CS

Citizen social science and citizen data? Methodological and ethical challenges for social research

$SAGE

Kingsley Purdam
University of Manchester, UK

Abstract
This article examines the value of observation data collected by volunteers as they go about their daily activities. Many citizens are already creating digital data archives of their own lives through online activity including via social media communication. Citizens now have the potential to be the default fieldworkers of their own lives. This can be extended to examine the value of citizens systematically collecting data on the world around them for social science research. This pilot observation study required volunteers to follow a protocol and record the number of people seen begging. The study produced important findings on begging which informed a larger research project. However, challenging methodological and ethical issues are raised concerning the observation of public life. Even so, it is clear there is potential for what can be termed 'citizen social science', including continuous data collection where volunteers collaborate in social science research and observe and record data as they go about their daily lives. This approach to the way evidence can be collected and integrated into research has implications for the interfaces between being a citizen, knowledge processes and the state and presents an opportunity for a renewed idea of emancipatory social science.

Corresponding author:
Kingsley Purdam, Cathie Marsh Centre for Census and Survey Research, Social Statistics, University of Manchester, Manchester, M13 9PL, UK.
Email: kingsley.purdam@manchester.ac.uk

Introduction: Fieldworkers of our own lives and communities?

The focus of this article is on the extent to which volunteers can be involved in collecting data about what they see around them as they go about their usual daily activities. This approach, where volunteers collaborate in a formal social research project, can be termed 'citizen social science'. The role is different to simply volunteering to participate in a research study such as giving an interview, joining a focus group or responding to a survey, as it is about citizens gathering data about the world they observe around them. In many ways this is a development of the wider field of 'citizen science' where volunteers contribute to science research such as, for example, environmental monitoring.

A pilot case study was conducted which involved recruiting volunteers and asking them to follow a protocol and a set of instructions to collate and report back what they observed whilst they went about their usual activities. The specific focus was on street begging in central London in the UK. The volunteers were given an information briefing and research protocol but they were not formally trained social scientists.

In terms of mobilising citizens to be observers for social science research it is clear many people are increasingly creating digital data from their own daily activities and communications, such as, for example, through online searching and purchasing records, through blogs, Facebook and Twitter communications (Boyd and Crawford, 2012; O'Reilly, 2011). The reality and scale of the so-called big data revolution is that data are now something that we are becoming embedded in. Citizens are generators of, but also generated in, the data environment (Elliot at al., 2013). A large part of the data is collected and controlled by state and commercial organisations (Mayor-Schonberger and Cukier, 2013). At the same time, it is citizens themselves who are generating these data including, as we discuss below, documenting their own lives in detail.

Can these data developments be harnessed and utilised for social science, and specifically in relation to using volunteer observers tasked with following a set of data gathering instructions? Whilst this is a very different form of data to, for example, citizen science data, it similarly has the citizen at the heart of the data generation process. There is also a link to the transformative potential of social science research and policymaking, including the idea of emancipatory social science where citizens are engaged as observers of the world around them and contribute to research and informing policymaking in a scientific way. This could, when linked to a theory of social justice include, for example, research that challenges oppression and inequality.

In this article the idea of citizen social science is examined, where volunteers participate in social science research alongside trained social scientists and systematically collect observation data as they go about their daily lives. It is not about going to look for data, but that the specific data-gathering task is designed to be part of the volunteer observer's daily routine.

Research questions

What are the challenges posed in terms of research design and data quality of engaging volunteer observers to collect data about the world around them? What ethical issues are

raised in relation to privacy and confidentiality? To what extent can such data be utilised alongside other research evidence? To what extent does the approach represent a link to a citizen engaged model and a more emancipatory form of social science research?

Background and theoretical context

For many years citizens have been called on to participate in social and medical research in the form of interviews, responding to surveys and being part of trials. Volunteers have also been recruited to observe and monitor aspects of the environment around them including such things as, for example, wildlife populations as part of conservation projects and community-based monitoring of environmental conditions (Bhattacharjee, 2005; Conrad and Hilchey, 2011; Sullivan et al., 2009). One such example is the Galaxy Zoo initiative, where volunteers help code and classify telescope images under the direction of professional astronomers. There are also online portals where citizens can volunteer to be part of citizen science projects[1] and the growth in Volunteered Geographic Information (VGI) and Open Street Map is notable. Google is also now allowing volunteers to add detail to Google maps.[2]

Such citizen science relies on public participation and volunteers in the data gathering, processing and analysis phases of the research. Citizens are an essential component to conducting the research. The wider movement includes debates about the democratisation of science (Corburn, 2005; Lakshminarayanan, 2007; Lidskog, 2008; Silvertown, 2009; Swan, 2012). Whilst such citizen science is very different to the data often used for social science research there is scope to consider if such an approach could be utilised for such research. Arguably such methods are very similar to those used as part of Mass Observation studies in the early 20th century as is discussed below.

The big data revolution includes information on: lifelong health and prescription records, brain scans, genetic and biomarker profiles and family histories, satellite images, digital passports, databases from product warranty forms, consumption transaction reports, online browsing records, email and web communications, information on movement and mobile phone use, and imputed and simulated data. Such data are created by direct data processes, either deliberately or by default, as a byproduct of the actual primary activity. Citizens are now being encouraged to be online researchers and observers to report on human rights abuses as observed by live satellite feeds. This can include posting and interpreting images from social protests and military action. See, for example, the Satellite Sentinel Project, a network of private satellites providing images of Sudan which citizens are being asked to observe and code for evidence of human rights abuse (e.g. military activity or signs of explosions).[3] Tweets can be coded by volunteers in order to identify people in need during a natural disaster such as was the case following Typhoon Haiyan in the Philippines.[4] People writing blogs and volunteers using other social media tools such as posting videos have become sources of information for documenting social and political issues. There are many more observers now and many more viewpoints being made public, often by those involved in the particular events.[5] Stakeholders, activist groups and media agencies also collate and post evidence submitted by volunteers. We have new and continuous streams of data. At the same time, state organisations and other agencies have the tools to monitor such communications.

