

Briefing

Sharing cities

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Introduction

A reinvention and revival of sharing in our cities could enhance equity, rebuild community and dramatically cut resource use. With modern technologies the intersection of urban space and cyber-space provides an unsurpassed platform for a more inclusive and environmentally efficient sharing economy.

Yet this opportunity is currently being overlooked.

Cities have always been about shared space, interaction and the exchange of goods and services through marketplaces and money-lending, for example. A successful city needs good governance and collective civic structures to facilitate and regulate the interface between the shared public realm and private interests, and enable effective and fair sharing of resources and opportunities. In their more recent incarnations however, 'sharing and shareability' are typically too narrowly conceived and perceived. The opportunity is so much greater than middle-class 'swishing' and Spotify and even though urban bike-sharing schemes have dominated news in this space, whether in London, Copenhagen, Paris or Montreal, or Rio, Guadalajara (México), Buenos Aires, or Providencia (Chile), sharing is definitely about much more than 'bums on bikes'.

All cultures across the globe share and have socially accepted codes for sharing, which tend to change only slowly. Here, we outline a broad conception of sharing that includes multiple dimensions: sharing 'things' ... cars, tools, books etc, sharing services ... premises, places to sleep, etc, and sharing activities (notably political activity, but also others such as leisure); we also include both sharing between private individuals, and collective provision of resources and services for sharing: eg green space, sanitation, city bikes, child care. We

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recognise that sharing can be material or virtual, rivalrous¹ or non-rivalrous, of consumption (eg digital music) or production (eg community gardens) and either simultaneous (eg green space) or sequential (eg recycling material).

Figure 1: The broad territory of sharing

	Things	Services	Experiences
Individual	Swapping, bartering	Ride sharing, AirBnB	Skill sharing
Collective	Car clubs, tool banks	Child care, Credit Unions, time banks	Sports clubs, social media
Public	Libraries, Freecycling	Health services, public transit	Politics, public space

Tensions between private interests and the shared public realm are nothing new in cities around the world. In the modern era we see, for example, gated communities; guarded shopping malls with dress-codes; conflicts between squatters and developers, and competition for road space between private and shared transport.

This paper highlights the importance of the shared public realm in the history and development, and more recently, in the re-imagining of politics. We argue that the neo-liberal, hegemonic model of development in the modern world prioritises private interests at the cost of shared interests. Instead, we suggest that a cultural rebalancing is overdue: one that gives much greater recognition and credit to the shared public realm in our cities (both physical and metaphorical); one that supports a revival of ‘conventional’ sharing - namely of the city as a whole as shared space - as well as a blossoming of novel forms of sharing; and one that recognises and affirms the ways in which the opportunities afforded to individuals in cities are founded on the collective efforts and actions of whole communities².

To demonstrate the opportunity in sharing, after a brief consideration of the historical roots and development of sharing, this paper explores four key questions:

- what is currently – or could be – shared;
- why is sharing desirable;
- what enables and drives sharing; and
- what opportunities are there to both enhance sharing and overcome barriers to it?

¹ Rivalrous goods or resources are those where use by one person excludes use by another (at least at the same time).

² We share the view that entrepreneurs do not build businesses alone, nor parents raise children in isolation from the wider community. Regardless of the national culture, both are always forms of collective, co-production.

The roots and development of sharing

Sharing is, by all accounts, an evolutionary trait (Schmidt *et al* 2011). Shared efforts allowed our ancestors to band together to hunt, farm and create shelter, and altruism arose naturally from repeated interactions in such collective groups where reputation matters (Ridley, 1996). Hunter-gatherer societies depended on sharing and cooperation and this behaviour instilled a natural preference for fair shares and broadly equal outcomes (Tomasello and Warneken 2008).

In practice though, sharing is also strongly influenced by cultural learning. In the West, infants and toddlers have been found to understand, but not actively apply, principles of sharing (Smith *et al* 2013). Children learn to practice sharing as they get a little older (Belk 2007). Children aged as young as seven purposefully seek equal distribution of resources among their classmates, rather than taking a larger share for themselves³. In Eastern cultures, it appears that children exhibit altruism very early, and subsequently become more concerned with reciprocity and reputation later in youth, in order to avoid being exploited (Tomasello *et al* 2008)⁴. Other authors contrast individualistic and collective cultures according to the sources of status and identity – put crudely, individualistic cultures value *things* and collective ones *relationships* (Gabriel 2013). Unsurprisingly, collective cultures appear to exhibit higher levels of sharing behaviours.

An apparent historical decline in sharing (in western societies) has been associated with the development of consumer capitalism and the growth and promotion of a culture of individual self-reliance (Ivanova 2007). The development of advertising targeting - and recreating - an individualistic model of the self, has transformed consumption patterns (Gabriel 2013). Belk (2007) notes an ‘over-privatization’ of many belongings to the point where Americans do not even need to share much within their own families, much less with other members of their communities.

Sharing theory suggests that one reason individuals may collectively assume the cost of a particular item or resource is because they cannot afford it individually (Volkner and Flap 2007), so wealth may reduce sharing (Crocker and Linden, 1998). But there is a big downside to the loss of this type of sharing. Those who have fewer resources – and more sharing - have more social contacts with their neighbours and within their community, and those with more resources have less (Volkner and Flap 2007).

In the last century cities have experienced the increasing privatization of public spaces, especially after the 1980s ‘neoliberal onslaught,’ which brought a ‘*trenchant reregulation and redaction of public space*’ (Low and Smith 2006, 1). Gabriel (2013) also identifies a post-war process of ‘commercialization’ of public space running alongside the growth of individual consumerism in the US and other western societies. These processes have transformed the nature of public space - away from shared political or citizen activities, and the collective consumption of – for example – public leisure facilities, with negative consequences for

³ Studies cited by Tomasello and Warneken (2008)

⁴ In some cultures, like the Australian Aborigines, children learn sharing both from a much younger age, and in a more intense way, than they ever ‘learn’ ownership (Belk 2007).

wellbeing. Gabriel highlights how this has contributed to the unhealthy predominance of individualist consumer identities in modern societies⁵. We might also attribute stalled or declining happiness and wellbeing in wealthier societies – in part – to the decreasing community solidarity and human interaction arising as both private and public sharing declines.

What is being shared

The city is not just a venue for the sharing of spaces, ‘things’ and services, but is historically a shared entity in itself; the product of shared creation or co-production⁶. Historically, provision of both public spaces and public goods such as sanitation, public health and education has been key to urban development (Harvey 2012). . These shared spaces, services and goods contribute greatly to the urban commons, co-produced through collective and political action by citizens and decision-makers.

Sharing, as defined by Belk (2010) is the “*act and process of distributing what is ours to others for their use and/or the act and process of receiving or taking from others for our use.*” Belk (2007) includes as ‘sharing’ voluntary lending, pooling, allocation of resources, and authorized use of public property, but excludes contractual renting, leasing or unauthorized use of property. We suggest that such a tightly constrained definition could be unhelpful. Many formal sharing schemes – for both goods and services - involve formal or informal contracts (for example through membership of car-sharing or film rental services). Perhaps more importantly, sharing on the margins of legality, such as squatting, is a feature of sharing systems motivated by equality and justice, which is equally important to the 2050 goal as environmental sustainability.

Botsman and Rogers (2010) include bartering, lending, renting, gifting, and swapping under the generic term ‘collaborative consumption’, which they divide into three categories; ‘product service systems’, ‘redistribution markets’, and ‘collaborative lifestyles’. Product service systems allow companies or organizations to offer the utility of a product – such as a car - as a service without the need for ownership. Redistribution markets are defined as those which direct pre-owned and unused goods to places where they are needed. Lastly, collaborative lifestyles are defined as those where people with similar needs or interests band together (physically or virtually) to share and exchange less-tangible assets such as time, space, skills, and money⁷.

Lamberton and Rose (2012) also develop a typology of sharing (Figure 2) which distinguishes the ‘goods’ being shared by the extent to which they are rivalrous (where one

⁵ Editor’s note: Shifts in identity associated with consumer capitalism are to be explored in more detail as a companion topic in the ‘Big ideas change the world’ series.

⁶ Loosely based on the NESTA/NEF definition for co-production of public services, we see co-production more broadly as producing and delivering goods and services in a reciprocal relationship between producers and users; recognising the resources that citizens already have, and delivering spaces, services and goods *with* rather than *for* users, their families and their neighbours.

