illustrate the multiplicity

of approaches to food sharing, with some viewed as quite niche and hidden from mainstream food practices.

4.2. What Could Be Developed to Facilitate a Sharing City?

When participants were asked what they would create, amplify, or destroy to facilitate a 'sharing city' in the future, a number of ideas emerged. Workshop participants stated that new social, business, and governance models to promote primarily non-economic, communal sharing should be created. In Lancaster, it was identified that values should be created through trust and transparency, particularly in models to govern the sharing city. Policies and practices should enable civic engagement and reward people for working with the community. Participants also discussed trust in relation to who would be the most 'trusted' host of a potential sharing network: for Lancaster-based participants, they wanted an apolitical person or group. In Birmingham, an exemplar model of sharing was identified in Birmingham City Council's Active Parks initiative, which provides a platform to allow communities to utilise parks and streets for their own events (see beactivebirmingham.co.uk/active-parks).

Amplifying and improving existing initiatives and spaces for sharing, alongside greater civic participation and new social and business models, were identified in Lancaster and Birmingham. In both workshops, an appeal was made for both economic and non-economic and communal sharing to be made visible and tangible. In Lancaster, it was desired that existing activities and places of sharing should be recognised and valued, such as corner shops, markets, libraries, and food growing projects. In Birmingham, a desire existed to coordinate the activities that already take place in the community, and to foster a better network involving communities that are currently hard to reach. To do so, it was felt that informal sharing should be prioritised over formal models: a sharing city should be a platform that enables informal encounters in shared spaces. Unstructured ways of meeting and collaborating should be promoted in key places for sharing alongside spaces that are naturally conducive of sharing, including streets, green spaces and cafés.

Furthermore, participants from the Lancaster workshop suggested that amplifying local, more non-economic and communal sharing initiatives was important and needed to be better connected to local economies, services, and projects, rather than relying on traditional models of consumption and big retailers. This, again, would require a fundamental shift in values as well as a reconceptualization of our narrow understanding of value as primarily economic [57]. As social connections are the foundations of the sharing city, communicating and sharing values become extremely important.

Finally, participants talked about 'destroying time', as it was viewed by some as a key barrier to the uptake of sharing initiatives, both for users and for potential volunteers. Several participants expressed a desire in the future sharing city to value and prioritise the time spent contributing in the community over strict working hours. Once again, this alludes to a shift in values in contemporary society, and supports the perspective that changing consumer mindsets is one key to the success of sharing efforts [3].

There also was a discussion about removing (or destroying) cars from roads and creating alternative solutions. Participants in Lancaster desired better connections through safer bike access, walkable neighbourhoods, and affordable public transport. Together, these could bring the benefit of the sharing city to the whole area, particularly in more deprived areas within the neighbouring town of Morecambe. In Birmingham, participants wanted to discourage car ownership and transform today's busy roads into places where people could meet up. They also identified and promoted slow, more sustainable mobility solutions. In both cases, the management of transport by government was heavily critiqued, with current governance models perceived to be inadequate to meet the needs of the sharing city.

5. Discussion

The Liveable Cities team synthesized the above findings from the workshops, developing the following proposition: to facilitate the 'sharing city' in which both non-economic and communal

sharing and the sharing economy can sit alongside each other, three sets of things are needed: (1) physical and digital hubs; (2) physical and digital bridges; and (3) the wider promotion of sharing in cities.

Regarding (1), hubs act as a centre for activity. Thus, having both a physical space and a digital network where sharing activities can be focused is important. Physical hubs are places, from very public (e.g., a library) to very private (e.g., living room in a house), where people can come together and share things. Digital hubs provide an online space that facilitates sharing that may be akin to Web 2.0 sharing economy movements.

Concerning (2), a bridge may be viewed as a structure that connects two separate parcels of land, as desired in the Lancaster workshop to reduce boundaries between physically isolated communities. It also could refer to bringing together two separate, yet potentially related, ideas or groups together. Here, the bridge could be physical, but it also could be digital by enabling the exchange of knowledge between sharing initiatives that may seem disparate. For both (1) and (2), the concepts of physical and digital hubs and bridges can be viewed as enablers, which assist sharing in proliferating in cities.

Finally, with (3), the notion of sharing in cities needs to be promoted so that people will know it exists, they will know how to get involved, and they can begin to ask questions of government and other important stakeholders about how to ensure that sharing is an integral part of their cities. While many companies and organisations involved in the sharing economy will, no doubt, have marketing budgets to make potential and existing customers aware of their products and services, more local, non-economic, and communal sharing initiatives do not. The latter often are smaller, more traditional/institutional (e.g., sharing meals in religious spaces), more informal or hidden (e.g., sharing chickens) and more grassroots (e.g., Incredible Edible). One way to ensure visibility is to map both economic and non-economic and communal sharing schemes in cities.