It is useful to explore a recent example in more detail and, in particular, citizen generated blog data. In 2013 a blog and website called Everyday Sexism was developed where the public were invited to report experiences of sexual harassment.[6] Over 30,000 reports of sexual harassment have been uploaded and the linked Twitter account has over 100,000 followers. Ongoing Twitter postings on the website also report experiences of sexism. For example one posting reads:

> Car beeps behind me. I ignore it. Same car passes me by… I don't turn around. A minute later the same car (he's been waiting for me) passes me by slowly, man inside says something I don't understand. (2013)

This, what can be termed crowd-sourced data, is publicly available but has not been through any processing. The data have strengths and weaknesses. The processes for checking the validity of claims are limited. The data gathering has an immediate impact and can lead to respondents engaging in follow-up discussion, both between themselves and support services, and with the media and policymakers. However, the sample is limited and there can be no straightforward extrapolation to a measurement of prevalence. The data gathering could be developed further by, for example, asking respondents to report key demographics, change over time and to describe how their experiences compare to people they know. It can also, of course, be the basis for a further study.

The idea of volunteers recording observations for social research has parallels with certain aspects of the Mass Observation movement in the early 20th century in the UK, where people submitted reports of their daily activities and events that they had seen (Gurney, 1988; Hubble, 2006; Madge and Harrisson, 1938). One of the key aspects of this approach was reporting issues such as poverty that were otherwise going undocumented. However, the work of the Mass Observation movement was the subject of some considerable debate about how robust and generalisable the data were (Kushner, 2004; Sheridan, 1993; Stanley, 2008).

Methodologically the citizen observer project piloted here also has links to the disciplines of anthropology and in part brings together aspects of ethnographic, non-participant observation, covert research and unobtrusive methods. It is important to look to the tradition of the sociological research methods pioneered in the early 20th century in the USA including intensive fieldwork and social mapping techniques. Examples include Anderson's (1923) participatory observation study of homelessness, which involved living alongside the people who were the focus of the research, and Cressey's (1932) detailed studies of dance halls. See Bulmer (1984) and Deegan (2001) for an overview and critique.

The citizen observer methodology piloted here was a non-participatory task but it is very much citizens' observations of everyday life, so momentarily the observers are in the setting. Moreover, as they are recording observations as they go about their usual activities they are likely to have some familiarity with the location. The observers are not involved with the people they see begging but they are directly reporting on them. For the observer in their role as citizen, their involvement in social science research perhaps brings them closer to the idea of participant observer of their own lives and a new reading of the world around them.

In terms of observations and the recording of people in public spaces there is already an established literature examining different approaches (see Alasuutari et al., 2008; Bernard, 1995; Brannen, 2008; DeWalt, 2010; Homan, 1991). The design of the pilot volunteer observer methodology has some links with what are termed spot, instantaneous and experience sampling methodologies used in anthropological research (Altmann, 1974; Bernard and Killworth, 1993; Borgerhoff Mulder and Caro, 1985; Ozdemir, 2008). These research techniques are well developed in terms of being used by professional social science researchers. However, even so they can be challenging in terms of research access, privacy, the extent to which the data are objective and what can be claimed and generalised. The innovation in this pilot study is the mobilisation of the volunteer citizen in observing the world around them as they go about their usual activities.

Methodology and data: Observing street begging in the UK

Begging

Begging is defined as asking for money, food or other items in public places. Begging is often associated with an individual's wider difficulties including: homelessness, social isolation, mental health problems and drug and alcohol addiction (Crisis, 2000). People who beg are a diverse population and recent migration patterns are thought to have led to new types of street begging including begging with children in the UK. Research on begging is subject to a number of challenges in relation to conducting fieldwork. As a population to research they are a hard-to-reach and vulnerable group, but we can look to the methods used to research homelessness. Scurfield et al. (2009) argue, in relation to measuring homelessness, that obtaining an accurate picture is challenging due to the transient and hidden nature of this population. There are, however, a number of methods that have been used to research homeless people and begging including: street counts, street activity audits, rapid assessment techniques and employer surveys (Home Office, 2004; IPEC, 2004). These techniques usually involve recording how many people are seen begging in a specific time period. Other commonly used methods include snowball sampling based on contacting people seen begging or through homeless support agencies. However, these different methods are subject to some debate as it is thought they can miss people who are homeless or are vulnerably accommodated, for example people sleeping on other people's floors with no regular place to stay. The UK government coordinates local authority level street counts of people sleeping rough using local intelligence and known areas (DCLG, 2012). In 2012 an estimated 2309 people were reported as sleeping rough in England during the autumn, with 24% of the sightings being in London. Other counts based on reported outreach contact identified 5678 rough sleepers in London across a 12-month period in 2011–2012 (Broadway, 2012). Over 50% were estimated to be from outside the UK.

Of course people sleeping rough are not necessarily people who are involved in street begging. Quantitative evidence on begging is not routinely collected in the UK. On an ad hoc basis evidence on begging is collected at the local level by charities and by local authorities. For example, in 2003 as part of the government's antisocial behaviour strategy, there was a one-day count of begging and there were 3239 sightings of

people begging and street drinking across Britain (Home Office, 2003). Research by the charity Crisis in central London found that people begging were mainly men aged 16 and above (Crisis, 2000). Many people begging were found to be in poor health. Over half the people begging had lived in care as a child. People who begged usually begged every day.

