Towards diffuse forms of public governance: service design, open data and disruption in the private rented market

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Abstract

This paper discusses the contribution of service design in not only reducing barriers to accessibility but more importantly crafting alignments in complex interplays of power and balances of demand and supply in public service delivery. It examines the role of open data as a material for design and its public value in public service innovation.

KEYWORDS: public service innovation, service design, open data and public value

Introduction

Increasingly, design thinkers and the emerging discipline of service design (Manzini 1993; Sangiorgi & Meroni 2011; Bason 2011, 2014, Junginger 2013) is concerning itself with the contribution of design thinking, practices and user centred approaches to service innovation in the public sector. Services are understood as

> *[C]omplex, hybrid artefact[s]. They are made up of things - places and systems of communication and interaction - but also of human beings and their organisations. Permeated with human activity as they are, they can never be reduced to the simplicity of mechanical entities. Like all complex entities they are largely un-designable. On the other hand, for this very reason, precisely because they appear to be un-designable, it is both useful and necessary today to develop a new, service-oriented design culture and practice. (Manzini 2011, 1).*

Junginger (2013) suggests the design of services in a public context is not a new practice, as "[g]overnments have always been in the business of designing." (2013, 18). She suggests much of this activity is carried out by silent designers (Gorb & Dumas 1987) who create systems, policies and institutions which fundamentally shape our experiences of public services and governments. Although designing services and systems is an emerging area for the design field and profession, "the design of services has a long history and tradition in the public realm … [and] services remain first and foremost instruments for policy-making." (Junginger 2013, 19).

The contribution of service design and design more generally, is it's ability to bring to the fore a deep understanding of how to embody knowledge in man-made things (Archer 1994) and create user experiences that are desirable and attractive (Bason 2014).

This paper discusses the implications of a design case study where open data features as a key element of the design process and outcome. The case study addresses housing affordability in the private rented sector (PRS) and provides an alternative approach for governments to regulate rent levels and the quality of accommodation in this sector.

In the UK, the 1988 Housing Act removed control on rents, leaving the market to determine prices, agreed through a direct contract between landlords tenants. The PRS is comprised of many landlords with small portfolios, making regulation and the implementation of policy in this sector a very complex and costly undertaking. A lack of action by successive governments to tackle such issues has meant renters - as consumers of a service - currently have limited protection from poor practices and standards. Traditional policy instruments of rent control and regulation on quality of standards are either resisted or have historically had an adverse impact in the sector.

The case study presented in this paper discusses the application of open data to a digital service platform designed to disrupt practices in this market and drive transparency into a de-regulated market. We discuss the relationship between service design, policy implementation and innovative vehicles for delivery of policy outcomes and social impact. It shows how a service design approach can support policy design processes to address market imbalances and deliver social impact. A key element of the case study is the application of open data and open data principles to support, though information, more transparent practices. The paper points to the opportunity of extending the role of service design beyond making policy implementation more user-friendly and accessible, towards it's role in exploring new diffuse and collaborative mechanisms for policy delivery (Hartley 2005, Christiansen and Bunt 2014).

Imbalances of power and lack of policy instruments

Historically in the UK, housing policy has been characterised by more favourable policies towards home ownership and social rented housing. Up until the 1988 Housing Act, the PRS was tightly regulated through laws which regulated rent levels and ensured long term security of tenure. These tight restrictions meant the private rented sector offered low return rates and a poor investment option to landlords (Haffner et al. 2009). The net effect of these meant landlords seized every opportunity to exit the market (Kemp 2004) and resulted in an effective reduction in supply (Haffner et al 2009, 44).

The 1988 Housing Act removed any regulation over rents and, in introducing contractual agreements between landlords and tenants, shifted these responsibilities to individual transactions between tenants and landlords. It also removed any form of control on rents, which could now be set freely according to market prices and tenants' ability to pay. Contractual agreements set expected quality standards of accommodation and ensured a minimum 6 months of security of tenure to any tenant renting the PRS.

From a design perspective these individual contracts became the principal touchpoint and tangible mechanism to enshrine the interaction between tenants and landlords. From a policy

perspective, the contracts became the principle, yet extremely fragmented way, for governments to regulate practices in the sector.

