Sharing in the Creative Wick: East London Informal Economies and Citizen Science Data Pilot

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Abstract

In 2016, the creative communities in Hackney Wick & Fish Island (HWFI) are braced for rapid change. Situated on the western edge of the Queen Elizabeth Olympic Park, HWFI is one of the focal areas of the Mayor of London’s ‘convergence’ agenda. Convergence will be operationalised by the temporary Olympic Legacy authority, the London Legacy Development Corporation (LLDC), through regeneration of the built environment in HWFI, alongside other areas falling within the six Olympic boroughs.

HWFI has one of the densest concentrations of creative and cultural industry workers in Europe. The LLDC and other policymakers have highlighted the creative and cultural industries (CCIs) in HWFI as a source of potential for a sustainable local economy, but has also recognised their vulnerability in the face of regeneration. The community of creative and cultural workers manifests a flourishing sharing economy - sharing space, resources, knowledge and skills - largely on an informal, non-monetised basis. This sharing economy has allowed the CCIs of Hackney Wick to show resilience, if not thrive, in spite of low and/or unreliable incomes.
1. INTRODUCTION

On an urban scale, Richard Florida’s (Florida, 2004) ideas of creative clusters has inspired (and repelled) theorists interested in creative urban communities, based as it is on concepts of artists with mobile cultural capital, free to move to locales where thriving Creative and Cultural Industries (CCIs) provide rich opportunities for income, networking, and cross-pollination. Conversely, the role of artists as victims and beneficiaries of gentrification processes points towards a more complex reality regarding artists’ interests, agency, and mobility (see for example, Markuson, 2006), whilst retaining an emphasis on the importance of spatial clustering and connection. This model of a dense, interacting community is reflected in Hackney Wick and Fish Island (HWFI) in north-east London: primary research carried out in Hackney Wick (Brown, 2013) illuminates an area with the highest density of artists in any European city.

Cultural and artistic production, as all social activities, ‘happens somewhere’ (Longley, Goodchild, Maguire, & Rhind, 2005). Wenger (1999) defines such activity groups as ‘communities of practice’, and Capdevila (2013) as ‘localized space of collaborative innovation’. Whilst the spaces in HWFI are not generally open to the public, the characteristics shared with these definitions include a common focus or goal amongst the residents – live-work in a creative community, the sharing of information, tools and other resources – in other words, ‘mutual engagement, joint [social] enterprise, and shared repertoire’ (Wenger, 1999:73).

1.1. The Sharing Economy

It is important to distinguish between the sharing economy in question, and the ‘Sharing Economy’ as applied to the monetisation of individual resources via a peer-to-peer (typically digital) platform, as exemplified by profit-seeking enterprises such as Air BNB and Uber, amongst others. We define the sharing economy by the more traditional understanding of sharing – that of a resource being used by someone other than its owner without a direct purchase/hire financial interaction; or by ownership of the resource used not residing with an individual or household. While some see the former as disruptive in a democratizing way (for example, Botsman (2013)), others take a more pessimistic view of this model as “one of the ways in which neoliberalism has been able to proceed with its programme of privatisation, deregulation, and reduction to a minimum of the state, public sector and welfare” (Hall, 2015). Furthermore, there is widely interchangeable use of the terms ‘sharing economy’, ‘collaborative economy’ and ‘peer-to-peer economy’ (Botsman, 2013). We focus on the sharing that is not formalised via digital intermediaries, and in which the act of sharing does not represent a source of income for participants directly, although the sharing activity may ultimately result in an income. We concentrate mainly on collaborative consumption as ‘lifestyle’ as opposed to product service systems / ICT enabled platforms (Hamari et al., 2015) or redistribution markets (Botsman and Rogers, 2010). Whilst economic necessity may play a role in people’s willingness to participate in a collaborative economy, the habit of it may open up new ways of accessing products and services in a sustainable way, i.e. living within the financial and ecological limits set upon us.

A collaborative or sharing economy is created by a collection of acts of collaborative consumption, already defined by Felson and Spaeth (1978) as “events in which one or more persons consume economic goods or services in the process of engaging in joint activities with one or more others”. This approach to ‘shared consumption’ takes us beyond the discrete preferences and resources of individual consumers, and ideally for the community, to a more stable (and economically feasible) resource base. Collaborative consumption, when regarded as more than a ‘marketing trend’, can be viewed as an
opportunity, or even a ‘force for change’ towards sustainability (Hamari et al., 2015) in addition to a means to build stronger communities (Botsman and Rogers, 2010).

