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Abstract

In recent years there has been growing emphasis on the need to develop ways of capturing 'complexity' in the evaluation of health initiatives in order to produce better evidence about 'how' and under what conditions such interventions work. Used alone, conventional methods of evaluation, that attempt to reduce intervention processes and outcomes to a small number of discrete and finite variables, are typically not well suited to this task. Among the research community there have been increasing calls to take more seriously qualitative methods as an alternative or complementary approach to intervention evaluation. Ethnography has been identified as being particularly well suited to the purpose of capturing the full messiness that ensues when health interventions are introduced into complex settings (or systems). In this paper we reflect on our experience of taking a long term multi-site, multi team, ethnographic approach to capture complex, dynamic system processes in the first phase of an evaluation of a major areabased community empowerment initiative being rolled out in 150 neighbourhoods in England. We consider the utility of our approach for capturing the complexity inherent to understanding the changes that ensue when the initiative is delivered into multiple diverse contexts/systems as well as the opportunities and challenges that emerge in the research process.

Complexity in the evaluation of health interventions

In recent years, there has been growing emphasis on the need to consider 'complexity' in the evaluation of health interventions in order to improve and better understand intervention effectiveness and indeed failure. This 'turn to the complex' (Cohn et al 2013) is reflected in efforts to define and establish guidance on evaluating 'complex interventions' - that is interventions that typically comprise 'several interacting components' (Campbell et al 2000, Craig et al. 2008). Evaluators have often been concerned with making better sense of these multiple interacting components, focussing, for example, on identifying particular 'active ingredients' or understanding how different components combine to produce intervention effects. Such approaches, however, frequently reduce complexity to interventions themselves and the interaction between their constituent parts (Hawe, Shiell and Riley, 2009). Others have rather sought to consider complexity beyond the intervention itself, orienting attention toward generating understanding of how specific contextual conditions work to activate (or trigger) the change mechanisms embedded within interventions (Moore et al. 2015, Pawson and Tilley 1997). Such analysis, it is postulated, has greater potential for informing if and how initiatives can successfully be replicated elsewhere and under what conditions. Yet, empirical accounts following this vein frequently tend to conceptualise context as something external to the intervention, facilitating or constraining outcomes in a one directional relationship, and often fail to capture the full messiness and dynamic nature of intervention effects (Barnes, Matka and Sullivan 2003). This separation between intervention and context is necessarily artificial and the relationship between the two can be considered as being much more blurred (Shoveller et al 2015). In order to understand 'how' interventions prompt changes in complex social settings, context and intervention can be better understood as two interdependent elements of the same system; coexisting, interacting and adapting over time (Hawe 2015, Durie and Wyatt 2013). Indeed, in many instances it may, for example, beelements of the context itself that may become changed as a result of the introduction of and intervention into a given setting or system (Orton et al. 2016).

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Reflecting this emphasis, evaluators are increasingly coming to employ the conceptual tools and language offered by 'complexity science' to interpret and articulate the full messiness that ensues when interventions are introduced into complex settings (or systems), such as communities, schools or health care systems, that may be characterised by constantly shifting social, economic and political processes (Hawe 2015, Orton *et al.* 2016). Following Brainard and Hunter (2016) we use the term 'complexity science' as an umbrella term for a number of closely related theoretical perspectives including systems thinking; systems approaches; and complexity theory. Such approaches already assume complexity of social setting, not just the

1 intervention itself, and offer a useful way of conceptualising how intervention change takes 2

place. In evaluation terms, rather than viewing initiatives as external to the contexts in which

they are introduced, approaches drawing on complexity science conceive of health interventions

as 'events' occurring within 'complex adaptive systems' (Hawe et al. 2009, Hawe 2015).

5 'Complex adaptive systems' (CAS) are conceptualised as 'open' and dynamic, comprising of

any number of interacting components and processes that are emergent, self-organising and

unpredictable often operating in non-linear ways, making chains of causality hard to follow.

8 Integral to this perspective is the recognition that alteration in one part may provoke change

9 throughout the system and that the effects of such alteration may be amplified and dampened

by system conditions. In terms of evaluation, a complexity science approach places emphasis

on tracking over time the dynamic system events, interactions and changes that stem from the

disruption of introducing an intervention into a given setting to generate a better sense of how

and under what system conditions interventions will have the best outcomes (Petticrew 2015,

Hawe 2015, Orton, Halliday et al 2016).

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Using ethnography in evaluation to understand complexity

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Used alone, standard methods of evaluation, such as Randomised Controlled Trials (RCTs), that typically attempt to reduce complex intervention processes to a finite number of discrete mediating and outcome variables, are unsuited to fully capturing systems complexity (Agar 2004, Diez Roux 2011, Cohn et al. 2013, Pawson 2013). Alongside developments in novel quantitative techniques such as social network analysis and systems dynamic modelling, there have been increasing calls among the research community to take more seriously in-depth qualitative methods as an alternative or complementary approach to the evaluation of health and social initiatives (Bonnell et al. 2012, Cohn et al 2013, Durie and Wyatt 2013, Woolcock 2013, Orton, Halliday et al 2016).

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Ethnography has been identified by some as being particularly well suited to the purpose of capturing systems complexity in intervention evaluation in part because of a promise of 'holism' (Agar 2004, Reynolds 2016, Bikker et al 2017). Yet among anthropologists, following the 'crisis in representation' (Clifford and Marcus 1986) the notion that ethnography can generate holistic insights has been widely disputed. It is now broadly accepted that ethnographic accounts will always only ever be partial and incomplete and what is 'knowable' about a population, place or practice under study is shaped by the social location of particular researchers or groups of researchers who are grounded within concrete cultural settings (Stanley 1990). This shift in

thinking about the nature of ethnography has been underscored by broader developments in the conduct of contemporary ethnographic inquiry (some of which are discussed in more detail below) that does not necessarily resemble the classic vision of the lone ranger, embedded for extended periods of time in the field with the aim of capturing and explicating 'a complete culture'. The idea that holistic explanation is unattainable aligns well with the thinking of complexity science, which asserts that complex adaptive systems can never be fully known (Cohen *et al* 2013). This is in part based on the understanding that social systems are shaped by human agency and are therefore never 'closed' but subject to ever-present emergence – that is ongoing, often unplanned and unpredictable change (Dalkin *et al* 2015).

