

Negotiated Boundaries: The Role of Social Scientists in Public Engagement with Science and Technology (PEST)

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Introduction

Responding to the growing gap between the sociological ethos and the world we study, the challenge of public sociology is to engage the public in multiple ways. These public sociologies should not be left out in the cold, but brought into the framework of our discipline.

In 2004, Michael Burawoy (2005:4) made the above statement in his presidential address to the American Sociological Association. The idea that social scientists should incorporate principles asked of other academics in their work generated debate and some apprehension amongst the social science community, largely with regards to detail rather than ethos (Martinelli, 2008). However, parallels may be drawn between the points that Burawoy raises and the roles in which some social scientists operate, both practically and academically, within a public engagement with science and technology (PEST) setting. In the UK, as Burchell and Holden (2009:4) describe, an ‘extensive and diverse network – consisting of policy, practitioner, academic actors... has emerged... around the practice of a particular form of public participation in science and technology’, networks ‘searching for shared languages, understandings, objectives and even timeframes’.

The need for a greater engagement with social science has been highlighted by key UK-based organisations such as the Economic and Social Research Council (ESRC) and the Academy of Social Sciences (Benyon and David, 2008). Funded by the British Academy (SG-54670) this research project aimed to explore issues of identity, role and boundary work when social scientists participate in public engagement with science and technology, with a view to exploring implications for greater public engagement with social science. The objectives of the project were to:

- Carry out a systematic literature review of existing work of relevance.
- Establish a series of interviews with key stakeholders in the field.
- Disseminate project findings to sectors of relevance.

The following short report primarily focuses on a summary of Objective 2 of the project.

Methods

The research carried out for this project involved a small-scale exploratory study, predominantly using qualitative interview techniques. Key findings were drawn from the existing literature to inform the research design and devise a series of interview questions. These included questions on experience of working within PEST

settings, across disciplines and views on public engagement with the social sciences more widely.

Interviews were carried out with a sample (n=20) of UK-based social scientists, working in and around the PEST field. Additionally one social scientist responded to the interview questions via email. We were keen to embody a sampling approach which would establish key social scientists in the field as well as those working in additional, ‘hidden’ areas of relevance. We also felt it important to speak to social scientists at different stages of their careers, working across diverse areas of science and technology and in differing roles. We generated a pool of social scientists via the following means; social scientists working at relevant institutions (for example ESRC Genomics Network) or in relevant fields; attendees at relevant events with appropriate backgrounds (for example The Roles of Social Science in Public Dialogue on Science and Technology: Report of a One-Day Stakeholder Workshop); recommendations from key contacts in the field and advisory group members and social scientists that had published relevant work on PEST and social science engagement.

The final interviewees comprised a range of informal to formal academic experience within the social sciences. Perhaps predictably the most common areas of interviewees experience included Sociology, 18 interviewees expressed some level of experience in this field, followed by Science, Technology and Innovation Studies at 16 interviewees. However there was a wide range of experience across all of the fields included within the ESRC definition of social science. Interview participants came from a variety of academic roles including: one PhD student, two Senior Research Assistants/Research Assistants, six Senior Research Fellows/Research Fellows, four Senior Lecturers/Lecturers, two Academic Fellows and six Professors.

Interviewees were also involved in a variety of scientific areas and it was very common for interviewees to note that they had worked in a variety of scientific fields. 21 differing scientific subject areas were referred to. Most common however were subject areas such as Genetics (n=13), Genomics (n=10), Biotechnology (n=10), Stem Cells (n=9), Biomedicine (n=9), Cultural Studies of Science (n=8) and the Environment (n=8). Interviewees were also asked about the types of roles they had taken in previous work with scientists. The most frequently ascribed roles here, which interviewees stated they had ‘often’ done included as a Researcher (scientist as subject) (n=11), Principal Investigator (n=10), Co-Investigator (n=10), Joint-Investigator (n=6), and

Teacher (of science students) (n=6). It was also relatively common to 'often' act as a Named/Sub-contracted Researcher (n=5) and Facilitator (n=5).