Research specifically on children begging in the UK is also limited. Data are, however, recorded on the number of children arrested and found guilty of begging. In a five-year period from 2002, 106 children were arrested for begging in England and Wales.[7] Though it is understood that arrests for children begging are relatively rare and many more are likely to be cautioned and/or referred to Children's Services. In the past, media reports claimed that over 1000 Romanian children have been trafficked into the UK with the specific purpose of begging and criminal activity (Fresco, 2008). It was reported that 11 children (some thought to be under the age of 10 and therefore clearly young children) who had been begging in the town of Slough were taken by the police into the care of social services (Hansard, 2008). Reports have also suggested that Roma children have been found begging in Westminster, London (BBC, 2011; Metropolitan Police, 2010; Westminster Council, 2007). In Bolton, in Lancashire in the Northwest of England there have also been reports of adult women begging with children (*Bolton Evening News*, 2002). The involvement of criminal gangs and forced labour has also been considered to be a factor (Metropolitan Police, 2010; NICCY, 2007).

Pilot case study methodology

The aim of the pilot study was to recruit volunteer observers to record data as they went about their usual daily journeys. The specific focus was to provide an indication of the numbers of people begging (i.e. asking for money, food or other items in public places) in certain areas at particular times and to provide a framework for, and the possible geographic locations of, a larger research project.

Central London was selected as the case study on the basis of it being an urban and densely populated area where reports and sightings of people begging are common but where actual research data on the issue are limited. As outlined, the method has some links with what are termed spot, instantaneous and experience sampling methodologies used in anthropological research. However, of course here the difference is that the observations are recorded by volunteers as they go about their usual activities.

Recruitment of volunteers

A group of 13 volunteers were recruited to be observers. The task involved the volunteers following a set of instructions and recording what they observed. The criterion for selection was that the volunteer commuted regularly in central London. They included people with various professional occupations including: civil servants, business managers and designers. Their usual commuting times were early morning and 6 p.m. onwards. The actual time of any observations of people begging were recorded on the observation sheet shown in Figure 1. The volunteers were recruited via snowball sampling.

Figure 1. Observation sheet.

Training of volunteers

The volunteers were given a written brief of their role and a research protocol (see Appendix). They were asked to note down if they saw anyone begging on their daily commute. The volunteers were asked to record the age and appearance of the people begging and also the time and location. They were not asked to go looking for people begging but to note down what they saw on their daily journeys in and around central London.

The volunteers were not directed to go to specific areas but to conduct their observations during their usual movements, but these were known to be busy, high-density routes. The volunteers recorded their observations during a two-day period.

It was suggested that the volunteers keep a notebook or mobile phone record as they went about their travels and complete the data table at the end of each day. The volunteers were asked not to have any direct contact with the people who they saw begging during the observation period. They were asked to be as unobtrusive as possible.

The volunteers were advised to report any problems to the lead social researcher and to report any issues of immediate concern to the police in line with good practice in social science research and not asked to go beyond what would be expected of a citizen (BSA, 2002; SRA, 2003).

The reported observations from each of the volunteers were collated into a database.

Empirical and methodological findings

The results from the pilot case study are important, both in terms of the empirical findings in relation to street begging in central London and in terms of piloting the volunteer observer methodology.

In the study period, observations were made during a total of 66 journeys in central London by tube, bus and on foot. In total, 24 people were seen begging during the observation period. It is clear that despite the legal restrictions, begging is taking place in very public areas in central London, including highly regulated places such as tube stations.

Most people were begging on their own (or at least standing alone) though some were in groups. Of those people who were observed begging, 18 were male and six were female. Four of the people seen begging were categorised as young people (aged around 16 years old). No young children were seen begging alone. Five of the women begging had babies with them.

Begging was observed at different times of the day and at various locations, such as within and outside tube stations and outside shops. The information on context, (the immediate environment and circumstances in which the begging was taking place) is particularly important to consider. The number of people seen begging by the observers prompt questions for follow-up research into the circumstances of the people begging, the locations of the observations and analysis of the journeys the volunteer observers took.

Of the people observed begging, four of them were in a group. These women were thought by the observer to be of 'North African' appearance and wearing 'traditional dress'. The fifth woman seen begging with a baby was reported as being of 'Eastern European' appearance. These were the descriptive terms used by the observers. It is clear that the use of such descriptions reflects the volunteer's own ways of seeing. The volunteer observers, in reporting their observations, are revealing their own value frameworks. This might also reflect the type of people who were recruited or would volunteer for such a role; however, this labelling in the observation process can be informative.

Observer effects, such as in the descriptive terms used and the value frameworks articulated, are of potential importance to the researcher. See Tjora (2006) for further discussion and see Clark et al. (2009) and Monahan and Fisher (2010) for illustrative discussions of the different terms and language used by participant observers and how this evidence can be reflected in research. Observers are also likely to have different observation skills and awareness levels and therefore issues of objectivity and validity need to be considered. To some extent all observations are partial. Clark et al. (2009) also highlight variations in the quality and completeness of observation data recorded by paid observers; but there are ways of calibrating and minimising this.

In terms of learning from the case study the volunteer observer method could be extended to have more than one volunteer observing the same area at the same time. The consistency of observations could then be compared and cross-validated. In addition, the observers could be given more detailed information sheets/digital tools and a shared vocabulary could be developed in order to identify more specifically people's appearance.

In the pilot case study privacy assessment was part of the research design process and the data collected were only to be used for research purposes. No individual identifying information was collected. The risks of harm to the person observed and to their privacy were minimal. The study was non-intrusive and people seen begging were not contacted directly; as such, there were no additional risks to them or their liberty. It would have been impractical to have informed consent, but if, in a more extensive study, there was

direct contact and information gathering between observer and the observed it would of course be required.

