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All Innovation Is Social

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We examine and critique today's emerging design theories of a social and community focus (e.g. Social Innovation and Social Design), which we contextualise in practice, drawing from collaborations with two community organisations whose objective is to create technological and sociological change in and with their communities. Drawing from interview data and reflective logs we discuss the connections and disconnections between the design literature and our findings, detailing tensions between technology and community and between the agency and expertise of social innovators, and that of the community they intend to benefit. Whilst recent design theories provide some confluence with practice, they point towards, rather than coherently define the phenomena of how innovation forms from communities, as they overlook the material constraints that undermine production of shared value. We discuss how the outcome of innovation and design is synthesised by the thesis of agency and approach of our organisations, and the anti-thesis of material and economic conditions present in the community. We conclude by describing a form of servant-servile leadership that is required in designing innovation with community, producing shared lines of reasoning around the design of innovation and shared ownership over outcomes.

Keywords: *social innovation, social design, design activism, collaboration.*

1. Introduction

In this paper we contribute emergent findings from a research collaboration with two organisations; The Baking Army and Electric Hand, and, an interview with the director of a social enterprise support organisation, Social Enterprise Insight. Drawing from our analysis, we go on to introduce relevant historical and contemporary design literature, to examine synergies with and contextualise findings from our collaborative practice. We finalise by proposing two design opportunities: first, how social innovation and social design can be better understood as a dialectical synthesis of opposing tensions and secondly, that leadership over innovation must be continually challenged to succeed in delivering lasting impact, necessitating the creation of a rebellious community that holds experts to account.

1.1 Establishing Community Collaborations

The first author met with potential research partners by attending a university community business event in the North East of England (hereafter 'North East') and through existing contacts on a Scottish island (hereafter 'The Island'). We recruited two organisations in late 2017 and have been collaborating with them since then on a university research project into social design in the digital economy. The organisations are The Baking Army, a community

bakery whose objective is to create a sustainable food infrastructure in the North East, and Electric Hand, which aims to mobilise the high-tech economy on a Scottish island by fostering collaborations between the technology sector and organisations on The Island. In addition, we draw from an interview with the director of Social Enterprise Insight, which supports innovative social projects across the North East, the director of which has more than 15 years' experience developing Social Innovation, Community Led Development and Social Enterprise in the region.



(Left) The Baking Army runs market stalls to generate profits that are directed into social projects, such as baking workshops to promote healthier eating, sustainable food production, and skills development for those who are differently abled. (Right) A flyer designed by the first author to promote Electric Hand's workshop with local farmers in collaboration with a Scottish university to promote prototypical IoT technologies in rural farming.

1.2 Motivation for the Research

Our particular interest in these organisations was threefold; they are small scale SMEs, with fewer than 10 staff, yet motivated to initiate a societal change; they are operating in resource constrained environments without the necessary capital investment to support the changes they seek to create; and finally, their goal to work with their (proximate) communities are facilitated through both physical and digital spaces. Furthermore, it was deemed relevant that both The Baking Army and Electric Hand are seeking to create technologically-enabled change; albeit in different ways with different emphases and motivations. Furthermore, their different settings—The Baking Army being mostly urban, and Electric Hand being rural—was considered useful for probing the relevance of environmental setting on this work. In this paper we work with a broad definition of technology that includes techniques such as language (Coeckelbergh & Funk, 2018) that are constituted by social relations and the political economy (Booth, 2013; Smith, 2019).

We agreed an exchange of design services with both organisations as part of our collaboration. This involved 'shadowing' the organisations' leads as their plans took shape and developed and also contributing to enabling the changes they each sought through our communication design and research skills. The first author recorded this ongoing process through reflective visual logs and diaries. This knowledge exchange approach aimed to create a relatively equitable basis for mutual benefit and impact.

2. The Research

The first author conducted semi-structured interviews with the three leads, to gather insights on their roles, positioning within their organisations and their wider community. The interviews were conducted between December 2017 and May 2018 and totalled 5 hours. We asked open questions to encourage reflection on the relationship between the organisation and the community e.g. 'Why are you interested in working with this community?'. We also asked them to each comment on opportunities and barriers they had encountered in engaging and innovating with their respective communities. We also asked them how they conceptualized their role (did they see themselves as an activist? How political was their work?); and ways in which this work was validated, or not, by their community. In addition, The Baking Army and Electric Hand interviews involved their leads participating in various visual mapping tasks to map their networks of suppliers and collaborators.

We audio recorded and transcribed the interviews. We then qualitatively coded the transcripts using a grounded theory approach (Charmaz, 2006). This resulted in 45 open codes which we constructed into three themes: Visions of Change; Challenges of Developing Social Value in a Failed Market; and Listening and Acting, which we discuss below. The rest of the paper is organised thus: we go on to discuss the reflective visual logs and diaries, before contributing a tabled summary of key design literatures. This triangulation (see Figure 1 below) comprises our underpinning methodology and informs our subsequent discussion on the intersection of theory and practice, expertise and collaboration and technology and community.