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The utility of ethnography for understanding complexity in intervention evaluation lies, we would argue, not in the certainty of holistic explanation, but in the methodological privileging of immersion in the field often (but not always) over an extended period of time (Lewis and Russell 2011). This brings with it a commitment to the generation of rich contextual data and identifying and tracking the intricate processes and relationships through which 'particular events, practices and things' interact and take shape and become meaningful and important within a given context (Hastrup 2004). These deeper meanings are usually revealed through multiple observations over a period of time, although some contemporary ethnography may focus on engagement with more ephemeral events via the accounts of key informants with whom they have built up trust and rapport (Paulsen 2009). The express aim of ethnography nevertheless is to build complicated pictures of patterns of many interacting things (Agar 2004). This entails a detailed study of the interaction between social action, representation, organisation and meaning (Atkinson 2004). Rather than attempting to 'unravel' complexity (i.e. reduce processes to measurable variables) the aim with ethnography is to represent the full messiness of constantly evolving dynamic system processes. For Agar (2004) this is the missing part of conventional science, but the whole point of ethnography. As such embedded within ethnographic logic (Agar 2004) is a level of closeness and attention to picturing interconnection that is particularly appropriate for capturing the dynamic and constantly emerging processes and objects that not only interact with each other, but come to be defined by those interactions. Indeed, it is one of the central contentions of this paper that ethnographically grounded approaches to intervention evaluation have a certain utility for elucidating processes of emergence that can enrich our understanding of how interventions take shape in different contexts.

Not only does ethnography inherently entail the study of complexity but ethnography itself can be understood as a complex (and adaptive) system/process of which we, as researchers, are inevitably a part (Agar 2004, Cohen *et al* 2013). It begins with comparative disorder (shifts and changes in focus) and may end up with conclusions that were not expected at the beginning (or even throughout fieldwork). The methodology itself is characterised by emergence as we learn how to ask questions in new ways and of new people and we discover new questions that we didn't anticipate when we started. Methods evolve as local information about how to do a study accumulates. One insight often leads to another unexpected insight. In other words there is also non-linearity in the research process itself (as well as the phenomena we study). Flexibility and creativity to adapt to the unknown is key to the revelation of knowledge about systems complexity. In terms of the evaluation of social and health interventions, ethnography allows for the identification of emergent happenings - events, experiences and processes – flowing from intervention implementation and the research process itself that are otherwise liable to be left out of more traditional evaluative accounts.

Multi-site and multi-team ethnography

While in the above section we have outlined the value in general of ethnography for capturing complexity in intervention evaluation, for the purposes of this paper, it is useful to elaborate briefly on the use of two particular approaches to ethnographic study and the additional methodological insights they offer for the study of complexity. As we have already touched on above, contemporary ethnography rarely resembles the image of the lone ranger embedded within the field for extended periods of time and since the 1980s 'multi-site' ethnography has been recognised as one of several distinct methodological advancements in anthropology (Marcus 1995, Hannerz 2003). Rather than understanding phenomena within a particular bounded frame, multi-site ethnography usually seeks to track particular phenomena; relationships or events that are perceived to be continuous but spatially non-contiguous (Falzon 2009) within and across a number of sites that exist within and in relationships with the wider 'world system' (Marcus 1995). As Hannerz (2003) points out what multi-site studies tend to have in common is that they 'draw on some phenomenon or topic, which is significantly local, [but] not confined within some single place' (Hannerz 2006 p.204). For Hannerz, multi-site ethnography can be distinguished from a more conventional comparative ethnographic study of single localities and as such places

emphasis on linkages that flow across sites, for example, between a world-wide 'community' of foreign correspondents or a geographically dispersed group of professionals.

In this paper, however, we use the term 'multi-site' somewhat differently, and perhaps more simply, to describe the multiple locations where fieldwork took place. Although the approach used in our study adopts some of the characteristics of traditional multi-site ethnography by, for example, identifying particular lines of inquiry to follow in each site (see methods section below), our aim was not to track linkages (people, events) across and between sites. Each site is considered to be relatively bounded, but experiencing similar events in that each has had the same highly adaptable intervention introduced to the setting. The inclusion of a diverse set of field sites within the sample was primarily aimed at generating data about how and why the intervention under study embedded and prompted change differently within different types of system. Our intention though was not to produce a series of individual ethnographic cases for comparison (although comparison between sites inevitably took place during the analytic process), but to build up a set of general (and potentially transferable) but sufficiently detailed propositions about broad system changes that could be used to describe 'how' and 'why' the intervention might work and progress differently under different system conditions.

Team ethnography (and team research in general) has also become an increasingly common trend, not least in response to increasing pressures on academics to develop ever more collaborative projects which are multi-disciplinary, multi-institutional and frequently multi-national. The advantages of such approaches perhaps seem obvious in terms of efficiency and the production of better quality evidence to address increasingly complex research questions. As Mauthner and Doucet (2008) point out, the epistemological imperatives for collaborative team approaches in academia appear self-evident. With a larger and more dispersed team there are greater opportunities to reach geographically spread sites; to divide workload; and to allocate research problems to those best skilled to tackle them. Team composition and the way in which collaboration is managed is important to realising the benefits of such an approach, however, and both multi-site and multi ream research require considerable resources to co-ordinate. Although accounts of the challenges of carrying out team ethnography have become more common in recent years (Mautner and Doucet 2008), few reflect on the processes of carrying out team ethnography where researchers are located within different field sites. Fewer still comment on the use of such approaches particularly for the purposes of evaluation (with some exceptions, for example, Bikker et al 2017; Jarzabkowski, Bednarek and Cabantous 2014).

