Methods for understanding public opinion about emerging technologies

Paul Stoneman and Patrick Sturgis, NCRM Hub, University of Southampton

Historically, science governance has been a policy domain driven almost entirely by ‘elites’.

Today, public consultation procedures have become an automatic part of the policy-making process with the aim of bringing members of the general public into closer engagement with the technical, social and ethical issues around new and emerging science and technology.

While such strategies have had varying degrees of success, they face the charge that, being based on small and self-selecting samples, they do not adequately reflect the true distribution of views and preferences within the public as a whole. Instead of injecting a dose of democracy into the policy making process, small-scale consultation procedures like ‘citizen juries’ may undermine democratic aims by generating a distorted view of public opinion. As part of a project funded by the Wellcome Trust, we have been researching how to measure public opinion on emerging scientific issues and technologies. We argue in a working paper that although social surveys and opinion polls are not generally conceived of as being part of the apparatus of public engagement, they do in fact provide a crucial link between science and the public, and one which has considerably stronger claims to represent the full distribution of public opinion than standard consultation procedures.

In recognising that closed-ended questions may constrain or distort our understanding of public responses to new scientific issues and technologies, we explore whether quantitative analysis of unstructured, verbatim responses to ‘open-ended’ survey questions can provide a solution to the problems associated with measuring public opinion about techno-science via a narrow and pre-determined set of fixed response alternatives. The approach adopted is a so-called ‘quantitizing’ of qualitative data, and the results reveal that individuals can be clustered into latent groups which reveal the different ways in which people think and talk about science and scientific issues. Not only do these narrative groups provide a novel way to segment and describe populations, they are also diagnostic of how people relate to other areas of science. Surprisingly, group membership of these different clusters accounted for as much variability in optimism about science as standard measures of scientific knowledge, suggesting that the way in which people think about science is as important as what they know about science in terms of understanding science engagement.

The working paper is available in http://eprints.ncrm.ac.uk/2039/
Narrative Analysis in research on families’ habitual practices

Ann Phoenix, NOVELLA node, Institute of Education

Across the social sciences the study of the everyday is recognised as central to the understanding of identities, agency and social life. Yet, all too often, attempts to research the everyday fail to capture the complexity of the mundane because the research methods used entail reductive simplification.

Alternatively, attempts to represent complexity result in detailed attention to very few cases. Narrative analysis, linked with other approaches, is being employed in the NOVELLA node at NCRM to deepen and contextualise understandings of the everyday and habitual.

What can narrative analysis contribute?

The term ‘narrative’ has many meanings and encompasses a variety of theoretical and methodological approaches. Narrative methods have proliferated in the social sciences because they can make four main contributions to the understanding of social life.

First, they offer a way simultaneously to keep individual lives and social positioning in view, while focusing on people’s own accounts. In other words, they allow researchers to apply insights from ‘turn-to-language’ approaches, while situating individual meaning in social context and so enabling simultaneous microanalysis of talk and interactions and macroanalysis of wider social contexts. Second, narratives are common and naturally-occurring. Third, they are interdisciplinary, used in disciplines as varied as literature, law, anthropology, psychology, social history and sociology. Fourth, they enable the linking of theory and practice.

These advantages make narrative analysis particularly suited to the study of everyday practices - the repeated, familiar, predictable, habitual routines that are at the heart of the production of subject positions and identities. The turn to biographical and narrative methods is partly because of increased interest in subjectivity in the social sciences. People’s stories tell us about their lives and the contexts in which they are lived.

What theoretical assumptions inform the study of families’ habitual practices?

Many everyday practices are habitual, enabling people to deal routinely with everyday challenges. Repetitions of such practices serve to produce and reproduce identities and can come to be taken for granted as natural, although they are cultural, social and negotiated in context.

At particular times in the life course and in specific generational and socioeconomic contexts, parenting and other family practices have to be established and negotiated and identities have to change in consequence. The question of how parenting practices become routinised and part of parenting identities is one with which some researchers are currently grappling. Although there is now a substantial body of work on parenting styles, however, parenting practices and more general family practices remain under-researched.