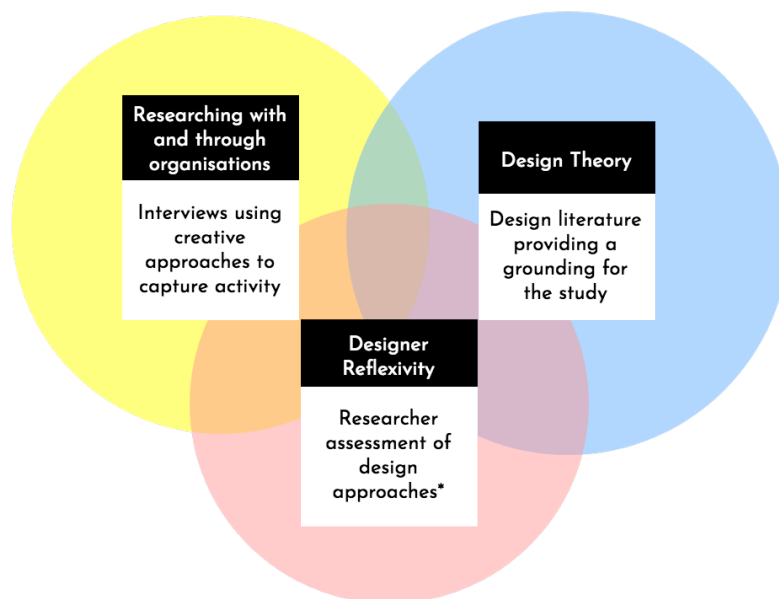


Figure 1. *Creative work such as designing promotional materials and visual mapping (see Figure 2) accompanied by visual logs and diaries.

2.1 Visions of Change

This theme evidenced that each organisation's foundational activity was motivated by a particular sociological vision, and that this related to deficiencies in state funding and existing technological infrastructure. In the case of The Baking Army, these deficiencies primarily related to the inadequacy of urban food infrastructure, where underdeveloped distribution and mass-production meant that there was poor access to affordable, nutritious food.

The founding member of the organisation described himself in interview as previously a *'global activist'*, who had been involved in lobbying government. However, they *'don't have a lot of belief in that approach'* he said, referring to traditional forms of influencing representative democracy such as lobbying, before going on to say how he felt it was necessary to *'be a producer'* working at a grass roots level. In order to develop a more equitable food system he had decided: *'bread was a good way to start with this complex challenge'* and was consequently raising money towards establishing a 'community food hub and social bakery'.

Both The Baking Army and Electric Hand aimed to address technological inequities. The Electric Hand lead described the communications infrastructure on The Island as suffering from a *'broadband deficit'*. The Baking Army described food production in the North East as *'unequitable'* and *'unsustainable'*. All three organisations' leads referred to having to be vocally activist, acting on behalf of their respective community: *'someone's got to do it'* said The Baking Army's lead. The director of Social Enterprise Insight's reflected: *'There generally has to be a driver [of innovation] ... often without any formal skills at all, and often doing it quite badly in some ways, but with a real passion to make it happen...'*. All three interviewees demonstrated how they have each taken centralised power to develop their particular community innovation.

Both The Baking Army and Electric Hand leads assumed leadership and used their expertise. The Baking Army referred to mobilising others in order to *'show [the community] by doing, make something tangible, and develop momentum that way'*. Both organisations' strategic goals are to create something scalable by first demonstrating at a smaller scale, and mobilising the community to realise and scale change. The organisations themselves form *'an exemplar ... demonstrating a model that can be scaled and replicated'* (Baking Army lead). Interestingly, all three respondents discussed their community as separate to themselves and made clear distinctions between their organisation and the community, which *'needs to be open and willing to invest [economically through time and resource]'* (Electric Hand), and to engage in the organisations who in turn aimed *'to nurture them.. their ideas'* (The Baking Army lead). This separation from their community may be a consequence of taking on private ownership structures as required for legislation and in order to receive funding; The Baking Army was in the process of registering as a Social Enterprise limited by guarantee from its previous status as a community group; Electric Hand operates as a Corporate Social Responsibility Scheme or 'CSR' to a private consultancy. As such, these organisations are constantly in tension between social (activist) action and the regulatory, legal and economic infrastructures in which they operate, creating what Social Enterprise Insight's director referred to as *'paternalistic'* structures and processes that can become so entrenched that the organisation effectively occupies a space of activism that might otherwise emerge from the community, which *'disavows itself'* from engagement.