A collaborative economy essentially consists of sharing events located in space and time. Since such events usually require the spatio-temporal concurrence of participants, they reflect the network, connectivity and interdependencies of the participants and must be analysed in terms of the individual, preferably connectable actions. Not only does the collaborative economy depend on a close geographic proximity of actors, but actors whose shared culture and values engender a collaborative economy, and who rely on the collaborative economy to thrive. We address this via a three-fold methodology for collecting data on sharing events, namely an online survey across and within households, individual interviews and participant diaries. These will be revisited in the Method-section. This will be followed by early reflections on results in Discussion including impacts and ways forward in Conclusion. But first, we turn to the local socio-economic, spatial and policy contexts that underpin this investigation.

2. HACKNEY WICK AND FISH ISLAND

2.1. Creative and Cultural Urban Communities

The role of artistic and creative communities in the realm of urban development, ‘regeneration’ and gentrification is a richly explored topic, falling under the imposing shadows of Jane Jacobs (Jacobs, 1961) and Richard Florida (Florida, 2004), with many later authors simply seeking to ground-truth or refute these influential writers. For example, Markusen (2006) critiques the notion of ‘the creative class’ as an aggregate mass of society, pointing to heterogeneous class interests within Florida’s label. It is posited that artistic communities are supported by an art-savvy urban middle class, who benefit from the artists’ cultural capital (in return for the more traditional capital that landlords and supermarkets accept) (Ley, 2003). In this sense, artists are intermediaries between a mobile middle class and a local community with a wider range of socioeconomic statuses.

Focusing on the UK, Lees and Melhuish (2013) provide a review of policy around arts-led regeneration, pointing to a limited and contended evidence base to justify successive governments’ support of this model. Conversely, artists and creative communities have been viewed by some as harbingers of gentrification: catalysts as well as victims. Work on ‘non-global cities’ by Stern (2003), specifically Philadelphia in the late 1990s and early noughts, provides important evidence that, while artists can nucleate gentrification in the unstable real estate market of global cities, in smaller cities they are able to support sustainable and gradual growth, as well as pointing to a model of dynamic equilibrium – one in which artistic endeavours undergo a 25% ‘churn’ over a five-year period. This ‘ever-changing stability’ highlights the dynamic nature of creative cultures and industries, and the critical tension between the positive impacts on urban life and the gentrification process this can enable – a tension which is exacerbated in the overheated property market of a global city like London.

It is argued that design has a role to play in the choices consumers make, and ultimately in changing our world for the better [more sustainable] (Botsman and Rogers 2010: 196-198). The densely packed Creative and Cultural Industries (CCIs) at Hackney Wick and Fish Island (HWFI) are host to numerous design professionals and professionals-to-be (Brown, 2013). The area is therefore prime for the investigation of sharing economies and sustainability not only because of the pragmatic examples of sharing behaviour, but also from the point of view of servicing the (sustainable) design industry and therefore speeding up the general trend of collaborative consumption through design. This potential is supported by the sheer density of CCI professionals, said to be the highest of any city (district) in Europe
Density allows for networks to be built and sustained with ease, and for the necessary, and facilitating spatio-temporal connections to occur. The exceptionally well-defined geography of HWFI also helps to promote the high levels of informal sharing and collaboration that currently takes place (Figure 1). Bounded by the A12 dual carriageway to the north and west, the Hackney Cut canal to the east and the Northern Outfall Sewer (or Greenway) to the South, the CCI cluster in HWFI is effectively isolated from its surrounding neighbourhoods and whilst efforts have been made (and continue to do so) by the London Legacy Development Corporation (LLDC) to improve accessibility through its master planning, HWFI remains cut off. This means that the CCIs look to each other, very often on local social media networks, for help or other resources in the first instance.