Habitual practices are of central importance to everyday family life and identity construction in three ways. First, the routinisation of habitual practices in families makes life easier: it takes for granted the scheduling of household tasks, caring responsibilities and other routines, saving effort in negotiation, and thus assisting with time compression and producing a ‘comfortable groove’ of order, repetition and coherence. Second, the importance of habitual practices to the construction of family identities is demonstrated by the readiness with which families claim habitual practices and so construct themselves as belonging to particular, established families. Third, family myths, scripts and legends (stories that get repeatedly retold in families) serve to maintain the family ethos and its idealised notion of itself.

While family practices may appear personal, they are embedded in culture and history, in ways that mean the personal and social interpenetrate and are inextricably linked.

Why NOVELLA: Narratives of Everyday Lives and Linked Approaches?

Families’ routinised practices provide a site for the analysis of the processes and constituents of identities; microsocial processes and the wider social structures in which they are located and so for understanding social policy and practice issues. Methodologically, however, the study of habitual practices poses particular challenges. Tastes and dispositions are often not conscious once they have become habitual. Moreover, the minutiae of everyday lives are not readily recalled and observed by others. Memories are constructed with hindsight, and narrative accounts are constructed and performed as co-constructions between participants and researchers – in accordance with current and past individual and collective identities. In addition, a key problem with using narrative analysis, and all language-focused methods, is the apparent ‘disconnect’ between behaviour and the ways in which participants construct the meanings of their habitual practices. This contradiction often leaves policy makers and practitioners at a loss as to what research findings mean and how to employ them to address personal troubles and public issues.

The NOVELLA node is a new cross-institution collaboration designed to develop and showcase methods and approaches that capture the complexity of the everyday across relatively large data sets. It aims to help move forward the analysis of everyday experiences in families through a mixed-methods approach that combines narrative methods with a range of other qualitative and quantitative approaches and that involves secondary analysis of a variety of data sets as well and some new data collection. It involves research on three interlinked sets of family practices: parenting identities and practices; family food practices and family practices in relation to environment in the UK and India.

By combining narrative and other approaches with the analysis of everyday experiences NOVELLA seeks to generate new understandings of habitual practices in family and personal lives.

Professor Ann Phoenix is the Director of the NCRM Phase 3 NOVELLA node.
The World at (or around) Seven Billion

Jakub Bijak and Andrew “Amos” Channon, Centre for Population Change, University of Southampton

If there is one thing certain about predictions of future populations, it is their uncertainty. In that respect, the day of the global population reaching seven billion, proclaimed by the United Nations to fall on October 31st 2011 – coinciding with the All Hallows’ Eve – has mainly a symbolic meaning.

If we use the UN demographic estimates as a base, from a statistical point of view, with a probability of 0.95, it would be more apt to celebrate the year of seven billion, from mid-July 2011 to mid-July 2012.

How many people inhabit the Earth?

Even measuring the numbers of people on this planet, not to mention predicting into the future, is an inexact science. Countries vary in the accuracy of their figures, although clearly it is impossible to measure how accurate the estimates are. These inaccuracies are more common in areas of conflict, of high mortality and fertility and where there is mass migration into and out of the country.

Population censuses are the usual method to collect information about the population of a country. The United Nations Census Programme indicates that 229 countries will have conducted a census between 2005 and 2014, with only five – Iraq, Lebanon, Somalia, Uzbekistan and Western Sahara – not having a census scheduled. However no census is completely accurate, with some individuals being missed or double counted. Also, the information provided is soon out of date, especially in countries where there is high fertility, mortality or migration. Combining all these censuses, taken in different years with different levels of accuracy, into one figure for the world population leads to much uncertainty. In fact it could be argued that it is an achievement to be so accurate to state that there are around 7 billion people alive today.

From 4bn to 7bn in one generation

When both authors of this piece were born, which was slightly more than one generation ago, global population was just exceeding 4 billion.

The subsequent magnitude of demographic increase was unprecedented, but it is also likely to be a one-off phase in human history. According to the UN estimates, since the late 1970s the global rates of population growth declined by over a third: from 1.8 to 1.1 per cent a year.

How much do we know about future populations?

