



Think Piece Naked¹ Science²: Avoiding Methodolatry in an Environmental Education Context

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Abstract

Research methodology is significantly political and in this think piece I try to better understand the effect of this politicisation in the production of science. The main focus of the think piece is to identify the dominant methodological discourses and analyse them using techniques borrowed from post-structuralism. From this analysis, I suggest that methodological discourses are reproduced and normalised in much the same way as discourses of, for example, sexuality, and I give examples of this from my experience as a PhD student of environmental education. I also suggest that some transgressive methodologies, such as those associated with postmodernism or participatory research, despite purporting to empower, at times also disempower. Furthermore, all of the methodologies that I analyse are, in one way or another, 'loaded'; they cloak their agendas. From this analysis, I move towards suggesting an alternative critical realist methodology for environmental education which is naked; its agendas are clearly stated, not least because this epistemology does not lend itself to deception. An important part of this critical realist conception of methodology is the idea of 'meta-reflexivity' in which truth is not vulgarly pragmatic or fideistic.

Introduction

For some time, it has been generally understood that research has a sociopolitical component and that it is not naively objective, although there may be disagreement as to how 'objectivity' is defined (Sayer, 2000:61). As a result, a range of methodological discourses have emerged in the social and political domains of the academic context.³ In the words of Lather (2003:204):

As the concept of 'disinterested' knowledge implodes and collapses inward, social inquiry becomes, in my present favorite definition of science, a much-contested cultural space, a site of the surfacing of what has historically been repressed.

Many of the surfacing discourses declare our subjection to an era of methodological repression, related to the hegemony of positivism, and demand a transgressive move towards greater methodological freedom (e.g. Lather, 1991; Usher, Bryant & Johnston, 1997). Choosing to base our research on transgressive alternative methodologies could be considered to be a liberatory practice undertaken in an attempt to resist hegemonic methodological assumptions: Mary Daly's (1973:11–12) 'methodolatry'. Part of this liberatory practice involves the writing of academic papers, and peer debate. Researchers are encouraged to share experiences and dilemmas, both

as a move towards improving their professional practice, but also in the interests of social and political change. A key assumption is that academics are significantly influential in reproducing or dismantling methodological hegemony with all of its dire social and political consequences (Popkewitz, 1984).

My interest in methodological discourse was prompted by ambivalence around the operation of these discourses in my professional capacity as an environmental educator. I should have felt emancipated in this context of liberatory practice, but, instead, I felt constrained and unconvinced that my work was contributing to anything useful. In this paper I explore my ambivalence through a post-structural-style framework, despite nevertheless critiquing some of the methodological assumptions of post-structuralism. I therefore consider the methodological discourses as socially and historically constructed, both constituting knowledge and conferring power. I argue that power play is produced and reinforced in the transgressive methodological discourses as well as in positivist methodological discourses (Foucault, 1975:194). Foucault (1976) made similar claims concerning discourses of sexuality.

One of the places where power circulates is in university faculties. The common practice in these faculties of sharing experiences and research dilemmas, or publishing these in our research texts, can be considered the equivalent of Foucault's confessional.⁴ Whilst the discussions ostensibly promise liberation from methodological hegemony and the release of what was repressed, they ultimately constitute a subtle and complex form of regulation and determination (Foucault, 1976). One might argue that the university methodology course, the thesis methodological chapter, or personal interviews with supervisors are confessional forums that serve to construct the researcher identity as well as to reproduce and normalise certain assumptions, generally those adhered to by the methodological discourses dominant in a particular context.