In this paper we reflect on our own experience of taking a long term multi-site, multi team, ethnographic approach to capturing complex, dynamic system processes, specifically in the emergence of capabilities for "collective control" among the residents of relatively disadvantaged neighbourhoods. The research involved an evaluation of a major area-based community empowerment initiative being rolled out in 150 neighbourhoods in England. Despite growing interest in the role of ethnography for unveiling complexity in intervention evaluation empirical accounts of the application of ethnographic approaches in such studies, particularly those that also incorporate multi-site, multi-team elements, remain scarce (Orton et al 2016). By describing some of the key findings from the first phase of our study and reflecting on the practice of conducting multi-site, multi-team ethnography, we consider the utility of our approach for capturing the complexity inherent to understanding the changes that ensue when an empowerment initiative is delivered into multiple diverse contexts/systems, as well as the opportunities and challenges that emerged during in the research process. We first provide some background on the initiative under study and our methods of data generation and analysis.

The Big Local Initiative

Big Local (BL) a major area based initiative in England. Funded by the Big Lottery and managed by a charitable trust, Local Trust, residents of 150 relatively disadvantaged geographical areas in England have been allocated over £1 million each for a period of 10 years or more to support them in making their neighbourhood a better place to live. The funding is accompanied by a range of support from Local Trust and other national organisations they commission. A core principle underpinning the initiative is that decisions over how to use the money are put directly into the hands of local residents through the formation of a resident led 'Big Local Partnership'. There is no formal requirement for residents to engage with local government structures or public sector organisations. Local partnerships are, however, encouraged to collaborate and network with professionals and other organisations in order to achieve local priorities or deliver activities in their plans (Local Trust 2015). This distinguishes BL from many similar initiatives aiming to involve residents in decision making about their neighbourhoods that often only involve resident consultation on local priorities and where the money remains in the hands of local councils or other community and voluntary organisations (see for example Lawless 2012, Lawson and Kearns 2014). Although BL is not explicitly described as a health intervention, by giving residents

- 1 greater control over decisions that affect their neighbourhoods the initiative has the potential to
- 2 impact on social, psychosocial and environmental determinants of health (Popay 2010,
- 3 Whitehead et al 2016).

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While BL operates within a shared framework that flows from involving local people, forming a partnership led by residents, developing a neighbourhood plan, implementing the plan and reviewing it over time; BL is subject to much local adaption as areas use or spend their funding to meet locally derived priorities. Thus while there is consistency of overall function (the fundamental principles of the initiative) across different locations, there may be great variation in the form the programme takes locally (Hawe, Shiell and Riley 2004). As a social initiative - that is introduced into complex 'open' community settings (or systems) and where the aim is to enable residents to take action in support of neighborhood improvements (i.e. not to do what interventionists tell them) - BL entails great complexity. The dimensions of individual local area systems including its demography (population size, ethnic diversity) geography (area boundaries, population density, green/blue space), economy (material resources, local economy, employment 15 rates) and - importantly - the social relationships in place (local decision making structures, level of community organisation, existence and role of public and third sector organisations) will shape 17 the kinds of system shifts the intervention prompts. The level of control afforded to residents in driving local action arguably makes these processes unusually unpredictable and hard to track. Within each local area system, a multitude of pathways and feedback loops may be triggered by the BL initiative, which may result in both positive and negative neighbourhood effects. potential for such diversity within each neighbourhood presents great challenges to the way we evaluate BL and generate general theoretical propositions about how the intervention works (or fails to) in different settings.

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The Communities in Control evaluation study

Study aims

The Communities in Control (CiC) study is an ongoing independent longitudinal mixed methods multi-site, multi team evaluation of the BL initiative and its impact on health inequalities and their social determinants. Within the public health literature, there is growing recognition of the role of 'collective control' as a key mechanism for improving health and reducing inequalities (Wallerstein 2002, Wallerstein 2006, Popay 2010, Marmot 2010, PHE and NHS England 2015, Whitehead et al. 2016). Our research seeks to contribute to the limited evidence base on whether and if so how

- 1 community empowerment initiatives work to improve health and reduce health inequalities (Popay
- 2 et al. 2007), and the pathways through which such improvements may take shape.
 - The study is being carried out by five multi-disciplinary research teams who are all members of the NIHR funded School of Public Health Research. The data and methodological reflections described in this paper are based on the qualitative element of the study that was carried out across ten sites in the first phase of the research between March 2014 and November 2015. This element of the study involved a team of fifteen researchers each at various stages in their research careers and with disciplinary backgrounds in anthropology, sociology, history, psychology and public health. The overall objective of this component of the study was to capture the events that flowed from the introduction of the BL initiative in each individual system under study, creating 'thick description' of how the initiative was unfolding 'on the ground' and if and how it might lead to any changes in the capabilities for collective control amongst residents of BL neighbourhoods. As already indicated, our aim was not to produce a series of individual ethnographies, but to produce one large corpus of data with greater purchase for understanding the broader kinds of (system) changes emergent as BL embedded within our field-sites.

