

Reluctant citizens? The disjuncture between participatory biological monitoring and environmental governance¹

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Abstract

Participatory environmental governance relies on both information about the environment, and participants whose values and motivations lead them to take part in governance. It is commonly assumed that participation in data collection, such as environmental monitoring, can be equated with citizenship yet this presupposes a link between experience and motivation, or 'participation' and 'empowerment'. Voluntary biological monitoring (VBM) provides a wide range of examples of values, motives and activities in which to explore this hypothetical link. Whilst a classic participatory framework would criticise much VBM as 'top-down' and 'extractive', in which scientists appear to exploit volunteers simply for the production of data, this study reveals a diversity of motivations. On the one hand, participants are longing for the opportunity, indeed the 'excuse', to observe nature; on the other, they are disenchanted with governance opportunities howsoever presented to them, and displace responsibility for decision-making on to others. Their relationship with science is ambivalent; whilst sceptical about the link between scientific data and good decision-making, many discover a new relationship with science through the regularity of observation and sampling imposed on them by the survey design, and through satisfaction derived from contribution to 'the bigger picture'. In the context of the Risk Society, their engagement with nature is often portrayed as an escape from society but provides participants with some sense of new connections with colleagues and community. Nevertheless few feel that their data will change decisions, and fewer still display an interest in environmental policy or policy-making. Participants in the study often appeared to feel surprised and rewarded by the energy and depth of emotion that they discovered on taking part in discussions about their experiences. A broader notion of 'empowerment', that includes the discovery of meaningfulness in one's life, is needed to shift the debate on public participation and to refocus on the need for reflexive and shared learning.

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INTRODUCTION

‘What prevents us ... from pursuing ... action ... is not plausibly a lack of data. It is much more centrally a failure to integrate those data, a failure to make them real to ourselves’ (Maguire 1996, p. 171)

Governance and participation

Environmental governance can be viewed as a fusion of democracy and environmental management. Whilst the former can be seen as an attempt to represent societal values fairly, the latter is widely held to rely on valid and reliable information about the environment. Both information and values also feature in analyses of participation, which often take as their starting point the notion of a ‘ladder’ (Arnstein 1969; Halvorsen 2003; Plummer and FitzGibbon 2004), or spectrum of types of participation from top-down to bottom-up. Interpretations of this ladder vary, but in most analyses the top-down model leaves values and power relations unchanged. This is the approach where information is treated as a resource or commodity, moving from the periphery to the centre where decisions are made and the consequences handed out again. The bottom-up model focuses more on changes in power relations than on information, assuming the desirability of moving to a system where values are equitably expressed and powers equitably exercised.

The two approaches are widely held to be mutually exclusive (e.g. Goodwin 1998). Critics take the view that participation is in fact rarely empowering because it happens within the existing structures of the status quo (Cooke and Kothari 2001; Goodwin 1998; Hayward et al. 2004). However, in an analysis of examples of voluntary biological monitoring (VBM) I conclude that, because of human capacities to learn and relate to place, it is quite possible for a top-down approach to create the conditions for more radical changes in personal outlook and values; and conversely that bottom-up approaches can produce data of sufficient quality to prove environmental mismanagement by government and can consequently change power relations (Lawrence submitted). Top-down and bottom-up can, it seems, happen at the same time.

A model of participation is therefore needed which represents the dynamics between individual values and motivations, and the production of data for use within existing decision-making structures, which in turn are represented as both the enabling context for such participation, and modified by the cumulative effect of personal growth and value-change. Such a model is proposed in Lawrence (submitted) (fig. 1), and recognises the mutually constitutive relationship of structure and agency through filters of culture and experience (McAnulla 2002). It is also, crucially, a critical realist model in that it acknowledges both the *existence* of nature, or the real world, as well as culturally mediated *perceptions* or *constructions* of nature (Murphy 1994).

A key link in the proposed model is ‘empowerment’. The experientially-rich volunteers are hypothesised as taking a more active role in environmental governance. Indeed a link between volunteering and citizenship has been assumed in the context of biodiversity action planning (Ellis and Waterton 2004), and empirical studies show that experience brought to consciousness, and shared, may support value change

and personal transformation (Maiteny 2002; Webler et al. 1995). Yet personal transformation is not the same as participation in governance. This paper uses empirical data to explore the reality of that proposed link and the context in which it happens, if at all.