2.2 Challenges of developing innovation in a failed market.

This theme articulates the interviewees' expressed challenges of delivering social value in an economy focused on private gain. *'Running a business is hard, running a business in a social space is even harder... you are usually working in places of market failure'* (Social Enterprise Insight). The interviews surfaced many contradictions and tensions across resourcing, financing desired change, operational costs, and authority. All of these material constraints can undermine the social purpose of the organisations, forcing them to prioritise

operations that support viability rather than develop social impact. Collaboration with and in the community is necessary to address the lack of financial capital. Thus value generation and exchange requires community buy-in and contribution (e.g. through volunteering). However, problems can arise because of competition between organisations for limited funding and the highly constrained resources in their communities.

Both The Baking Army and Electric Hand had their inception in activist campaigns, only later transforming into social enterprises to sustain themselves and scale up, through primarily accessing grant funding. When profits were made, for The Baking Army through bread sales and for Electric Hand through digital infrastructure consultancy, these were required for maintaining day-to-day operations, inhibiting capital development for scaling social impact. Whilst investment capital can be raised, this is only by short term grant funding or private loans. These constraints affected the organisations' ability to employ and provide job security to new staff. There was a sense of stop-start and scattergun or somewhat disorganised operational activity, by the duality of their oft-competing aims. As The Baking Army lead put it succinctly: *'...[the] route to viability is often not very clear'*.

Day-to-day operations limited the time available for The Baking Army's staff to explore *'more strategic ideas'* in order to enable innovation: *'we don't get enough time to do that without overstretching myself personally – it's just not possible'* (lead). This epitomises a continual balancing act of social value delivery and private value retention. Time is lost to delivering the essentials e.g. networking, developing strategy and communicating with the wider community. These multiple constraints often, as described by Social Enterprise Insight's director *'force difficult decisions'* between socially impactful activities and economic viability.

Both The Baking Army and Electric Hand's leads pointed out how the eco-system of support surrounding their organisations is hindered by wider ongoing under-investment in the public sector and funding regimes. This has left a legacy of mistrust amongst potential service users, with service providers seen as *'self-serving'* (Social Enterprise Insight's director). Furthermore, the organisations deemed third party funding (from regional/national government or private sector enterprise grants) problematic, with other providers *'not (socio-politically) engaged'* and unstrategic (The Baking Army). Enforced competition for scarce funding disincentivised collaboration, resource, and even ideas sharing:

'...the bigger idea ... will come through collaboration ... organisations aren't used to doing that, the community organisations very much so, they are competitors – in a different way to ourselves and another bakery, they are competing for funding and interest from whatever stakeholders they need to be involved ... once you share your ideas, someone else might be in a better position to get the funding to take that forward'. (The Baking Army) The Baking Army's lead went on to recount how their idea to form a community food hub was shared with another social food project, which took and promoted the idea as their own in a funding bid.

Whilst those interviewed see community engagement and social mission as symbiotic, the question remains as to how to reconfigure innovation to both draw from and also deliver social value. One approach was to utilise novel business models in order to align running a private business with delivering social value, such as by structuring their value proposition (the key motivations behind users' take-up and use of a service, see Strategyzer, 2019). Rather than trying to sell a service to potential beneficiaries directly, organisations identify a

value proposition that benefits organisations with the capital to enable service delivery. For example; Social Enterprise Insight's director explained how a start-up enterprise focused on tackling obesity in a resource-limited community could be funded through commission by the National Health Service, which would hope to benefit from a reduction in patients with weight related conditions.

However, limited access to the right skills was a core limitation. *'The challenge I see is the skills, and the human infrastructures sitting alongside the digital infrastructure, the copper and the wireless, without which nothing else can happen'* (Electric Hand). Focusing on producing novel technology in this resource limited space requires participation and the freely given labour time of the community, otherwise it is inert, without any channels by which it can bring about positive change.

In summary, these organisations gain economic value from their community collaboration that enables them to overcome the inherent challenges of resourcing innovation without private investment.

2.3 Listening and Acting.

This relates to each organisation's future direction being informed by listening to and dialogue with the community. A process described by The Baking Army as generative, even catalytic: *'giving people ... encouragement to develop their own ideas and implement something real'*. Structuring this collaboration creates demands on resources, but can allow organisations to scale through community contribution, rather than private investment.

Electric Hand's lead saw strategic development as a collaborative process:

'... because [the community] are bringing things in, experience, understanding, knowledge of the area ... that enriches the content that everybody else is going to feed on, it's like a giant bowl, and you're sipping at the edges, and people are putting more ingredients in, and the soup is getting more interesting as it goes...' (Electric Hand).

Maintaining this level of collaboration requires changes in leadership models, as described by Social Enterprise Insight's director, that *'actually enable the organisation to thrive... that ... have somebody who's driving the change but then they've created a culture where people feel they can contribute in the right sort of way and those seem to be the best'*. However, she continued: *'I think where you're trying to reach consensual decision making, they kind of flounder quite a lot.'* Here, collaboration is not 'ultra-democracy' (where all participants are consulted on all decisions) as this stalls the process; instead, as Social Enterprise Insight's director advised: *'stopping talking and get things done'*.