Looking into the future, the inertia of demographic processes allows us to be less uncertain than for example in the case of economy or weather. Population dynamics are usually slower, and the changes are visible mainly over a longer horizon. In this way, the next generation is likely to see further reductions in growth rates, mainly driven by falling fertility. It is all the more difficult to forecast demographics more than 20–30 years ahead, since this requires assumptions about the generations that have not yet been born. However, if the decline in fertility continues, the global population will be well on the path to stability by the end of the 21st century.

A growing population has many implications – for poverty, pressure on the environment, health, food production and water supply. Knowing the world’s population exactly does not change these implications. Even though populations are more predictable than many other areas of human life, uncertainty is with us to stay. Still, this is something to be embraced, rather than to be afraid of.

Taking uncertainty into account in public policy and planning allows for rational risk management instead of plain risk aversion in the face of the unknown. In this way, we can hope to make better decisions regardless of the challenges ahead.

Figure. Probability density of the seven-billion day. Own elaboration in R. Assumptions: correct UN estimate for mid-2010; constant growth rate r throughout 2010–2015 normally distributed with mean following the Base variant of the 2010 UN projections and standard deviation corresponding to the half of the Low-High variant span.
Measuring the impact of academic work

Jane Tinkler, Impact Project, LSE Public Policy Group, London School of Economics

Being able to assess your own research impact is something that is rising up the academic’s agenda. Metrics such as citation scores and public engagement measures are slowly being introduced into progress and promotion criteria in some universities.

Additionally, the Research Excellence Framework (REF) will, from 2014, allocate 20 per cent of university funding based on impact assessments.

Defining impact

Despite this, there is still confusion around what impact is, how it happens and how it should be assessed. For example, there is an array of definitions of impact, with each research council and funding body envisaging impact slightly differently. And metrics for measuring impact are in the relatively early stages of development in some disciplines.

A team based in the LSE Public Policy Group at the London School of Economics, along with colleagues in Imperial College London and the University of Leeds, are working on a three year HEFCE-funded project looking to assess the impact of academic work in the social sciences on government, business and civil society. Part of this research involves developing metrics that can measure impact across disciplines taking into account their differing norms for publication type, career path and ways of working.

The Impact Project’s definition of a research impact is ‘a recorded or otherwise auditable occasion of influence from academic research on another actor or organization’. A research impact can be felt both within and outside academia. So academic impacts are those where research has influences upon actors in academia or universities, e.g. as measured by citations in other academic authors’ work. Whereas external impacts are influences on actors outside higher education, that is, in business, government or civil society, e.g. as measured by references in the trade press or in government documents, or by coverage in mass media.

Academic impacts

In the past academic citations were most usually assessed using proprietary databases such as Thompson’s ISI Web of Knowledge or Elsevier’s Scopus. The benefit of these systems is that the information they contain is extremely accurate, because they are manually built and checked. They therefore do not contain duplicate or incorrect entries. They are also a known quantity that allows analysis on the contents to be performed.

However the older systems also have a number of drawbacks, especially for the social sciences. These databases are skewed towards science disciplines, US publications and English-language outputs. They cover only journal articles, rather than the full range of publication types produced by academics. Their usefulness for particular subjects is only as good as their coverage of that subject. For some science disciplines, a very high proportion of references in each article are to other outputs contained within the database. For medicine and biology, this inclusiveness measure is over 90%, with health and physical sciences over 80 per cent. However for the social sciences, the inclusiveness measure is only 25%, which is very poor.

This software allows individual academics to easily search across the web to collect citations on their own work, including all types of output. Duplicates and misattributed entries will occur (because even academics make mistakes when citing other people’s work). But they can be easily corrected in Harzing and the software also automatically generates a range of very useful citation scores from the results. These scores, such as the H-score and G-index, allow for some comparison of academics or disciplines to be made. These scores must of course be contextualised: more senior academics will usually have a higher H-score than more junior staff, because they have more publications that have had longer to have an impact. Disciplines also vary widely in their average H scores. Figure 1 gives an indication of this from the PPG dataset, showing the range of average H-scores across our first five case study social science disciplines.