Robin Grove-White (1996) has highlighted the ‘decreasing sensitivity in the research world to the warp and woof of everyday moral, social and cultural experience’, calls for research focusing people’s subjective realities, within the modern world of industry and social atomisation, to understand the cultural tensions within the risk society. Here, I focus on what volunteers themselves relate about their experiences, on the links between society, volunteers, VBM and environmental governance.

These questions were explored through a series of group discussions and individual semi-structured interviews, conducted with VBM participants, in 2004. After a brief introduction to VBM in the UK, the following section discusses four themes that emerge from these interviews. First, the engagement with data collection is revealed as largely serving to legitimise and give purpose to an emotional desire to be in nature; in fewer cases, the desire is to make a contribution to something larger. Whether this sense of purpose can be interpreted as empowerment is open to question; the next section shows how separate volunteers feel from the structures of power, while the following section demonstrates that power may be acquired more in terms of social capital. Finally the role of reflexivity in such processes is considered.

VOLUNTARY BIOLOGICAL MONITORING IN THE UK

VBM includes activities which involve unpaid people, from specialist amateurs to more typical members of the public, in collecting data about the spatial or temporal distribution of species and habitats. Examples of VBM are documented through hundreds of scientific papers (Lawrence and Gillett in prep.; Mackney and Spring 2000). Most of these test the ‘effectiveness’ of ‘using’ volunteers to gather data, and use language such as ‘volunteers must be encouraged to visit sites regularly’ so that they ‘yield accurate data’ and ‘provide information’. Practitioners of participation call this kind of language ‘extractive’. The people seem like cogs in a machine. There is no doubt that the volunteers’ efforts are highly appreciated, but the management culture treats volunteers as a resource to be trained and organised, so that they produce data. Much less attention is given to the effect of the experience on the volunteers themselves (Gillett and Lawrence under review; Lawrence and Gillett in prep.), which is the focus of this paper.

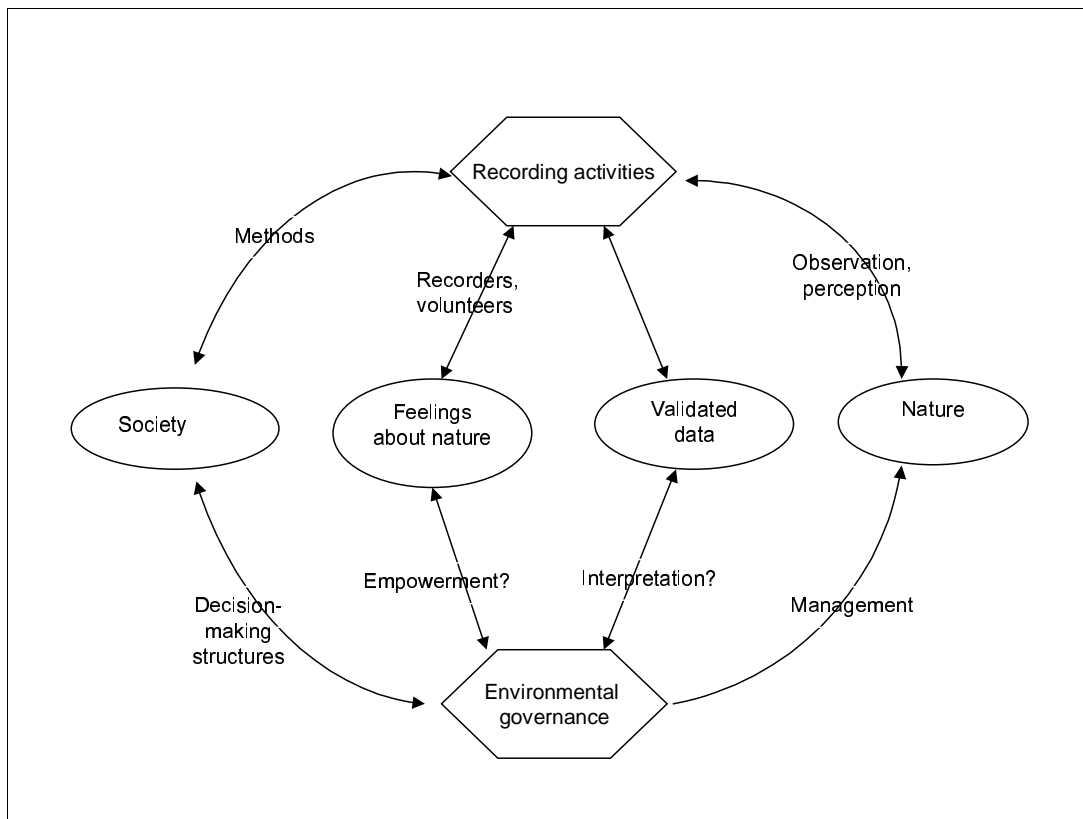
Britain probably has the best-documented flora and fauna anywhere in the world. It has evolved from the rich tradition of natural history which flourished in Europe (and particularly in Britain) from the 18th century (Jardine et al. 1996) and the learned societies whose aim was to enhance knowledge of their adopted group of organisms, to a much more structured and policy-generated demand for data. The current VBM landscape in the UK now consists of (in approximate order of historical appearance):