Social Enterprise Insight's director summarised this as *'servant leadership'* that involves partners *'assembling ideas in the right way'* and then *'testing them with the community'*. This involved listening closely, organising and synthesising relevant ideas into coherent designs that can then be taken back to the community, creating the right infrastructure for the community to, as she said, *'contribute in the right sort of way'*.

2.4 Accounts of the Action.

So far we have shown how organisations were responding to a sociological vision of change in opposition to economic and infrastructural deficits. In wanting to produce scalable social value, the leads were challenged by scarce capital, organisational constraints, and by the same economic and infrastructural deficits that they sought to address in the first place. In order to overcome these economic challenges, The Baking Army and Electric Hand had structured collaboration with/in their respective communities, who could enable service delivery by contributing labour time and other resources, by providing strategic direction.

The first author's background enabled us to offer design services to both organisations, meanwhile testing specific design research approaches. Additionally, this enabled their 'embeddedness'; to observe and capture more intangible factors in each organisation's activities. Furthermore, our presence as a volunteer designer encouraged other community members to become involved in the projects. One volunteer took on a marketing and communications role for The Baking Army for personal experience. This is an example of resource capacity increasing cumulatively as projects scale; people's involvement attracts others' interest and contributions. It also demonstrates how a researcher's involvement can raise awareness and help signal trust or confidence in the community organisation. However, this responsibility does place additional pressure on the researcher in ensuring that the organisation is working democratically and listening to its community (Kimbell & Julier, 2019).

To evidence the tangled web of stakeholders organisations are working amongst, our design interventions included mapping activities to solicit and document each organisation's networks (see Figure 2). These acted as a pertinent form of 'antefact', an accessory to the act of design that became its own outcome (see Cockton, 2017) and were useful in developing and planning new fundraising campaigns for the later stage of the research. Later in Summer 2018 the first author used ideas from Gamification (Seaborn & Fels, 2015) to design a community engagement survey used by Electric Hand (see Figure 3). Afterwards, Electric Hand's lead commented how this proved both *'an interesting and powerful way of capturing information, preferences and feelings about connectivity that's open to different demographics'*.

The Baking Army took leadership from the community in its engagements with the community where they aim to create a new food hub. They ran surveys at events created by existing organisations, with guidance from local community members. In Summer 2018, Electric Hand participated in a connectivity forum on the island to gain preliminary insights into issues amongst local groups (such as schools, businesses, emergency services and the local health trust), around which Electric Hand subsequently sought to create new events. In this way, they 'piggy backed' on existing initiatives, tailoring their very limited resources accordingly. This has led to the organisation pivoting its original objective of island connectivity towards digital skills development, informed by its own public engagement, using the gamified survey developed by the first author (see Figure 3). In this, Island participants attempted to 'wire up' the islands industries, towns, and services with connectivity and prompted discussion on the digital deficit within The Island.

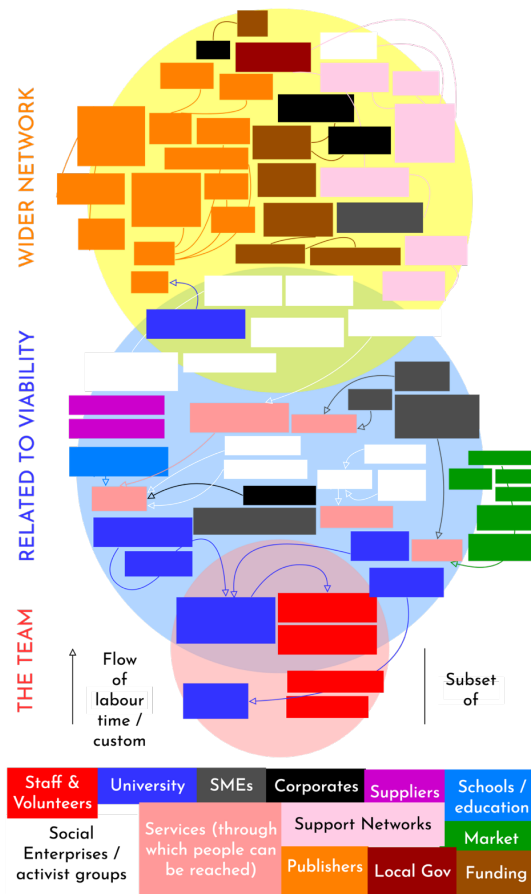


Figure 2. A co-created network map for The Baking Army (organisation names redacted). Our research found aspects of the sharing economy present (Light & Miskelly, 2014; Gauntlett, 2011), with numerous other social enterprises supporting The Baking Army and extending its impact. These myriad, ad-hoc collaborations help the organisation develop new partnerships to deliver training courses and other services.