External impact

For impact outside the academic community, there are a number of measures that, taken together, can be used as proxies for impactful activities. Looking at funding being awarded for consultancy or other research activities can highlight academics with strong links to external organisations, or those who are skilled communicators. The range of business and community engagement activities that a university undertakes can be examined, and information on this is already collected by HEFCE each year.
Young people with autism

Methodological innovations in researching socially excluded groups

Jamie Ellis, NCRM Hub, University of Southampton

Autism Spectrum Condition (ASC) is a life long developmental disorder which affects how a person makes sense of the world, processes information and relates to other people¹. It is a condition that affects approximately 1 in 100 people in the UK² and estimates indicate that 1% of the UK’s school population is on the autism spectrum. Children with ASC are a socially excluded group conceived in social research terms as hard to hear, hard to reach or a muted group. An early challenge social researchers encounter is difficulty gaining access to this group, but when access is granted the decision over which method to employ is an important one. The choice of method(s) determines if research is to be carried out on, for, with or by the children. Innovations, applications and adaptations of research methodology³ have enabled and encouraged increasingly meaningful participation of socially excluded groups, such as children with ASC, in social research.

Including socially excluded groups in research

It was with the firm belief that researchers should promote and actively encourage socially excluded groups in research that I set out to discover what innovative methods are appropriate to be used in conducting research with children with ASC in a way that captures their experiences and their social worlds. The sample, consisting of nine boys and three girls all of whom had a diagnosis of ASC and were aged between 11-15 years, took part in four research activities which were written into the school’s regular timetabled lessons. The students first wrote an essay about their perceived futures, a method adapted from Veness⁴ and Pahl⁵. The second task required the students to take photographs of people, places and objects which were special to them and compile them into an album, provide a title and explanation for each photograph. The third task arose through influence of Gauntlett’s work⁶ as the students used creative means to portray who they are through designing and making a patch which contributed towards a patchwork quilt. Finally, the students worked together to write, perform and record a documentary about their lives. In addition to these tasks I observed the students in their school environment for eight months and also interviewed their parents or carers.

Determining the suitability of research methods

In order to determine if, how and why the methods were appropriate I asked what the methods have enabled us to learn about the friendships and relationships of the children. Whilst all six methods proved useful in aiding our understanding of the relationships of the students, some methods were better suited to the children than others. For example, the students particularly engaged with the photography project because it was a visual project that was carried out in isolation and required no verbal communication with others. The clear structure of the task coupled with its ability to alleviate the social anxiety often experienced by individuals with autism when engaged in talk promoted the meaningful participation of the students. Furthermore because of the capacity of the method to physically cross the home-school border this helped the students capture the here and now and provided an insight into the relationships occurring at home and at school.

My research has illustrated that a method should be selected based not only on its ability to answer the research question but also with consideration of the research sample in mind. By exploring if, how and why methods are suitable to be used with children with ASC and examining what the methods enable us to learn, the research seeks to encourage researchers to find ways to promote the meaningful participation of all socially excluded groups in social research.

Jamie Ellis is a research student attached to the NCRM Hub.

References


For more information on the Impact Project and tips about how to increase and measure your own impact, please see http://blogs.lse.ac.uk/impactofsocialsciences/
Using the UK Freedom of Information Act for research

Cathy Murray, Social Sciences, University of Southampton

The Freedom of Information Act 2000, which covers England, Wales and Northern Ireland, came into full effect in 2005. Access to information via Freedom of Information requests can be made to any ‘public authorities’ e.g. government departments, health services and local councils.

The response by public authorities has to be made within twenty working days of the receipt of the request. It can either be a copy of the information or an invitation to inspect the material in person. Access to information can be refused if, for example, the request is ‘vexatious’, and a range of exemptions apply. For example, if it is deemed not to be in the public interest, information can be withheld. The request can also be refused if the cost of accessing the information would be above the ‘appropriate limit’ (£600 for central government and Parliament and £450 for other public authorities).

The Act is regulated by an Information Commissioner, who promotes compliance and reports annually to Parliament. In cases where information may have been withheld unreasonably, applicants have recourse to the Information Commissioner, who then adjudicates. This system of appeal will in time enable a body of case law to build up which can act as a guide to those making requests.