16 Data generation

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Fieldwork was conducted by five teams (one involving collaboration between two universities, one a collaboration between five universities, and three further single institution teams) in 10 disparate geographical areas that were already involved in the BL initiative. Areas were selected for the study to reflect diversity in local context and to include those at different stages of the BL framework (described above). The decision to involve a number of research teams from across the country allowed us to include in the study a diverse range of geographically dispersed fieldsites, with each research team taking responsibility for carrying out all fieldwork in the research site that was closest in proximity to them. The sample of ten sites included seaside, urban innercity and outer city areas in the North and South of England. Methods of data collection included a rapid review of documents describing the social and economic history of field sites; transect walks around the local areas accompanied by residents; informal conversations; and in-depth qualitative interviews with residents and other stakeholders; regular observation of relevant meetings of BL resident-led partnerships and other groups and events; and documentary analysis of meeting minutes, locally commissioned research reports and policies and protocols developed as part of the BL initiative. In some sites participatory group activities were also carried out, which involved participants mapping local neighbourhood histories; places of importance; and their BL

journeys so far. Fieldwork involved repeated researcher visits to each field site, by the same members of the research team responsible for data collection in that site.

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To ensure some consistency of data generation across sites a tool kit of standard interview topic guides and templates for capturing information during transect walks, informal conversations and observations at meetings and events, and to extract details from documents were created collaboratively by the whole cross site team. This process was led by two senior researchers from one of the research teams who had additional responsibility for managing and coordinating fieldwork across all ten field sites. Opportunities for other researchers to feed into the development of these materials were provided. While each individual researcher often made their own free-flowing notes to help them make sense of what happening in their own sites, the templates helped ensure that data collection followed similar lines of inquiry in each site to aid later comparison and aggregation of data. Templates were structured around themes pertinent to our aim for this phase of the study: to develop 'thick description' of how BL was embedding in local field sites and if and how it was contributing to changes in residents capabilities for collective control. Our focus was on capturing the characteristics of local field sites their histories, relationships in place and assets and any signs of whether and if so how these were becoming altered by the introduction of BL. Field notes were, therefore, written for an audience, rather than as 'aide memoirs' for individual researchers as in traditional ethnography. This, like in Scales et al's (2011) research, encouraged us to keep 'making the familiar strange' throughout the data collection process and not to take shortcuts in our observations and reflections so our field notes could be interpreted by other cross site team members who did not have a comparable level of familiarity with our particular field sites. As described in more detail below, such processes allowed for data generated across the 10 sites, by the different research teams, to be shared and understood among the study team from an early stage in the fieldwork process. Procedures for gaining informed consent in each field site and disseminating findings publicly including to research participants were also agreed collaboratively by the team and integrated into the tool kit that ultimately constituted the agreed principles and terms of engagement for the whole team.

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Our approach to the ethnographic method, therefore, resembles much contemporary ethnography involving shorter stints of fieldwork, more focused research activity, multiple field sites and researcher collaboration, than in conventional ethnography (Marcus 2008, Reynolds

2016), but with a commitment to long-term, immersion within a field and developing a sense of 'being there' through observations, encounters and conversations (Lewis and Russell 2011).

Data analysis

The five teams, working across 10 sites, produced a large volume of research data, including: 138 interviews with residents and other stakeholders; 18 participatory group activities and around 440 hours of observation. A comparative narrative synthesis was conducted across fieldwork sites and methods. Nvivo version 10 was used to store and manage cross site data and an initial coding frame was developed accross the research teams to help organise data and identify intitial themes. Cross-case analysis was initiated through the sharing of data and early analytic interpretations via email and a through a series of regular face-to-face data analysis workshops involving all team members where early findings were presented by each of the five research teams as a way of identifying patterns and relationships across the data set. Analysis then continued in smaller working groups focussed around particular themes identified in the early phase of analysis. Led by one researcher from each of the five research teams and involving at least one researcher from each of the other teams to maintain detailed and tacit contextual knowledge about each individual site these working groups continued focussed analysis through a combination of data tabulation and narrative techniques until an 'overall story' to describe their findings had emerged (Popay et al., 2006). This involved an iterative process of review and refinement between working group members until consensus was reached about a set of general theoretical propositions in relation to the cross site data (Yin, 2009).

One of the core challenges of bringing the data together across sites was in relation to balancing attention to what was happening locally (at each individual site) versus delivering an "overall story" about the initiative and the kinds of changes it was engendering. By identifying and exploring commonalities and divergences in common "processes", for example in relation to changing social relationships, structures, group efficacy and connections with external organisations, across our field sites we aimed to develop an understanding of broad system changes applicable to the development of resident capability for collective control across sites, while maintaining attention to individual context. Taking this approach, we aimed to build up a picture of the core processes that were engendered by the initiative and the diversity of ways in which they might be shaped in each system. While we wanted to maintain some of the complexity and specificity of what was happening in individual sites, the aim was to explore common processes that were occurring in each site (or system) albeit perhaps in quite different ways.

Using empirical data from the study, we now reflect on how multi-site, multi-team ethnography enabled us to build up a general theory of the way in which BL might bring about changes in residents capabilities for collective control and the kind of system conditions that might influence these developments. We also reflect briefly on some of the opportunities and challenges we encountered as a team.

Capturing systems complexity in the evaluation of BL

As already indicated, one of the central aims of this phase of our study was to understand how BL might prompt changes in capabilities for 'collective control' among residents where the initiative was implemented. A focus on how these capabilities were taking shape was the subject of some of the smaller group analyses described above. Through repeated observation and encounters in the field, individual researcher teams were slowly able to build up a picture of the ways in which the BL initiative was impacting on development of capabilities for collective control amongst residents in these neighbourhoods. Through the sharing and interrogation of structured field notes from each site and regular ongoing team discussion, we were able to identify within the data set a number of common shifts in the emergence of these capabilities that were occurring to different extents across our field sites.