The findings from the pilot case study were used to develop our understanding of the nature and type of street begging in likely hotspot areas in London in the UK. The findings were also used to inform the decision on the undertaking of a larger study of begging and forced labour (including by gangs) by an international charity and the scope, form and geographical focus that the study might take. The findings were of potential interest to other agencies, services and local authorities working in the area and policymakers more widely in relation to vulnerable populations and people street begging, including begging with children in the UK.

It is very notable that the volunteers were relatively straightforward to recruit. There was a feeling that this was something which would not be too burdensome and they were keen to participate. All but two of the people who initially volunteered completed their observation studies and returned their data, though for several of the volunteer observers reminders had to be sent and responses chased up. The protocol was easy to follow and the actual task of observing was not seen as one that had an impact on their daily routines. There was a sense that they were just going about their lives as normal but that they were producing useful information and involved in a cooperative process.

The volunteer observers reported no incidents of concern about their role and all found it straightforward to record their observations. The feedback from some of the volunteers included that they were surprised that when they were actually conducting the observations they did not see more people begging. One volunteer queried this and asked if they should go out and look again until they saw someone begging! There was also a sense that their observation roles had caused the volunteers to reflect on the issue of street begging. The volunteers had become more aware of their surroundings even though they were undertaking regular journeys. It is notable that through the author's wider discussion of the pilot project other volunteers offered to become observers and collaborate in social science research projects. As such, even from this pilot study there is evidence of public interest in the idea of being observers and therefore in the idea of citizen social science.

The volunteer observer method as designed here involved collecting a small number of observations and was essentially qualitative in nature. It was only possible to collect limited information about people's circumstances, and only infer information on their background. No information could be gathered on what might have led the different people to beg and their circumstances. Only a limited number of locations were observed for a short time period so the findings cannot be generalised. There was a lot of information that was not collected such as: links between people begging, the nature of interaction with the passing public, the amount of money collected, and evidence on organised begging and the role of gangs. But of course this was not the intended focus of the pilot study.

The method of using volunteer observers for collecting data for social science research does have the potential to be extended to provide more general quantitative data. This could involve transect sampling in order to allow some quantification of observations and calibration of population size or prevalence as has been more common in citizen science and, for example, the counting of wildlife populations. This might also include

collecting more detailed information and observers could be asked to commit more time to their observational roles whilst still going about their daily activities. The observation data could be used to inform the development of hypotheses that could be tested, to develop a preliminary classification of areas in terms of incidences of begging, and as the basis of follow-up interviews or a survey.

Discussion and implications

In the pilot case study the idea of citizen social science and the scope and limitations of social science researchers working with volunteers in a structured way gathering data as they go about their daily activities has been explored. Volunteers acted as observant citizens and collected data as part of a team led by a trained social science researcher. This did not entail the volunteers specifically going out looking for data but recording the world around them according to the research project's protocol.

Citizens are increasingly providing rich streams of data about themselves both to the organisations they interact with and the people around them. Moreover, citizens increasingly have the scope to be the intelligent systems of their own lives through access to monitoring technology and potential access to data such as in relation to health, movement and communication. See, for example, the development of so-called life logging and the Quantified Self.[8] Even though the data may be very different in terms of format and access it can be argued that there is a link to citizens being involved as observers to record and help document the world around them. What might be termed a crowdsourced data methodology is potentially a powerful tool for social science research.

The volunteer observer method used in the pilot case study was straightforward to organise and the volunteers proved to be reliable in terms of following the research protocol and collecting the data. Evidence was collected on numerous incidences of street begging and the data were used to evaluate the method and inform the next phase of a wider research programme on forced labour and what methods would be appropriate for capturing information on these hard-to-reach populations. In this sense there is a link to the idea of preliminary fieldwork prior to the main phase of a study in social science research (Caine et al., 2009). It is however important to consider some of the key issues raised.

Ethics, privacy and surveillance

The process of being observed is likely to raise the privacy concerns of people and organisations. The ethics and validity of covert-based research methods have been subject to some debate (Calvey, 2008; Spicker, 2011; Webb et al., 1999). However, where justified, these methods are not precluded by research councils and professional bodies such as the British Sociological Association in the UK (BSA, 2002; ESRC, 2010). Of course people have the right to a 'private life' as outlined in legislation including the European Convention on Human Rights. A key aspect of this is the issue of consent. As guidance from the UK Social Research Association (SRA, 2003) highlights, data gathered from observations of public places are available for research use without prior consent. Spicker (2007) argues consent is no longer an issue because the individual no longer has the right

to control the information about them as they might if the data were gathered about their activities in private. Though, one might add, this should be the case as long as other aspects of the rights to privacy and good practice in information handling are adhered to, such as anonymisation.

The observer role for citizens does raise concerns about issues of surveillance (Lyon, 2001). These issues are politically and socially sensitive and arguably have a moral dimension. One can look to debates around state informers and, for example, anti-communism campaigns and the McCarthyism period in the USA in the 1950s, including the so-called Minute Women of the USA who would report people suspected of supporting communism. One might also look further back to the Second World War, where paid state agents covertly monitored citizens including in relation to the identification of minorities. For a more recent discussion of the role of confidential informants in relation to the police see Mitchell Miller (2011). It is notable that the formation of the police force in the UK in the 19th century emerged out of volunteers and so-called watchmen.

However, in the pilot study the volunteers were not acting as 'spies' and did not have a direct role in the research but were just motivated observers/data collectors without any direct political interest in the nature of the study. If there is a comparison perhaps it is more in relation to a citizen being an eyewitness to a crime or a witness in a court trial or participating in a neighbourhood watch scheme.

The volunteer observer methodology may encounter issues related to the type of people who volunteer and any preconceptions they may have. Of course in theory the research could be designed to target specific vulnerable groups or target certain populations, but as has been outlined, the methodology is based on ethically approved research design and on following a protocol and set of instructions.