If, following Foucault, we assume that the confessional constructs meaning, practice and understanding, then we must admit that, through the confessional act of disclosing our methodological assumptions and challenges, we are implicated in the governing of ourselves and our research practice. In these confessional forums, we are presented with a variety of methodological options. Once we have chosen an option, and have invested time or money in it, in theory it must give us an advantage. Educators and researchers are involved in the struggle for symbolic capital, money and power (Bhaskar, 1993:214) and I explain how our agendas are furthered by our particular methodological choices,⁵ whether we are aware of this or not. In the following discussion, I will look at three common methodological options and consider them as discourses. I will explain how they 'seize' political advantage (power). I use the term 'seize' to draw attention to the lack of mutuality involved; power is seized, it is not willingly given. I have labelled these discourses as being associated with: positivism, participation and post-structuralism. Referring to Bhaskar's (1993:164–167) critical realist description of agency, I assume that the production of discourse (an action) is influenced by, amongst other things, the authors' stratified personality, including their conscious being (providing them with routine or tacit reasons for their actions) and their unconscious being (actually causing their action, but without their knowledge).

I will also refer to how environmental educators tend to take up multiple (often contradictory) methodological positions, hoping to either maximise each methodology's advantages or minimise its problems. I will go on to explain how I avoided being fully constructed by the confessional forum in the university context, perhaps putting a question mark over the determinism suggested by Foucault (1975). Specifically, I avoided being fully determined because of a relationship to reality that Bhaskar (1993) has called 'meta-reflexivity'. As an antidote to the problems with the discourses of positivism, participation and post-structuralism, I will introduce a fourth methodological discourse, associated with critical realism. This discourse is also potentially empowering, but it does not necessarily achieve its power by seizing it.

The Construction of Methodological Identity: Loaded Truths

How the discourse of positivism seizes power

Positivism is often linked with activism; historically, it has been associated with certain dominant versions of Marxism and it was a key component of the activism against the hegemony of superstition during the Enlightenment (Popkewitz, 1984). Positivism is empowering for activists because, for the positivist, morality is the nature of things; what is good is what is (supposedly) simply and obviously natural (Comte, 2000). Positivism assumes positive, stand-alone, natural categories disconnected from, and unconstructed by, humans (Latour, 1999). This is useful in politics and polemical debates, because it supposedly justifies a polemical position objectively – for one cannot argue with the facts – although one could argue with a person. For environmental educators, it is tempting to turn to positivism when we want to prove, for example, that global warming is anthropogenic or that nuclear power is both unnecessary and unjustifiably dangerous as a way to cope with global energy demands.

An example of how positivism seizes power is to be found in the way that a pathological virus can be portrayed, without qualification, as an objective thing in itself. The researcher merely 'finds' it and then 'objectively' describes it and its mode of transmission. The scientist's particular world views are, supposedly, irrelevant and thus his or her research is portrayed as entirely objective and 'true'. An example of such a virus is the HIV virus. Here, the objective naturalness of the mode of transmission of the virus is linked to moral standings. For example, 'Moral Majority' leader Jerry Falwell (in Weinstein, 1997) commented: 'When you violate moral, health, and hygiene laws, you reap the whirlwind. You cannot shake your fist in God's face and get by with it.' Thus, the scientists state, 'objectively', that owing to its mode of transmission, the virus, devoid of its human constructedness, is most easily contracted through homosexual sex. Moralists can take this fact and seize power by reifying it to show the immorality of homosexual sex. Likewise, another researcher with the aim of protecting homosexual rights might emphasise the transmission of the virus in terms of certain sexual practices, which can be found in heterosexual and homosexual sex. The moralists from this side of the moral combat zone can also seize power by reifying the objective fact of the transmission of the virus to argue that HIV infection is an issue for all sexual beings and that homosexuality versus heterosexuality is of no consequence in the fight against HIV transmission.

Thus, the objective ‘rightness’ of the scientific information is translated into the objective ‘rightness’ of a moral stand. Proponents can feel morally justified in their position because of the scientific ‘facts’. This is an example of what Latour (1993) describes as the modernist settlement. Here, the methodological position of positivism is held in place because it can be used to bolster the power of those who have an activist agenda, whilst at the same time secretly denying this agenda. Relatedly, Latour (1999:7) describes the science of positivism as based on ‘the fear of mob rule’. It confers power by insisting on the innate moral rightness of certain positions against possibly a large majority who disagree, claiming the epistemological privilege of the objectivity of science, this privilege being unavailable to the non-experts (the mob).