Employing constructs drawn from the empowerment literature (Rowlands 1997, Kim 2007) we categorised these shifts in capabilities for and the exercise of collective control as occurring within the domains of 'power within', 'power with' and 'power to'. Our Power Framework is discussed in detail elsewhere (forthcoming). In this paper we consider how bringing data together from across the teams enabled us to identify the kinds of system conditions and structures that might influence the development of collective control capabilities in each site. These are described in more detail in **Box 1.** Focussing specifically on 'power within' - the development of internal communal characteristics such as collective identity group efficacy and 'know how' – we also reflect on how our data enabled us to identify important, yet subtle, ebbs and flows in the emergence of the capabilities for collective control demonstrating how such processes were emergent, occurring in non-linear ways over lengthy periods of time. **Box 2.**

Box 1: understanding system influences

Levels of social cohesion

Whilst it is understandable that BL funding is allocated to specific geographical areas this means the initiative defines the social as well as the physical boundaries for action. Sometimes these boundaries were contiguous with pre-existing social groupings that 'made sense' to local residents (a housing estate, for example). At other times - particularly in the larger BL areas – the initiative brought together previously unconnected social groupings (several villages for example, or estates separated by a major road).

Our research suggests that the pre-existing 'cohesiveness" of groups within BL areas (whether they had a shared sense of place, a shared history, previous experience of collective action) greatly influenced the speed at which residents engaged with one another, developed a shared plan and brought about change in their area.

Pre-existing organisational and decision making structures

Looking across our field sites we were able to understand how BL came to be positioned within pre-existing organisations and decision making structures. In areas with pre-existing community organisations and activism BL Partnerships often embedded and operated through established networks between a wide range of local stakeholders. In area FA3, for example, the BL initiative initially became embedded within a pre-existing community partnership which was eventually transformed into the BL Partnership. Already established productive working relationships were harnessed and BL activity became increasingly embedded within local council structures, enabling the resident led partnership to work towards common goals with the council. In contrast, areas where three were few pre-existing links between organisations, or where residents did not view these relationships positively developing relationships with others could take more time.

A common observation across all sites was that pre-existing social relationships between residents and between residents and other organisations played an important role in determining the networks through which BL was acting and the direction and speed at which these networks were developing.

Past experience and collective memory shape the emergences of capabilities for collective control amongst residents

Shared memories of previous placed based initiatives impacted on trust, speeding up or slowing down the processes through which BL impacted on capabilities for collective action amongst residents. In areas where residents had difficult past experiences and negative attitudes towards, external agencies they were reluctant to engage with them.

In contrast, where past experiences were more positive, multiple interactions were developing with local agencies in the public, private and/or third sector, which could work to maximise actions on issues prioritised in the BL plan. As one resident described:

I have had a separate conversation about the idea of linking up all of the organisations together and having a conversation with public health [department in the Local Authority] across the whole of the area about potential joint funding and you know larger scale projects. (Fieldwork Area 5–Interview–Partnership Member-4)

Non-resident stakeholders were often seen to bring extra skills/powers/leverage as well as benefits arising from joining with others to achieve common goals. Residents' expectation that the behaviours of other organisations matched their ethos and priorities was an important driver of these interactions. Shared memories of previous placed-based initiatives also shaped expectations of what could be achieved by BL. In some areas, an apparently slow pace of change brought back negative memories leading to demotivation, people dropping out or worries about the wider public perceptions of the ability of the BL partnership to bring about change. We witnessed the continuation of these processes as new, shared memories were created through the recounting of stories, both celebratory and cautionary, which had a role in moving residents forward.

Adapted from Orton, Halliday et al (2016).

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As the excerpts in **Box 1**, above, illustrate, the processes whereby the Big Local intervention was able to impact on capabilities for collective control amongst residents were permeated by characteristics of the system that shaped the potential for these changes to come about in each setting. Aspects of pre-existing social context - including common identity, shared memories/past

experiences of working together and with others, pre-existing social networks and structures -

influenced how the kinds of changes that the BL initiative brought about. The creation of a collective (of local residents), the identification of shared priorities, how residents were able to engage with each other and other local organisations, including local councils and community and voluntary organisations to begin to identify and ultimately work towards common goals were to different extents influenced by these elements of the setting. Across our sites we could see how local differences impacted on system dynamics. In particular, we were able to explore the ways in which local residents were/or were not able to come together with each other and with others-to develop capabilities for collective action.

Our examination and discussion of cross site processes also sensitised the research team to the potential for the development of capabilities for collective control to progress at different speeds and in different ways over time, rather than to build in a straight forward linear way. It was by examining the different narratives emanating from each site we could fully comprehend the fragility of these developmental processes, which could be compromised by tension and conflict within and beyond BL partnerships that were often inextricably tied to the social conditions and histories of the area described in **Box 1**. In **Box 2** we describe some of the ways in which we identified how the development of capabilities for collective control ebbed and flowed within our field sites.

Box 2: Capturing ebb and flow in the development of capabilities for collective control: the example of "power within'

As already noted 'Power within' pertains to capabilities internal to a community – to the collective identity, collective efficacy and 'know how' that provide the drive, knowledge and skills necessary for communities of interest or place to act collectively to change things or to influence others. Our data indicated that on some occasions negative experiences with 'more powerful' organisations could dampen the collective confidence of residents in their ability to make changes in their neighbourhood. In one field site, with strong community organisations and history of community activism, for example, the recruitment of an out of work surveyor to the BL Partnership resulted in a strong sense of confidence about the ability of the group to establish a new community hub. Plans were drawn up and initial support from the local Council seemed promising. Partnership members appeared positive and enthusiastic about progress towards their goal. They struggled, however, to acquire land from a local housing association on which to build, and felt both the housing

association and the local Council were evading them. Many participants linked this action to perceived longer term neglect of the area by, and fractious relationship with, the local Council. For some participants these challenges resulted in a loss in their sense of group efficacy and worked to instill a sense of powerlessness in relation to making change in their own neighbourhoods. As one participant described:

"Yeah, yeah, I mean if it could get off the ground then, yes, it could, could give local people the incentive to, to really get their act together to say, this is what we want to do. This is how we want to do it. Not, this is what you're going to do and this is how you're going to do it...but at the moment that's not going to happen...It could happen if the main people who give you the, the ability to do it would allow you to do it. But at the moment there is a, that brick wall going, you're not going to do it. And until that comes down or something happens they're not going to allow you to do it." [Fieldwork Area 6-Interview-Partnership Member-5]

For others, this challenge resulted in a shift in priorities from a focus on a new building for a hub to providing services out of existing council or housing association owned buildings. Over time the group were able to re-build confidence in their ability to achieve their goals through a re-focus on new priorities where they were able to make greater progress. Their confidence and willingness to work with the council going forward, however, remained severely compromised.