From 1991 to 2001, in the UK, the number of households in the sector rose by 27% and the number of people renting in the sector increased by 44% (Ball 2004, 10). A recent study by Scanlon et al (2014) confirms the situation in cities like London is particularly acute with the size of the sector more than doubling since 1991 (11).

Policy makers have limited data available to them about landlords operating in this sector or the quality of properties on offer. From a policy perspective, and in particular policy design point of view, this is problematic.

The most comprehensive and recent survey of landlords was carried out by the Department of Communities and Local Government in 2010 which highlight the extent to which the sector is fragmented. 89% of landlords operating in the sector are private individuals, who own a small portfolios of 2-4 properties (DCLG 2010).

Our research showed many of these landlords reluctantly rely on letting agents to set prices. Many were aware agents set opportunistic prices, which benchmarked against other speculative prices, increase landlords' risk of arrears and voids.

The high demand for properties pushes tenants into over committing on rents and means many compromise on the quality of the property, at high personal costs to themselves and their families (Alakeson et al. 2014). Recent figures suggest that in London, more than a quarter of tenants renting, pay more than half of their income on rents (Alakeson et al. 2014).

The speculative nature of the PRS market and the surge in demand has a wide ranging social impact on tenants' health, well being and levels of child poverty (Social Mobility and Child Poverty Commission 2014; Shelter 2012). In London, where the effects of high demand are more acute, industry bodies are suggesting this is having an adverse effect on national economic productivity (CBI 2013). The wider social impact is felt in delays to family formation (Doling 2012) and the substantial £10 billion bill to the Department of Work and Pensions (2014).

The PRS, from a policy making perspective, presents itself as a very complex system for intervention, given the volume of providers and its cottage industry characteristic. Regulating such a fragmented market is costly and limits the capacity of governments to design and implement policies. Strong resistance from landlords to government intervention coupled with the increasing attractiveness of real estate investment as an alternative to pensions further increases government's reluctance to intervene. Mounting public opinion and the thousands of tenants in this sector, who increasingly are priced out of home ownership (Ronald & Elsinga 2012) are pressuring governments to act.

From a design perspective, the issues of the private rented sector faced by policy makers can be understood as a *wicked problem* (Rittel and Webber 1973). It is this complexity of competing interests and imbalances in supply and demand that the case study set out to address.

An alternative to rent controls: designing for social change

It is first important to comment on the methodology applied in the case study. It uses action research (Checkland 1981) as a model of design research for analysis and the design of project outcomes. For this reason, the researcher also plays the role of designer, actively and reflexively interacting with both the object of research and design outputs. It is also worth noting the authors are also co-founders the company set up as a result of the case study development.

The case study explored in this paper is a digital service which connects tenants and landlords directly around the best rent price. The overall design vision was to use information to bring transparency into the PRS and correct its inefficiencies in two ways.

The first and central to the design proposition is fair rent pricing. Through an innovative calculator, a series of open data sets and data generated by users to calculate a robust pricing model. The intention is that the calculator encourages fairer and more transparent deals that are more affordable for renters while optimising a return for the landlord.

For the design process, building an understanding the market was key to developing an efficient rent price calculation to reduce the time properties sit empty between tenancies and ensure a good and fair deal between tenants and landlords. Open data not only powers the design proposition and the technology sitting behind it but also helps generate further public value in the form of data about real-time pricing, void periods and the experience of living in those homes.

To develop the pricing baseline for the calculator, a collaborative co-creative approach was taken alongside experts on open data, machine learning, housing, policy. These explored how principles of fairness and transparency could be made tangible and be translated into the technology and calculations.

The second element of the proposition uses the digital interface to encourage more transparency in practices and better matching of demand to supply. The idea is that users can close deals for properties at these efficient prices. They can access matchmaking features to agree the terms of their deal and make the contract exchange fast, easy and significantly lower transaction costs and time to complete the contract exchange.

From a design perspective, the design strategy seeks to stimulate better behaviours and operationalise a number of policy initiatives, as Landlord Accreditation Schemes and best practice on longer tenancies. By getting landlords and tenants to input further information, to obtain a more accurate calculation and close agreements online, it offers a mechanism for regulation which is user led and demand driven.