⁷ These categories easily blur into one another where different models of provision may be used to deliver the same end service.

person’s consumption prevents another from consuming the same good), and/or exclusive (where use is limited to a particular group by some other mechanism).

Figure 2: Shared goods typology (based on Lamberton and Rose, 2012)

	Lower exclusivity	Higher exclusivity
Lower rivalry	Public goods Eg public parks, open source software	Club access Eg country clubs, gated communities
Higher rivalry	Rental and reuse ⁸ Eg toolbanks, Freecycle, car sharing	Closed commercial Eg HMOs, frequent flyer mile sharing schemes

While these definitions and categorisations are helpful, they are rather narrow for our purposes. The *collective commons* of physical and virtual public spaces and services might be included in the low rivalry / low exclusivity quadrant of Lamberton and Rose’s classification, but it is not present in Botsman and Rogers’ categories. In Figure 3 we suggest it might be added – as a space in which we typically consume communally rather than collaboratively. Moreover, while Botsman and Rogers helpfully distinguish sharing resources that are produced *individually* (or by organisations) from those produced collectively and collaboratively in *peer-to-peer* networks, and Lamberton and Rose contrast shared *consumption* opportunities by their exclusivity, neither consider the *communal, collective production* that characterises the collective commons.

Figure 3 (our ‘sharing spectrum’) broadens Botsman and Rogers’ categorisation in both directions, incorporating aspects of co-production, as well as collaborative (or co) consumption; and more importantly also collective political participation and the shared processes and services that it produces. It highlights that a focus on goods and services can miss opportunities to share both *inputs* to the economy such as materials and water, and the *outputs* that people really value - the wellbeing obtained from our activities, and the capabilities (or real freedoms) to participate in society that we all seek⁹.

⁸ Lamberton and Rose call these ‘open commercial goods’, but the category encompasses much not-for profit sharing.

⁹ We deliberately use Amartya Sen’s term ‘capability’ here to describe the fundamental things we value as humans, and that by sharing, we can best ensure all humans can enjoy.

Figure 3: The sharing spectrum

What is being shared	Concept	Examples	Participants (typically)
Material <i>tangible</i>	Recovery and recycling	Glass and paper banks, scrapyards	Many suppliers, few users
Product	Redistribution markets	Flea markets, charity shops, freecycle	Single provider to single user
Service	Product service systems	Zipcar, Netflix, fashion and toy rental, libraries	Single provider to many users
Wellbeing	Collaborative lifestyles	Errand networks, peer to peer travel (eg AirBnB)	Many single providers to many single users (P2P)
Capability <i>intangible</i>	Collective commons	The internet, safe streets, participative politics	Collective providers to collective users

Cities have always been dependent on sharing. Next we explore four dimensions of urban sharing which rely on and help define the collective commons of the city: exchange of goods and services, the public realm, infrastructure and environmental resources.

The city as a place of exchange

Within the walls of early cities lay the streets, markets and an economic system whose foundations were set by the end of the Middle-Ages. Public services were integral to the urban model: for example, urban governments ensured food supply for their residents through city owned-mills and granaries.

By the end of the Middle-Ages, urban areas were already centres for exchange, including local, regional and long-distance trade (Mumford 1961) as well as of secondary-sector manufacturing (Freidrichs 1995). What set the urban economy apart from the rural was the transfer of goods, services or labour in exchange for money, rather than transfer by appropriation, or through informal exchange and bartering. While this shift might seem to mark the end of previous forms of sharing, markets are in some respects just a more formalised way of sharing skills and resources, while – more importantly - the market itself, and the rules of exchange, are collaborative, shared projects.

Cities have long also hosted financial functions such as banking, alongside mercantile and industrial interests. In all these respects too, cities have always relied on collective and

collaborative activities – albeit ones that have underpinned the development of commercial models of market exchange that have largely displaced sharing behaviour, both economically and politically.

But new models of collective consumption and co-production that are less commercial, and more deliberately collaborative are emerging strongly in the 21st century city. Initiatives to reclaim urban space for food production, especially those aimed at increasing food security among low income and minority neighbourhoods, low-cost transportation options like car sharing and bike sharing programs, as well as tool sharing, and other community-use centres are all contributing towards a re-definition of the function of cities as places for sharing and exchange.

The city as 'polis'

The earliest origin of cities is arguably as centres of political power in the combination of temple and city hall (Wheatley 1971), but cities are also the cradle of democracy – not only in ancient Greece, but more generally: as the Germans say “*stadluft macht frei*” (city air makes (one) free).

The role of public urban space in the historic formation of both culture and political progress cannot be overlooked. During the Renaissance cities became sites for gatherings, discovery, expression, and political participation (Amin 2008).

Public urban spaces however, are not all the same. Space can be used for *security*, for *resistance*, or for *possibility* (Agyeman, 2013). In terms of *security*, he contrasts ‘inclusive’ and ‘exclusive’ urban spaces (Shaftoe, 2008). Inclusive spaces are the aim of ‘*the New Urbanists, Urban Villagers and 24 Hour City people who want to “crowd out crime” through mixed use and maximizing activity in public areas.*’ (p16) Exclusive spaces, in contrast, are the domain of ‘the “designing out crime” proselytisers who seek closure and limitation of use of spaces.’ Beijing’s Tiananmen Square, Cairo’s Tahrir Square were spaces of *resistance* as were the streets, plazas, and squares in Libya, Bahrain, Syria, and Yemen, among other Middle Eastern countries, where citizens gathered to protest against long-standing repressive regimes. In 2011, a gendered focus took hold in Toronto, as the Slut Walk phenomenon grew out of a careless and crass comment by a Toronto police officer to students at York University. *Possibility* is where the fullest expression of the human spirit lies. Through various methods of urbanism – guerilla, DIY, tactical, pop-up, and open-source to name a few – city dwellers are reimagining and redefining their environments. Rather than accepting places as they ‘are,’ they are redefining what they can ‘become’ (Massey 1995). Indeed, *space as possibility* is another way of framing a ‘Right to the City’, a recognition of Harvey’s conclusion that such a Right should be seen not as “*an exclusive individual right, but a focussed collective right*” (2011, p137).

Most recently, Los Indignados in Spain, and the Occupy movement which began in 2011 as a response to extreme wealth disparity (99%/1%) in the US, garnered support by gathering in POPS (privately owned public spaces) such as Zuccotti Park, NYC, public spaces such as Dewey Square, Boston, and as in the case of Canary Wharf in London, in private spaces.

The Occupy London plan was however foiled by a High Court injunction in 2011, calling in to question the changing role of public space and its increasing privatization.

Since 2011, several uprisings have been catalyzed around the world where citizens reclaimed public space as a symbolic means to revolt against unjust power dynamics (Samir El Khatib 2013; El Sadek 2011). These uprisings included those in Tahrir Square of Cairo in both 2011 and more recently in 2013 and that in Gezi Park in Istanbul in 2013. The high density of wired and wireless connections to virtual space in cities reinforces the more conventional opportunities for political assembly in the physical public spaces of the city, effectively multiplying the challenges to power and injustice that such social uprisings create. The state is confronted by virtual assembly and physical assembly simultaneously, and despite growing powers of cyber-surveillance and collaboration by corporate providers, the very multi-dimensionality of these new spaces makes them more durable venues for protest.

The density and diversity of cities also creates the spaces in which artistic or musical counter-cultures can flourish. The physical clustering and interaction, and sharing of ideas and agents for example, helps stimulate new artistic and cultural movements. Such artistic counter-cultures have formed a vibrant part of public political activity from the Situationist International's art of spectacle in the time of the Paris Commune, through to the counter-culture of New York's Soho, and Berlin's squatted artistic centre the *Kunsthau Tacheles*¹⁰. As Harvey (2012) puts it, effectively bringing together identity politics, anti-capitalism and 'the Right to the City' movement, "*striving for a certain kind of cultural autonomy and support for cultural creativity and differentiation is a powerful constitutive element in these political movements*" (p111). Of course, as Harvey recognises, and Gabriel (2013) too, these counter-cultures are typically assimilated into or co-opted by the mainstream of consumer capitalism - which has also mobilised more formal public art and museums as a reformist institution (Mitrache 2013); but without the sort of cultural spaces the city offers, the hope of truly transformative political movements is lost.