In summary, our long term multi-site, multi team ethnographic approach enabled us to build up a broad picture of how the introduction of BL might prompt changes in resident capabilities for collective control through shifts in neighbourhood social relations and organisation structures; the extent of these shifts might be influenced by the characteristics of different neighbourhood (system) characteristics; and the emergent and dynamic nature of such system changes. Through both an 'up close' ethnographic engagement with what was happening in relation to emergent capabilities for collective control in each of the BL areas while at the same time taking a broader perspective by looking across multiple field sites we were able to build up an empirically informed theory about how the initiative might lead to increased capabilities for and the exercise of control among residents and how these changes might be promoted in different settings. The longitudinal aspect of the study proved invaluable in enabling us to track and capture the temporal

nature of changes in capabilities for collective control that were emergent, not always in a linear fashion.

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Crucially, it was through the collaborative analytic process where we were able to build up a fuller sense of the broad whole system changes BL as an initiative might trigger and where the value of the multi-site, multi-team approach really came to the fore. While the pooling of data added to the breadth and depth of our understanding, regular team discussion also worked as an analytic and reflexive tool that forced individual researchers to think more deeply and critically about their individual data and interpretations of 'what was happening' in their own field sites in light of the interpretations of others in the wider team. These collective processes took place in what Wasser and Bressler (1996 p.6) refer to as the 'interpretive zone', defined as 'the place where multiple viewpoints are held in dynamic tension as a group seeks to make sense of fieldwork issues and meanings'. Developing a sense of trust and a 'safe space' where open discussion could take place was critical to this process and was facilitated by regular face to face meetings and social gatherings involving team members at all levels where researchers could get to know one another. Interpretive discussions were inevitably shaped by and inflected with the diverse backgrounds of researchers involved in the project at different stages of career who each brought a different set of identities, experiences, beliefs and theoretical knowledge to bear in the interpretative zone. From this diversity of background and interpretation the team had to derive new, often more nuanced, collective understandings through discussion and debate (Scales et al. 2011).

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It was nevertheless also important to remain alert to the risk of arriving at consensus and a shared story too early, unduly privileging particular accounts and obscuring options for multiple and expansive interpretations. When and how to open-up and foreclose data interpretation, therefore, required careful consideration. It was here that the guidance of more senior and experienced academics on the team became particularly useful.

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Although our aim had always been to ensure the involvement of all team members in the analysis process, it was often the role of a single researcher, - especially those who were closest to the data - to take responsibility for the challenge of textually 'putting together' the accounts of multiple researchers following discussion and creating an overall narrative about the findings (Mautnher and Doucet 2008). While this may have run the risk of reducing collaborative analysis to a more 'top-down' or 'solo' approach, individual researchers were engaged in ongoing basis in the final

descriptions of the findings, adding additional thoughts and contextual and tacit knowledge where appropriate. This synergistic approach, we would argue, enabled us to arrive at a fuller and more rigorous, yet not complete, interpretation of 'how' the BL initiative might work to enhance collective control in different settings.

Understanding complexity: What can multi-site, multi-team ethnography offer?

So, for evaluation, what can multi-site, multi team ethnography add to understand complexity in social initiatives like BL? Did it produce 'better' evidence about the initiative?

The multi-site approach met our aim of developing understanding of the broad system changes (common processes and mechanisms) that BL might bring about by looking across sites and also added understanding of the range of ways in which these might be influenced by the constituent parts of the same system. Treating the data not as individual cases but as one large corpus of data gave us much greater purchase for generating transferable insights about how the intervention might work in different settings. The collaborative analytic process enabled the comparative work to build up, interrogate and refine these insights, improving the quality of our interpretation. The use of ethnographic methods employed over a relatively lengthy period of time enabled us to shed light on the ways that the emergence of greater capabilities for and ultimately the exercise of collective control among residents of these neighbourhoods is temporally tied, emergent and subject to ongoing shift in non-linear ways

These are insights that we would argue may have been left out of other accounts that adopt more conventional methods of evaluation. Taking an approach like ours may be particularly useful for evaluating initiatives over the longer term where change does not necessarily 'happen' in linear or predictable ways. For evaluation, insights such as these might help us to understand what changes to expect in what circumstances; why things might not be moving in the expected direction; and at which points within the system to intervene and direct resources to support desired change.

A number of challenges remain, however. Within ethnography, we know that holistic representation is impossible: our accounts will always partial and selective, and unknowns will always remain. Even though our approach enabled us to uncover subtle non-linear processes of change unfolding and shifting over a period of time, there were limits on how far we could track these system dynamics. We were only able to produce situated accounts for understanding

unpredictable dynamics and longer term trajectories that depend on national and global as well as local processes. Our research necessarily can only provide a (perhaps more extended than usual) snapshot of ongoing dynamic processes unfolding over the longer term.

