Learning to change the world: DIY research by environmental activists

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Introduction
Historically, the radical tradition of adult education was informed by a critical epistemology which made the crucial distinction between ‘really useful’ and ‘merely useful’ knowledge (Johnson 1988). The latter was largely instrumental and pragmatic whereas ‘really useful knowledge’ was aimed at freeing exploited and oppressed groups from the constraints that shaped and limited their autonomy and agency in both individual and collective terms. This was couched in terms of social class inequalities and sometimes in terms of gender inequalities. ‘Really useful knowledge’ involved conflicts not only over the content of knowledge but also whose knowledge counted and in whose interests it was deployed.

One of the criticisms made of Johnson’s argument is that it suggests really useful knowledge is something that only happens in turbulent social and political times and that when ‘normality’ returns it deflates (Flett 2006). Our argument is that this view is too superficial. Really useful knowledge may be pursued less vigorously and less dramatically, according to circumstances and opportunities, and radical ideas may ebb and flow, but they do not simply disappear until the problems they address are resolved. Another point Johnson (1988) makes is that his focus is the ‘spearhead’ knowledges that explicitly address social, economic and political inequalities. Certainly, today, we might want to consider really useful knowledge in broader terms and, in particular, to include conflicts over environmental knowledge amongst other things. In this paper we interpret ‘really useful research’ in terms of this radical tradition but with a broader view of really useful knowledge that recognises inequalities of class, ‘race’ and gender but also other forms of exploitation and oppression. The perspective of ‘really useful research’ emphasises the idea that research can help activists learn, persuade others, and act on their causes in order to make progressive change. Quite often this is against so-called ‘evidence-based’ research, which might be used to suppress and obscure the inequalities activists seek to illuminate.
To further our argument we will illustrate aspects of DIY research that environmental activists in Scotland are engaged in which aim to address environmental issues. By DIY research we mean a range of systematic but makeshift ways in which activists gather information and test out arguments and ideas – sometimes with the aid of sympathetic experts, and sometimes without them. In the context of the struggle of environmental justice, information and communication technologies (ICTs) play an increasing role in the organization, mobilisation and 'cognitive praxis' of social movements (Eyerman and Jamison 1991). These technologies provide opportunities – as well as dilemmas – for activists. Both will be discussed. The paper will draw on recent empirical research involving local and national groups of environmental activists in Scotland. Our case studies include two local community campaigns – the first (named Phase 2) is an occupational campaign against National Semiconductor, a multi-national microchip company in Greenock, which has damaged the health of former employees. The second is an anti fish-farming campaign at Scoraig on the west-coast of Scotland where Marine Harvest, a multinational company had, until recently, several salmon fish farms that have damaged the local environment. The third is Friends of the Earth Scotland, a national non-governmental organisation, which provides various resources for environmental justice campaigns. This project was funded by the ESRC between May 2007 – September 2008.

The structure of the paper is that we will give selective examples of activist research without giving a full contextual account of the case studies. The text is structured around three key distinctions that relate to the theme of really useful research: Whose evidence? Whose knowledge? Whose voice?

**Whose evidence counts?**
We concur with Marston and Watts (1998: 157) who argue that no research can be considered detached, value free, and neutral. They also claim that while policy and research can be based on ‘evidence’, not all evidence is equal, nor equally robust. Government sponsored evidence based policy is clearly influenced by a particular set of values as the following quote indicates:

> By research evidence, we mean knowledge that has been acquired through a systematic and transparent process of enquiry. Appropriate use of research can help you to do the following: 1) ensure and underpin professional credibility, 2) ensure transparency in the commissioning process, 3) ensure value for money, 4) ensure accountability, 5) Ensure that we protect the welfare of vulnerable groups, 6) ensure delivery of national and local priorities and 8) respond appropriately and effectively to locally defined needs. (Social Exclusion Task Force, Cabinet Office, 2008; 4-5)
In stark contrast with the above, the starting point for DIY activist research is often based on problems that arise from experience that are caused explicitly by inequalities of power. It is the nature of inequality that is at the crux of how evidence is received. The following quote from the Phase 2 campaign shows how the women began to identify the problem for research when they met at the Greenock workers’ rights office.