Figure 1. Buildings identified by community contacts as key in the Hackney Wick and Fish Island Cultural Economy. The Hackney Wick and Fish Island area is defined by the A12 road to the west and north, the Hackney Cut Canal to the east, and is intersected by the Northern Outfall Sewer and the London Overground railway line. Map data from OS OpenLayer Local, with Northern Outfall Sewer data from OpenStreetMap. Please see acknowledgements for full licence details.
2.2. Planning and Policies

In order to understand the specific spatio-temporal context in which the collaborative economy of HWFI occurs, we need to investigate the governing political and planning infrastructures. HWFI is divided into the Hackney Wick and Fish Island regions along the London Overground railway line. Land south of the Overground (Fish Island) falls within Tower Hamlets borough, and land north of the line (Hackney Wick) falls within Hackney borough (see Figure 2). Since 2012, the London Legacy Development Corporation (LLDC) - the planning authority responsible for delivering the legacy of the Olympic Games in London - has been the planning authority for both Hackney Wick and Fish Island. Hackney and Tower Hamlets council continue to play a role in the development of Hackney Wick and Fish Island respectively. LLDC will be the planning authority for roughly 10-15 years, until the LLDC hand over to Hackney and Tower Hamlets borough councils. In the following paragraphs we therefore review the three distinct though closely related planning authorities’ strategies.

All three planning authorities posit the unique built environment of HWFI as a causal factor in the shape of local economies and cultural activities. HWFI is typically characterised as an ‘enclave’ (LLDC, 2014: 13), ‘severed’ (LLDC, 2014: 15), as described above, from the Olympic Park and the rest of Hackney and Tower Hamlets by the Lower Lea Valley to the east and the A12 to the north and west. Its physical
severance serves as a reason and a metaphor for the communities' apparent isolation (LLDC, 2014: 7). The built environment of the area is primarily industrial. However, the buildings themselves have been treated as monuments to a declining industry in policy documents (LLDC, 2014: 21).¹

Although the area is distanced from other communities, authors of the Hackney Wick & Fish Island Design and Planning Guidance concede that “this severance does have value in defining the special, island character of the area” (LLDC, 2014: 15). Additionally, the industrial buildings, though of “low economic value”, are “frequently of strategic importance in the wider local economy” (LLDC, 2014: 21). The co-founder of muf architects Liza Fior, writes that it is possible to use selective mapping as a way of “suggesting possible futures by describing the present”, asserting that “observation is proposition” (Fior, 2012: 118). muf (sic) as a co-authoring organisation of the HWFI Design and Planning Guidance (2014, commissioned by LLDC) ensure that readers are aware that HWFI is a place which comprises “someone else’s everyday” (Fior, 2012: 119).

2.3. People

Those who live in Hackney Wick & Fish Island (HWFI) are, according to census data, living within the 10% to 30% most deprived areas of the UK (Department for Communities and Local Government, 2015). Those who live in the north of HWFI are living within the 2% most deprived wards in London, and within the 5% most deprived wards in England (London Borough of Hackney, 2015). However, the area as a whole is becoming steadily less deprived (Consumer Data Research Centre, 2015).

The population structure of HWFI’s three investigated output areas (comprising roughly 300 households per area) is characterised by the lack of both teenage and mature populations (see Figure 3). Compared to the national (England and Wales) 2013 population structure, the differences are striking: for the year 2013 the age structure of England and Wales is remarkably flat, i.e. there are roughly equal sized cohorts of most age groups. The largest age group is the 48-year-olds. There is a levelling off (decreasing age group sizes) due to natural causes after a marked peak of ‘baby-boomers’ (around 67 years of age in the 2013 database) and a slight dip in ten-year-olds and people in their late 30s (ONS 2016). None of these general population features are present in the HWFI population structure, which is characterised by a markedly young adult population with a distinctive peak around the 30 year-olds.

¹ The authors of the Hackney Wick & Fish Island Design and Planning Guidance (2014) do, however, point to the Tower Hamlets Spatial Economy Study, which “shows that many of the existing firms within Hackney Wick are sustainable; they benefit from good transport links and, in addition to the waste and recycling industries that service the wider London area, there are firms that are part of the supply chains for the City and Canary Wharf, providing services or goods with a short shelf life.” (LLDC, 2014: 21)
Recognising the perceived geographical and economic severance of HWFI and its communities from the rest of London, as well as its demographic difference, is crucial for understanding the significance of the concept of ‘convergence’ articulated in, and underpinning the aforementioned planning strategies. Convergence is the policy agenda adopted by the Mayor’s Office and London’s six host boroughs to frame the socio-economic goals for the Olympic legacy (IGP, 2016). The aim is to close the gap in performance and prospects between London’s wealthiest and poorest areas so that by 2030, residents of the six Olympic host boroughs (Newham, Tower Hamlets, Hackney, Waltham Forest, Barking and Dagenham, and Greenwich) will enjoy the same life chances as other Londoners (GLA, 2011; 2015).