Shared use of infrastructure and services

Ask any in-comer what are the 'pull factors' which draw them to a particular city and – besides job opportunities - they will likely mention things like healthcare, childcare, education and libraries, and public transport; all services which are harder to provide at scale in rural areas, especially in less developed countries. Perhaps less visible, but equally critical infrastructures such as water and power supply and sanitation are also provided more efficiently in dense urban areas.

The history of childcare, healthcare and education as elements of the welfare state highlight not only the efficiencies of sharing, but also massive potential for enhanced equity and participation. For example, kindergartens are more efficient than everyone having their own nanny; and universal access to shared services such as education enables wider participation in society. Women's participation is particularly enabled by availability of, and

¹⁰ In the UK the role of squatting in music culture has been highlighted in recent resistance to the criminalisation of squatting: see <http://www.theguardian.com/music/musicblog/2012/sep/03/criminalising-squatters-hurts-british-music>

rights to, childcare.

In many countries such services are provided by national or municipal public authorities. Government has even been described as the “*ultimate level of sharing*” in which we practice “*collaborative consumption through societal organisation of public services*” (Jonathan Schifferes, 2013 RSA blog). Yet, for all that the successes of some Scandinavian nations suggest that such an approach can be both effective and efficient, sharing doesn’t necessarily require a ‘state provision’ model.

For example, cooperatives offer alternative models for such shared service provision, as well as a slightly different perspective on sharing. There are many forms of cooperative depending on what is being shared, ranging from retailer cooperatives (sharing manufacturer discounts) to worker cooperatives (shares in the enterprise); from consumer cooperatives (sharing retail and financial services) to housing cooperatives (various forms of housing shares, membership or occupancy rights). The delivery of shared services through cooperatives is not uncommon in the energy sector, for example, where community cooperative ownership of renewable generation capacity is becoming popular in many countries.

And cooperatives need not always be small. According to Tremlett (2013), the Mondragon Cooperative in Spain, which acts as the parent company to 111 small, medium-sized and larger co-ops, is now the world’s biggest workers co-operative with global sales of €15bn (£13bn). Spain’s struggle through the double-dip recession, with its desperate austerity measures and 26% unemployment, has hit its people hard. However, Mondragon has not shed many jobs, sharing the pain between owners and workers in contrast to the typical approach of private corporations. The workforce of around 84,000 people worldwide – about a sixth of them outside Spain, has remained constant.

Medellin: A Sharing City Against All Odds

Medellin has come a very long way in the past 20 years. Colombia’s second city has become a thriving medical, business and tourist center with a population of 3.5 million. Formerly the murder capital of Colombia, the city’s murder rate prior to the death of the infamous drug cartel leader Pablo Escobar in 1993 was approximately 381 homicides per 100,000. By 2007, after increased support for law enforcement and a focus on shared facilities such as public spaces, integrated transit routes, libraries, and schools, the murder rate had dropped dramatically to 34 per 100,000.

The generator of the change strategy was the philosophy of, and department of *urbanismo social* (social civic planning) of the Medellín Academy. In the mid-1990s the idea that a focus on a) empowering citizens and b) beginning in the poorest neighborhoods began to inform the discourse. The City’s Plan (2004) mentions that: “*public space and infrastructure must become the framework where education and culture are cultivated in places of encounter and coexistence.*” In this way, shared public spaces were seen as focal and were to be designed to fit into and enhance poorer neighbourhoods including the award winning *parque biblioteca*, (library park), where people can come to read and use computers or simply relax. Created for and with the people, public spaces today are well used and maintained both by

the municipality and by the users themselves. The city's transportation system was designed to be both accessible and functional as possible. Since 2004, people living in the city's poorer areas which are largely up in the hills that surround the city, have had access to the metro areas' integrated train and bus system by using cable cars. Cable car (or Metrocable) stations were deliberately located close to public facilities such as libraries and shops. In 2012 escalators were added in some of the higher neighborhoods and footbridges were added to connect communities.

Shared use of environmental resources

As well as infrastructure and services cities also share environmental resources: very obviously in the form of dense and high rise development as the most effective form of land-sharing, but also in multi-purpose streets and public spaces – especially parks and other green spaces, where, of course, clean (or not so clean) air is equally a shared resource. The less visible sharing of water is epitomised by the (perhaps urban mythical) claim that tap water in London has on average already passed through seven people before you drink it. Materials used in all sorts of products from buildings to newspapers are also sequentially shared through recovery and recycling: and urban areas are where recycling collection and reprocessing are most efficient.

Natural common resources such as air and water are necessarily shared everywhere, but in cities the sharing process is more intensive than elsewhere. It requires close intervention and management, for which, fortunately, we can learn from the management of natural commons previously. Most importantly, the imposition of commercial interests and market mechanisms is – as Harvey (2012) puts it, entirely the wrong reading of lack of collective interest in the 'tragedy of the commons': rather than privatising the grazing, he suggests we should instead consider shared ownership of the sheep too.

Sharing systems deliver direct environmental benefits through increased efficiency in our use of environmental resources. But they are not always unproblematic, and indeed can be strongly contested.

For instance streets are contested spaces between car-drivers and users of alternate modes of transportation. While Europe's narrow urban roads were historically shared between all users, growing dominance by motor vehicles led several countries including Denmark, Germany, Sweden and Holland to act to support shared use, introducing measures such as "woonerven," (or 'Home Zones' in the UK: residential streets, safe for children to play in), and sign-free roundabouts, where drivers, cyclists and pedestrians must make eye contact and effectively 'collaborate' to pass through (Hamilton-Baille 2008). In the US, similar practices are beginning to take shape also, often called "Complete Streets". Another similar movement, both in the US and abroad, is the development of "mixed-use" communities which promote a mix of land-uses and services, encouraging walking and cycling and delivering a better balance between economic, social and environmental outcomes (Williams & Dair 2006).

Community gardens offer another valuable yet contested use for shared land. They deliver benefits for both the individual and the community including an increased sense of

attachment to the neighbourhood, and the added benefits of increased physical activity and better nutrition (Wakefield et. al 2007). These small urban oases are sadly often temporary as new development vies for land rights.

Land and land sharing

Land ownership and land use is a key issue in modern cities and can shape both the problems of the urban landscape and their solutions. High housing costs that exclude poorer groups, and many young people from cities are largely the consequence of inflated land values. The extraction of land rent is a key driver of regeneration, gentrification and redevelopment, regardless of the social need (Harvey, 2012). Several strategies attempt to more equitably allocate city land through incentives, policies, and guidelines. One movement, inspired by Henry George in the 19th Century, aims to eliminate land speculation by the introduction of land value taxation (Cho *et al* 2011). A tax related to land value encourages landowners to generate income from the land, promoting density. The community thereby defines the land values (Vincent 2012).

Land titling is another method being used to reduce poverty and barriers to land ownership, allowing informal land users “to access the credit markets, transforming their wealth into capital and, hence, increase their labor productivity and income” (Galiani & Schargrotsky 2009, 31). In their study of urban squatters in Argentina, Galiani & Schargrotsky found that those given land titles had increased quality of the housing, and lifestyles over neighbours that did not have rights (2009). However *individual* titling carries risks that inequalities will be recreated. *Community* Land Titling is being investigated in Liberia, Uganda and Mozambique as a way of preventing governments granting land concessions which dispossess communities in rural areas and rob them of access to the resources essential to their wellbeing, livelihoods and economic survival (Knight et al 2012). In Scotland, communities have been given enhanced rights to buy land – including whole rural estates – and financial support to do so. Similar approaches could be tried in urban areas, yet in many countries – like the UK, the trend is in the opposite direction, with squatting being turned into a criminal rather than civil offence. In Amsterdam, however, Gilderbloom et al (2009) note that “*squatting laws...encourage landlords to fix up abandoned housing units rather than face losing these unused structures.*”

Other possible ways to share land more equitably would be community land trusts, or yard sharing, where residents can offer their unused land to others for growing food or other uses.

Copenhagen: From privacy to sharing.

Copenhagen, Denmark is an example of a city which has embraced sharing in its many forms despite being part of a very private national culture. The city is widely known for its many healthy and vibrant public spaces as well as its deeply embedded cycling culture. Copenhagen’s transportation and public space transformation began in the 1960s and 1970s as the city leaders, in response to environmental concerns and worries about resource depletion, begun closing off streets to private motor vehicles in the downtown area of the city to encourage alternative modes of transportation. Copenhagen is now

internationally known for its pedestrian and cyclist friendly roads, boasting the world's first bicycling superhighway.