Systematically mapping the 'sharing assets' is as a key principle to governing the sharing city [58]. The mapping activity in Lancaster and Birmingham identified a very rich diversity of existing initiatives that are potential examples of sustainable practices for resource use, health, and wellbeing in cities. The initiatives identified also may be somewhat hidden and disconnected from the broader community. The authors of [53,59] identify the importance of recognising social innovations, then potentially 'scaling out' or 'scaling up' networks to make them more sustainable. 'Scaling out' refers to growing small initiatives into large ones, preferably by multiplying the many small initiatives and projects so more people may participate, rather than making the initiative a large, homogenous organisation. Incredible Edible is an excellent example of 'scaling out' food growing initiatives, as it has been replicated from a few, to a network of many. 'Scaling up' refers to the challenge of making niche initiatives a central consideration in mainstream governance models.

6. Conclusions

This paper started by looking at the concept of sharing in cities, noting that sharing does not necessarily need an economic imperative or a digital platform to be successful. From a practical perspective, we then investigated sharing on the ground in Lancaster and Birmingham, mapping sharing activities and understanding what needs to be created, amplified, and destroyed if sharing in cities is to be sustainable. Based on these perspectives, we reiterate that the sharing economy and non-economic and communal sharing in cities can co-exist; however, further research is needed to provide more nuance to the comprehensive and complex conceptual landscape of sharing.

We also believe that for sharing to flourish in cities and to contribute to the economic, environmental, and social sustainability of these urban environments, mapping of sharing initiatives is an essential first step. This involves identifying what currently exists and promoting it, recognising who is involved, and what schemes might benefit from scaling up and out. We posit that creating physical and digital hubs and bridges could assist with the promotion of sharing schemes in cities and provides a voice to currently hidden sharing initiatives. Policy makers can help this process by developing policies and regulations that recognise and foster non-economic and communal forms

of sharing that need not benefit from economic incentivisation. This also may involve changes in governance structures and models to prioritise sharing practices that bring communities together (e.g., providing small pots of funding to encourage, enable and maintain grassroots examples of sharing). Likewise, as many examples of sharing depend on physical space and assets, both urban planners and designers need to think more carefully about how to design new and existing developments and infrastructures—and the important spaces in between—to inspire sharing (e.g., designing innovative cohousing [60], institutional and vertical mixed-use buildings with shared kitchen spaces). By working in tandem with one another, both non-economic and communal sharing and the sharing economy offer significant potential to assist in the transition towards a more sustainable society within cities.

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References

1. Schmidt-Bleek, F. *The Factor Ten/MIPS-Concept: Bridging Ecological, Economic, and Social Dimensions with Sustainability Indicators*; The United Nations University, Zero Emissions Forum: Tokyo, Japan, 1999.
2. Agyeman, J.; McLaren, D.; Schaefer-Borrego, A. *Sharing Cities*; Friends of the Earth: London, UK, 2013.
3. Albinsson, P.A.; Yasanthi Perera, B. Alternative marketplaces in the 21st century: Building community through sharing events. *J. Consum. Behav.* **2012**, *11*, 303–315. [CrossRef]
4. Lamberton, C.P.; Rose, R.L. When is ours better than mine? A framework for understanding and altering participation in commercial sharing systems. *J. Mark.* **2012**, *76*, 109–125. [CrossRef]
5. Belk, R. You are what you can access: Sharing and collaborative consumption online. *J. Bus. Res.* **2014**, *67*, 1595–1600. [CrossRef]
6. PriceWaterhouseCoopers. *The Sharing Economy—Sizing the Revenue Opportunity*; PriceWaterhouseCoopers: London, UK, 2014.
7. Department for Business, Innovation and Skills (BIS). *Independent Review of the Sharing Economy: Government Response*; BIS: London, UK, 2015.
8. Investopedia. Sharing Economy. Available online: http://www.investopedia.com/terms/s/sharing-economy.asp (accessed on 21 April 2017).
9. Matofska, B. What Is the Sharing Economy? Available online: http://thepeoplewhoshare.com/blog/what-is-the-sharing-economy/ (accessed on 6 June 2016).
10. Botsman, R.; Rogers, R. *What's Mine is Yours: The Rise of Collaborative Consumption*; HarperCollins Business: New York, NY, USA, 2010.
11. Kaplan, A.M.; Haenlein, M. Users of the world, unite! The challenges and opportunities of Social Media. *Bus. Horiz.* **2010**, *53*, 59–68. [CrossRef]
12. Wang, C.; Zhang, P. The evolution of social commerce: The people, management, technology, and information dimensions. *Commun. Assoc. Inf. Syst.* **2012**, *31*, 105–127.
13. Wosskow, D. *Unlocking the Sharing Economy. An Independent Review*; Department for Business, Innovation and Skills: London, UK, 2014.
14. Sundararajan, A. *The Sharing Economy: The End of Employment and the Rise of Crowd-Based Capitalism*; MIT Press: Cambridge, MA, USA, 2016.