Social science researchers and Freedom of Information requests

As social scientists, we are usually alert to the possibility of additional and innovative ways of collecting data and it is perhaps surprising that social science researchers have been slow to seize the opportunities which the Freedom of Information Act offers. I embarked recently on a study entitled Sport in Care using Freedom of Information requests to access data on children in state care, following the 2007 White Paper, Care Matters: Time for Change which signposted improvements for this disadvantaged group. I became aware that, with notable exceptions, there was a paucity of literature on using Freedom of Information in social science research in the UK, and few published empirical studies. Consequently, there was limited guidance on how to proceed as a researcher using this approach.

In the event, the Sport in care study was relatively straightforward. Of the 152 Freedom of Information requests made in writing to local councils in England, replies were received from 128. This is an exceptionally high response rate (84%) compared with, say, postal questionnaires. Responses were almost invariably received within the specified statutory period and for the most part full answers were provided to the questions. There had been no access to negotiate, no fieldwork to conduct, no travel involved and no transcribing required.

In this instance, the use of Freedom of Information requests proved to be a quick and efficient way of accessing up-to-date data about a hard to reach population and was completed with considerable savings in cost and time to the researcher.

Why is the Freedom of Information Act under-utilised by researchers?

There are various reasons why the UK Freedom of Information act has been so under-utilised in the six years since its enactment.

First, there may simply be a lack of awareness of the kinds of data which can be accessed. While universities have provided training to staff on compliance to the Act when responding to requests, they appear not to have promoted the opportunities which the Act presents for research.

Secondly, the approach is reliant on the functioning of bureaucratic organisations. As with other ‘unobtrusive measures’, the researcher takes rather a passive role once Freedom of Information requests have been made, being reliant on the organisations. Academics may be sceptical about the extent of compliance by public bodies, which may attempt to circumvent the legislation and provide limited, delayed or large volumes of extraneous data. Obstruction may be more likely if sensitive data is being sought. For example, Canadian government handled Freedom of Information requests in a way which minimised damage to the government. That said, as well as having recourse to the Information Commissioner, the researcher can also query the response. In the Sport in Care study three boroughs councils provided very brief responses compared with others and had not answered all the questions.

When they were contacted to ask whether they were able to address the questions more fully, this was interpreted to be a request for an ‘internal review’ and lengthier responses subsequently arrived from all three.

Conclusion

To conclude, the UK Freedom of Information Act provides the applicant with a right to be informed as to whether information exists and (usually) a right to receive that information, and in the face of public bodies which prove to be reluctant to comply, recourse to internal reviews and the Information Commissioner. This provides social science researchers with the unprecedented opportunity of having a right to access data for research purposes. While there are challenges associated with the use of Freedom of Information requests, some of which have been touched on, it can offer a speedy and productive way of accessing research data.

Dr Cathy Murray is a senior lecturer at the University of Southampton.

References and notes

1 In Scotland it is the Freedom of Information (Scotland) Act.
Arts based methods in criminology

Maggie O’Neill, Applied Social Sciences, Durham University

Arts based methods in criminology are gaining ground, particularly in relation to visual and performative methods. There is an increasing use of visual methodologies in interdisciplinary research connected to the emergence of visual studies, cultural sociology, cultural criminology as well as media and cultural studies. These methodologies highlight the impact and immediacy of visual research and visual representation for the social sciences as well as the potential impact upon social policy. Note, for example, the current relevance of arts based research taking place in criminology that connect arts and media practice with participatory methodologies and social research that is committed to meaningful ‘impact’.

In criminology arts based methods are predominantly, but not always, associated with cultural criminology. Cultural criminology is a relatively young sub-field in the discipline of criminology. In the 1990s, a distinctive ‘cultural criminology’ emerged at the intersections of postmodernism, ethnography, critical/ theoretical criminology, media analysis and subcultural theory. Rooted in the Birmingham school of Cultural Studies, critical criminology, as well as symbolic interactionist and ethnographic approaches to crime and deviance, there is a focus on the everyday meanings of crime and transgression, phenomenological analysis as well as methodologies that are predominantly ethnographic, textual, and visual. ‘Cultural criminology explores the many ways in which cultural dynamics intertwine with the practices of crime and crime control in contemporary society’. In Framing Crime the editors and authors unpack cultural criminology and the image by focusing specifically upon visual representations of ‘crime, transgression and punishment’ and the power of ‘visual culture’.