There is a remains a tension in multi-site multi-team ethnography in balancing attention to the particularities of each individual site and taking advantage of the inerrant felxibility that ethnography allows for this (particularly in terms of capturing systems complexity) whilst also producing data that are comparable across sites and teams (through the use of common observation templates, for example). One of the benefits of our multi-site multi-team approach, however, helped to address this. Critical reflection on our data collection tools was facilitated through long term engagement with our field sites and through team reflexive sessions that were built-in to our approach from day 1. By coming together and sharing research experiences and emergent findings from across field sites we were able to adapt the research tools as time went on so they were more suited to capturing the data we were coming to learn was important to our understanding of BL and how it was embedding in different local field site and use this data to expand our overall interpretations

In conclusion, we suggest that our work shows practically how multi-site, multi-team ethnography can help capture complexity of emergent system dynamics - that ensue in the implementation of public health initiatives in to complex community settings. Identifying such processes is crucial to understanding 'how' interventions prompt change within a system and enabling the transferability of successful interventions into other settings.

References

Agar, M. (2004). We have met the other side and they are all nonlinear: ethnography as a nonlinear dynamic system. Complexity. 10(2):16-24

Atkinson, P. (2007). Contours of culture: complex ethnography and the ethnography of complexity. New York: AltaMira Press.

- Barnes, M., Matka, E, and Sullivan, H. (2003) Evidence, understanding and complexity:
- Evaluation in non-linear systems. Evaluation, 9: 265-284.

- Bikker, A.P., Atherton, H., Brant, H., Porqueddu, T., Campbell, JL. Gibson, A., McKinstry, B.,
- Salisbury, C. and Ziebland, S. (2017) Conducting a team-based multi-sited focused ethnography
- in primary care. BMC Medical Research Methodology. 17:139.

- Bonell, C., Fletcher, A., Morton, M., Lorenc, T. and Moore L. (2012). Realist randomised
- controlled trials: a new approach to evaluating complex public health interventions. Soc Sci Med.
- 75(12):2299-306. doi: 10.1016/j.socscimed.2012.08.032.

- 2 Brainard, J. and Hunter, P. (2016) Do complex informed interventions work? A scoping review.
- 3 *Implementation Science*. 11:127. doi: 10.1186/s13012-016-0492-5

- 5 Campbell, M., Fitzpatrick R., Haines A., Kinmonth, AL., Sandercock P., Spiegelhalter D., et al.
- 6 (2000). Framework for design and evaluation of complex interventions to improve health. BMJ.
- 7 321:694

8

- 9 Cohn S, Clinch M, Bunn C, Stronge P. Entangled complexity: why complex intervention are just
- 10 not complicated enough. Journal of Health Services Research & Policy 18 (1), 2013: 40-43.

11 12

- 13 Clifford, J. and Marcus, G. (1986) Writing Culture: The poetics and Politics of Ethnography.
- 14 London: University of California Press.

15

- 16 Craig P., Dieppe P, Macintyre, S., Michie S., Nazareth I., Petticrew M., et al. (2008). Developing
- 17 and evaluating complex interventions: the new Medical Research Council guidance BMJ 337a
- 18 :1655

19

- 20 Creese A, Bhatt A, Bhojani N, Martin P (2008) Fieldnotes in team ethnography: researching
- 21 complementary schools. Qualitative Research 8(2): 197–215

22

- 23 Dalkin, SM. Greenhalgh, J., Jones, D. Cunningham, B. and Lhussier, M. (2015) What is a
- 24 mechanism? Development of a key concept in realist evaluation. *Implementation Science*. 10(49)
- 25 dOI 10.1186/s13012-015-0237-x

26

- 27 Diez Roux, A. V. (2011). Complex systems thinking and current impasses in health disparities
- 28 research. American Journal of Public Health, 101, 1627–1634. doi:10.2105/AJPH.2011.300149

29

- 30 Durie, R., & Wyatt, K. (2013). Connecting communities and complexity: A case study in creating
- 31 the conditions for transformational change. Critical Public Health, 23, 174–187.
- 32 doi:10.1080/09581596.2013.781266.

- 1 Falzon, M. (2009) Introduction: Multi-sited Ethnography: Theory, Praxis and Locality in
- 2 Contemporary Research, in M. Falzon (ed.) *Multi-sited Ethnography: Theory, Praxis and Locality*
- 3 in Contemporary Research. London: Routledge.

- 5 Hannerz, U. (2003) "Being there...and there...and there! Reflections on multi-site ethnography"
- 6 Ethnography 4(2): 201-216

7

- 8 Hastrup KH. Getting it right: Knowledge and evidence in anthropology. Anthropological Theory
- 9 2004;4:455–72.

10

- 11 Hawe, P. (2004) Complex interventions: How 'out of control' can a randomized control trial be?
- 12 *BMJ*. 328:1561. doi: 10.1136/bmj.328.7455.156i

13

- 14 Hawe, P. (2015). Lessons from complex interventions to improve health. *Annual Review of Public*
- 15 *Health*, 36, 307–323. doi:10.1146/annurev-publhealth-031912-114421

16

- Hawe, P., Shiell, A., & Riley, T. (2009). Theorising interventions as events in systems. *American*
- 18 Journal of Community Psychology, 43, 267–276. doi:10.1007/s10464-009-9229-9.
- 19 Jarzabkowski, P., Bednarek, R. & Cabantous, L. (2014). Conducting global team-based
- ethnography: Methodological challenges and practical methods. Human Relations, 66(1), pp. 3-
- 21 33. doi: 10.1177/0018726714535449

22

- 23 Kim, J. (2007). Understanding the impact of a microfinance-based intervention of women's
- 24 empowerment and the reduction of intimate partner violence in South Africa. Research and
- 25 *Practice*, 97(10):1794-1802. doi: 10.2105/AJPH.2006.095521

26

- 27 Lawless, P. (2012) Can area-based regeneration programmes ever work? Evidence from
- 28 England's New Deal for Communities Programme. *Policy Studies*, Vol 33, pp. 313-328.