People would come with their children and we would just sit and chat, and it was really the first time that people had got together who had all worked in similar circumstances. We started noticing that a lot of us had the same sort of illnesses, and we had never been able to discuss that before in work because we never had meetings like that…we began to realize that these chemicals had been affecting our health (Phase 2 female).

Making the causal connection between working conditions and health is at the essence of the Phase 2 campaign. It is also how the Company—using ‘evidence-based’ research undertaken by the Health and Safety Executive—are able to wriggle out of responsibility for the matter (more on this below). Some members of the Phase 2 campaign did their own personal research on their health condition and its causes. The use of the Internet was particularly important for this, because search engines were quick and simple ways of tracking down specialist papers on health research:

I actually asked my own doctor, ‘do you think my exposure to these chemicals could have caused my illness?’ He said absolutely not. I had some papers with me to show him, research papers and stuff like that, and I said ‘have you read anything on the subject, do you know there has been studies into it?’ He said no, but he was prepared to offer me an opinion and tell me that my illness hadn’t been caused by chemicals (Phase 2 female).

The growth of lay health expertise and the use of the Internet is well documented and there are different views about its impact, on the one hand, in transforming power relations between patients and health professionals and, on the other, in the potential dangers of accessible but poor quality and misleading information (Nettleton et al 2005). In our view, the context of collective action makes the former more likely in that the involvement of campaigners, with a network of intellectual resources, provides greater opportunities to develop a critical consciousness for self-empowerment in health (see Lemire et al 2008).

**Whose knowledge counts?**

Eyerman and Jamison (1991) argue that movements are characterised by their ‘cognitive praxis’. That is to say, movements generate social learning spaces where new problems, values, identities and knowledges emerge. Because movements challenge some aspect of the dominant social order they invariably express views which usually upset one or more powerful
vested social, cultural, political or economic interests. This means they are always likely to be the subject of a hostile reception and attempts to discredit their case. One of the ways in this might be done, particularly in environmental conflicts, is to draw on science based knowledge claims, which disadvantages lay people.

**Lay knowledge**

Hierarchies of knowledge often mean that lay knowledge is discredited as parochial and limited with little to offer. The richness of contextualised knowledge can, however, be far more powerful and accurate because it is seasoned by experience and the test of time. An example of this is in the location of the fish farms in our case study at Scoraig. Local people knew the Atlantic tides and the problems they create so they argued against Marine Harvest's choice of location. One of the campaigners explains the consequences of ignoring their knowledge:

... [the salmon fish cages] had broken off in the storm, and I've actually got quite a lot of debris that I have collected from the loch, like big pipes that are 200 or 300 ft long...It was the most ridiculous place to put a fish farm and when they put it there, we all said that's not going to last for long anyway because we get a north-westerly swell which is influenced by the Atlantic. The seas that come around here – I mean it looks quite tranquil today but in the winter months it's the end of the earth, cold. You kind of get marooned as a community because it’s too rough to cross and they put a fish farm right in that. It’s just inches off the sea, it’s not right up on a loch like most are or in a hidden place, it was right in the face of the prevailing winds and currents; so they're idiots. (Scoraig campaigner)

In the next quote, from the same campaign, some of the strengths and limitations of lay knowledge are apparent. The person is referring to his knowledge of some dubious practices that went on at the fish farms to de-lice the salmon but the limitations of his own expertise is acknowledged. They’re not allowed to have certain chemicals in the water, and they used to do it in the middle of the night when nobody was around. They would go out in the boat at three in the morning when it’s totally dark and then add these certain chemicals, and different things. There were chemicals to get rid of the lice, you know, the lice that attached themselves [to the salmon], and you’re not allowed to use certain things [chemicals] and they were supposedly banned but they used to use them. There were certain things I knew they did, that I knew they were not allowed to do. So I could always pass that information on. ... I couldn’t prove for definite because I'm not a scientist type person who could say what these chemicals were.

The problem for community campaigners can be the lack of specialist expertise which can lend credibility to the strength of lay knowledge and
crucially extend and deepen it. Below we describe how the alliance of campaigners in Phase 2, with sympathetic experts, has enabled them to achieve this.