- recording schemes for different biological groups (such as plants, mosses or dragonflies), focusing on data collection, usually with acknowledged experts appointed as Vice County Recorders;

- often associated with the above, specific projects to produce Atlases, such as the New Atlas of the British Flora, based on over 9 million records collected by 1600 volunteers;
- Wildlife Trusts and other owners of nature reserves and protected areas, which need data in order to plan and monitor management of such areas;
- the more environmentally political NGOs which seek to involve sectors of the public in lobbying for greater security for 'nature'. National public surveys are organised with high media publicity, for example the Garden Birdwatch Scheme, or PlantLife's annual single-species survey (bluebells in 2003, poppies in 2004);
- the UK Biodiversity Action Plan, and its associated Local Biodiversity Action Plans, linked in various ways with the above, and focusing on data required to monitor their individual species and habitat action plans.

The range of approaches forms a mosaic of overlapping activities and intentions, within which the mutually interacting roles of data and values can be explored.

Figure 1. A model to represent the dynamic interaction between volunteers' values, data collection, and environmental governance (adapted from Lawrence submitted)



VBM THROUGH THE EYES OF THE VOLUNTEERS

Citizen science as the excuse to look at nature

The most salient feature of many of the interviews was the strong emotions expressed by volunteers, especially in terms of their love for nature. For example:

- ‘I really love hedgerows actually.’ (W3, Group A)
- ‘I remember a particularly lovely late afternoon in October, ... I was busy doing [i.e. recording] my hedge and then when I turned round I could see where it had been ploughed at some time in the past, I mean I have no idea how long ago, but it was just the sense of what it had been like in the past, and there was nobody else around and there was just the moon and it was clear and the sun and the sheep and it was just – absolutely gorgeous’ (W4, Group A)
- ‘I must have been a hunter-gatherer in the past because I love seeing the diversity of all the things in a hedge, that really turns me on, you can walk along and see all the different things at the different times of year, and that gives me quite a buzz, I mean actually spending the time looking at a hedge, just taking the time to look at

it, you see, the wonder of that, you know, that had an effect on my brain anyway, it's soothing' (W3, Group A)

- 'to me [it] was wonderful, and it's there in my mind ... I just loved the colour ... being in a meadow where it was just so much the countryside and nobody else around.' (W2, Group B)

Rarely would a professional scientist ever admit to such feelings, but it is important to recognise that this is the passion that leads to the data. The interviews provide a strong sense of wanting to be in nature, wanting to go slow, wanting to look in detail – but somehow needing a purpose, an excuse, or permission. Science, or the wider need for data, seems to provide that purpose. For example, group S expressed themselves as follows:

- W1: 'I mean walking on a spring morning is lovely, but when there's a purpose to it that's even better isn't it'
- W2: 'it's nice, but as long as you do it with a purpose in mind and at the end of it you feel you've done something really quite good'
- W5: 'you'd feel guilty, wouldn't you, sort of wandering along not doing anything very much except looking'
- M1: '[after retiring] I used to go for the same walk every day but I thought "this is not right, I've got to find something to do"'

For these people, there was a tension between emotion and science; they were uncertain if their desire to return to a place already surveyed could be accommodated within the monitoring methodology. For example:

- 'I'd want to go back – I've seen a hedge perhaps in the spring, I'd love to come back and see what's come out again in the hedgerow plants which *probably isn't allowed*' [W5, Group A, emphasis added]

A smaller number of volunteers consider themselves to be 'collectors' or 'list-makers':

- 'I think human beings have a collecting instinct ... collecting lists is quite a passion' (interview O1)
- 'I like collecting, it's like collecting things ... I feel that if I learn to recognise a species, when I've got something I can recognise any time of the year, then it's like a having-ness, I've got that one.' W1, Group A.