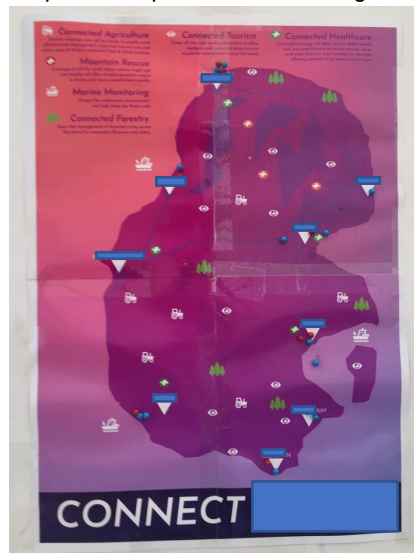


Figure 3. A simple engagement game used by Electric Hand during an island festival.

3. Design theory since the crash.

An imperative in this project was to use design practice to probe the relevance and distinctiveness of design literature. As part of an ongoing analysis, we contribute here an overview of contemporary philosophical design disciplines and methodologies.

	Definitions from literature <i>(from indicative literature unless stated otherwise)</i>	Summary	Indicative literature
Social Design	The collective task of developing an artefact or putting in place processes for the public good.	Often used as a 'catch all' term for designing that has a social (rather than commercial) orientation. Encompassing some of the fields below in this table (Armstrong, Bailey, Julier, & Kimbell, 2014), Social Design addresses multiple situations, largely design for political exchanges with the public sector, but also some community based work. Focusing on outcomes that produce 'social value', social design is open enough to encompass designing that both supports and challenges the status quo.	Chen, Lu-Lin, Hummels, & Koskinen, 2016; Dourish, 2010
Social Innovation	Driven by 'bottom up' collaboration to develop new ideas from existing elements.	As Social Design above, Social Innovation has a broad enough meaning to encompass a wide variety of design activities. It is differentiable from Social Design in its theoretical focus on socially enabled process rather than socially valuable outcomes, though both advocate similar design processes.	Manzini, 2014; Mazé, 2014; Mulgan, Tucker, Ali, & Sanders, 2007
Responsible Innovation	An emerging concept in the EU context that highlights the relevance of social-ethical issues in research and innovation practices (OZSW, 2019).	Perhaps the inheritor of Victor Papanek's Responsible Design (1971), this seeks to develop innovation processes that are environmentally sustainable, convivial, and humane. Responsible Innovation typically involves participatory and co-design processes.	Blok & Lemmens, 2015
Utopian, Molecular and Sociological Social Design	Socially oriented or otherwise ethical design practiced towards a sociological agenda.	Koskinen and Hush (2016) further characterise Social Design into three distinctive phenomena <ul style="list-style-type: none"> ● design towards <i>utopian</i> futures—Buckminster Fuller's Design Science as an example (Fuller, 1971) ● <i>Molecular</i> Social Design towards incremental change— such as contemporary forms of ethical design practices ● <i>Sociological</i> Social Design— in which a larger sociological conception of change is held. 	Koskinen & Hush, 2016

Design and Publics.	Designing publics refers both to the way publics arise out of design interventions and to the generative action publics take—how they ‘do design’ as they mobilize and act in the world.’ (MIT Press, 2019).	‘Publics’ as used here refers to Dewey’s analysis of political movements of being affinities of self-interest (1927). As it is highly individualising—in this theory it makes no sense that a white male would support movements against racism or patriarchy—this conceptual device is cited as giving us a means of designing interactions that can leverage self-interest into collective action and supporting social change. There is some variation of terminology; <i>Designing for Publics</i> and <i>Designing Publics</i> refers to taking the designing to a public or mobilising (new) publics. <i>Designing with Publics</i> is collaborative design towards mapping existing publics.	Le Dantec, 2016; Light & Briggs, 2017
Contestational Design; Agonistic Pluralism	Aims to promote particular agendas in contested political arenas (Hirsch, 2008).	Designing ambiguous or controversial spaces and interactions in the community where opinion can be crystallised or deconstructed. Borrows from a Marxist, rather than Deweyian conception of social formation, in which the individual is subsumed and produced by social relations, rather than individually relating to them. This places the focus of designing towards effecting discourse rather than affecting the individual.	Julier et al., 2016; Korn & Volda, 2015; Mouffe, 2009
Citizen/ Citizenship Design/ Design as Citizenship	Designing as ‘activist citizen’ or through collaboration with citizens to generate responses to emerging problems, political issues and social phenomena.	More disparate than other philosophies and approaches listed here, but has a distinctive positioning of the designer as both constituted by and constituting their socio-political relations. Designer as an actor in the political relations that (re)produce them.	Grout, 2018; Heller & Vienne, 2003; Lewis, 2017
Design Activism	Design playing a central role in promoting social change, raising awareness about values and beliefs, and questioning the constraints of mass production and consumerism.	The literature is associated mostly with the production of artefacts for propaganda purposes. However, broader manifestations through objects and services concerning the design of and towards activism also specifies the use of design for radical political purposes.	DiSalvo, 2016; Markussen, 2011
Digital Civics	Uses digital technologies to empower citizens.	Broadly encompasses designing technology for the relationships between people and the state, and each other in civic responsibility. Typically mobilised through a civic university research agenda. Draws on participatory and co-design methods.	Olivier & Wright, 2015; Vlachokyriakos et al., 2017