As part of the design process, the data assumptions for the rent calculation were modelled using a sample of 100 properties in Hackney, London. The modelling tested different assumptions for pricing and applications of open data and demonstrated a market for the proposition, working for 69% of the chosen sample. The accuracy rate for calculations has since been confirmed following a crowdsourcing campaign to launch the service.
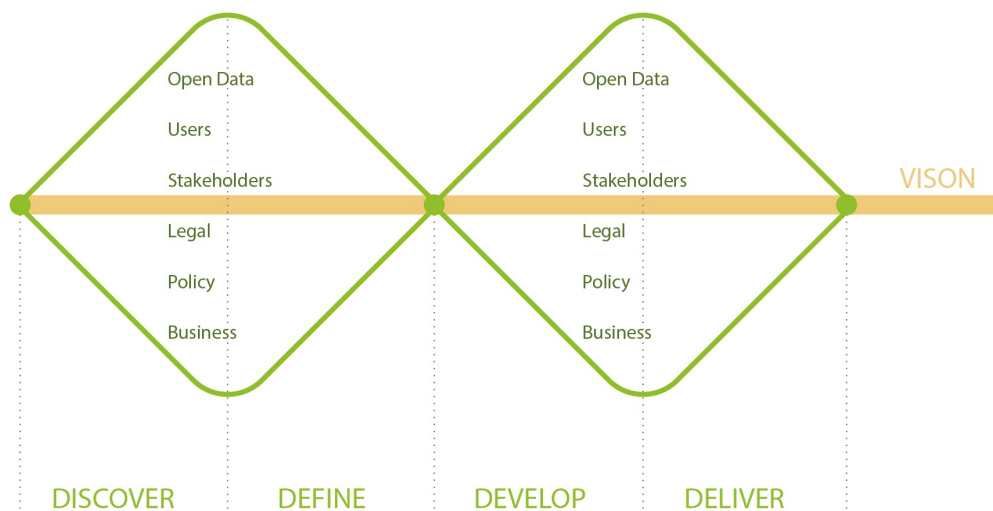
It also demonstrated the business model saving landlords an average 85% in fees and costs associated with letting and tenants an average of £1300 per year. The intention is that the savings generated means tenants can afford to pay an electricity bill or save for a mortgage, and landlords are guaranteed a return.

The wider design vision is to deliver a user driven tool to help the market to regulate itself, empower people with the ability to make real choices and offer a mechanism for regulation which is user led and demand driven, which could enable, given the right support, the market to regulate itself.

It seeks to disrupt the market as a way of increasing housing affordability and build an ecosystem where government subsidy and policy, institutional partners, and innovative approaches can be combined through a platform approach.

Service design, social impact and data as a public good

The design process, described in the diagram below, uses the broadly accepted iterative cycles of divergent and convergent modes of enquiry common to the design process (UK Design Council).

The development of the case study was a response to a challenge call run by Nesta and the Open Data Institute. The aim of the challenge was to "generate innovative and sustainable open data solutions to social challenges", and in this case, to help people get the best out of renting.

To kick off the process, the design team developed a deep understanding of the problem following a comprehensive desktop research and information from initial user research provided as part of the call. In addition, one of the design team members has extensive academic research and practical experience of housing.

The design team approached open data as any other material used as part of the research and exploratory phase of the design process. To appropriate the data for use in the design purposes, the team carried out an extensive mapping exercise of all the available data sets, categorising them according to type, comprehensiveness, usability, scope and baselines they provided. The mapping exercise involved building a comprehensive picture of the opportunities for design provided by these data sets. These were cross referenced and cross
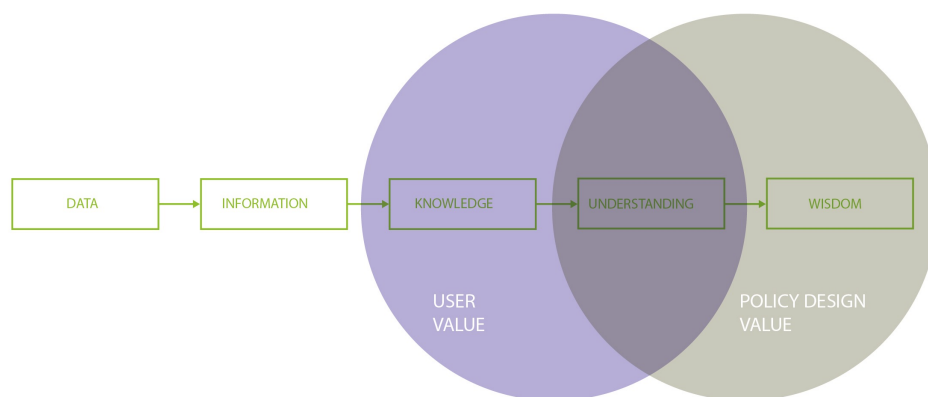
pollinated with known problems and service opportunities which emerged from combining a different series of data sets. The result was the definition of the design proposition, which was broadly scoped, ideated and developed into a brief following the well established design process.