- comments which are echoed by Richard Fitter, renowned author of field guides, and collector of phenological data over 50 years when he stated 'I'm an inveterate maker of lists' (BBC2 2005).

For these volunteers, the sense of purpose can come from contributing to the 'wider picture':

- 'the data can show the changes so it is exciting' (W3, Group A)
- 'I like to see how it all fits together, ... you can put it into context, you can understand why it's there, what its role is in the bigger picture' (W4, Group A)

Both the respondents who need an excuse to be in nature, and those who feel rewarded by collecting, seem to enhance their own sense of meaning by taking up

these activities. But they also found that it can contribute to a sense of unaccustomed optimism:

- ‘it makes me feel more positive than sitting at home thinking “they’ve dug up that, they’ve ploughed all that up” which I have done a lot in the past.’ (W2, S discussion group)
- ‘you can get depressed you know if you look at the whole big picture, you just have to do what your little bit can be, I’m doing something positive and useful and putting something back into the community, the fact that I’m volunteering I feel quite positive about’ (W3, Group A).

Empowerment or disenfranchisement?

So there are strong emotional reasons for, and consequences of, monitoring biodiversity. Does that lead to empowerment? To answer this question we have to consider briefly the various interpretations of empowerment, including capacity building, acquisition of political power, participation in decision-making processes, and personal development. The third (participation in decisions) is the sense which is closest to ‘governance’, and yet most often denied by respondents.

Several did refer to the acquisition of new skills, and the building up of relevant experience for a career in conservation. Yet in relation to the institutions of conservation, many expressed powerlessness, resignation, or ignorance, or carefully distanced themselves from the processes of power. Most felt there was little likelihood of their activities changing anything:

‘I don’t see our roles as having any power to change things, I see our role as ... providing records for other more experienced people to use ... I mean the decisions that I would want to make are probably not the decisions that are going to be made. Because I would be biased towards keeping things natural, whereas this is not always possible.’ (M2, Group B)

There was, nevertheless, general agreement that the act of providing records at least makes some people more informed; those in Group A especially felt that their data had raised awareness, perhaps because they were all working on the same project and their joint data acquired a visible effect. They noted that ‘facts and figures’ can ‘make people aware of what we’ve got’, ‘make people act on it’ and contribute to arguments for and against a protected area. They made a direct link between collecting and entering the data and contributing to a planning process. This connects with the contribution to the wider picture mentioned above, and a sense of usefulness was mentioned frequently:

- ‘to have that recognition of having done something quite useful really inspired me to collect records and to submit them to the usual place’ (M3, Group B)
- ‘we got into a terrific argument [with another naturalist] about ... the whole ethical thing about recording. ... and he said he didn’t see why he needed to give his information to anybody else at all, it was his information ... and I think all the rest of us were absolutely shocked – because we felt there was no point in doing it unless you could make it available to other people.’ (interview O1).

- ‘when I go on holiday I put this big note on, in case anything happens to me, please give these to ... the Records Office. Because we all know how valuable it is to have records at the Records Office.’ (W2, Group B)

On the other hand many seem content *not* to know more about the decision processes. When asked if they take an interest in the UK Biodiversity Action Plan, or the LBAP, one group responded:

- ‘[laughing] I’m showing my ignorance’
- ‘no I don’t
- ‘as a volunteer you don’t have the time to put into it, and your life changes, so it comes down to a more emotional thing’
- ‘I don’t actually do anything but I do think about it’

This was taken even further by some who were explicitly concerned to distance themselves from planning and regulations. Several emphasised the value of public goodwill, especially of landowners, and felt that association with regulations would find them losing that goodwill and therefore access to monitoring sites. One woman in Group B commented, ‘Perhaps you are better off not being on the Parish council’, because officialdom could alienate you from the public. A man in the same group added:

- ‘I prefer to play that role, being neutral, get the information, pass it to the right authority, let them do the battles if they want to.’ (M2, Group B).

So, power is acquired in a quiet way, and expressed more as service, as usefulness. The key here is certainly to do with the *kind* of person who tends to take on biodiversity volunteering; those who really want to exercise power in environmental decision-making do not, it seems, spend their time meticulously gathering data in isolated fields and forests. Yet, there is another way in which these volunteers expressed a sense of satisfaction that is a form of empowerment, and that is their relationship with themselves and others.