The greater Copenhagen area is also the origin of co-housing, a housing movement which began in the 1970s and has now spread internationally. Co-housing communities consist of several families living separately with extensive communal space, in a neighbourhood designed specifically for social interaction. The model came out of Nordic feminist community project models with a goal of creating a *“just society in which children’s and women’s needs and the social reproduction of all peoples and natures are valued as central motives for action”* (Jarvis 2011, 560). In practice, social interaction and shared experience are the major catalyst in the founding of cohousing communities: *“When you do things together,”* says Anna Jorgensen, cofounder of Jernstoberiet, a co-housing community in Roskilde, Denmark, *“you create history together.”* Soren Fredericksen, an active co-housing community member noted the impact on his own personal interactions with people outside the community, as well as the impact on his teenagers. *“Living so closely with people, I am much more open minded and able to put myself in someone’s shoes in a situation. My children have learned teamwork, responsibility, and I see the effect it has had on their upbringing.”*

Despite traditional Danish social norms which tend towards the reclusive, sharing food is also something of a habit in some Copenhagen neighbourhoods. Since the 1970s, a public shared weekly meal has been served in two different urban communities where people can buy wholesome food at an affordable rate, while also meeting up with their neighbours.

The new sharing culture

We now turn to highlight the recent revival - largely internet mediated - of sharing in contemporary cities. This reflects an evolution in our economic culture with tremendous prospects for the future.

In the last decade conventional second hand markets for goods have moved online in many countries with the growth of sites like E-bay and Gumtree, or Descola aÍ in Brazil, where consumers can sell, exchange and buy products and services. Low transaction costs have enabled the establishment of gift-based approaches such as Freecycle, in which usable goods are simply given away online; and more dramatically, the emergence of sharing platforms which allow for the rental of personal goods such as cars, tools and spare bedrooms, and sale of services such as meal-sharing. And this is not just in the west. Xiaozhu.com is a Chinese online service for short-term property rental.

At the same time the transformation of digital goods markets by enterprises such as Napster, Spotify, LoveFilm and Netflix has profoundly impacted norms of ownership. No longer do we see it as essential to own a musical recording or a DVD. And similar perspectives are intruding into material goods markets: why own an expensive ball-gown, if you can borrow a different one for each of the few occasions a year you might wear it? Why have a garage packed with tools that are scarcely used, instead of borrowing them from a communal hub, or from lists posted online by neighbours?

This consumer oriented, peer-to-peer, sharing economy can be seen as “a bunch of new ways to connect things that aren’t being used with people who could use them” (Schiffere, 2013) and because internet-based platforms perform this task “radically better than previous systems in achieving higher utilisation of the economy’s ‘idling capacity’” (*ibid*), the sector is attracting serious financial investment. Estimates of the global value of the sector range from more than \$25bn¹¹ to over \$500bn¹² with some individual companies - such as AirBnB – already valued at well over \$1bn¹³.

Shared production facilities are booming too. Shared kitchens, shop-fronts, markets and offices all provide opportunities for small and social enterprises to meet public needs at lower costs. Fab-labs – or digital fabrication facilities – are emerging in many countries, combining 3-D printing technologies with access to other tools and equipment, giving entrepreneurs, schools and communities tools to turn ideas and concepts into reality. With widespread sharing of digital designs under creative commons licensing, the potential for fab-labs to underpin a new wave of co-production and self-provisioning, matched with domestic or community generation of renewable energy, is amazing.

Yet, combining the anti-corporate spirit of file-sharing and open-source software with the social purpose and altruistic foundations of much sharing, the cutting edge of the sharing economy is often not commercial. Sharing entrepreneurs are often social entrepreneurs first. Sharing has long informally facilitated the unpaid care, support and nurturing we provide for one another, and more formal institutions, supported by new technologies, promise to sustain and expand this segment. Schiffere (2013) reports that 28,000 people have collectively pooled their skills and support at 300 local timebanks across the UK, sharing their time and skills with those that need help with anything from childcare to job applications.

Some have wisely questioned whether the intrusion of commercial markets into the sharing culture is a risk, seeing in the short term, the danger of an inevitably bursting ‘sharing stock market bubble’ and in the longer term, the commercialisation of sharing behaviour and culture. We return to these challenges in Section 6.

Seoul: Sharing the future

Seoul, South Korea aims to become the poster child of urban sharing. In a new, city-funded project called Sharing City, Seoul plans to make the sharing economy available to all citizens by: “expanding sharing infrastructure, promoting existing sharing enterprises, incubating sharing economy startups, utilizing idle public resources, and providing more access to data” (Johnson, 2013).

¹¹ Estimate from Rachel Botsman cited in The Economist (2013).

¹² Estimate reported in

http://www.thepeoplewhoshare.com/tpws/assets/File/TheStateoftheSharingEconomy_May2013_FoodSharin gintheUK.pdf

¹³ <http://gigaom.com/2012/10/19/with-new-funding-airbnb-could-be-looking-at-a-2-5b-valuation/>

Sharing is seen as a partial solution to shortages in housing, transportation and parking, and excess pollution and use of resources, as well as a means to create jobs and rebuild trusting communities. Johnson cites Kim Tae Kyoon, director of Seoul's Social Innovation Division, as saying that *"the recovery of a sense of community is a central important aspect of the project."*

Building on Korea's successful development of hi-tech industries, high levels of smartphone ownership and a 'Smart city' programme in Seoul which delivered highly developed ICT infrastructure and widespread public wifi access, much of Seoul's sharing city programme involves online platforms – for sharing parking spaces, spare rooms and more. But the plans also take advantage of the large population and high density of the urban environment, supporting the provision of physical spaces for activities such as meal sharing and creative education.

To stimulate this, the city authorities are providing business incubation support, direct subsidies, accreditation, city-wide promotion and collective branding (including an online directory and portal) to sharing enterprises (including not-for profits). And the city is sharing public data, and establishing and participating in already practical sharing projects such as car sharing, and sharing municipal buildings with the public during off-hours and idle days.

Johnson reports that *"Sharing enterprises chosen for city support include home-stay platforms; a company that remodels old houses into shared houses; companies that facilitate the lending and borrowing of idle goods; a car sharing service; a children's clothing exchange; and a company that distributes donated suits to young job seekers"*.

The massive range and diversity in what is being shared, and how it is being shared makes it difficult to summarise, but the foregoing, and the case of Seoul (see Box) both illustrates the range of different conceptions and models of sharing, and highlights the possible multiple benefits for enhanced wellbeing, social participation and resource efficiency, to which we now turn.

Why is sharing desirable?

Of course the benefits of sharing vary to some degree with the resource or service in question. Here we elaborate briefly on the evidence for four broad types of benefit: environmental, economic, social and democratic.

Environmental

Environmental benefits are common to many sharing schemes: including resource efficiency and potential energy savings. Sharing enhances the potential environmental efficiency benefits of cities while less energy is needed for transportation, production and less waste is created as everyday products and services are shared among a group (Belk 2010). Sharing also might provide the opportunity for a community to utilize underused land, or maximize use of other existing resources for the enjoyment of the greater public.

Research by the Swiss Federal Office of Energy (2006) shows that each active Swiss car share user¹⁴ emits 290 kg CO₂ less per year than he or she would without car sharing. In the US, The National League of Cities argues that bike sharing reduces congestion and wasted fuel (NLC 2011). The World Bank (2013) argues that knowledge sharing programmes, as a public good, are key to increasing energy efficiency and are a governmental responsibility.

Economic

Economic benefits can arise on at least three levels.

For individuals and enterprises there can be cost-savings or even earnings from shared resources. Surveys consistently show that opportunities to save and make money can motivate sharing (Latitude 2013; State of the Sharing Economy 2013). For instance, if one only needs a car to commute to work, carpooling offers large savings. AirBnB allows householders to make money from a spare room. Credit unions and online funding platforms such as Kickstarter allow individuals to fund unconventional new enterprises.

At an urban scale, service provision costs can be similarly reduced by sharing. But there are also potential system level benefits for creativity and innovation, as long as resistance from incumbents can be overcome. *Wikinomics* argues for the opening up of innovation and development processes to make firms more effective and competitive (Tapscott and Williams, 2009). Cluster theory shows how innovation and conventional economic growth can be generated by the interaction and sharing of skilled staff and research resources.