Following on from the definition of the idea, the design team worked iteratively to not only test the concept with users, but also validate the concept from a business perspective. Also key in the development of the idea was testing open data assumptions and foundations. The outcome of this phase of work, culminated in refining the brief and forming a hypothesis to be taken into the concept design and develop stage.

The design team conducted a comprehensive design stage, which involved co-creating and working iteratively and collaboratively on the development of the user journey, service blueprint, main interfaces and touchpoints. Just as significant was the use of design's divergent and convergent thinking and practices in separate design activities for the open data, business model and theory of change elements of the project. Each of these strands were developed following principles of the design process for validation and in preparation for design implementation.

Both service design and broader design principles were fundamental to the development of the proposition. The design of the service and its interface sought to simplify and translate complex information about rents and models of return. The match-making functionality is a good example of how service interfaces were created to not only improve the user experience but also embody policy initiatives while at the same time de-institutionalise them. Design's ability to bring tangibility and materiality to services and systems is well documented (Panceti 1998; Secomandi and Snelders 2011; Sangiorgi and Meroni 2011). But it's role extended well beyond that.

There is an extensive legacy and body of literature by designers and researchers in the field, who discuss the role of a strong vision and broader purpose for design activity and outcomes. Although prominent in past debates around the role of design, this practice is not commonly featured in more recent writing about the service design process. From the outset, a key element of the design case study discussed in this paper was to design with a very clear social impact vision and view to designing for housing affordability.

Interpretation of Ackoff's DIKW pyramid

What is most critical to the design of the case study was an understanding about how to best use open data to build the interconnected, collaborative, and systemic nature of service exchange, opportunities for the co-creation of value (Sphorer et al 2007; Vargo & Lusch 2004; Weiland et al. 2012;) and reciprocal resource integration (Martinez and Turner 2011, 12).

Open data, was the essential raw material from which value could be extracted as part of the design process. The transformation of open data into knowledge, information and understanding followed broadly Ackoff's (1989) pyramid (pictured). In it, Ackoff suggests data in itself has little value if information and more importantly knowledge and understanding cannot be gained from it. In our case, the application of open data, meant being able to generate information and knowledge and essentially create value for users.

Value could be co-created by both landlords and tenants, in the form of a calculator which could address imbalances of information and therefore power in these relationships. To continue to generate value and knowledge from original data sets, the calculation is refined through user generated data on specific properties further adding value to the pricing models. In order to do that, the design process focused heavily throughout on exploring which combinations of data could yield the greatest value to both renters and landlords. Aligning value networks and co-created value were thought through from the premise of the knowledge, understanding and value generated to address major imbalances of power in the relationship between these two parties.

The application of open data was therefore a critical ingredient in the service design process. By transforming raw data and information into knowledge and understanding, the case turns data into a service. This is not the same as data visualisation (*information*). Instead, RentSquare actively extracts value from open data (*knowledge*) to design and build a service proposition (*understanding*). The value the service generates for the user is a fairer price and better matches between tenants and landlords, resulting in a more efficient market. It also addresses major imbalances of power in this relationship which allows traditionally antagonistic relationships to be made more mutually beneficial. Finally from a policy perspective, it provides a mechanism to deliver the functionality of regulation in a collaborative and alternative way.

Essentially, in this case, the role of open data in the service proposition, gives legitimacy to the value created. It brings trust to the service due to the accuracy and robustness of the pricing model. Moreover, this gives the service design process capacity and agency for change.

In the public sector, the idea co-production is gaining increasing traction as a tool for collaborative design of future services and social innovation (Cottam and Leadbeater 2004; Parker and Heapy 2006; Mulgan and Tucker 2007, Manzini 2011; Bason 2011, 2014). The implication of the co-productive nature of value co-creation and design for diffuse value networks (Manzini 2011; Mont 2002; Stahel 2006) compounds the dimension of complexity but at the same time in this case offered opportunities for action.