15. Schor, J. Debating the Sharing Economy. Available online: http://www.greattransition.org/publication/debating-the-sharing-economy (accessed on 12 November 2015).

16. Gansky, L. Mesh, the Pulse of the Sharing Economy. Available online: http://www.meshing.it (accessed on 23 October 2015).

17. Cannon, B.; Chung, H. A framework for designing co-regulation models well-adapted to technology facilitated sharing economies. *St. Clar. High Technol. Law J.* **2015**, *31*, 23–96.

18. Mont, O. Clarifying the concept of product-service system. *J. Clean. Prod.* **2002**, *10*, 237–245. [CrossRef]

19. Miller, E. Solidarity economy: Key issues and questions. In *Solidarity Economy 1: Building Alternatives for People and Planet*; Kawano, E., Masterson, T., Teller-Elsberg, J., Eds.; Center for Popular Economics: Amherst, MA, USA, 2010.

20. Booth, W.J. On the idea of the moral economy. *Am. Political Sci. Rev.* **1994**, *88*, 653–667. [CrossRef]

21. Sayer, A. Moral economy and political economy. *Stud. Political Econ.* **2000**, *61*, 79–104. [CrossRef]

22. Smith, A.; Stenning, A. Beyond household economies: Articulations and spaces of economic practice in postsocialism. *Progr. Hum. Geogr.* **2006**, *30*, 190–213. [CrossRef]

23. The Community Economies Collective. Imagining and enacting noncapitalist futures. *Soc. Rev.* **2001**, *28*, 93–135.

24. Arnould, E.J.; Rose, A.S. Mutuality: Critique and substitute for Belk's "sharing". *Mark. Theory* **2016**, *16*, 75–99. [CrossRef]

25. Mauss, M. *The Gift: Forms and Functions of Exchange in Archaic Societies*; Routledge: London, UK, 1967.

26. Owyang, J.; Samuel, A.; Grenville, A. *Sharing is the New Buying. How to Win in the Collaborative Economy*; Vision Critical: Vancouver, BC, Canada, 2014.

27. Bazelon, C.; McHenry, G. *Spectrum Sharing: Taxonomy and Economics*; The Brattle Group: Cambridge, MA, USA, 2014.

28. Davies, A.R. *Working Paper 1: Sharecity Typologies of Food Sharing*; Trinity College Dublin: Dublin, Ireland, 2016.

29. McLaren, D.; Agyeman, J. *Sharing Cities. A Case for Truly Smart and Sustainable Cities*; MIT Press: Cambridge, MA, USA, 2015.

30. Belk, R. Why not share rather than own? *Ann. Am. Acad. Political Soc. Sci.* **2007**, *611*, 126–140. [CrossRef]

31. Benkler, Y. Sharing nicely: On shareable goods and the emergence of sharing as a modality of economic production. *Yale Law J.* **2004**, *114*, 273–358. [CrossRef]

32. Nicholas., A.J. Sharing and web 2.0: The emergence of a keyword. *New Media Soc.* **2013**, *15*, 167–182.

33. Edelman, B.G.; Luca, M.; Svirsky, D. *Racial Discrimination in the Sharing Economy: Evidence from a Field Experiment*; Harvard Business School Working Paper No. 16-069 (Revised January 2016); Harvard University: Harvard, MA, USA, 2015.

34. Ryan, R.M.; Deci, E.L. Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemp. Educ. Psychol.* **2000**, *25*, 54–67. [CrossRef] [PubMed]

35. Jones, A. *Woking: Local Sustainable Community Energy*; Woking Borough Council: Woking, UK, 2010.

36. City of Sydney. City of Sydney Decentralised Energy Master Plan Renewable Energy. Available online: http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0003/153282/Renewable-Energy-Master-Plan.pdf (accessed on 5 August 2015).