Individualisation and rediscovery of community

Although conservation organisations report that volunteers often take up biodiversity monitoring in order to meet like-minded people (Gillett and Lawrence under review), the volunteers in this research expressed themselves as solitary types.

- ‘I like to enjoy it on my own.’ (W3, Group B)
- ‘a lot of naturalists are loners’ (M2, Group B)
- ‘bat recorders are completely mad, independent, strong and enthusiastic’ (interview O3)

The word ‘mad’ was not atypical. Many volunteers did not feel they fitted in with modern society. The following discussion in Group B highlights this:

[researcher]: do you feel typical, normal citizens?

W4: ‘my husband tells me not to appear too loony [group laughter] he says “don’t get too worked up about - because sometimes you get quite emotionally involved with your little projects, don’t you”

M1: [sarcastically] well that's good, isn't it?

Researcher: how do you feel about being told not to get too emotionally involved?

W4: I find it very difficult to step back sometimes, and he says "you're more effective if you appear completely normal ..."

W2: we're normal; it's the rest of them ...

M3: I've got a bit of a reputation for looking down holes and being slightly mad ...'

However others feel it has helped them to bridge social isolation:

- 'If I could hide in a dark corner and do it all on my own that would be fine. But you know, you have to do it [talk to people]. And what I've realised of course is that the more you *can* talk to people the more they are interested and say "Oh, I didn't know that's happening!" and I feel as if I'm actually helping, in that sense, directly helping create awareness I suppose.' (W4, Group A)
- 'I was amazed at the interest those people had ... there's this interest in trees, their reactions to what I actually do.' (M1, Group A)

These moments of connection with others are rare however:

- 'I have been surrounded by people living their normal lives and children going to school and realised how uninterested people are in our environmental, so ... that is a bit frustrating, so it is nice for me to feel I am contributing with people who *are* interested but sad that there seems to be such a gulf between the two' (W3, Group A)

The clue to what really motivates these volunteers, it seems, lies in these declarations of madness, non-normality, and excess emotion. Despite a strong sense of isolation, many of these people are discovering what is important to them. The 'loony' woman above was persisting with her 'little projects', and others made even more powerful statements:

- 'what I've been doing since I retired is finding what I really want to do - you know you wait till you're sixty and then you discover what your really want to do, and I've been not only discovering but actually doing it ... it fills quite a lot of important roles for me.' (W4, Group A).
- 'I think the whole purpose of my existence is [to find] a way to improve or at least prevent certain things happening, and you know, when you look back over a lifetime and can see so many losses, things that you've lost, often with no real need to have lost them, you know, ... it appals me really' (M1, Group B)

There is a sadness in reflecting on those losses, and on other people:

- 'it's modern life isn't it .. people lead very busy lives.' (W4, Group B)
- 'most people today are kind of urban people ... out of touch with the countryside ... you can't love what you've never been in contact with, and you need to be in close contact with things to develop a real interest and love of it.' (M1, Group B)

and concern about the future, especially about children:

- 'children don't go out any more. ... they have no experience of that in the way that we used to as children [general agreement] ... they're not going to get the same thing out of it as they would if they were alone. That's how we used to do it

when I was a kid, we'd be alone, and that's where that early part of enjoying nature comes from, and it isn't something children get an awful lot of opportunity these days.' (W3, Group A)

- 'children don't have the freedom these days to explore and root around and find the frogspawn' (W1, Group B)
- 'you'd be wandering off all day, parents didn't used to worry [but now they] daren't do that with children even if you live in the countryside.' (M1, Group B)

In their reflections on 'other people' and children, the groups return to the importance of being alone, and again express implicitly their strong emotions in relation to nature. Their talk about themselves emphasised a sense of isolation, of sadness about the future, and a courageous intent to pursue what is important to them. Is this empowerment and citizenship?

Experiential and social learning: a missing link between emotion and empowerment

If life politics is

'essentially about gaining control over your own life, empowering yourself in relation to your environment. Part of such empowerment is knowing yourself, becoming aware of yourself.' (Dickens 2004, p. 53, paraphrasing Anthony Giddens' theory of life politics)

then these biodiversity recorders are certainly evidence for that societal shift. Yet the alienation and individualisation of the risk society are there too. Control over one's life is only gained in terms of one's emotional proximity to nature; much more remains uncontrollable.