Civic Tech	Questions how we shape technology and how technology shapes us; how we govern, organise, serve, and identify matters of concern for communities.	Coming out of the Human Computer Interaction community to describe the interplay between 'civic' and 'technology', mostly differentiable from Digital Civics in its application through private sector crowdsourcing and crowdfunding platforms and apps rather than service design in the public sector.	Boehner & DiSalvo, 2016; Knight Foundation, 2013
Transformation Design	Explores design's potential to shape the future of organisations and society.	Developed out of organisational design, service design and change management. The methodological approach starts with ethnography and user-centred approaches. Differentiable in its synthesis of wider organisational identity through observation and collaboration with individuals working within its lower levels.	Stephan, 2017; Yee & White, 2016
Participatory Design	The direct involvement of end-users and other stakeholders in designing or implementing system designs.	Preceded and overlaps many other approaches (mentioned here as it remains a distinctive sub-discipline). This philosophy originated in the worker's movement, in processes of designing factory equipment with the workers who used them.	Carroll & Rosson, 2007; Ehn, 2016; Kusano, Ohno, & Kohtake, 2014
Design Thinking	Human-centred approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.	Proposed methodology comprising numerous tools borrowed from user-centred and Participatory Design as well as ethnographic approaches. Largely applied in the private sector as a research tool to support service design (e.g. RBS's 'Open Experience' team (RBS, 2019). It has also been applied in third and public sector work, with proponents citing its capacity for social change.	Brown, 2009; Brown & Martin, 2016; von Busch & Palmás, 2016; Yee & White, 2016

3.1 Theory in the context of practice.

There is a degree of confluence with aspects of these design theories as set out in the table above, which loosely frame what is happening in the research collaboration. However, they lack clear guidance to inform practice. Social Innovation's theory of emergent innovation, where 'experts' channel innovation from and through the commons (Manzini, 2015), partly describes the approach of listening and acting we encountered (see section 2.3). Or; the ways in which our organisations have used existing networks and local voluntary labour to provide insight and strategy, direction in the design of services, and at times channel and provide resources for the organisation's activities (see section 2.4). Our organisation leads are attempting to innovate with the community as Manzini's 'experts', attempting to structure community contribution, as discussed, maintaining this level of collaboration requires changes in leadership models, as described by Social Enterprise Insight's director, taking and representing ideas '*in the right way*', to co-develop innovations. However, no working model is provided for this in the literature, aside from demonstrations of workshop and co-design methods. The theory does not address issues of resourcing, legal structures and the need for economic viability, which together distance the organisation from the community and force it to centralise value in order to survive (see section 2.2). In an imaginary world without the social relations of ownership made necessary in capitalism, experts might be able to channel innovation in their communities more freely. Manzini recognises that this conceptualisation points towards, rather than defines the phenomenon of how 'Social Innovation' emerges (Manzini, 2015). But the theoretical separation of 'expert' and the 'diffuse design' (the designing and creative potential of everyone in the community, see Manzini, 2014) is undermined by the reality that in practice, both experts and members of the community are not in fixed positions but frequently interchange.

Design approaches such as iterative prototyping and participatory co-design occur frequently in the literature. Whilst they have been criticised for promoting the agency of the expert (designer/researcher/our organisations leads) over participants in forming objectives and contextualising outcomes (Blok & Lemmens, 2015; Johnson et al., 2017; Kimbell & Julier, 2019), the literature often endorses these methods, somewhat uncritically. In our practice, organisation leads invite substantive contributions from their user communities, but struggle to resource meaningfully ongoing consultation, as the demands of core activities (producing and selling bread in the case of The Baking Army) mean that they do not '*get enough time to do that*' (The Baking Army lead). The design literature eschews difficult conversations about funding processes of co-design and who benefits (economically or otherwise). The servant leadership role described in section 2.3, extends further than instances of 'bolt-on tool kits' for consultation (IDEO, 2015). This instead intends that the community meaningfully informs objectives and contextualises outcomes of design processes. These activities challenge the validity of the designer as having agency over authoring both the inception and outcomes of design and innovation processes, both of which are generally espoused by Social Innovation and Social Design literature.

We argue that we need to design relationships where leadership is challenged to ensure activities serve the real needs of communities. Korn and Volda (2015) show how fostering contestation through designing controversial and ambiguous spaces can help promote engaged and lively debate. However, in the practice of designing innovations with their respective community, our organisations need contestation to singularly focus contribution

towards innovation and design, rather than fragment efforts of the already resource-constrained community, in which social projects are forced to compete with each other (see section 2.2).