For all three planning authorities, the Creative and Cultural Industries (CCIs) in HWFI play a crucial role in realising convergence for the communities living and working in the Tower Hamlets and Hackney boroughs. The CCIs are foregrounded as a potential source for the sustainable economic wellbeing of the local community: participating in or contributing to this local economy are a group of firms that are ‘sustainable’ (LLDC, 2014: 21), or have the capacity to become sustainable enterprises in the longer term (LLDC, 2014: 21). Moreover, CCIs in HWFI have the capacity to contribute to a diverse local economy (Tower Hamlets, 2012). They are already ‘culturally robust’, and “each practice draws on the others for both intellectual sustenance, inspiration and to expand a ‘customer base” (LLDC, 2014: 24). The three
planning authorities for HWFI therefore recognise the existing CCIs as a ‘force for change’ towards sustainability, in the words of Hamari et al. (2015) and a means to build stronger communities (Botsman and Rogers, 2010).

However, the CCIs are also ‘vulnerable’ to market forces and the tendency for the more commercial practices to eventually price out artist studios (LLDC, 2014: 24). The planning authorities all highlight the importance of protecting, as well as enhancing, these industries. The potential for the CCIs to progress a sustainable and diverse local economy is positive. However, there is no interrogation of what a sustainable or diverse economy means, either in general or within the specific context of HWFI. Moreover, the CCIs’ capacity to progress a diverse economy in the area is celebrated in isolation from the social context in which the CCIs have been able to survive/thrive. Cultural clusters are recognised to be ‘diverse ecosystems’ (LLDC, 2014: 24), but there is no significant discussion on the appropriateness of former industrial spaces as flexible working space, CCIs’ reliance on the (bi-)products of local light industry (e.g. waste or left-over materials), the culture of sharing, and social networks that link CCIs to one another, and to non-creative sector organisations or businesses that support and contribute to these ‘diverse ecosystems’.

Non-policy literature that describes these ecosystems reveals that the culture of sharing is not merely a feature of, but an active factor in shaping and enabling a thriving creative community in HWFI. It is an inextricable element of the specific spatial and social underpinnings upon which the densely concentrated creative studios rely (Brown, 2012: 7). Case studies of the factory blocks reveal a self-build practice and live/work culture which would be impossible without a culture of sharing: an interviewee living in Old Ford Works (a warehouse complex in Fish Island) reports that each of the housemates depend on one another, followed quickly by the observation that “there is a great deal that is shared” (Brown, 2012: 4). In order to repurpose the factories that allow for this flexible and affordable accommodation and studio space, the surrounding extended community help to build the rooms, “as well as lending skills and DIY construction tips” (Brown, 2012: 7). While the significance of HWFI’s factory spaces to the shape and vitality of the creative communities is recognised (Brown, 2013: 8), the culture of sharing, the practices of sharing, and even the need to share materials and skills has not yet been the focus of substantial research.

3. METHOD

This research is predicated on the following principles and insights from the literature discussed above:

1. The built and natural environment is a significant agent in the shaping of communities, community cultures and practices;
2. Quantitative and qualitative geographic information is necessary for understanding the development potential, needs, cultures and practices of a community;
3. Geographic information, created and defined with a community, ought to be embedded in every stage of the research: from design, through data collection, to data analysis and dissemination.

Our methodology encompasses three layers of information collection: 1) an online survey across and within households (Appendix 1); 2) semi-structured interviews carried out by citizen scientists embedded within the community; and 3) participant diaries on sharing behaviour over a fixed period of two weeks.
These three components are designed to approach questions around the sharing economy within the limited scope of a pilot project. Given greater time and budget, elucidating the nature and structure of social networks of sharing within HWFI would allow spatial network analyses of this economy; we have opted for a three-pronged approach which balances depth and breadth. The online survey asks respondents census-based questions to gather information about their location, family circumstances, education, age, and, unlike the census, income (to begin to quantify the value of this economy) and information about how much the respondent takes part in sharing. Because this is carried out online, it has the potential to reach a larger group within the group, however, privacy concerns mean that it is more difficult to ask respondents to provide information about with whom they are sharing. The online survey is then expected to provide overview and contextual data about the community, but provide less detail about the network or the spatiality of sharing.