Interviews predominantly occurred via the telephone, with a small number occurring face-to-face, based on interviewee preference. Interviews occurred between June and September 2010. All interview data were digitally recorded and transcribed. The transcripts were coded and analysed using the qualitative software programme NVivo and a coding frame was developed based on Ritchie and Spencer's (1994) five-step framework analysis. Ethical approval was granted by the Faculty of Health and Life Sciences, UWE, Bristol.

Results

The coding frame as it currently stands includes four key themes;

Definitions

Within the interview data four key aspects were discussed relating to definitions. At the outset of the interviews we asked interviewees to offer their own definition of public engagement, which produced some interesting reactions from interviewees. Interviewees were keen to stress that it had multiple definitions, as well as sometimes contradictory aims, that it was an 'umbrella term' and that many definitions were in operation:

The bottom line, is to try to get a dialogue between the academic community and people that are out there, whoever they may be. So some kind of dialogue. I don't think the term is particularly helpful because it does scare people, including me [interviewee laughs]. (Interviewee 2, Senior Lecturer/Lecturer)

Multiple interpretations could mean engagement was used by members of the scientific community to describe something more akin to a traditional public understanding of science model, where as the majority of interviewees that we spoke to conceptualised public engagement as having a more 'democratic', 'two-way', 'deliberative' or 'dialogic' connotation. Discussing this aspect also often raised issues around definitions of the public/s, who they are, the contributions and questions they offer, how they are conceptualised and discussed in academic arenas. In addition a number of interviewees stressed the historical, academic and political origins of the use of the term in a UK context.

This issue of definition of public engagement was also apparent when discussing social scientists and public engagement agendas. Whereby interviewees discussed how social scientists via their formal and informal engagement with research, communities, methods and feeding back research results to those that had contributed to them signifies engagement but perhaps not in the way that it might be more commonly perceived in a natural science setting. Over the course of our

interviews defining social scientists also featured as a topic for discussion when interviewees discussed identity as a social scientist, how that could be defined, asserted or perceived might impact on their professional roles. It was interesting to note that a number of our interviewees discussed 'starting out' or having natural science backgrounds at an earlier stage of their career, placing their social science expertise 'undercover' and on occasion asserting a natural science identity when working in the PEST arena. Interviewees often described having 'many hats' and social scientists themselves rejecting or critiquing particular labels that might be associated to them. This often led to discussions within the interviews relating to the next set of questions, around the roles that social scientists have in such scientific settings.

Role of Social Scientists

Again many of the interviewees we spoke to were keen to stress that social scientists working with and within science and technology fields had many differing roles and objectives in particular projects. Given that many interviewees referred to the historical and academic development of public engagement, it was expected that a number would mention the theoretical role of the social scientist, and at times as this could be seen to take on a more vocal defence of the incorporation of views of publics:

I think that the social sciences had a formative role in setting out the requirement for decision-makers to involve different kinds, more plural kinds of knowledge. I think that the current kind of fashion towards public engagement can be traced to critical involvements from social scientists in saying that. (Interviewee 7, Professor)

In this regard interviewees also discussed how the social sciences could bring a suite of information and understanding on publics, how they build, mobilise and contribute expertise, in addition to methodological roles. Here comments were made that social scientists might be involved in the development of strategies, methods, protocols or techniques used in the PEST setting, or offering the inspiration for them, for example via the evaluation methods that have emerged in the field. Social scientists were also seen to take more practical roles at times, problem solving, providing functional, translation and mediatory approaches and whilst it was recognised that this could be a role social scientists were accepting of, interviewees were often keen to stress that this could be controversial or miss some of the important benefits of social science expertise:

I think socials scientists have been quite good at giving examples of different methods and what they mean, perhaps there's a role that's not really called on to kind of provide them so much, I don't know, I don't know about that. I mean, I think methods are crucial but I think they often don't translate very well, because it's a skill isn't it? It's a whole craft to understanding the social, you can't just pass it around. (Interviewee 12, Senior Lecturer/Lecturer)