Methodologically, the doing of arts based methods in criminology examines how crime is constructed, made, understood and experienced, whether through historical analysis and uncovering hidden histories, ethnographic, phenomenological and participatory research, or analysis of media and cultural forms and practices. For example, Jim Mienczakowski’s ‘ethno-drama’ Busting developed verbatim accounts of observations and interviews over a four month period at a drug and alcohol treatment centre into a scripted play. Performed by the participants this is an example of the use of theatre and performance science as social research. It was also a way that disempowered health consumers could gain a voice within the community. Similarly Janice Haaken’s film Guilty except for Insanity undertaken participatory research with staff and inmates in Portland State hospital for the criminally insane and explores psycho-social constructions of deviance, care and control in the lives of five of the inmates who pleaded ‘not guilty by reason of insanity. The film starkly highlights the lack of community mental health services and the lack of a safety net. The only way that some participants had access to mental health care is through the guilty except for insanity defence.

Exploring the inter-textuality across the arts and social sciences to examine lived cultures, as well the transformative role of connecting arts based work and social research, I have worked with performance artist Sarah Giddens in the mid 1990’s to re-present the narratives of sex workers in a trilogy of works including two live art [dance] performances, a video Not all the time...but mostly... and a photographic exhibition. The intention was to represent the sensory dimensions of doing ethnographic research gained through immersion in the life worlds of women who sell sex. I looked for ways of exploring and representing the complexity of psychic and social lived relations by combining art and ethnography. My subsequent work has involved arts based research with: street sex workers and the communities they live and work in; young people on diversity and community cohesion in inner cities; asylum seekers and refugees exploring exile, displacement and belonging through arts based research on migration and diaspora; and more recently with residents of the downtown east side of Vancouver that explored community, politics and resistance using photography and walking based methods. All of these projects have used participatory and arts based methods and have involved working in partnership with community or participatory arts organisations to share something of the lived experiences of participants and influence and policy and practice.

Arts based methods can create spaces for the voices, experiences and inclusion of participants with little English or literacy and are very useful when working with children and young people. Art is a way of overcoming barriers, challenging stereotypes, producing more complex knowledge; creating safe spaces for dialogue for listening and communicating experience across linguistic and cultural divides. Research findings are made more accessible and can offer social, economic and cultural impact too.

Maggie O’Neill is a Professor in Criminology at Durham University. She gave a presentation about arts based methods in criminology at the recent NCRM Autumn School in Southampton.

References

6 O’Neill, M., Giddens, S., Bretnach, P. J., Bagley, C., Bourne, and Judge, T. (2002). Not all the time...but mostly... a nine minute video is available by contacting maggie.o’neill@durham.ac.uk
Breaking new ground - NCRM Phase 3 launch

The National Centre for Research Methods launched the new Phase 3 nodes on 19 October 2011 in an evening reception at the Royal Institute of British Architects.

NCRM Director Professor Patrick Sturgis welcomed the guests and ESRC Chief Executive Professor Paul Boyle gave short talks about the ESRC strategy and future challenges.

The event was an opportunity for the six new nodes - LEMMA 3, MODE, NOVELLA, PATHWAYS, PEPA and TALISMAN - to present their research and training programme in a poster exhibition and meet colleagues from other research organisations.

To see the photos from the launch event, please go to http://bit.ly/vE3VMM

Confirmed speakers and programme overview

The National Centre for Research Methods is happy to announce that John Beddington, Andrew Abbott, Gillian Rose and Laura Stoker have been confirmed as key lecture speakers at the 5th ESRC Research Methods Festival. The programme overview is available online and the more detailed version will be available in early 2012.

NCRM is the organiser of the 5th ESRC Research Methods Festival. The festival takes place on 2-5 July 2012, once again at the St Catherine’s College in Oxford.

The bookings will open in March 2012. For further information please go to http://www.ncrm.ac.uk/TandE/RFMF2012/