At the opposite extreme, one-to-one interviews will gather a detailed account of an individual’s involvement in the sharing economy, and the locations where sharing occurs, what is shared, and the place of business of those sharing. The posed questions and responses will explore spatiality and social networks, but only for a few individuals, identified as figures with profile within the community, meaning that there is a reasonable expectation that they will act as “hubs” within these sharing networks. Finally, sharing diaries will be given to these individuals to complete over a two-week period, creating a detailed and granular picture of the sharing activities – furthering our understanding of what is shared, how frequently, with whom, and whether those sharing behaviours recur between individuals, or are more strongly influenced by proximity, and the need for specialised materials or skills, or other factors.

Our choice of methodology is first anchored in the aim of bringing together quantitative and qualitative methods to strengthen our snapshot of the community when building this local case study. In order to meet the requirement of geographically specific information, we require data to be specific in terms of location of the respondent who shares (obtained by asking for postcode), localities of sharing activity (can be outside of the respondent’s residence) and the frequency of the sharing event(s). This desired link between the focus on the spatio-temporal pattern of everyday consumption, and the possible longer term trend (e.g. sustainability) was raised in a slightly more ‘consumer research’ oriented form already by Felson and Spaeth (1978). In addition to supporting the ‘trend’ approach, this level of geographical detail would entail the possibility of realising a ‘networks’ approach to data analysis.

With sufficient data to support network analysis, we would aim to unveil how and where goods and services may be shared within the specific circumstances of everyday life experienced by the CCIs’ workers and households. Further data visualisation and trend analysis would reveal how the practices may affect longer-term consumption trends and cycles for the benefit of increased urban sustainability and urban wellbeing stemming from a ‘community of sharers’.

3.1. Citizen Science

Citizen science practice, typically understood as occurring on a large scale, concerned with quantitative data collection, relying on volunteered time, and offering limited involvement in the research process as a whole, has been deployed to advance disciplines like ecology and the environmental sciences (Silvertown, 2009). This form of practice has, however, undergone a shift: it now shares aspects with ‘community science’ in which local communities drive change in their area by utilising scientific tools and methods to conduct research of their area (Haklay, 2010: 1). For the purposes of this pilot project, we
have adopted the definition of ‘Extreme Citizen Science’ proposed by the ExCiteS institution situated in University College London. In order to qualify as Extreme Citizen Science, the practice must be:

“[A] situated, bottom-up practice that takes into account local needs, practices and culture and works with broad networks of people to design and build new devices and knowledge creation processes that can transform the world.” (ExCiteS)

We are piloting this ‘extreme’ form of citizen science in order to achieve a fine-grained study of a space or community with a mixed method approach. The situational and domain expertise of the citizen scientists has shaped our project so that it is applicable to the needs, cultures and practices of the researched community. In turn, we aim to increase research capacity through training, and importantly, enable citizen scientists to be totally immersed in the research project, from research design to final evaluation. In the entire process of formulating the approach and methodology of the current study, co-design and interdisciplinarity have been at the core of our research. The participants in our survey, semi-structured interviews and sharing diaries volunteer their geographic and sharing consumption information. However, to increase the reach of the project as well as the impact of our research, we use citizen scientists who are compensated for their time spent, and gain transferable skills by working on the research team. We have worked, and continue to work closely with the community to determine the course of the research and ultimately benefit equally from the exercise.

The demands of fine-grained study, qualitative research methodologies, and total immersion in the research process are time-consuming. Without offering compensation, researchers risk alienating potential citizen scientists who are well connected in their community, who would not otherwise afford the time to dedicate their time and local knowledge to the project. Lack of compensation would further exclude groups without ‘free time’, i.e. those with multiple employment or caring responsibilities, both of which circumstances, anatomically, are common in the community. Our employment of citizen scientists is connected to the question of agency, ownership of knowledge, and the applicability of the research to the needs, cultures and practices of the researched community. The role of the ‘researcher’ as an expert entering a community is here replaced with a ‘citizen scientist’, who is part of the existing community and trained to bring their own expertise to the data collection and ‘engagement’ process.