Moreover the volunteers were not anonymous individuals; they were recruited and trained by the social research team. The data gathered would be used as part of published research and part of an open and transparent process and subject to the same ethical standards as any other social science research project. It is vital that volunteer observers are guided and trained in line with the highest standards of social science research practice.

Methodology and data limitations

Some of the limitations of the volunteer observer methodology and data require new thinking in terms of research design and analysis. Key challenges are generalisability and inference and the sample size and strategy that were used. The observations in the pilot study were limited to a number of locations for a short time period by single observers. Moreover, observers only see certain things and only certain aspects of people's lives are directly observable. The approach was not ethnographic in the sense of gathering details on individual life histories of the people begging.

However, as outlined, the methodology has the scope to be extended to provide more general quantitative coverage involving perhaps the use of transect sampling and also to collect more detailed information. Volunteers could record observations over a longer period and examine how long people were seen begging in a certain area. Over time this would lead to the accumulation of a substantial evidence source. Multiple observers on

the same daily routes could be recruited in order to provide more precise data through cross-verification. Counts and descriptions could be compared in order to verify observations and explore variations.

The volunteer observation method could also use digital recording devices and be submitted in real time. Volunteers could log the time and location of their observations automatically and so enable the digital mapping of begging. These kinds of approaches are currently being used to map journey routes by combining Global Position System (GPS) data and survey data through mobile phone technology. This could be done in almost real time. Wearable camera technology is also being developed and tested. As such there is a link with developments in what is termed 'live social science' and live methods. See Back and Puwar (2012) and Raento et al. (2009) for further discussion. Related techniques have been used in research where electronically activated ear recorders are fitted to volunteers and recordings are made of sounds at particular times of the day. It is argued that such tools gather evidence that would otherwise go unnoticed or unreported using more conventional techniques (Mehl et al., 2001). See Kalekin-Fishman (2013) and Sztompka (2008) for recent discussions of the importance of researching everyday life and the role of observation alongside other methods including visual sociology.

New data and new social science?

For social science research the relationship between the volunteer observer and the social researcher needs to be considered and new theoretical and ethical frameworks developed. Whilst there may be new sources of social evidence responsibility needs, of course, to remain with trained social science researchers. It is notable that, as has been highlighted above, during the pilot case study other people came forward asking to become volunteer observers and to report their observations. Of course, many citizens may be unwilling to volunteer and feel uncomfortable with the idea of being an observer, even as part of a social science research process. However, as Hryniewicz (2011) has outlined in relation to the voluntary involvement of the public in the UK in the oversight of the police, citizens can have an important role to play and this can, in part, contribute to a sense of community and citizenship.[9]

In relation to the ongoing debates about sociological research in the context of other sources of evidence (Savage and Burrows, 2007), the volunteer observer methodology might enable and empower the citizen in the social research process and also facilitate the researching of issues where resources are limited and where populations are hard to reach. Without the involvement of volunteer observers certain types of research and data gathering may not otherwise take place, as is the case in citizen science based studies of environmental monitoring. It is clear fieldwork costs would be lower; however, in the pilot study it was not about doing social research 'on the cheap' or about the undermining of the trained social researcher.

Of course there are limits to what would be a suitable subject for research using the citizen observer methodology. But there is also potential for extending its use in conjunction with other methods and/or as part of exploratory work examining the options for a larger study or identifying areas for fieldwork. A potential challenge relates to the

perception of the credibility of the data amongst policymakers. This has already been an issue in citizen science. However, it is clear that when part of a robust research design with an awareness of its limitations such data can have real value.

Citizens are already part of multiple data collection processes often by default such as via the tracking of online behaviour. When taking on the role of being a volunteer observer they become part of the knowledge process in a more applied and directed way (Elias, 1991). They also become more connected with the shared spaces around them despite having no direct contact with the people they observe begging. This may have an impact on the observer's own identity. The role of being a volunteer observer could be seen as a form of civic involvement and what Ilcan (2009) has described as responsible citizenship. In the UK, responsible citizenship is linked to initiatives under the Big Society agenda, which attempts to mobilise citizens to take a greater role in looking after themselves, those around them and the areas in which they live (Cabinet Office, 2010; Dorey and Garnett, 2012; Pattie and Johnson, 2011). It can also be seen as an aspect of the so-called monitorial citizen (Schudson, 1998). The monitorial citizen is a conception of citizenship where even though citizens are not civically active they are still watchful and will mobilise when they feel their input is required.

There is also a link to more participatory and action forms of research and co-production in the form of community based participatory research where user knowledge and insight and also engagement and iteration are central (Abraham and Purkayastha, 2012; Burawoy, 2005; Clark et al., 2009; Elias, 1956, 1978; Goodson and Phillimore, 2012; Kindon et al., 2007; Reason and Bradbury, 2008). However, perhaps the idea of citizen social science takes us further. It could bring a renewed idea of public sociology and a radical, emancipatory and social justice driven social science. Empowered citizens engaged as observers of the world around them could contribute evidence on pressing social issues, identifying areas of concern and informing policymaking as part of formalised research projects. Co-led and collaborative citizen social science research, when linked to a theory of justice, could produce evidence and research that not only serves to monitor but also to challenge oppression and inequality in a coordinated way. Not only would citizens be involved as observers but also be enabled to report on their own lives in a structured way. Such a democratising approach has the potential to be transformative and lead to new forms of continuous social science through collaborative knowledge production within a robust and ethical social science framework. As has been outlined, there are increasingly continuous streams of data being generated.