Silicon Valley's success is attributed to the clustering of related firms, venture capital and research institutions in a single locality with effective means for the swift transformation of research into innovative products. This involved the cyclical movement of staff between research and commercial organisations with permeable boundaries¹⁵ and collective learning through multiple connections between funders, researchers and developers. In effect knowledge, skills and even people were being intensively shared. More generally researchers suggest that the smartest, most innovative cities are those that attract key 'talent' in the knowledge and cultural industries¹⁶. But the success of key 'clusters' is not just about the right people, but about how synergies are created from their knowledge and skills by sharing those within a local innovation ecosystem.

¹⁴ An "active" car share user is a person who used a car share at least once in the study year.

¹⁵ The idea that firms can draw on skills and knowledge from outside is also central to Tapscott and Williams' arguments in *Wikinomics*, that collaboration across firm boundaries enabled by digital platforms is transforming firms and business models. *Wikinomics* talks of sharing 'knowledge, computing power, bandwidth and other resources to produce free open-source goods and services' in a 'digital commons'.

¹⁶ In turn this is an argument for liveable cities with low pollution, high accessibility, shared streets and good public spaces and cultural facilities (to attract such people), and for justice in the form of recognition and welcoming of diversity. Studies show, for example, that the most gay-friendly cities are the most innovative, while places where women are best supported with quality childcare services are naturally those where women can make most economic contribution (Florida and Gates, 2001).

The "Cambridge Phenomenon"

The rapid growth of science-based industry around the city has made the so-called "Silicon Fen", one of the most successful technology business clusters in the world with more than 1,600 businesses. Many have connections with Cambridge University, developing products based in research done in University laboratories. The cluster effect has been generated by people mobilising resources and finance *"through personal connections made at informal levels, rather than being driven or managed by an overarching organisation, structures or systems. This has been described as a self-organising, constructive chaos where who you know is as important as what you know"*¹⁷.

It might be thought that growing web-connectivity is overtaking the importance of place in such processes. Online collaboration backed by crowd-funding might appear to offer the same chances to share knowledge and skills to generate innovation. But in practice, it appears that the digital versions are better seen as a complement to conventional face-to-face collaboration. Capello and Faggian (2005) report, for example, that collective learning in the form of cooperation with local suppliers and customers in an urban milieu is one of the key determinants of firms' innovation.

Online platforms can open up innovation processes to new ideas and new approaches, but only where a culture of collaborative sharing and learning exists. Open-source software works as a model for innovation not only because of the on-line platforms for collaboration, but because it is not tied down by commercial secrecy and artificial barriers to the sharing of knowledge and resources on those platforms. Cities which create and strengthen a culture of sharing, as Seoul is attempting, can thus also strengthen their potential for positive economic innovation.

Social

The economic, social, wellbeing and democratic benefits of sharing can be hard to disentangle. Belk argues that sharing is a communal act that links us to others and creates feelings of solidarity, and trust (2010). Putnam (1995) notes that *" in such fields as education, urban poverty, unemployment, the control of crime and drug abuse, and even health ... successful outcomes are more likely in civically engaged communities. [and] research in a wide range of settings ... demonstrates the vital importance of social networks for job placement and many other economic outcomes."* He continues: *"For a variety of reasons, life is easier in a community blessed with a substantial stock of social capital. In the first place, networks of civic engagement foster sturdy norms of generalized reciprocity and encourage the emergence of social trust. Such networks facilitate coordination and communication, amplify reputations, and thus allow dilemmas of collective action to be resolved"* (66).

Collaborative institutions, public services and voluntary organizations strengthen social capital, although it is unclear whether they can generate it from scratch. For instance, research has revealed that online exchange communities such as "Freecycle" foster greater

¹⁷ <http://www.jbs.cam.ac.uk/aboutus/camconnections/comecosystem.html>

community spirit among their members than do equivalent cash-for-goods websites such as “Craigslist” (Willer *et al* 2012) and places with strong social capital typically also have strong services and organizations (Vårheim 2011).

In terms of wellbeing, in cultures most strongly impacted by individual and consumerist values, many people may not see sharing as intrinsically desirable, yet might still adopt practices such as car-sharing for reasons such as convenience. However, more generally we can expect significant social and wellbeing benefits from sharing as the less well off gain access to resources they could not otherwise afford (from borrowed library books to shared ownership homes). Moreover, the extension of sharing communities online means that potential users are not limited sharing only those resources that those within their existing social group own and are prepared to share¹⁸. At the same time, as we have argued, greater sharing at the whole society level also benefits those who are better off as well. Managed well, sharing can build mutual respect and solidarity. A shared public realm can improve health and reduce crime (Shaftoe 2008, ODPM 2004, Pucher *et al.* 2010; Alfonzo *et al.* 2008).

Recent studies on subjective well-being and the link between income and consumption indicate that feelings of well-being or happiness may not increase as a result of further consumption once a certain amount of basic needs are met (Layard, 2011, Wilkinson and Pickett 2009, Jackson 2009, Cobb *et al* 2005). Yet researchers have reported positive effects on life satisfaction from both ‘greener consumption and action’ (Xiao & Li 2011) and pro-social spending behavior (Dunn 2011). Since sharing is both a green and a pro-social behavior, one can suggest that it too would have such positive effects.

So while money doesn’t buy happiness, sharing just might. A study by Co-operatives UK, notes that 7 out of 10 people in the UK report that sharing makes us feel better about ourselves, and 8 out of 10 people say that sharing makes them happy (Co-operatives UK 2013). Moreover, shared public spaces offer places for physical activity, social interaction, and personal reflection, leading to improvements in physical and mental health. The positive effect is so strong that cities are being judged - in part - based on the amount of quality public spaces they offer (Siemens 2011). Sharing, especially when it involves face to face interaction, also increases relationship building and social interaction between neighbours and strangers, including different ethnic groups and decrease isolation of vulnerable populations (Shinew *et al* 2004). Interventions in shared streets can significantly benefit the health and sustainability of communities. In Portland, Oregon, a group called City Repair has led dozens of “intersection repair,” projects where streets are painted and sharing nodes, including mini-libraries, public seating or self-serve cafes are set-up for the public to enjoy. Residents within a 2 block radius report increased social interaction, improvements in mental health, a stronger sense of community and increased social capital (Semenza 2009).

¹⁸ Of course this implies that a ‘digital divide’ becomes a more severe problem, and fair sharing cultures and cities must work to eliminate it.

Amsterdam: Sharing welfare

Is Amsterdam the “ideal city?” asks Gilderbloom et al (2009, 473), noting that “*people live longer because of Amsterdam’s walkability and bike usage and access to parks*” (473). One form of sharing that Amsterdam exemplifies better than most major cities is its positive tolerance to immigrants defined as “*the capacity to put up with another’s fully recognized differences from self . . . with a mild appreciation for, or enjoyment of, those differences*” (Lofland 2000, pp. 146–149). The result, as Gilderbloom et al (2009, 482) note is that “*Unlike the USA, ghettos and/or highly segregated places, which are nearly all poor and made up of one race, do not exist in the Netherlands, because of the dominant role of the social welfare state in the Netherlands in fostering the integration of immigrants.*”

Other aspects of sharing in which Amsterdam (and the Netherlands generally) excels is in “*the production and maintenance of social housing. Social housing is essentially housing taken out of the free market and placed within a cooperative-run entity*” (Gilderbloom et al 2009, 483). Not only are the Dutch excellent at providing social housing, “*If any buildings are torn down, 90% of the materials (wood, brick, glass, and plumbing) are recycled and used again*” (Gilderbloom et al 2009, 484).

Being a part of a sharing network may also enable individuals who value simplicity, and relationships to enjoy a lifestyle in tune with their personal beliefs. It may also allow parents to pass on these pro-social values to their children. For instance, parents using toy libraries in New Zealand felt supported in their views of frugality, sustainability, anti-consumption and generosity (Ozanne & Ballantine 2010).

The increase in popularity of sharing systems in mainstream culture is not however without its complexities. Crucially, equity needs to be considered in the design of sharing programs – ideally with the participation of likely users. Currently it is all too often an afterthought in formal sharing schemes such as bike- and car sharing programs where a credit card, or up-front fee/deposit is typical and effectively excludes those on low incomes. However, as Piff et al (2010) have argued, those on lower incomes are typically more generous, charitable, trusting and helpful when compared to those on higher incomes, exhibiting greater compassion and commitment to egalitarian values.