3.2. Final Exhibition

Part of the method design was from the outset the plan for disseminating the final results in an open event. The event is to be held on-site in HWFI in order to facilitate the community’s engagement with the results. The content for the event will also be connected to the community: through sharing of the research outputs, namely anonymised data, we will engage with local artists to develop visualisation of the pilot data for the exhibition. It is this partly commissioned visualisation that will be on show at the final display. During the exhibition, we intend to provide a space where members of the community can provide feedback and comments on the research design and outputs, thereby involving a more local people in the evaluation of the project and allowing us to include their insights in further iterations. The event will be co-curated with the LLDC, Foundation for FutureLondon and UCL Public and Cultural Engagement unit, showcasing to the local community the value in co-production, broad engagement and above all, interesting details of the HWFI CCIs sharing practices seen through the eyes of the researchers, citizen scientists as well as locals artists.
4. **DISCUSSION**

At the time of writing, the project has achieved promising responses to the online survey (live for three weeks out of a planned total of eight), and the first of 16 interviews have been completed. Initial results point towards the importance of personal relationships and networks as well as local social media networks (Hackney Wick Locals - open group, Fish Island - open group, We of Vittoria Wharf - closed group, Omega Works Fish Island - closed group, Fish Island Lab Residents - closed group, 22 Smeed E3 - closed group) in the effectiveness of the informal sharing economy. There is also early evidence of sector-specific sharing economies with the festivals sector and its spinoffs, in particular, in providing employment, commissioning and programming opportunities for a significant number of Creative and Cultural Industries (CCIs) in Hackney Wick & Fish Island (HWFI).

Another finding from the pilot has been that applying the citizen science approach not only shapes the research design, but it also shapes and diversifies the geographic terms of reference. Applying the citizen science approach has highlighted to the team the importance of the CCI’s spatial and mapping vernacular. In the context of researching HWFI, output areas, postcodes and other forms of formal geographic information are of less relevance to the local communities than the places created around yards and factory blocks (e.g. Old Ford Works). By working with citizen scientists, our team has been able to gather specific sharing information through adopting the vernacular of this unique spatial context. This connects with the condition posed by Haklay (2010: 2) that data collection methods have to support accurate geographical information in order to be sufficient. While it may be assumed that the increased accessibility and affordability of geo-locating technologies (i.e. on smartphones) is inevitably leading to improved accuracy in citizen science-led research, we have found that adopting the mapping vernacular of the CCIs is more useful to understanding their sharing practices.

We intend for the citizen scientists to communicate the collaborative research method to other members of the community, in order to have the community own the process and its facilitation, rather than positioning this as an external research exercise. The exhibition output is not only intended as a means of disseminating our findings to the local community, but also as a means of catalysing further interest and involvement in our research, and possible similar exercises in the future.

We suggest that the application of the citizen science methodology, the co-design and co-production processes will render the research outputs to be more relevant to the needs, cultures and practices of the researched community. As previously discussed, we have adopted the researched community’s geographic terminology and their spatial and mapping vernacular. In doing so, we hope that we are not only able to make the research more relevant to the community, but are also able to connect HWFI’s spatial vernacular with the specific sharing activities of the community for dissemination to planners and policy-makers whose aim to enable sustainable and inclusive economies in HWFI could be informed by this research.

More specifically, we suggest that elucidating the overlapping and interconnected networks of sharing will allow us to understand the weaknesses and resiliences of the network to different forms of insult and failure (and therefore to understand the sustainability of the sharing economy) as well as the diversity of the sharing economy’s social ‘ecosystem’. This is particularly important for a community with a basis in trust and personal relationships, buffeted by the fortunes of the east London property market. While social network analysis has existed for over a century (Milgram, 1967), in the last five years techniques have made the automation of data collection possible - exemplified by Pentland’s “Social Physics” (Alshamsi, Pianesi, Lepri, Pentland, & Rahwan, 2015). However, these approaches require substantial resources.
and technological intervention in the community - in this case, a community which already faces substantial time and fiscal pressures. Access to existing social networks, i.e. commercial social media platforms, could provide methods for elucidating network connections. This has been carried out, for example, on Twitter (Huberman, Romero, & Wu, 2008) and Facebook (Ellison, Steinfield, & Lampe, 2007), but suffers from representation issues in the case of Twitter, and requires access to what is nominally a closed or private network in Facebook’s case. A third route would be through building a relationship with a social network or sharing platform provider - but this would still require a critical mass of community members to be using these resources, and depends crucially on relationships with the platform provider. Ironically, it is the independence and informality of this sharing community, as much as the business models of platform capitalism that prevents rapid data collection. While we may not be able to ‘machine-read’ these networks, we do have ‘human access’ to some of the HWFI Facebook groups (see above), which will allow us some exploration of these digital manifestations.