Nevertheless, activists who use positivism to gain the political edge over opponents also risk losing power. Because these objective facts are reified, and combined with the existence of the secret agendas, they can congeal in such a way as to backfire. For example, if science can be used to support the idea that homosexuality is immoral, then what about the evidence that lesbians are least likely to transmit the virus: is their sexuality therefore more moral than that of heterosexuals? If it is true that one’s sexuality is of no consequence in the fight against HIV transmission, might this not prevent us from addressing the different needs of different groups: perhaps gay men do in fact need special attention given their higher rates of infection? Many activists appear to demonstrate partial vision: they can see how positivism works against their cause, but fail to see it as problematic that they also revert to positivism when it suits them.

Instead of trying to gain the upper hand by reifying the facts and removing the human component (its constructedness – critical realism’s transitive dimension) (Bhaskar, 1975), it would be better to acknowledge the objective of the preferred way of constructing the facts. Thus, the activists might state their original objective, which already existed before the scientific information became available, in this case either to condemn gays or to protect them from condemnation. They then present the facts in terms of using them to make a case for their particular position. They thus construct the facts, although, because this is a weak constructionism, the facts’ constructedness does not detract from their truthfulness. These facts, differently constructed by each camp, are nevertheless not fictional. The facts ought not to be made to ‘speak for themselves’, but, instead, should be used by way of debate to allow judgemental rationality, ultimately leaving it up to the involved humans to make informed decisions, even if the decision is to disagree with one another.

In terms of the environmental education issue of global warming, the unstated, not-so-hidden agenda on the two sides of the activist divide, that pre-exists the issue, is to do with challenging (or maintaining) the current world order of consumerism and capitalism. If human industrial activity were shown to be uninvolved in global warming, the left would be in trouble because they would have to concede a green light to excessive production and consumption, which is actually what they are against. Therefore, it would be wise for them to be honest about their actual agenda in case the ‘facts’ which supposedly clinch the argument backfire. Similarly, for the right agenda, if global warming were shown to be driven by human industrial activity, then they must concede reduced production and consumption. However, since indeed this does seem to be the current situation (Intergovernmental Panel on Climate Change, 2013), the way that the right are trying to get around this is by advocating for nuclear energy to allow them to continue their industrial

activity without causing excessive release of carbon dioxide. Again, discussions of nuclear energy, supposedly informed by impartial scientific evidence, get as heated as they do because the hidden agenda is to do with maintaining the current economic order and its inequalities.

I think that both sides feel that they need reified facts to bolster their arguments because they lack social acceptance of a conception of a layered ontology (Bhaskar, 1975). Such an ontology accepts that some things can be real even if they are not empirical or actual. In the absence of such an ontology, activists cannot justify their rational arguments that posit real but unempirical structures and mechanisms, such as capitalism or liberalism, to explain the problems that they are concerned about. Thus activists looking to improve global environmental and social conditions are forced to rely on shallow, empiricist theory of cause and effect to prove their point. In the current context of what is considered appropriate knowledge for environmental activists, one reified fact on your side ('proving' your point) is worth a great deal more in terms of power than a general (unprovable) theory that capitalism is the cause of global heteronomy. If contemporary activists were allowed the possibility of the existence of real mechanisms and structures, the left and right would be able to discuss their politics without resorting to shallow, reified theories of cause and effect. In the context of ecology, such theories of cause and effect are particularly nonsensical given that ecosystems are open systems and any self-respecting empiricist would question claims for causation based on constant conjunctions of events in open systems. However, activists break their own empirical rules of not assuming causation based on correlation because they think that there is no alternative. The reason they think that there is no alternative is that they cannot conceive that some things (such as generative mechanisms) are real even if they do not satisfy the criteria of being empirical. We can avoid empiricism and its degeneration into positivism by having discussions about mechanisms and structures, where no one tries to dominate. We instead try to persuade through reasoned argument based on empirical evidence, not reified facts.