Interviewee 2 however discussed how operating in these more facilitator type roles could be a way to build trust and collaborations with scientific areas you might be seeking to work with, whilst Interviewee 4 and others could see that social science expertise might have useful supporting and structuring mediating functions, they could also see problems with these approaches:

I mean there are different types of translation and I think that if it's seen as a very simple way of, so the scientists say this "let's get the social scientist to say it in a slightly more friendly way", I disagree with that. (Interviewee 4, Senior Research Fellow/Research Fellow)

As such a number of interviewees were keen to stress that the critical and challenging role of the social scientist should not be neglected:

I think what gets underplayed is the role the social scientists can play in interpreting the results. And if there is one critique I would make of the field as it stands at the moment, it is that critical capacity that the social scientists have to interpret the results of a public engagement process in the context of broader social insight, is often underplayed. (Interviewee 6, Academic Fellow)

When discussing this type of function a few interviewees discussed the challenges this could bring to a working relationship with those scientists involved in PEST projects and maintaining 'a critical distance'. Some final roles that were expressed by interviewees included working in more embedded type situations, as social scientists located in different disciplines or fields. Interviewees discussing this suggested it could lead to issues of identity, whereby those you might be working closely with may not be clear on the objectives or approaches of your discipline but it was also seen to be helpful in negotiating social science perspectives throughout a projects period, rather than introducing social science expertise at an end point of public engagement with a particular piece of research. On this note a small number of interviewees discussed being written into bids and working in a much more interdisciplinary fashion than may have once been the case, whilst this could still raise issues around 'framing' and 'objectives' for a project as a whole this was seen as a very positive shift, encouraging the scientific community to recognise and value the findings of social science studies:

Generally, there has been a sense of growing openness to the wider social and ethical dimensions of the science. It is still difficult to achieve, but in principle there have been openness. (Interviewee 7, Professor)

Working with Scientists

Linked to the above points regarding increasing opportunities for interdisciplinary research, interviewees discussed funding in terms of successes; in having their research supported at an interdisciplinary level, for example that higher levels of financial support might be

available via the EPSRC (Engineering and Physical Sciences Research Council) than the ESRC, and difficulties; in funding bodies recognising work which may branch differing fields or becoming isolated from one's own disciplinary area by cultivating such a career. Funding across disciplines could raise 'power dynamics', or see social scientific work 'tacked on' but also required negotiation at the outset of the project to learn about other fields of work:

It wasn't wasted time [at the project outset] because it needed to happen but it felt like the funding bodies just threw us together and expected us to get on with it and I think that if funding bodies are going to fund more of this kind of work, then they actually need to provide researchers with more support, not least because it would be an awful lot more efficient if there was some kind of basic introduction or a way of people understanding each other's work early on, so they don't have to do it often from the ground up. (Interviewee 1, Senior Research Fellow/Research Fellow)

Increasing awareness of others fields applied both to natural and social scientists and within the interviews we explored how conceptions and understanding of social science had impacted on interviewees work.

A number of comments here specifically discussed the difficulty of encouraging more qualitative approaches or coming from different empirical perspectives and linked to this the differing timeframes that disciplines could work to. Whilst many comments alluded to hierarchical notions of social science being a 'lesser' discipline, seen as an easy subject or 'soft science', there was also suggestion that this could work to the social scientists advantage: 'they just assumed I knew nothing, which was quite useful' in a research context.