Citizens' data archives could be set up with people automatically copying their observation data alongside other data such as blogs and social media for social science research. Technological developments are under way in this area in the work of COSMOS project, which has developed tools for harvesting and annotating social media data.[10] Citizens would then have greater control over such data and knowledge utilisation more generally and so potentially provide scope for social science research use. This would be a social science that is not only indirectly owned by the public but also one where the public is integral to the evidence process, thus potentially challenging the way knowledge is valued and questioning of the evidence gaps. There are still gaps in the evidence base often relating to, for example, vulnerable groups and intractable social problems. This could constitute a structural shift in the way society understands itself and provide new vantage points

for explaining social change, but this takes us beyond the scope of this initial pilot study. There is, however, evidence for such an impact in relation to citizen involvement in some environmental monitoring research (Conrad and Hilchey, 2011), though of course, as outlined above, there are risks if such methods are used outside the framework of ethically approved research or targeted at a particular vulnerable group.

The idea of citizen social science and citizen volunteer observers collecting data for use in social science research of course raises a debate about validity and objectivity. However, increasingly there are new data being created and scope for innovations in the methods to conduct social science research through the digital traces people leave when going about their daily lives. The centrality of citizens in these data processes can be extended to citizens having a more direct role in social science research as volunteer observers working in collaboration with trained social scientists and systematically gathering data about the world around them. Whilst this may pose challenges, it is clear there are genuine opportunities for research that involves and integrates citizens gathering observation data as part of robustly designed social science research. There is an opportunity for a new theory of social science data and use. This new role for citizens can link to the policymaking process and contribute to a redefining of the interfaces between citizens, knowledge processes and the state.

Funding

Notes

1. See, for example, Sci Starter www.scistarter.com/ and the Citizen Science Alliance www.citizensciencealliance.org/
2. See www.google.com/mapmaker
3. See www.satsentinel.org/
4. See, for example, BBC News, November 2013. 'Can Twitter save you in a tornado?', www.bbc.co.uk/news/magazine-24993953
5. See, for example, brown-moses.blogspot.co.uk/, which posts and interprets video footage on the conflict in Syria.
6. See www.everydaysexism.com/
7. These statistics refer to where begging was the principal offence and the offence which carried the severest penalty. If a person were being prosecuted for both theft and begging, the offence recorded would be theft.
8. See quantifiedself.com/about/
9. In the past citizens in the UK have mobilised to monitor police behaviour. This developed out of concerns about police professionalism in the UK. See, for example, research by Jefferson and Smith (1985) into police watching organizations during the miners' strikes in the 1980s.
10. See www.cosmosproject.net

References

Abraham M and Purkayastha B (2012) Making a difference: Linking research and action in practice, pedagogy, and policy for social justice: Introduction. *Current Sociology* 60(2): 123–141.

Alasuutari P, Brannen J and Bickman L (eds) (2008) *Handbook of Social Research*. London: Sage.

Altmann J (1974) The observational study of behavior: Sampling methods. *Behavior* 49(3): 227–267.

Anderson N (1923) *The Hobo: The Sociology of the Homeless Man*. Chicago: University of Chicago Press.

Back L and Puwar N (2012) *Live Methods*. London: Wiley-Blackwell.

BBC (2011) The secret lives of Britain's child beggars. *Panorama*, October 2011.

Bernard HR (1995) *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. London: Sage.

Bernard HR and Killworth PD (1993) Sampling in time allocation research. *Ethnology* 32(2): 769–802.

Bhattacharjee Y (2005) Citizen scientists supplement work of Cornell researchers. *Science* 308: 1402–1403.

Bolton Evening News (2002) Refugee youngsters begging on the streets. 19 December.

Borgerhoff Mulder M and Caro T (1985) The use of quantitative observation techniques in anthropology. *Current Anthropology* 26(3): 232–262.

Boyd D and Crawford K (2012) Critical questions for big data. *Information, Communication and Society* 15(5): 662–679.

Brannen J (2008) The practice of a mixed methods research strategy: Personal, professional and project considerations. In: Bergman M (ed.) *Advances in Mixed Methods Research: Theories and Applications*. London: Sage.

Broadway (2012) *Street to Home Annual Report*. London: Broadway.

BSA (2002) *Statement of Ethical Practice*. London: British Sociological Association.

Bulmer M (1984) *The Chicago School of Sociology: Institutionalization, Diversity, and the Rise of Sociological Research*. Chicago: University of Chicago Press.

Burawoy M (2005) For public sociology. *American Sociological Review* 70(1): 4–28.

Cabinet Office (2010) *Building the Big Society*. London: Cabinet Office.

Caine KJ, Davison CM and Stewart EJ (2009) Preliminary field-work: Methodological reflections from northern Canadian research. *Qualitative Research* 9(4): 489–513.

Calvey D (2008) The art and politics of covert research. *Sociology* 42(5): 905–918.

Clark A, Holland C, Katz J and Peace S (2009) Learning to see: Lessons from a participatory observation research project in public spaces. *International Journal of Social Research Methodology* 12(4): 345–360.

Conrad CC and Hilchey KG (2011) A review of citizen science and community-based environmental monitoring: Issues and opportunities. *Environment Monitoring Assessment* 176: 273–291.

Corburn J (2005) *Street Science Community Knowledge and Environmental Health Justice*. Cambridge, MA: MIT Press.

Cressey PG (1932) *The Taxi-Dance Hall*. Chicago: University of Chicago Press.

Crisis (2000) *Walk on by*. London: Crisis.

DCLG (2012) *Rough Sleeping Statistics England – Autumn 2012 Experimental Statistics*. London: Department for Communities and Local Government.

Deegan M (2001) The Chicago school of ethnography. In: Atkinson P, Coffey A, Delamont S et al. (eds) *Handbook of Ethnography*. London: Sage.

DeWalt KM (2010) *Participant Observation: A Guide for Fieldworkers*. Lanham, MD: Alta Mira Press.