The more traditional approach we’ve taken continues, in part, work carried out by some of the authors on communities of practice within UCL (Johnson & Austwick, 2014) in order to reconstruct the networks of shared research focus within the Sustainability field, and create an online visualisation tool that researchers could use to understand their position and role within an institutional research landscape. A fundamental limitation to our approach is that much of it scales linearly with research scope: collecting twice as much interview data requires twice as many interviews to be carried out, for example. While online surveys and sharing diaries allow the option for wider uptake, it is difficult at present to imagine using more sophisticated big data collection tools to rapidly scale the project up, and to gather data at a scale and granularity to ask very specific questions of the network. Similar questions arise when discussing the spatial resolution of these phenomena, and both network and spatial analysis approaches raise questions about individual privacy and the way the research data will be stored, analysed, and presented.

While this is limiting from a data-driven perspective, it allows the use of a much more participatory, citizen-scientist driven approach. In doing so, we have adopted the ‘extreme’ citizen science approach as defined by UCL ExCiteS. We have also acknowledged criticisms of the citizen science approach: that “There is also growing awareness by researchers that the public is even cheaper to hire than graduate students” (Draper, 2013), and the extractive model that views citizen scientists as a renewable resource rather than active participants in the research planning process. Arnstein’s (1969) ladder of participation provides us with some useful context regarding the interaction with publics in the planning process, and the need for the sharing of power in forming the research agenda. This research project actively embodies a different approach to citizen science, and could inform future participatory approaches.

5. CONCLUSION

We have applied the citizen science methodology in order to gather geographic information about the informal sharing economy of Hackney Wick & Fish Island (HWFI): a practice and culture that is likely to elude researchers without local expertise. We worked together with the Cultural Interest Group and local citizen scientists to explore networks of sharing and interaction, to uncover spatial connections and demographic characteristics within this creative community. We ask how and why this community is able to sustain a high degree of informality, collectivity and creativity. Our work aims to build data visualisation upon the raw data, and feed this back into the community to generate new reactions in the form of digital and physical artworks. These works will be exhibited in HWFI in order to stimulate further debate, to invite local people to evaluate the project, and to incite further iterations. Eventually, we interrogate whether the
informal sharing economy can provide a model for the sustainable and inclusive local economy mentioned in policy literature.

Our approach furthermore takes into account the cultural geography of the area and recent developments: Hackney Wick and its adjacency to the Olympic Park has received a disproportionate amount of attention from researchers, not least from UCL with the future UCL East development, and we are keen to avoid a further intrusion into the community. Moreover, the informal nature of the sharing economy in HWFI is likely to elude researchers who do not come equipped with local expertise. We have therefore applied the citizen science methodology in order to overcome these challenges, to co-produce rather than dictate data and analysis with the local citizens, and to increase the value of our research to the researched community as a whole.

It has been suggested that cultural capital is what draws middle classes to live in ‘artistic’ parts of the city, and it is this process which drives the gentrification that we see in these areas. If ‘regeneration’ in this context simply means displacement of existing communities, it’s a very poor model for sustainability of 21st Century Cities. Further work comparing urban pockets of creative industries and cultural capital is needed to gain better insight into the question of sustainable and resilient communities. Other directions for further research include: a) investigating the role of HWFI’s industrial typology in the sharing activities of local communities, answering questions such as: Does the industrial typology of HWFI increase the likelihood of sharing activity? Does the industrial activity of HWFI increase the capacity of the local community to participate in non-growth focused economies?; b) comparing and contrasting the cultures and practices of the informal sharing economy in HWFI to the formal sharing economy in east London (focusing on East Village), facilitated by ECHO (Economy of Hours); c) the different roles played by the digital and built environments of HWFI, and how these interrelate in the processes of sharing; d) to what extent (if any) sharing activity alleviates economic and resource pressures that would otherwise be experienced by participants?

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APPENDIX 1: Survey questions

Questions on the household / residential unit
For the purpose of this questionnaire a household or residential unit is:
• one person living alone; or
• a group of people (not necessarily related) living at the same address who share cooking facilities and living space.