Informal sharing systems in which those on lower incomes tend to participate, are also left out of much of the current sharing dialogue. Informal sharing describes sharing activity such as carpooling and day-care systems undertaken collectively to reduce economic burdens and increase opportunity, rather than to meet any other higher environmental, or personal goals (Schaefer-Borrego 2013). Informal sharers and sharing need to be better recognized and their practice de-stigmatized. The growth of sharing in middle class and bourgeois bohemian groups (Schor, 2011; Holt 2013) offers some hope that sharing in general is becoming less stigmatized, but this trend seems unlikely to spread to all forms and groups without specific support. Informal sharing is also of particular significance in developing countries where it extends far beyond caring activities. For example what limited access residents have to power, water and sanitation in informal settlements in cities such as Mumbai (India) and Cali de Santiago (Colombia) is typically shared, perhaps illegal, but often

achieved through communal activity. In Rio's *favelas*, even landscaping to stabilize slopes prone to mud-slides is being delivered through community skill-sharing.

Democratic

The idea that sharing is healthy for democracy is rooted in two related propositions. First, that investment in the extent and quality of the shared public realm, both (physical and virtual) is essential for functioning democracy. Second, that the sharing economy challenges the influence of individualism and consumerism in culture and identity, and can therefore reduce the pernicious effects those cultural trends have had on collective politics.

Gabriel (2013), for example, highlights how the growth of individualism and consumerism has led to the dominance of public spaces and discourses by advertising and commercial or corporate interests. Participation in sharing directly challenges the individualistic model of the self-promoted by contemporary advertising and marketing. It reinforces values of community and collaboration, which can then be expected to be reflected in the political domain.

Moreover, the public realm is both a venue for and an expression of participatory democracy, allowing public discourse and public reasoning to influence political decisions. And, as Amartya Sen (2009) argues, such participative deliberation is in itself central to the development of a good society. It is a fundamental human capability, without which we lack a critical freedom, as well as being an essential means of discussing what we think is good (rather than relying on consumer markets to define wellbeing).

What drives and enables sharing?

This section identifies the key drivers and enablers of sharing in cities, and highlights some of the obstacles to its growth.

We see the effects of population density, highly networked physical space, and new internet technologies as crucial. All three come together to provide critical mass in both demand for, and supply of, shared resources and facilities. New opportunities for collaboration and sharing are arising at the intersection of urban space and cyberspace.

Many commentators (like Belk, 2010) see the roots of contemporary sharing in the development of the internet, particularly because of its importance to a significant shift in attitudes towards free sharing. Real time technologies are re-enabling peer to peer swapping and trading and we are re-wiring our worlds to share. We argue, further, that we are in turn re-wiring ourselves with new sharing norms, developed in cyberspace, but increasingly applied in real, particularly urban, space.

Pine and Gilmore suggest that ours is "*becoming an experience economy that values doing over having*" (2007, 136) in which technological advances are allowing people to shed the 'burdens of ownership', and shift toward shared ownership (2007). Botsman (2010) goes further. She sees sharing not as "*a short term trend but a powerful cultural and economic*

force reinventing not just what we consume but how we consume". She cites four reasons which have set up such a transformation, on which we elaborate below.

1. A renewed belief in the importance of community

Community remains a contested political space in many countries, but in both real and virtual worlds there is evidence aplenty that the tide of individualism epitomised by Margaret Thatcher's claim that 'there is no such thing as society' is receding. New forms of online communities are booming, while in our cities, contemporary movements for walkability, liveability, shared streets, Complete Streets, and placemaking are (re)building communities by creating places and spaces in common.

2. The torrent of peer to peer social networks and real time technologies;

The web first enabled free sharing both of information, through sites like Wikipedia, and Facebook, and of digital media – particularly music and video – through sites like Napster, Kazaa, Flickr, YouTube, and now Spotify, Grooveshark and a host of other mainstream legal music sharing services. The parallel 'virtualisation' of 'market' places (such as e-bay) is a massive extension of the 'shared space' that enables markets to function. Now new technology is also facilitating the sharing and management of material resources. The combination of open-access web platforms for offering and booking sharing opportunities, and real-time smart systems (including RFID tagging¹⁹ of shared goods) helping match users and allocate shared resources – such as in city bike sharing schemes - have transformed the potential for sharing. Moreover, social networking technology is helping rebuild trust between strangers (Botsman 2010) despite the legitimate concerns over privacy raised by the potential for the same systems to be used for surveillance.

3. Pressing unresolved environmental concerns

Although the environmental benefits of sharing typically take second place to motivations such as saving money and doing good for the local community (Latitude survey 2013), awareness of environmental problems is high in the contemporary world. For many people, sharing is a simple positive action, like recycling, which can help tackle climate change and resource depletion. In our cities the immediate pressures of environmental degradation remain visible – particularly in the form of traffic congestion and pollution, making it unsurprising that so many recent sharing initiatives have focused on cars and bikes.

4. A global recession that has fundamentally shocked consumer behaviours.

The financial crash of 2008, and subsequent economic recession brought to an end an era in which politicians could claim 'an end to boom and bust'. Many economists predict that a new era of high growth is inconceivable, as the economic system bumps up against limits to

¹⁹ RFID is radio-frequency identification. The tagging of items with cheap RFID chips allows innovations in real-time tracking, stock control and so forth, enabling the so-called 'internet of things'.

land availability, rising energy prices and climate change. This fundamental uncertainty is reflected in consumer attitudes. Piercy et al (2010, 3) suggest we have entered an “*age of thrift*” which has radically changed customer purchase behaviour, [with] an environment dominated by public scepticism and lack of trust in business and in marketing offers.” In this context, sharing offers an alternative response to the ‘age of austerity’ – sticking two fingers up at the exhortations of politicians to spend and get the consumer treadmill turning again.

Together these four drivers are heading us to what Botsman (2010) calls ‘the big shift’ toward collaborative consumption and sharing. These drivers are not uniquely urban, but the dense populations and physical networks of our cities are critical in enabling sharing as a practical and efficient response to them. It is no coincidence that most sharing services and platforms have launched in specific cities.

The flourishing of the internet has created new virtual commons, with particular challenges that might arise because the spaces or infrastructure of new commons are privately owned, while the content and activity are managed in common.

The ‘Tragedy of the Commons’ suggests that, in the absence of effective rules or norms for communication, users of common property tend to over-consume it rather than sharing it effectively, degrading its overall quality and productiveness. But this only applies to forms of property that can be degraded in use, rather than those whose value is enhanced by the numbers using them (such as communication networks). Social capital is similarly a shared resource that grows with use. More generally effective common ownership provides a mechanism where individual interests in immediate consumption can be moderated in the interests of the collective. With deliberative negotiation and communication long-term and future interests are *more* likely to be considered.

In general both social and environmental goals would appear to support extension of common property rather than its enclosure and privatisation. The key is then effective rules to ensure communication between users. Effective shared institutions will need to be part of the essential infrastructure of urban and virtual commons: institutions both to defend both the new commons, and to protect civil liberties, especially where the underlying infrastructure is privately owned.

There are also lessons to be learned from commercial markets and methods, notably in development and marketing of networked and complementary products.

Networked and complementary products (from faxes to mobile phones) offer insights into sharing because of the synergies (or lock-ins) that arise from users sharing the same platforms. Suppliers and users both benefit from a greater pool of users sharing the same platform. The early stages of ‘market creation’ are very difficult. And the snowball effect means that suboptimal products can become locked in²⁰.

²⁰ Marketing strategies for networked products have shifted to selling the network access – rather than the product used to gain access – think free phones with network contracts. This is a different form of selling services rather than products, but does open the prospect of the companies reconditioning phones, or at least

Sharing platforms share some of these characteristics: the web has massively widened the pool of potential users and items available for sharing. The more people involved in a time bank, for example, the more likely a new user will be able to access the skills they need, or find a user for the services they can offer. There are good reasons for supporting consolidation of competing services in this space. As Schiffrer (2013) notes: “*Many sharing platforms struggle to reaching critical mass in activities which represent a natural monopoly based on a network effect*” so we need “*infrastructure to consolidate the sharing economy [such as] comparison websites*”.

Interventions to support early stage market development are also clearly justified. In the UK, Bristol Council's support for the Bristol Pound by part-paying salaries in the local currency is an excellent example of a market making intervention. And in Seoul the city authority provides an accreditation scheme for sharing nonprofits and corporations. Johnson (2013) notes: “*By putting the city's stamp of approval on select sharing services, the city builds the public's trust in the sharing economy and introduces citizens to proven and trusted sharing services*”.