37. Lazarus, N.; Edwards, A. *Smart Local Grids*; BioRegional Development Group: Surrey, UK, 2015.

38. Desai, P. *One Brighton Impact Report 2007–2014*; BioRegional Development Group: Surrey, UK, 2014.

39. Martin, A.; Goryakin, Y.; Suhrcke, M. Does active commuting improve psychological wellbeing? Longitudinal evidence from eighteen waves of the British Household Panel Survey. *Prev. Med.* **2014**, *69*, 296–303. [CrossRef] [PubMed]

40. Penedo, F.J.; Dahn, J.R. Exercise and well-being: A review of mental and physical health benefits associated with physical activity. *Curr. Opin. Psychiatry* **2005**, *18*, 189–193. [CrossRef] [PubMed]

41. Wang, F.; Orpana, H.M.; Morrison, H.; de Groh, M.; Dai, S.; Luo, W. Long-term association between leisure-time physical activity and changes in happiness: Analysis of the prospective national population health survey. *Am. J. Epidemiol.* **2012**, *176*, 1095–1100. [CrossRef] [PubMed]

42. White, M.P.; Alcock, I.; Wheeler, B.W.; Depledge, M.H. Would you be happier living in a greener urban area? A fixed-effects analysis of panel data. *Psychol. Sci.* **2013**, *24*, 920–928. [CrossRef] [PubMed]

43. Mykyta, L.; Macartney, S. *Sharing a Household: Household Composition and Economic Well-Being: 2007–2010*; U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau: Washington, DC, USA, 2012.

44. Sheller, M.; Urry, J. The new mobilities paradigm. *Environ. Plan. A* **2006**, *38*, 207–226.

45. Bazzanella, L.; Roccasalva, G.; Valenti, S. Phygital public space approach: A case study in Volpiano. *Interact. Des. Archit.* **2014**, *20*, 23–32.

46. Tsekleves, E.; Gradinar, A.; Darby, A.; Smith, M. Active parks: 'Phygital' urban games for sedentary and older people. In *Games for Health 2014, Proceedings of the 4th Conference on Gaming and Playful Interaction in Healthcare*; Schouten, B., Fedtke, S., Schijven, M., Vosmeer, M., Gekker, A., Eds.; Springer: Heidelberg, Germany, 2014; pp. 140–143.

47. Bourdieu, P. *Distinction: A Social Critique of the Judgement of Taste (Translated by Richard Nice)*; Harvard University Press: Cambridge, MA, USA, 1979/1984.

48. Cruickshank, L.; Evans, M. Designing creative frameworks: Design thinking as an engine for new facilitation approaches. *Int. J. Arts Technol.* **2012**, *5*, 73–85. [CrossRef]

49. Fry, T. *A New Design Philosophy: An Introduction to Defuturing*; University of New South Wales: Sydney, Australia, 1999.

50. Jégou, F.; Manzini, E. LOLA Looking for Likely Alternatives. Available online: http://www. sustainable-everyday-project.net/blog/library-lola-looking-for-likeky-alternatives/lola_brochure (accessed on 12 November 2013).

51. Manzini, E. Small, local, open, and connected: Design for social innovation and sustainability. *J. Des. Strateg.* **2010**, *4*, 8–11.

52. Manzini, E. Scenarios of sustainable wellbeing. *Des. Philos. Pap.* **2003**, *1*, 5–21. [CrossRef]

53. Manzini, E. *Design, When Everybody Designs: An Introduction to Design for Social Innovation*; MIT Press: Cambridge, MA, USA, 2015.

54. Meroni, A. *Creative Communities. People Inventing Sustainable Ways of Living*; Edizioni POLI.design: Milan, Italy, 2007.

55. Westley, F.; Antadze, M. Making a difference: Strategies for scaling social innovation for greater impact. *Innov. J.* **2010**, *15*, 1–19.

56. Department for Business, Energy & Industrial Strategy (BEIS). *Office of the Regulator of Community Interest Companies: Information and Guidance Notes*; BEIS: London, UK, 2016.

57. Psarikidou, K. Re-thinking innovation through a moral economy lens: The case of alternative agro-food and mobility practices. *Ephemera* **2015**, *15*, 67–93.

58. Agyeman, J. Moving beyond the Sharing Economy: The Case for 'Sharing Cities'. Available online: http://julianagyeman.com/2014/07/beyond-sharing-economy-case-sharing-cities/ (accessed on 31 October 2015).

59. Antadze, N.; Westley, F. *When Scaling out Is Not Enough: Strategies for System Change*; NESTA: London, UK, 2013.

60. Krokfors, K. Co-housing in the making. *Built Environ.* **2014**, *38*, 309–314. [CrossRef]