In attempts to be apolitical, much of the literature has ignored that designing in this space is inherently political. A designer often has political power and privilege in the design process; this is true in our organisations. Their activity is predetermined by a sociological vision of societal change (see section 2.1) as described by Koskinen and Hush (2016). By eschewing the political ideology of both participants and its authors, the literature could be used to inform Social Innovation towards fascism, where the rich class 'emerges' the ideas in its own commons to oppress all other classes, in line with fascism's ideological goal of solidifying unequal economic distributions of wealth and opportunity. As things stand, Social Design could be used as a methodology in designing civic relations with an oppressive state e.g. making forms for reporting citizens to the secret police more accessible and user friendly.

3.2 Designing for 'the commons' wasn't *news from nowhere*.

In the advent of the great recession in 2008, we have seen a multiplicity of design philosophies and methodologies emerge. Those included in the table in section 3 share an intent to create technological innovation that produces 'common' value with communities. Though unsystematic, the opposition to design as a vehicle for accumulating private capital is clear; this is what binds this literature together.

Technology—in the broad sense as used in this paper—and community was the defining intersection in our analyses of interviews and practical design. We define community as that which is held in common by the community—whether this involves a geographically or culturally proximate group of individuals, a global community of technological product users, or indeed, design researchers. This means that the organisations and the communities they seek to serve are party to the same commons. Analysis of the interviews showed that organisations also aim to prioritise the production of common value—in alignment with the literature—however, scarce capital, and the legal requirements imposed by funding bodies, become dichotomous with these aspirations. Instead they are encouraged to effectively privatise the value provided by their community. Pragmatically, this is advantageous for capitalism in the current economic crisis, where we need to negate the risks associated with private capital investment into research and development. Clearly, national austerity policies have necessitated alternative ways of configuring innovation and delivering services; as seen in this study. However, all this raises critical questions around resourcing, and how, and *for whom* these endeavours are designed and delivered.

This discussion on how to design technology that produces common benefit predates the term 'design' as we know it today. The socialist pattern maker William Morris argued for the protection of the egalitarian arts and crafts against industrialisation (Morris, 1890; Pevsner, 2005). In the 1920s, the October Group (of the communist revolution in Russia) and the Bauhaus all argued that industry should be repurposed away from capitalist production and towards 'communal luxury' for the people—establishing values that became today's 'industrial design' (Gordon & McCormick, 2015). At the end of 'the great society' and the beginning of the counterrevolution against the period of social democracy following WW2, design theorists attacked what Buckminster Fuller called the 'designedly ignorant' consumer industry. Papanek (1985) promoted moral responsibility in designing whilst John Chris Jones

(1991) was part of a generation that created 'design methods', with the motivation of using design to liberate, rather than 'fix in place' the users of technology. Here Jones considered users subject to, rather than participants in the design of technology.

This glimpse into design history demonstrates how innovation around technology is often mirrored by the struggle to reclaim the value it produces. As technologies' capacities are developed, new ownership enclosures are devised to accumulate the value it produces. Similarly, capitalism was developed through privatisation of common land; whether the enclosures in England or the clearances of Scotland; and so too have new technologies such as social media been privatised in recent decades (see Kleiner & Wyrick, 2007).

Both The Baking Army and Electric Hand are responding to a social deficit; one concerning food inequalities, sustainability and distribution, and the other remote digital (dis)connectivity. If digital technologies provide opportunity to raise standards of living but only reproduce and reinforce inequality and poor social conditions, then their reclamation into common value (through e.g. Social Innovation) is predetermined.

3.3 Navigating tensions in leadership: Design emerging in the dialectic.

The literature is returning to older ideas e.g. Dewey (Dewey, 1927; Light & Briggs, 2017); and Marx (Korn & Volda, 2015; Mouffe, 2009). Perhaps popular post-modernist conceptions of community from the latter part of the 20th century are now insufficient. As designers and researchers, we inherently constitute a power relationship (Foucault 1978), and by declaring their validity 'to lead', our organisations do also. This is an unavoidable contradiction; to author change both Electric Hand and The Baking Army have had to constitute authority, to maintain their organisations as legal entities, fundraise, and to also be accountable for delivering promised outcomes. Additionally, the requisite skills to enable design and innovation are not evenly distributed. Our organisation leads have expertise that is centralized, particular and finite, but which also must be distributed, developed and built upon. This 'hierarchy' (Heimans & Timms, 2018), is not a problem until power becomes ossified, and the power to effect change becomes alienated from the community. Decentralisation, similarly, is not problematic until it fragments power, leading to a '*floundering*' as recognised and described by Social Enterprise Insight's director. In any case, it may be impossible to fully distribute agency over innovation., As Freeman (1970) argues, in attempts to produce flat hierarchies the most charismatic and well connected end up constituting a class of their own. We argue that this apparent binary between designer and user, expert and 'everyday' as present in the literature, undermines a more nuanced understanding. Our research suggests that centralisation and decentralisation are not mutually exclusive, both are necessary in developing any viable system of innovation.