But in many places the authorities are proving slow to remove legal and commercial obstacles to sharing, or are even actively supporting such obstacles in the interests of incumbent commercial operators whose business models are under threat from the growth of sharing.

Car- and lift-sharing operations have been challenged over insurance and liability. The Economist (2013b) reported: “*In November 2012 the California Public Utilities Commission issued \$20,000 fines against Lyft, SideCar and Uber for “operating as passenger carriers without evidence of public liability and property damage insurance coverage” and “engaging employee-drivers without evidence of workers’ compensation insurance”*”. Similarly, AirBnB's model has been declared illegal by a judge in New York - as a breach of the city's regulations on hotels making an example of an AirBnB letter - by fining him \$2400. Clearly smarter regulation is desperately needed, but will be resisted by incumbent interests.

Orsi *et al* (2013) suggest a series of regulatory reforms and other activities – notably using their procurement spending accordingly - that cities could implement to enable sharing of transport, food, housing and economic opportunities. Among many practical suggestions they include: providing designated, discounted, or free parking for car-sharing; adopting a city-wide public bike-sharing program; updating the zoning code to make “food membership distribution points” a permitted activity throughout the city; subsidizing shared commercial kitchens; supporting the development of cooperative housing; allowing short-term rental in residential areas; expanding allowable home occupations to include sharing economy enterprise; and procuring goods and services from cooperatives.

Obstacles in governance and economic competition are augmented by cultural ones, and all these seem likely to be much more significant than technical barriers. Belk (2007) highlights that while “*ownership allows sharing, feelings of possessiveness and attachment towards*

recovering components and materials, in the same way that companies selling chemical services, or in the famous case of Interface, flooring services, can recover and reuse materials in a sequential form of sharing.

the things we own or possess discourage sharing” (p131). And although ‘pioneer’ groups in modern society appear to be adopting less materialistic values and ethics, there are still large numbers in so-called ‘prospector’ and ‘settler’ groups, for whom material success and material belongings appear important (Rose and Dade, undated). For instance, Lamont and Molnár (2001) stress the use of consumption practices to define positive ethnic and racial identities in the face of discrimination: “*Consumption is uniquely important for blacks in gaining social membership. Their experience with racism makes the issue of membership particularly salient, and consuming is a democratically available way of affirming insertion in mainstream society.*” (p42)

Schor (2011) and others have highlighted the growth of sharing alongside new consumption ethics, including ‘minimalist’ living. But Holt (2013) argues that focusing sustainable consumption interventions on such groups – the bourgeois bohemians or ‘bobos’ – will not lead to the adoption of similar practices by ‘fashion’, and that rather, ‘mainstreet America’ needs interventions that target their needs for basic services and economic stability through shared services and resources.

In this, Holt echoes a wider potential criticism that sharing systems, as they currently exist in the contemporary revival of sharing in western countries, cater far more towards those who have means than those who don’t. Official resistance to illegal and informal sharing, such as squatting and work or exchange in the so-called ‘black economy’) exacerbates this problem, as such sharing on the edge of legitimacy is much more likely to be practiced by poor and disadvantaged groups – often, as in Spanish squatted occupation of homes repossessed by banks²¹, mobilised by justice concerns in response to economic collapse.

However, elsewhere, as in both Medellin and Seoul, sharing schemes have been adopted or designed to enhance equality, and such goals can also clearly be adopted in other ‘sharing cities’. An official stamp of approval through public provision (for example of libraries) – or as a formal ‘standard’, as used in Seoul – might prove particularly useful in broadening and de-stigmatising sharing behaviours.

More pragmatically, people often refrain from sharing because of a fear of a lack of resources, or from a fear of losing control over the process (Lamberton and Rose 2012). Managers or marketers of sharing systems should therefore take opportunities to manage such perceptions, and design systems to minimise such risks, for example recruiting a diversity of users with complementary demands, rather than only similar users with potentially competing demands.

Ligon and Schechter (2011) note that being able to choose who to share with and how much may have an important impact on sharing behaviour. This is both a pragmatic and psychological factor. For example, reluctance to making oneself vulnerable to criticism of private behaviours or attitudes – such as approaches to child care - is also likely to be a factor in reluctance to participate in cohousing for example.

Nonetheless, occasional sharing behaviours are becoming widespread, with 75% in the US sharing digitally, and 50-65% in both the US and UK sharing in other domains too – albeit

²¹ <http://www.guardian.co.uk/commentisfree/2013/apr/28/spain-indignados-protests-state-of-mind>

often at a small scale (Latitude, 2013). Most sharers share in multiple domains, and interestingly those who car share typically share more (11 sharing behaviours on average compared to 8 for other sharers). In Germany too “55% have experience of alternative forms of ownership and consumption (product-service systems, private business transactions or collaborative consumption)” (Heinrichs and Grunenberg, 2013, 12). Moreover sharing behaviours appear to be multiplying through the establishment of sharing norms and trust-building online (Latitude, 2013), the importance of which cannot be underestimated²².

Opposition to sharing may also arise from a liberal perspective because of the implications of some sharing – notably of vehicles - for internet freedoms and civil liberties. The idea that sharing might open one up to greater surveillance and tracking of ones movements will be repugnant to many (if not actually a great change in practice). Clearly using the potential of new technologies to minimise impacts on civil liberties and to maximise data privacy is likely to be critical to delivering sharing in a just manner²³.

This brief survey suggests that sharing is set to grow further. In the final section, below, we turn to the opportunities for truly shareable cities.

How far might sharing go?

It should be clear that sharing is a powerful contemporary trend. Over the past decade it has grown rapidly to the point where it might be perceived as a threat to incumbents in both business and politics. The ways in which the engagement between sharing – as a disruptive innovation – and the conventional, incumbent approaches play out will largely determine how far sharing might go.

A bleak analysis might suggest that collective consumption is already being co-opted by the business mainstream, even while it is being resisted through regulatory and legal means. To some degree sharing is being commercialised and bought-up by the incumbents. Avis’ purchase of Zipcar (and its share in Wheelz) exemplifies the trend towards this possible future. Similarly, political sharing might be dominated by exclusive strategies within wealthy communities. The proposal to construct a shared ‘citadel’ around an arms factory in Idaho is perhaps a mad-cap extreme, but gated communities, *within* which sharing of private facilities and resources is enabled, are entirely plausible.

Yet such outcomes would be a travesty of the true possibilities of sharing. Many better opportunities exist to enhance sharing and ensure fairness. Cities and city authorities are key actors here, with the potential to shape the development of sharing at a grand scale. Today’s revival of economic sharing could be spread globally, and underpin a revival of political sharing. This section outlines some of those opportunities, and some of the benefits that might arise.

²² Despite the relative anonymity of the web, many sharing platforms provide facilities for user reviews which (like ebay seller ratings) have become a key tool for trust building, while direct links to Facebook and other social media sites can allow users of sharing services to check out potential loaners / borrowers in advance.

²³ Similarly if governments and corporations collaborate to enable intrusive control over mobile and web technologies for security, and surveillance purposes, this would dramatically undermine the value of these platforms for sharing (whether economic or political).

Despite notable successes like AirBnB, most sharing initiatives are relatively small scale, and in many cases we can conceive of both niche expansion (sharing taking a greater share of the 'market' for particular products or services) and geographical replication. The Latitude survey (2013) sought to assess both current provision and demand for different sharing services. It suggested that sharing time/responsibilities, household items and appliances, money (eg via credit unions or crowd financing), cars and living space all have significant potential for further growth in the US with lower current provision and higher latent demand.

But the sharing economy also offers a broader chance to reinvent economic models that treat us as whole people (not just consumers or shareholders) and thus to reshape our identities – moving away from damaging forms of identity that rely on possessions and consumption rather than relationships and experiences²⁴. Shared community production facilities, energy generation systems and credit unions offer new models of co-production, further blurring the distinctions between work and consumption. If such models are nurtured, then there are good prospects for us to take our whole, sociable selves into our political interactions – rather than responding to the one-dimensional dog-whistle politics of tax or immigration for example.

The diversity of the sharing culture makes it difficult to summarise the measures that might enable such positive outcomes. But the typologies presented earlier suggest some important directions and approaches. Measures to support sharing need to ensure inclusivity, enable participation and build collaborative networks. They must also include areas in which sharing remains unrecognised, rare or non-existent. For example, in terms of sharing, co-production is almost invisible beside collaborative consumption, yet some of the most exciting opportunities recruit ordinary people into both production and consumption in collaborative lifestyles. Similarly a focus on products and services risks neglect of underpinning economic activities in community finance, energy supply and materials recovery. And overarching all else, failure to recognise the city as a co-production of its citizens, rather than just as a venue for sharing, will critically handicap the new sharing culture.