29

- 30 Lawson, L. and Kearns, A. (2010) 'Community empowerment' in the context of the Glasgow
- 31 housing stock transfer. Urban Studies, 47(7), pp. 1459-1478. doi: 10.1177/0042098009353619.

- 1 Lewis and Russell (2011). Being Embedded: A way forward for ethnographic research
- 2 Ethnography. Vol 12, Issue 3, pp. 398 416. doi: 10.1177/1466138110393786

- 4 Local Trust. "Who's involved in Big Local?" Available at:
- 5 http://localtrust.org.uk/library/programmeguidance/whos-involved-in-big-local/. Accessed
- 6 July 2015.

7

- 8 Marcus, G. (1995) Ethnography in/of the world system: The Emergence of Multi-Sited
- 9 Ethnography. Annu. Rev. Anthropol. 24:95-117

10

- 11 Marcus, G. (2008) The End(s) of Ethnography: Social/Cultural Anthropology's Signature Form
- of Producing Knowledge in Transition. Cultural Anthropology. 23(1): 1–14.

13

- 14 Marmot, M. (2010). Fair Society Healthy Lives: The Marmot Review. London: Institute of Health
- 15 Equity.
- 16 Mautner, N. and Doucet, A. (2008) Knowledge once divided can be hard to put together again:
- 17 An epistemological critique of collaborative team based research practices. Sociology. 42(5): 971-
- 18 985.
- 19 Moore. G.F., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., et al. (2015). Process
- 20 evaluation of complex interventions: Medical Research Council guidance. BMJ. 350 :h1258

21

- 22 Orton L, Halliday E, Collins M, Egan M, Lewis S, Ponsford R, Powell K, Salway S, Townsend A,
- Whitehead M & j Popay (2017). Putting context center stage: evidence from a systems evaluation
- 24 of an area based empowerment initiative in England. Critical Public Health 27; 4.
- 25 doi.org/10.1080/09581596.2016.1250868.

26

- 27 Paulsen, K. (2009) Ethnography of the ephemeral: studying temporary scenes through individual
- and collective approaches. Social Identities: Journal fo the study of race, nation and culture 15(4)
- 29 : 509-524. doi:10.1080/13504630903043865

30

31 Pawson, R. (2013) The science of Evaluation: A Realist Manifesto. London: Sage

32

33 Pawson, R. and Tilley, N. (1997) *Realistic Evaluation*. London: Sage.

- 2 Petticrew, M. (2015). Time to rethink the systematic review catechism? Moving from 'what works'
- 3 to 'what happens'. Systematic Reviews, 4(1), 1–6. doi:10.1186/s13643-015-0027-1

4

- 5 PHE & NHS England. (2015). A guide to community-centred approaches for health and wellbeing.
- 6 London: PHE.

7

- 8 Popay, J. (2010). Community engagement for health improvement, in Morgan A, Barker, R. et.
- 9 al. (Eds). International health and development: Investing in assets of individuals, communities
- 10 and organisations. New York: Springer pp.183-97

11

- 12 Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., ... Duffy, S. (2006).
- 13 Guidance on the conduct of narrative synthesis in systematic reviews. Retrieved from
- 14 http://www.lancaster.ac.uk/shm/research/nssr/research/dissemination/publications.php

15

- Popay, J., Attree, P., Hornby, D., Milton, B., Whitehead, M., French, B., et al. (2007a).
- 17 Community engagement to address the wider social determinants of health: A review of
- 18 evidence. London: National Institute for Health and Clinical Excellence.

19

- 20 Rowlands, J. (1997) Questioning empowerment: working with women in Honduras. Oxford:
- 21 Oxfam. ISBN 9780855983628

22

- 23 Reynolds, J. (2016) Missing out?: Reflections on the positioning of ethnographic research in an
- 24 evaluative framing

25

- 26 Shoveller, J., Viehbeck, S., Di Ruggiero, E., Greyson, D., Thomson, K., & Knight, R. (2015). A
- 27 critical examination of representations of context within research on population health
- 28 interventions. Critical Public Health, 26, 1–14. doi:10.1080/09581596.2015.1117577

29

- 30 Scales, K., Bailey, S. and Lloyd, J. (2011) Separately and together: Reflections on conducting a
- 31 collaborative team ethnography in dementia care. ENQUIRE 6: 24–49.

- 1 Stanley, L. (1990) Feminist Praxis and the Academic Mode of Production', in L. Stanley (ed.)
- 2 Feminist Praxis. London: Routledge.

- 4 Wasser J, and Bressler L (1996). Working the interpretative zone: conceptualizing collaboration
- 5 in qualitative research teams. Educational Researcher 25(5): 5–15

6

- 7 Wallerstein, N. (2002). Empowerment to reduce health disparities Scandinavian Journal of Public
- 8 Health 30 (Suppl59): 72-7. doi: 10.1177/14034948020300031201

9

- 10 Wallerstein, N. (2006). What is the evidence on effectiveness of empowerment to improve health?
- 11 Copenhagen: WHO Regional Office for Europe (Health Evidence Network Report). Available at:
- 12 http://www.euro.who.int/ data/assets/pdf file/0010/74656/E88086.pdf Accessed November
- 13 2016

14

- Whitehead, M., Pennington, A., Orton, L., Nayak, S., Petticrew, M., Sowden, A., & White, M.
- 16 (2016). How could differences in 'control over destiny' lead to socio-economic inequalities in
- 17 health? A synthesis of theories and pathways in the living environment. Health and Place, 39:51-
- 18 61. http://dx.doi.org/10.1016/j.healthplace.2016.02.002

19

- Woolcock, M. (2013) Using case studies to explore the external validity of 'complex' development
- 21 interventions. 19(3): 229-248

22

23 Yin, R. K. (2009). Case study research: Design and methods (4th ed.). London: Sage.

2425