The case demonstrates the potential disruptive role of open data and technology, their power as a design tool and driver for social change. Open data and the calculator development played a fundamental role in supporting the design outcome. It also demonstrates a case, from a policy design perspective, of data as a public good and asset (Digital Government Review 2014) and it's application.

Considerations for Policy Design

The consensus in public policy theory and practice is that policy making:

1. [F]ocuses on Dewey's (1927) expression of 'the *public and its problems*' (Parsons, 2005, xv)

2. [R]efers to actions of public actors (typically governments), although societal actors might to some extent be involved or participate in *public decision-making*. (Knill & Tosun 2012)

3. Is a *problem solving activity* (Laswell 1956; Birkland 2010).

Policy makers have designed several instruments to implement actions and solutions. Some which include both direct and indirect regulation, taxation, and subsidy incentives, and in the case of the PRS, have been deployed widely, and in a range of ways.

From a policy design perspective, the case study can be seen as a potential new mechanism to deliver public good, but it raises a number of questions. It particularly raises questions from the perspective of institutional design (O'Toole 2003: 234) and how it affects, complement or even compete with existing public and private institutional arrangements and structures.

These include:

1. What are the wider governance implications if regulation in the private rented sector came to be delivered through similar mechanism?

2. How can accountability be delivered by different institutional partners to ensure public value?

3. Should policymakers be thinking about policy innovation through new institutional frameworks and what then would be the role for government?

4. From a housing policy perspective, does the case study mean the effective creation of an intermediate private rented sector?

5. What are the critical measures for demonstrating impact and responsibility for delivery of these? And what is the role of policy makers in designing the legal and administrative frameworks to support implementation.

The question of market adoption are critical in this case. If it provides an alternative to rent regulation, market traction is key to ensure it can deliver its outcome. Also critical to understanding the role of the proposition as an alternative is its ability to measure impact. The design process focused heavily on developing clear metrics for measuring levels of affordability in the sector. Policy makers would have a critical role in designing legal and administrative frameworks to support implementation.

It's impact will also be tested in relation to the accuracy of information it generates on market activity. The ability of design proposition to offer credible information and manage data is fundamental to market adoption and it's use by policy makers. If it is to be relied upon, transparency around the use of personal data and data sharing will help ensure the tool is both trusted and accountable to its users.

The case study potentially offers an alternative to models of governance which pitch markets against the state and vice versa. It explores through a design case study how a new role for government in brokering relationships with a range of stakeholders (Streeck & Scmitter 1991) could be played out. It follows Parson's (2005, 492) description of governments which mix delivery systems to support policy implementation (governmental, sectoral, enforcement and values mixes), by providing value through opportunities for innovation and data as a public asset. However, further work is required to understand how an external social impact enterprise can collaboratively provide a regulatory function of government without compromising its role in affording public accountability.

What does this mean for public governance

What we have tried to do in the paper is by no means to argue that a solution like this case study is the only possible means of achieving policy outcomes and social impact. Instead, the design case study helps to illustrate and explore different public policy arrangements and mechanisms to support affordability of rents and quality of accommodation in the context of the PRS.

This paper discusses the role of a disruptive digital service and its application of open data to assist governments to regulate rents and assure quality in the private rented sector. The case provides a digital solution to encourage better practices from landlords, including stimulating small portfolio landlords away from thinking that charging the most in rents is the best way to secure their financial return.

From a design perspective, it demonstrates the contribution of service design to not only reducing barriers to accessibility but more importantly crafting alignments in complex interplays of power and balances of demand and supply.

It is still too early to measure the success of such model. It does however highlight opportunities for both service design and public policy making and practice to learn from each other. In the case of private rented market and rent controls, the design proposition discussed here does demonstrate a potentially effective approach for policy design which tackles the problem from a user/demand centred perspective while at the same time exploring the potentiality of different policy mechanism for effective action.

In bridging approaches which move away from bottom -up and top-down distinctions, it also demonstrates the potential of new approaches to governance, where open data plays a fundamental role in achieving social good. The case suggests alternatives to policy implementation instruments of direct taxation, regulation and subsidy and points to how solutions as these might support more collaborative and diffuse practices in policy delivery.

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