*Lay and counter-expertise*

It is through a combination of lay knowledge and sympathetic expertise that the Phase 2 campaigners have been able to challenge the official version of cancer that derives from so-called ‘evidence based’ research. The sources of counter expertise are two critical academics. One is a Scottish based professor Andrew Watterson, at the University of Stirling, who is a specialist in epidemiology (and a former adult educator). He wrote a number of incisive papers critical of the official accounts of the health and safety conditions at National Semiconductor and exposed their inadequacy in academic texts as well as advising Phase 2 about their flaws. The other critical academic is a leading USA occupational physician, Dr Joseph Ladou, who is an expert on the ill health effects of exposure to the chemicals involved and twice visited the Phase 2 group in Greenock. He is a professor at the University of California.

Official knowledge derived from three main sources, the company itself, the Health and Safety Executive (HSE) and the local medical profession. The knowledge provided by the company was sparse and worker’s complained that access to information about the chemicals they were handling was denied them. Naturally, the company, claims to meet all legal requirements and accepted standards in relation to health and safety conditions for its employees. Moreover, they tried to neutralize any problems created by the studies carried out by HSE, by claiming there is no definite proof to support the campaign’s claim.

In 1998 the first HSE study into the industry came about because local and national publicity generated the momentum of concern to force an investigation into the sector. Six plants across the UK were included in a small-scale study. When completed it appeared to provide evidence that health levels for employees in the plant at Greenock were actually better than in the local area. However, the sampling method and the limited scale of the study had diluted the prospect of detecting the concentration of problems in the clean room areas where exposure to chemical risk was greatest (Watterston and Ladou 2003). The next investigation by HSE, exclusively at National Semiconductor, was a response to the earlier studies inadequacy. This new investigation demonstrated above average cancer levels for employees at National Semiconductor: there were 11 cases of lung cancer in women which was two-to- three times greater than expected, 3 cases of stomach cancer four-to-five times greater than expected, 20 cases of breast cancer – five more than expected and 3 deaths from brain cancer amongst men that was also greater than expected (Watterston and Ladou 2003: 392). These results were also from a small sample of employees and a substantial
number of people with little or no exposure to the chemicals of most concern which also diluted the gravity of the situation. Moreover the HSE concluded that whilst it had cause for concern because of ‘…the possibility of work-related cause for some of these cancers’ it then went on to emphasise that ‘there is no proof…’ these cancers are caused at work and that further research is needed before definite conclusions can be made. (HSE 2001 :100).

Because of their interest in health matters the third (potential) source of official knowledge is the local Argyll and Clyde Health Board. However, their role is largely of silence on the issue. Silence is not the same as neutrality as the following quote makes clear:

I would have to say, the one area that I was surprised in, really surprised in, was the medical profession. I didn’t realise it was so class ridden. Because I don’t believe that the medics aren’t aware of the situation, I think they’re aware of it and choose to ignore it, for a whole lot of different reasons. But I think primarily its convenience and it’s a bias against blue-collar male and female workers. I can’t see any other reason as to why they would ignore these workers presenting themselves and not take an interest in the industry. I would have thought if there was a factory at its peak, with twelve hundred people using carcinogenic materials, that the company and the local health board should have got together and worked on this. The company would never do that for litigation reasons, because of the papers, and the correspondence could be called upon as part of the corporate legislation, but I would have thought the health board would have been a bit more proactive... It’s surprising how a local health board just accepts what a local employer says to them. They don’t regulate health, with a view to protecting the local people, they treat the illness. They don’t ask how the illnesses come about. (Male, Phase 2 campaigner)

The Phase 2 campaign wanted to educate local doctors by organizing a community seminar led by a leading USA toxicologist, Dr Joseph Ladou, but despite over 60 invitations to general practitioners in the area, significantly, no one from the medical profession attended.

Building alliances with sympathetic experts is one source of alternative knowledge resources for campaigners. Another alternative, or addition, has been to use the Internet to ferret out the type of information activists need.