Over and above that, I argue, real opportunities for empowerment through self awareness are lacking. Participants in the study often appeared to feel surprised and rewarded by the energy and depth of emotion that they discover on taking part in discussions about their experiences. Biodiversity monitoring is a deeply personal experience, very meaningful for the people involved, and the chance to analyse that experience is rare and highly appreciated. Several, who had given up a whole morning to participate in a focus group for this study, said how much they had enjoyed themselves. One commented, 'We don't get the chance for a good hedgy talk often – we just come in and do our work'.

At an earlier workshop on the role of volunteers in biodiversity monitoring, participants commented (Gillett and Lawrence 2003):

- 'thanks for arranging it – it gave us a chance to step back from what we are doing and look at it in a more analytical way'
- 'most positive for me was the chance to learn what others are doing and draw parallels'
- 'it fulfilled my desire to have my own (delightful and depressing) experiences put into a wider context'
- 'we need a discussion forum to seek help from others who have learnt from experience'

Adult learning takes place when experiences are made sense of through conscious reflection (Kolb 1984). Others have commented on the power of this as a shared

process of social learning (Webler et al. 1995, p. 445) and suggest that ‘Societal ... transformation occurs through personal transformation seen in the context of *experiencing* responsibility for one’s role within it’ (Maiteny 2000). The link between inner and outer experience, individual and collective effort (Wilber, 1996 in Maiteny 2000) does not happen automatically, and the assumption that participating in biological surveys will lead to citizens empowered to take part in governance is simplistic unless this link is recognised.

Maguire (1996, p. 185) has put it more challengingly: ‘My optimistic guess is that we can learn a new emotional vocabulary where creativity will replace caution, but I am sure that ... the way to healing, both ‘personal’ and ‘social’, will have to pass through a recognition of our ecological embodiment.’ That recognition, it seems, is incipient in these volunteers, but unless we take up more active forms of experiential learning, it will stay buried in their self-perceptions of non-normality and isolation.

CONCLUSION: CITIZENS AND NATURALISTS IN AN UNCERTAIN WORLD

Volunteers collecting data on biodiversity reflect not only the loss of control over their lives, and the alienation from both society and political institutions predicted by Risk Society theory (Beck and Beck-Gernsheim 2002), but also the loss of meaning typical of modernity. Maguire (1996, p. 169) has noted ‘vast numbers of us do lead lives of quiet desperation, and indeed the so-called ‘democratic deficit’ rests upon a more profound psychic loss.’ That despair was expressed, quietly:

‘things are going on and on and not changing, ... there must be information everywhere but people don’t seem to want to be really involved in it.’ (W3, Group A)

The people represented here – who do not, admittedly, see themselves as ‘normal’ – are deeply ambivalent about the world and its future. However, the story does not end there: they are creating new meanings and new relationships. There is an odd mismatch between the volunteers’ faith in their own data and the process to which they are contributing, and their alienation from the rationalistic, industrialistic world created by that same dependence on scientific culture. In part, we see the volunteers turning to science (or citizen science) for security as evidenced by the discussions around data, what they are ‘allowed’ to do, and the purpose and meaning that monitoring can give to their otherwise apparently shameful rambles in the countryside. Science, or the structured methodology required of surveys, provides at least the illusion of a framework of rules and procedures. Most significantly, however, these people are doing something because it is important and meaningful to them, and also links them up with other people because of that shared sense of meaning. This echoes findings from other studies of people relating to nature, for example

‘... their experiences and related discourses are not significant purely in terms of the environment *per se*. They also enhance the personal meaning of these individuals’ lives and, consequently, contribute to their sense of well-being.’ (Maiteny 2002, p. 305)

Returning to the key question set out at the beginning of this paper, the finding of personal meaning is perhaps the most significant sense in which we see empowerment happening through this kind of participation. Skills are being gained, and confidence;

this was considered particularly important by the women who had taken career breaks to bring up children. But the more standard sense in which empowerment, or the building of citizenship, is presupposed in participation models, is clearly brought into question by the findings of this study. That type of active citizenship, moreover, seems to be low on the participants' priorities. Advocates of participation may find that analyses based on meaningfulness, and reflexive methods including social learning, may provide a stronger indication of the empowering potential of participation in nature.

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