Dorey P and Garnett M (2012) No such thing as the 'Big Society': The Conservative Party's unnecessary search for 'narrative' in the 2010 General Election. *British Politics* 7(4): 389–417.

Elias N (1956) Problems of involvement and detachment. *British Journal of Sociology* 956(7): 226–252.

Elias N (1978) *What is Sociology?* London: Hutchinson.

Elias N (1991) *The Society of Individuals*. Oxford: Blackwell.

Elliot M, Purdam K and Mackey E (2013) *Data Horizons*. Swindon: Economic and Social Research Council.

ESRC (2010) *Framework for Research Ethics*. Swindon: Economic and Social Research Council.

Fresco A (2008) The Fagin gangs who make millions from child slavery. *The Times*, 25 January.

Goodson L and Phillimore J (2012) *Community Research for Participation: From Theory to Method*. Bristol: The Policy Press.

Gurney P (1988) *Working Class Life in Bolton in the 1930s: A Mass Observation Anthology*. Brighton: University of Sussex Library, Mass Observation Archive.

Hansard (2008) Enforced criminal activity (children). 6 February. Available at: www.parliament. the-stationeryoffice.co.uk/pa/cm200708/cmhansrd/cm080206/halltext/80206h0001.htm

Homan R (1991) *The Ethics of Social Research*. London: Macmillan.

Home Office (2003) *The One-day Count of Anti-social Behaviour*. London: Home Office.

Home Office (2004) *Defining and Measuring Anti-Social Behaviour*. London: Home Office.

Hryniewicz D (2011) Civilian oversight as a public good: Democratic policing, civilian oversight, and the social. *Contemporary Justice Review* 14(1): 77–83.

Hubble N (2006) *Mass-Observation and Everyday Life*. London: Palgrave.

Ilcan S (2009) Privatizing responsibility: Public sector reform under neoliberal government. *Canadian Review of Sociology* 46(3): 207–234.

IPEC (2004) *Lessons Learned When Investigating the Worst Forms of Child Labour Using the Rapid Assessment Methodology*. Geneva: International Programme on the Elimination of Child Labour.

Jefferson T and Smith J (1985) Watching the police. *Critical Social Policy* 5(13): 124–140.

Kalekin-Fishman D (2013) Sociology of everyday life. *Current Sociology Review* 61(6): 714–732.

Kindon S, Pain R and Kesby M (2007) *Participatory Action Research: Connecting People, Participation and Place*. London: Routledge.

Kushner A (2004) *We Europeans? Mass-Observation, Race and British Identity in the Twentieth Century*. Farnham: Ashgate.

Lakshminarayanan S (2007) Using citizens to do science versus citizens as scientists. *Ecology and Society* 12(2): 11–23.

Lidskog R (2008) Scientised citizens and democratised science. Re-assessing the expert-lay divide. *Journal of Risk Research* 11(1): 69–86.

Lyon D (2001) *Surveillance Society: Monitoring Everyday Life*. Oxford: Oxford University Press.

Madge C and Harrisson T (1938) *Britain by Mass-Observation*. London: Penguin.

Mayor-Schonberger V and Cukier K (2013) *Big Data*. London: Murray.

Mehl M, Pennebaker JW, Crow DM et al. (2001) The Electronically Activated Recorder (EAR): A device for sampling naturalistic daily activities and conversations. *Behavior Research Methods, Instruments, and Computers* 33(4): 517–523.

Metropolitan Police (2010) Operation Golf. Metropolitan police press release summary. Available at: www.met.police.uk/foi/pdfs/disclosure_2010/december/2010110004069.pdf

Mitchell Miller J (2011) Becoming an informant. *Justice Quarterly* 28(2): 203–220.

Monahan T and Fisher JA (2010) Benefits of 'observer effects': Lessons from the field. *Qualitative Research* 10(3): 357–376.

NICCY (2007) *Call for Action to Protect Street Children*. Belfast: Northern Ireland Commissioner for Children and Young People.

O'Reilly (2011) *Big Data Now: Current Perspectives*. Sebastopol, CA: O'Reilly Radar Team.

Ozdemir A (2008) Shopping malls: Measuring interpersonal distance under changing conditions and across cultures. *Field Methods* 20(3): 226–248.

Pattie C and Johnson R (2011) How big is the Big Society? *Parliamentary Affairs* 64(3): 403–424.

Raento M, Oulasvirta A and Eagle N (2009) Smartphones: An emerging tool for social scientists. *Sociological Methods Research* 37(3): 426–454.

Reason P and Bradbury H (eds) (2008) *Sage Handbook of Action Research: Participative Inquiry and Practice*. London: Sage.

Savage M and Burrows R (2007) The coming crisis of empirical sociology. *Sociology* 41(5): 885–899.

Schudson M (1998) *The Good Citizen*. New York: The Free Press.

Scurfield J, Rees P and Norman P (2009) Criminal victimisation of the homeless: An investigation of Big Issue vendors in Leeds. *Radical Statistics* 99: 3–11.

Sheridan D (1993) Writing to the archive: Mass-Observation as autobiography? *Sociology* 27(1): 27–40.

Silvertown J (2009) A new dawn for citizen science. *Trends in Ecology and Evolution* 24(9): 467–471.

Sullivan BL, Wood C, Liff MJ et al. (2009) eBird: A citizen-based bird observation network in the biological sciences. *Biological Conservation* 142(1): 2282–2292.

Spicker P (2007) Research without consent. *Social Research Update* 51.

Spicker P (2011) Ethical covert research. *Sociology* 45(1): 118–133.

SRA (2003) *Ethical Guidelines*. London: Social Research Association.