1. Please give a name for this household (for reference purposes)

2. Please enter the postcode of your address.

3. Who usually lives here?

   Me, this is my permanent or family home
   Family members including partners, children, and babies
   Students and/or schoolchildren who live away from home during term time
   Housemates, tenants or lodgers
   People who usually live outside the UK who are staying in the UK for 3 months or more
   People who work away from home within the UK, or are members of the armed forces, if this is their permanent or family home
   People who are temporarily outside the UK for less than 12 months
   People staying temporarily who usually live in the UK but do not have another UK address, for example, relatives, friends
   No-one usually lives here, for example, this is a second address or workspace

4. What type of accommodation is this?

   Detached, semi-detached or terraced house
   In a purpose-built (new built) block of flats
   Flat in a converted or shared (residential) house
   In a commercial or multi-purpose building (for example, work studio, factory, office building, hotel, or over a shop)

5. How many bedrooms/sleeping areas does the dwelling comprise?

6. How many workspaces does the dwelling comprise?

7. Counting everyone you included in question 3, how many people usually live here?

8. List the number of people living here under each age bracket.
   Age: <1 Age: 1-4 Age: 5-19 Age: 20-39 Age: 40-59 Age: 60-74 Age: 75+

9. How long have you lived here?

   < 1 year
   1-2 years
10. Does your household own or rent this accommodation?
   - Owns with / without mortgage
   - Part owns (shared ownership)
   - Rents
   - Lives rent free
   - Other

11. Who is your landlord (if any)?
   - Housing association, housing co-operative, charitable trust, registered social landlord
   - Council (local authority)
   - Private landlord or letting agency
   - Employer of a household member
   - Relative or friend of a household member
   - Other

Individual questions
Please invite all adults (>19 years old) in the HH to respond separately to this survey if possible.
Why am I asked these questions? We are trying to establish the size of the Creative Economy in HWFI.

12. How much rent do you pay monthly (£)?

13. What is your annual income before tax?
   - up to £19,999
   - £20,000-29,999
   - £30,000-39,000
   - £40,000-69,999
   - Over £70,000.

14. What is your sex?
   - Female
   - Male
   - Other

15. What is your nationality (or nationalities)?

16. How would you describe your ethnicity?
   - White British
   - White other
   - Mixed/multiple ethnic groups
   - Asian/Asian British
Black/African/Caribbean/Black British
Arab
Other

17. What is your highest attained education (qualification)?

O levels / CSEs / GCSEs
A levels / International Baccalaureate (IB)
NVQ Level 1/2/3/4, Intermediate GNVQ, BTEC, RSA...
Apprenticeship
Degree (for example BA, BSc), Higher degree (for example MA, PhD, PGCE)
Professional qualifications (for example teaching, nursing, accountancy)
No qualifications
Other

18. Which institution did you graduate from (highest degree)?

19. Last week, were you (tick all that apply)

working as an employee?
on a training scheme / apprenticeship?
self-employed or freelance?
working paid or unpaid for your own or your family’s business?
on parental leave, looking after children, other family members or temporarily laid off?
in education for further qualifications?
not working or retired?

20. Choose the area of activity/ies from which you earned your income in the last month (tick all that apply). Please can you give a more detailed description in the textbox below.

Accounting / Administration
Architecture / Buildings
Art direction / Curation
Advertising
Beautician / Stylist
Catering / Hospitality
Clinical
Consulting
Design
Education / Teaching
Events
Fashion
Film, Media
Finance
Fine art
IT / Gaming / SW
Laws
Music
Performing arts
Photography
Repairs
Research
Sales
Sanitation
Writer / Journalism
Other

21. If you work or study, how long is your usual commute one way?

I work/study from home
< 30 minutes
30-60 minutes
Over an hour.

Sharing behaviour
In this section, please think about sharing as broadly as possible (giving advice, sharing tools, exchanging skillsets etc.)

22. In the past month, have you shared with non-household members
Tick all that apply.

Materials (other than utilities such as water, electricity..)
Skills / knowledge
Time (for example babysitting, volunteer work..)
Food
None of the above (move to question nr 24)
Other

23. Could you describe what you shared with whom and how?

24. How often would you say this occurs on average?

Daily
More than once a week
More than once a month, less than once a week
Less often.

25. Do you share with adults within your household who aren’t related to you - for example, by sharing tools or work materials?

26. If you can, estimate the monetary value of the instances of sharing you’ve carried out in the last month.
Shared item/skill Times shared (#) Value each (£)
27. I would like to be kept up to date about (tick all that apply):

This research (please provide an email address below)
Activities of the HWFI Cultural Interest group (please provide an email address below)

28. Please enter your email address (optional).

Many thanks for your participation!

Please spread the word about this survey to any HWFI residents: https://opinio.ucl.ac.uk/s?s=41588.