Our study uncovered a style of '*servant leadership*' that has the potential to navigate tensions between organisation and community. Leadership can be centralised, but can only succeed as long as it processes the unsystematic, decentralised nature of a community, and is invested in producing shared ownership structures that leverage contributions of value to overcome the economic challenges facing both our organisations. Participation is thus motivated by self-interest of all those involved in the production of shared value.

4. Conclusion.

4.1 Theoretical implications

The theory behind the Social Innovation and Social Design is not distinctive or readily defined, we show here that it is part of an historic struggle to repurpose technology towards building common value, rather than accumulating private capital. Both 'design' and 'innovation' are often synonymous in their meanings, in that they both exploit new ideas. Their distinctiveness becomes immaterial in light of political considerations of *for whom* we are designing innovations. The disconnect between the different cases and methods in the literature, and the wider political visions that drive them in practice, make applying design 'theory' to any practical work supporting large scale social movements or causes more challenging. As political intentions are not explicit, we must continually rehabilitate and justify our political intent whenever these approaches are deployed.

We propose a theorisation of 'community' as a dialectical opposition between individuals within it and the commons they share. Design here is more than just a 'socially mitigated discipline' (Potter, 1989). Through Material Dialectics, which involves understanding phenomenon by the opposing tensions that produce them, we can see that the outcome of innovation and design for our organisations is synthesised by the thesis of agency and approach of our organisations, and the anti-thesis of material and economic conditions present in the community. The community must possess the surplus time and requisite infrastructure (factors such as digital literacy) to contribute to overcoming inherent constraints in designing for the production of common value.

Similar tensions such as those between service-users and organisations, and the technological 'push and pull' theorised in markets, exist in commercial innovation also. Beyond the highly collaborative nature of design, our expectations of design are informed by the social web of designed artefacts we interact with, hence we can say that all innovation is social. A rebuttal for those who say that competition for profit drives innovation is that all innovation was originally enabled by the highly unprofitable reproductive labour of mothers (Davis, 1981; Duffy, 2007). Social relationships driving design and innovation are constituted by the material conditions surrounding them; i.e. available capital and surplus labour time available in the community, levels of education and digital literacy, the quality of local infrastructure etc. Social relations predetermine design work in this space; who owns the outcomes, who possesses the relevant expertise, what ownership (class) and power dynamics are at play.

The emancipatory potential of digital technologies to improve living standards is in a dialectical tension with relationships involving ownership and unequal distribution of profits. Such tensions ultimately dictate the character of Social Innovation, Social Design, and the efforts to involve the community in the case of our organisations, who must separate themselves from the community they seek to serve, but for whom, sharing and collaboration (including volunteering) are a practical necessity to overcoming limited resourcing.

These tensions between material conditions and social relations surrounding innovation absorb Social Innovation's notions of 'expert' and 'everyday' (Manzini, 2015) That is, that the expert's role in Social Innovation is to solicit the potentiality of ideas in the everyday

'commons'. Further, this lens—borrowed from revolutionary theory—shows how the ultimate character of Social Innovation appears in the opposition between the agency of an 'expert' (as innovator/activist) and that of the community they seek to serve.

4.1 Design implications

Theory advocates that the organisation sits at the centre, and the community at the boundary. But in practice, they are in an opposing tension with each other, that synthesises the relationship and its outcome, contestation between the two is necessary for there to be a meaningful collaboration at all.

We need leadership in social research and the space of designing communal innovations that gets its strategy and tactics from the community; and shares ownership with them in order for the community to not disavow itself through apathy or the presumption of paternalistic agency. It is right therefore that they (the collective or individuals) challenge the social innovators even to the extent of bombarding them with demands, or entering and occupying organisations to ensure the community's needs are represented, just as stakeholders challenge commercial processes of design where there is a vested interest in the success of the outcome. Without entrenched authority, the communities' agency over outcomes must be systematically channelled through a servile form of leadership, that ultimately depends on the community to realise the innovation.

From outside of design literature, design for leadership towards a democratic innovation design is articulated coherently in the Chinese tradition of mass work. This is a method of developing strategy in community organising where a mass-line (of reasoning) is continually sought between organisers and the community in which they are trying to provide leadership (Moufawad, 2016). This involves frequent open meetings and large public artworks stating opinions and intent (Han, 2008). This process warrants further exploration, as it is understood as being in a dialectical tension—between the organisers, who might hold responsibility over prosecuting change, and the community who must support and resource that change in order for it to succeed. Here, the value of leadership is expressed through the community around it, who must direct leadership to serve them. If we, as leaders in innovation processes, designers and researchers, want to express collective agency in our work, we need to tell our communities that 'it is right to rebel'.

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