Stanley L (2008) It has always known and we have always been 'other': Knowing capitalism and the 'coming crisis' of sociology confront the concentration system and Mass-Observation. *Sociological Review* 56(4): 535–551.

Swan M (2012) Crowd-sourced health research studies: An important emerging complement to clinical trials in the public health research ecosystem. *Journal of Medical Internet Research* 14(2).

Sztompka P (2008) The focus on everyday life: A new turn in sociology. *European Review* 16(1): 1–15.

Tjora AH (2006) Writing small discoveries: An exploration of fresh observers' observations. *Qualitative Research* 6(4): 429–451.

Webb EJ, Campbell DT, Schwartz RD and Sechrest L (1999) *Unobtrusive Measures*. London: Sage.

Westminster Council (2007) Accession nationals turning to begging warns council. January.

Author biography

Kingsley Purdam is a lecturer in social statistics and research methods at the University of Manchester in the UK. He is particularly interested in public consultation and the governance process. He has successfully completed and published consultancy and research using qualitative, quantitative and experimental research methods working in the public and private sector on behalf of: the Electoral Commission, the Department for Communities and Local Government, the Home Office, the Department for Trade and Industry, the Department for Work and Pensions, the National Assembly for Wales, the European Union, the International Labour Organisation and numerous local authorities and charities (The Big Issue, Crisis and Practical Action). He is currently researching the issues of deprivation and community change, the impact of poverty in childhood and later life and citizen social science using digital data to research intractable social issues.

Résumé

Cet article examine l'intérêt des résultats d'observation recueillies par des volontaires dans le cadre de leurs activités quotidiennes. De nombreux citoyens ont d'ores et déjà

créé les archives numériques de leur propre vie par l'intermédiaire de leurs activités en ligne, notamment sur les médias sociaux. Un grand nombre de personnes peuvent maintenant devenir les observateurs de terrain de leur propre vie. Cette disposition a été encouragée afin d'évaluer l'intérêt que peuvent représenter pour les sciences sociales les données recueillies systématiquement par des citoyens observant le monde autour d'eux. Dans cette étude expérimentale, il a été demandé aux volontaires de suivre un protocole et de noter le nombre personnes aperçues en train de mendier. Ce travail a livré des informations importantes sur la mendicité dans le cadre d'un projet de recherche plus vaste. Cette observation de la vie publique a soulevé un certain nombre de problèmes méthodologiques et éthiques. Il existe cependant une réelle opportunité pour développer une science sociale citoyenne, fondée sur la collecte continue de données par des volontaires collaborant aux projets de recherche et recueillant des données d'observation au cours de leurs activités quotidiennes. Cette approche basée sur les moyens de recueillir ces données et de les intégrer dans la recherche a des incidences sur les interfaces entre la citoyenneté, les processus de connaissance et l'état. Elle offre alors une opportunité pour renouveler l'idée de sciences sociales émancipatrices.

Mots-clés

Citoyens, crowd-sourcing, sciences sociales émancipatrices, observation, volontaire

Resumen

En este artículo se analiza el valor de los datos de observación recogidos por voluntarios mientras realizan sus actividades cotidianas. Muchos ciudadanos ya están creando archivos de datos digitales de sus propias vidas a través de la actividad on-line, incluso a través de las redes sociales. Muchos ciudadanos tienen ahora el potencial de ser trabajadores de campo de su propia vida. Esto se extiende para examinar el valor de la recolección sistemática los ciudadanos de datos sobre el mundo a su alrededor para la investigación en ciencias sociales. Este estudio de observación piloto requirió voluntarios para seguir un protocolo y registrar el número de personas vistas mendigando. El estudio produjo resultados importantes sobre la mendicidad que informó un proyecto de investigación más amplio. Sin embargo, se plantean cuestiones metodológicas y éticas complicadas en relación con la observación de la vida pública. Aun así, está claro que hay potencial para lo que puede denominarse ciencias sociales ciudadanas, incluyendo la recolección de datos continua, donde los voluntarios colaboran en la investigaciones en ciencias sociales y observan y registrar datos a medida que desarrollan su vida cotidiana. Esta aproximación a la forma en que la evidencia puede ser recogida e integrada en la investigación tiene implicaciones para las interfaces entre ser un ciudadano, los procesos de conocimiento y el Estado y presenta una oportunidad para una idea renovada de la ciencia social emancipadora.

Palabras clave

Ciudadano, fuentes multitudinarias, crowd-sourcing, ciencias sociales emancipadora, observación, voluntario

Appendix

Pilot Observation Study – Guidance For Volunteers

Dear volunteer,

What You See Out and About! Observations of Begging – Pilot Study

thanks for helping. We are conducting a pilot study of begging and in particular children begging. Such information is difficult to capture.

All we would like you to do is discreetly record the number of people you see begging over a period of TWO days when you are walking around London and for example using the tube. Please record time and place where possible on the data table provided.

The people you note down who are begging could be on the tube, they might be around the station entrance, they might be outside shops as you walk to work etc.

Please don't speak to any people who are begging directly in relation to this research (just go about your usual activities!) as this is beyond the scope of this pilot study. Don't make a special trip looking for people begging!

At this stage we are just trying to assess the extent of children and young people begging. Subsequently there may be a larger study where these issues will be addressed in more detail. If anyone asks you about the research please refer them to me but people shouldn't really notice what you are doing. If you are concerned about the welfare of someone you see begging such as seeing a child begging then you should report this to the police immediately.

Use a separate table for each day. Once you have completed the tables please return them to me.

The study is on behalf of a charity that is concerned about the welfare of children and people who are forced into labour and poverty more generally. Once the research is complete we will send you a copy of the summary report.

Remember we are just asking you to note down what you see when going about your usual daily life around London. You don't need to make special trips or speak to anyone. If you don't see any people begging that's OK as well.

Thank you for your help.