However it should be stressed that in the main the comments were very positive, suggesting that whilst all parties had learnt things about each other, benefits were often reaped:

I find them [scientists] very receptive to the kinds of work I do, the way I illuminate different bits of their work, even when I have been slightly worried it always has been a very positive experience... I just generally find it very easy to work with them, very accepting of my different approaches to research, they always have been very open to that. (Interviewee 2, Senior Lecturer/Lecturer)

Whilst for all interviewees working with scientists was often essential to their interests, when probing aspects that they found beneficial there were many comments suggesting they were 'enjoyable', 'interesting' and 'intelligent' participants in interviewees research practices, as well as providing findings of interest:

I meet some great people...public engagement is only one part of my research; I have done a lot of ethnographic work in the past, ethnographic studies of laboratories, so I quite

like scientists and you meet quite nice people. I suppose that for me, I have a renewed understanding of the nature of their world...I suppose it helps me rethink my research, I started thinking that research scientists were the central people in all of this and actually they say no, they are not. They are part of a much broader system. My research has taken a bit of a left turn. (Interviewee 6, Academic Fellow)

Many interviewees that we spoke to had undertaken training in the natural sciences, but developing an understanding of the natural sciences was something a number referred to as a conscious or implicit aspect of their engagement with scientific fields. This included not only increasing their awareness of particular fields of science or new developments but also how aspects of academic life occurred in other disciplines, such as publishing, generating funding and communicating.

Social Science and Public Engagement

Within the interviews we took the opportunity to ask those involved in PEST settings about engagement with the social sciences more generally. It should be recognised that the following interview comments cannot express the attitudes of the social science community more widely and were not necessarily based on the research findings of those we spoke with, but we were keen to access the observations of this small number of interviewees. Many commented that they did not feel engagement with public engagement was widespread amongst social scientists. Numerous reasons were attributed to this including a lack of ‘time’, ‘skills’, ‘interest’ and ‘recognition’, issues which are common across disciplines. Here Interviewee 2 discusses the issues encountered when getting a public engagement activity started:

It was really difficult to get money to run this initially, it costs a couple of hundred quid per event and we really had to beg to keep it going and our enthusiasm and commitment kept it going. Suddenly it took off, there started to be quite a buzz in the University and suddenly it gave me extra cachet, it was also at a very cool venue. The problem then was other people wanting a piece of it, trying to claim it as their own and trying to take it over...I am used to this in research collaboration, but I didn't expect it in engagement! So my point is- when engagement works it is extremely rewarding - the event I organise is great fun and I am passionate about it...but it also created lots more problems and work which I have to do on top of my academic workload which is unrecognised by the institution. (Interviewee 2, Senior Lecturer/Lecturer)

There were mixed reactions as to whether the public engagement agenda was being supported amongst social science disciplines and organisations, and interviewees questioned whether this was simply a reflection of the lesser economic power or social status of the social sciences, suggesting the individual social scientist may not possess or desire a level of agency or infrastructure to capture public attention:

Because social sciences tend to be more analytical, that version of public engagement is not so relevant. But I think broader kinds of innovation in engagement might be quite interesting and I think most social scientists would be relatively happy to engage in interesting sort of ways. (Interviewee 6, Academic Fellow)

Returning to the issues around definition, a number of interviewees also highlighted that engagement in the research process, as well as responding and engaging with the policymaking process is core within the social sciences and thus greater recognition might be required of that:

There might be a problem with the word engagement...we are interacting with people and trying to watch and see what kind of trends and issues there are and how they shape society and how everything is changing and at what point do we say something has happened or do we try to describe things in a new way. And so we are in such an intimate relationship with all the things that we are studying that it feels weird to pronounce oneself as, I don't know, somebody who needs to engage with society. (Interviewee 12, Senior Lecturer/Lecturer)

However it was also stressed that creating an interesting engagement opportunity around some areas of social science could present its challenges:

It's almost as though, the things which excite the public about natural sciences are in some ways more provocative or glamorous than some of the things social scientists talk about. And also, a lot of things that the social scientists want to talk about are things that normal members of the society already have opinions about and often there's a feeling of, people don't necessarily recognise that social scientists are kind of experts on these things... So I think the natural scientists and the social scientists sit slightly differently with regard to people's everyday knowledge. (Interviewee 9, Professor)

Comments then frequently alluded to the challenges social scientists could face in defining (should they choose to) themselves as experts in social fields but this could also include policy or advisory settings, as Interviewee 13 went on to discuss in the case of their involvement in an advisory group:

I think social scientists do have difficulties in some forums gaining recognition for the work that they do... I sat on the committee of [names specific medical field] when it was established, set up as an expert advisory group, to the regulatory agency... A lot of these committees don't create the space for social scientists to be involved, even though they have a contribution to make. I ended up being on this committee as a lay expert, so, as representing the lay public...and I was the non-expert, so, there's a kind of ambiguous relationship there which I constantly and I, after a number of years, I said that I wanted to resign as a "lay expert" because I didn't regard myself as "lay", in the sense of I felt it should be somebody who was, perhaps a patient type of representative...Quite often, I think, at the sort of institutional level, there is a failure to identify a

specific role for social science expertise. (Interviewee 13, Professor)

Interviewees also reflected on the conflict they could sometimes feel in working within a PEST setting but neglecting to engage around their own work specifically:

I have all these thoughts about social scientists and communicators, but actually I found it quite difficult to communicate my own work, so I'm aware there is a real irony there. Part of that has to do with... I've studied controversies and I don't want to be part of the controversy while I'm studying it. There's a real methodological reason not to let yourself get drawn in, but at the same time it's quite easy to hide behind that. (Interviewee 1, Senior Research Fellow/Research Fellow)

What I'm thinking of doing now is to try to translate my work into a more public kind of framework, so I can make it less academic, so I'm interested in it, but I don't know how many people really are. (Interviewee 5, PhD Student)

Whilst many comments that were expressed were then very similar to the issues that some scientists express when discussing public engagement, interviewees also discussed complexity, time and language as creating challenges, the interviewees we spoke with could find themselves in confusing reflexive positions where engagement with their own work was concerned. Relatively few interviewees raised the role of the media, perhaps reflecting that many did not identify this with public engagement, but those that did saw social science as both implicit to many areas of news reporting but that social science stories did not attract as much media attention as the natural sciences. Again specific organisations such as the British Sociological Association were mentioned here as promoting an increased agenda around featuring social science research.

On that note, a number of interviewees raised the impact agenda, often expressing concerns as to how it might influence social science research funding, or influence and lead to very applied, business or public facing research but also that it may encourage a beneficial process in heartening wider social recognition of social science research and individual academics to consider such issues.

Summary

It should be noted that we are currently finalising the analysis of this data and as such themes may still alter, emerge or develop in further planned publications. We are only able to provide a summary here. However a number of interesting aspects have emerged thus far suggesting social scientists, particularly those with experience of working in public engagement with science and technology, have an interesting perspective where engagement with the social sciences is concerned. With a shift to multi and interdisciplinary working for some key organisations in the field, this provides one answer to an

agenda to demonstrate the worth (and economic value) of the social sciences but there are also dangers via such an approach. There are clear expectations regarding the role that the social scientist does or could take, be it from policymakers or scientists when working in such a setting, which can become typified by a perception that they should 'provide' answers, recommendations or methods the language of which at times can suggest a subservient rather than mutual experience. However, the social scientists we spoke with also discussed the very positive experiences they have noted in recent years, regarding the willingness and openness of many scientists to engage with their agendas. In addition to the skills developed and negotiation which can occur at early stages of project processes or working with scientists which can create a mutually beneficial experience.

Where engagement with the social sciences is concerned, the barriers for social scientists seeking to engage are similar to those in any other field; language use, time, finance and perceived value remain prominent. However it is also important that organisations seek to reflect and recognise the considerable engagement the social sciences undertake within their research processes, which might not always be appreciated in more traditional, scientific framings of the engagement agenda. In this regard the social scientists we spoke with here were often keen to stress, appropriately so, that they could not speak for social scientists more widely. This suggests that further research on this element of the project would be highly beneficial in the future.

Information on other aspects of the project are available from the authors on request or via the project website: <http://www.scu.uwe.ac.uk/index.php?q=node/200>. With Thanks to the British Academy and our interviewees.

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