To shape the future of sharing, we must understand how it might disrupt and transform – or be resisted and transformed by – conventional business practices. At present much of this is unknowable, but we can suggest some likely trends and pose some questions.

For instance, the impact of the internet on many businesses – from stockbroking to betting – rather than a uniform process of cutting out the middle men (or disintermediation) as first often predicted – has seen establishment of new intermediaries. These may be online subsidiaries of the conventional businesses or entirely new enterprises. We see the same with sharing. As well as innovative peer-to-peer ridesharing services, we see car hire companies and even car-makers buying into the car sharing market. In similar terms, AirBnB is an unconventional online travel intermediary. Professional sellers have emerged on ebay, and we can expect to see people buying cars to share them for profit, as they buy solar

²⁴ For those goods that remain critical to identity formation, models of shared ownership might maintain this aspect more effectively than those of shared use.

panels to make money back from electricity sales, with intermediaries or aggregators taking a significant share of the returns for matching up users and providers²⁵.

Incumbents can, and will simultaneously resist the new entrants and negotiate with them. Some will change strategies to better complement the new intermediaries – for example manufacturing more durable products better suited to intensive shared use, or to hold resale value; adding features that make the product more easily sharable (such as in-car systems for keyless sharing), or more easily (re)customisable to multiple sharers' needs.

The sharing sector is, however, also vulnerable to the same sort of stock valuation bubbles that have marked other generations of online enterprises. Cities and other authorities will need to be alert to this risk, especially to ensure that socially oriented sharing platforms are not starved of capital, skills and resources, and are not also lost when such a bubble bursts.

In the light of such trends, this final section seeks to identify some of the other actions cities (or indeed other levels of governance) might take to:

- stimulate expansion and replication of sharing schemes,
- extend sharing into new (or less widely shared) resources, or
- strengthen the underlying infrastructure and enablers of urban shareability.

Expansion and replication of sharing schemes

As sharing schemes grow, and particularly as they become formalised, they can run into all sorts of barriers, such as tax treatment, rules and a wide range of regulations,

The tax treatment of payments for activities such as ride-sharing, or letting out of rooms via AirBnB is delicate. Too heavy a tax burden and socially and economically valuable activity will be discouraged; too light, and successful sharing might dangerously erode the tax base – or even be abused as a deliberate tax avoidance strategy. In poor cities and countries struggling to fund even basic public services, a cut in the tax base arising from individual sharing might do greater harm to the provision of the collective commons of public services.

Rather than resisting sharing as a part of the 'black economy', tax and benefit rules need to recognise and permit it – with sensible thresholds for taxation of individual earnings from the sharing economy. Similarly, a better response to weak tax bases is tax sharing²⁶. For example within the USA, Minneapolis-St Paul (The Twin Cities) is: "*known for its unique tax base sharing program. Under the fiscal disparities program, taxing jurisdictions in the seven-county area contribute 40 percent of the growth in commercial-industrial (CI) property tax base since 1971 into an area-wide shared pool. Shared tax base is then redistributed back to jurisdictions - reducing fiscal disparities. Redistribution is based on population and the value of all property relative to the metro average.*" (Metrocouncil.org 2012)

²⁵ At least in sharing enterprises, unlike many other internet businesses (online media, social networks, search engines), individual providers are likely to receive some payment for their contribution.

²⁶ Our working definition of cities is 'functional urban areas' including both urban cores and suburbs. 'Tax-sharing' might be one of the useful tools to ensure that such cities can function – and equitably so - even where they are divided into different administrative areas.

Cities need tax rules and other regulations that facilitate sharing. Orsi et al (2013) set out many of the reforms needed at a city scale. Reforms are typically needed in rules on business registration, public health, planning and zoning, insurance and liability, and more.

For example three states (California, Oregon and Washington) have so far “*passed laws relating to car-sharing, placing liability squarely on the shoulders of the car-sharing service and its own insurers, just as if it owned the car during the rental period. The laws also prohibit insurers from cancelling owners’ policies*”. (Economist 2013b)

Similarly, current zoning and permitted use rules were typically not written with sharing in mind. US Planning and Zoning laws were intended to separate out ‘incompatible uses’ (eg a slaughter house next to homes). But this term has now been extended to prevent the turning of homes into places of (certain kinds of) business. For instance the City of San Francisco prohibits short term rentals (less than 32 days) under such rules. However, ‘accessory uses’ in zoning parlance are *customary* and *incidental* uses we do, or might make of our homes. If it can be established that these uses are *of benefit* to the community, such as sharing schemes (for all the reasons mentioned in this paper), then a challenge might be made to a Zoning Board of Appeal. But more widely the rules need explicit recognition of sharing uses incidental to residential ones²⁷.

Smart regulatory reforms may also be needed at national or federal levels, for example to provide a supportive intellectual property and copyright environment. Typically such an environment is one in which open-source and creative commons style sharing are enabled.

Extending sharing to new resources

Our brief survey of sharing activity suggests there are few resources as yet untouched by the sharing culture, but that there are opportunities for much greater active support for collective sharing behaviours in co-production and in the political domain. The most effective and powerful models for sharing have perhaps yet to be identified for land – where land reform and land taxation measures could unlock vast potential for enhanced sharing of scarce urban land – and finance, where the potential synergies between local currencies, crowd financing and credit unions might prove substantial.

The potential for co-production of renewable energy on rooftops and in neighbourhoods could be stimulated by local grids and ‘private wire’ arrangements, such as that supported by the local authority in Woking in the UK. Similarly support for local fab-labs could underpin localised co-production with significant environmental and social benefits

Getting land-sharing right underlies the idea of the genuinely sharing city. It is not only a means to efficient use of perhaps the scarcest resource in cities, but inflated land and property values can otherwise exclude poorer and disadvantaged groups from the other

²⁷ Resolution no 87 “In Support of Policies for Shareable Cities”, debated at The U.S. Conference of Mayors 81st Annual Meeting June 21-24, 2013 in Las Vegas

shared facilities and opportunities of the city. Delivering a Right to the City requires us to overturn the domination of land use and development by speculative interests in favour of diverse land sharing through, for example, land rights, community ownership, community titling of squatted land, more multiple use, recognition of informal uses, rent control and land value taxation.

Strengthening infrastructure and enablers

The land reforms suggested above would also provide a foundation for enhanced sharing in many other dimensions – supporting everything from shared workplaces to community facilities. They would also ensure that cities continued to house dense diverse populations, providing the underlying market for effective sharing.

In parallel with such reforms to maintain urban space, measures are also needed to protect and extend the shareability of cyber-space. Cities need to continue investing in ICT infrastructure, such as high-capacity broadband connections, and in ensuring access for all through, for example, free wifi in public spaces and public buildings, and access to training and, where necessary, finance and resources to overcome the digital divide²⁸.

Cities and other authorities must also collaborate to protect internet rights and freedoms, both to minimise civil liberties disincentives to sharing behaviours, and to ensure a strong shared political demos.

Conclusion

Sharing offers both a sustainable foundation for participatory urban democracy and a transformative approach to urban futures. The emerging sharability paradigm as we've described it, echoes and helps fulfil the basic tenets of the Right to the City (RTTC) as both a movement and an idea: *“Right to the City was born out of desire and need by organizers and allies around the country to have a stronger movement for urban justice. But it was also born out of the power of an idea of a new kind of urban politics that asserts that everyone, particularly the disenfranchised, not only has a right to the city, but as inhabitants, have a right to shape it, design it, and operationalize an urban human rights agenda.”* (righttothecity.org 2013).

As we have seen, sharing does not just offer this potential in cities in the rich world – it also offers a strategy or new paradigm for cities in the developing world, with potentially much broader application to challenges of slum improvement and infrastructure development – which might be partly met through community scale sanitation, water and power supply and distribution investments for example.

And perhaps even more importantly, a sharing culture offers the potential to build greater empathy and solidarity between rich and poor neighbourhoods, rich and poor cities, and the rich and poor worlds.

²⁸ Measures to regulate and sensibly enable sharing platforms that are commercial enterprises, yet free to users through revenues from advertising or data provision, may also be required.

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.

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