**Alternative knowledge sources**

ICTs are a helpful resource for tracking down counter or alternative information and ideas. This ability is clearly valued by FoES activists as one of our questionnaires revealed. Visiting environmentally relevant web sites to get information is a favourite online activity; 91% indicated this is how they spent their time online. Following this, 81% signed email petitions and 77%
receive environmental information by online contacts. In turn, 53% went on to circulate information and a small number (12%) write their own personal blogs, although a greater proportion (33%) read other people’s environmental blogs. A number of responses indicate an awareness that these sources of information carry risks. Information can be misleading and searches can generate too much to cope with in any meaningful way. Making balanced judgments about the veracity of counter information is difficult particularly if the source of the information is unclear. Some respondents recognise that information’s ‘counter status’ may mean it is treated less critically than ‘official’ information.

When we asked people to prioritise what kind of actions online learning led to, the overwhelming response was to act as informed green consumers by buying alternatives where possible, to act as a conduit for information by circulating material through their own networks and, as citizens, to vote for Green parties. Respondents were also likely to attend meetings, write letters, petition, fund raise and object to planning applications.

**Whose voice is heard?**

I am fully aware of the fact that the environment in which I live is relatively unspoiled, compared to many parts of the globe, but this cannot justify acceptance of further degradation. Even if we find the hidden route to filing an official objection, our voice is lost, deemed insignificant. We are then expected to accept the imposition of development, in order than another way of life, that is somehow more important than ours, is sustained in a wholly unsustainable way. (Scoraig Campaigner)

Because movements and their campaigns are ‘swimming against the tide’ they need to get their voice heard. Publicity is essential and mastering the mainstream media is something activists need to do successfully. A Phase 2 campaigner makes this point and how it generated a range of other platforms for the campaign to make its voice heard:

- BBC Scotland must have heard about us, and they asked if they could do a programme on the group and that was the very first one we did. It was called ‘Shadow over the Glen’ and it basically concentrated on spontaneous abortion, obviously we weren’t all involved in that part of it but it did get us noticed and lots of other people were interested then, like the media, the Herald. All the local papers were interested, and then we did radio interviews and we did a channel four, one. So basically the group built up and built up and we got well known. We started to get asked to speak at conferences and things like that, and obviously not everybody can stand up and speak at a conference so we had to decide who could do what. I was prepared to speak and Helen would have spoken at a
conference. But we had to really – not everybody was prepared to do that, you know? But yeah, that is how we got going.

However, traditional media cannot always be relied on so using them and building alliances with relevant others is important. ICTs help find alternative useful sources of knowledge as well making direct contact with like-minded others. The same person quoted above elaborates on the links they made with other campaigns of workers in similar positions. We had spoken to the Americans’ who were in a similar situation to us. We had spoken to the Japanese, the Taiwanese, European workers in the same kind of industry. And we discovered that no government had ever done a study of any meaningful value.

It is the centrifugal capacity of ICTs that helps to internationalise the struggle so that other workers and communities have been able collectively to share experiences, ideas and information to further their own struggles often against the same multinational company. In Phase 2 alliances have been developed with academics and workers in Thailand, Mexico, the USA, Europe and Malaysia (www.nanojury.org.uk). Links with activists at the International Institute for the Responsible Use of Technology (www.responsibletechnology.org) also help share the Phase 2 experience with a wider audience. Pooling information and experiences between Phase 1 campaigners at the Silicon Valley Toxics Coalition (www.svtc.org) is an important resource for both groups of campaigners. It is necessary to emphasise, nevertheless, that these relationships are facilitated by ICTs rather than made by them. It is the network of international labour organisations, academics, occupational health specialists, voluntary groups and so on that provides the underlying structure for flows of information to occur.

Conclusion
We hope this account creates some insight into how ‘really useful; research’ is critical to struggles and that this can be carried out with the aid of sympathetic academics but, probably more often, in a DIY way under the radar of professional educators and researchers in the academy. Moreover, the research activists undertake is refracted through an alternative prism of values and interests to that of so-called ‘evidence based policy’ and, in the context of struggle, is generally in opposition to it. The critical point is not evidence, or transparency, or facts – all of which can be more or less convincing in their own terms - but the underlying inequalities and struggles which raise problems that are contested, provokes awkward questions and requires solutions which powerful interests seek to avoid. In this situation, DIY research by activists provides an alternative and necessary resource for learning and action.
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