How the discourse of participation seizes power

Although most contemporary overviews of research methodology would prefer to talk about the phenomenological or interpretative approaches at this point, I prefer to talk about participatory research methodologies, which are often justified from a phenomenological or interpretative perspective. This is because my focus is on methodological discourses, rather than the methodologies themselves. In an environmental education context, phenomenology and interpretative methodologies are often fairly invisible, whilst nevertheless assumed within the more clearly defined discourse of 'participation' or perhaps 'participatory action research'. This approach is typified by the phenomenologically justified, participatory action research of environmental educators Stapp, Wals and Stankorb (1996). The idea of people's participation originated in the 1970s as a response to oppression. For example, advocacy for participatory methods of research and activism can be found in the work of Freire (1970) and, more recently, Chambers, Pacey and Thripps (1989) and Chambers (1997, 2004). In southern Africa, researchers are acutely aware of their postcolonial heritage and therefore seek ways to avoid oppression. Participatory action research has therefore become popular among environmental educators in southern Africa because of its promise to effect change whilst at the same time being empowering and democratic.

Participatory action research methodologies are a reaction against positivist methodologies, and, therefore, I consider them to be transgressive. They are based on the epistemological assumption that we can decide on truth by putting it to the vote; participatory action research supposedly ‘democratizes research’ (Smith, Bratini, Chambers, Jensen & Romero, 2010). Thus, positivist facts that support a Western agenda and can be overruled by grassroots communities on the basis of a participatory epistemology in which truth is what the community says it is; the community’s knowledge trumps so-called scientific knowledge. However, whilst participation is a useful strategy to insist on marginal agendas against dominant, oppressive agendas, it is not a method that allows a search for knowledge, since it is conceivable that minority groups could be mistaken, just as it is possible for anyone to be mistaken. Furthermore, participatory research methods can also be used by majority groups to insist on questionable agendas against minorities, and vice versa. The key is in the strategic division of the community into groups: thus, gerrymandering becomes equivalent to truth-making. An example might be the questionable claim, common in southern African countries such as Botswana (Ntseane, 2004), that it is wrong for women to insist that their partners use a condom, despite the risk of HIV, since the majority belief in this culture is that women must always play the submissive role. However, if we were to draw the voting boundaries differently, and allow all of the people in the world to vote, or only allow women to vote, the result might be significantly different.

The question remains as to why marginalised groups would opt for participatory research when it can so easily also be used against them. Remembering that participation is a transgressive reaction against positivism, to answer this question, one must consider the reason that positivism has been so effective against marginalised groups. Briefly, where the discourse of positivism is hegemonic, for one to be allowed to participate in discussions, one must have access to reified facts that reflect sympathetically upon your cause. Most marginalised groups do not have trained scientists within their group and cannot afford to pay for the services of such scientists to gather the kinds of facts that they would need to play the positivist version of activism. Indeed, their indigenous knowledge may not lend itself to ‘scientific’ engagement at all. Marginalised groups opt for participatory action research because it gives them a socially sanctioned right to make knowledge claims and to participate in discussions relevant to themselves, even if they are not trained scientists or even if their knowledge is not ‘scientific’.

Unfortunately, the epistemology underlying such ‘democratic knowledge’ is questionable for the reasons already given. Once again, an alternative is to avoid positivism by insisting that we have access to knowledge of a layered reality. Therefore, we not only have access to knowledge of facts (through the objective, hypothetico-deductive methods of so-called science), but we also have access to knowledge of events, structures and mechanisms (through reason, based on experience, using retroductive logic). Retroductive logic is the logic that we use every day. With retroduction, we draw on experience and facts to suggest structures and events that have led to the current state of affairs. In social research, retroduction allows us to fallibly posit the existence (or absence) of structures and mechanisms that explain our oppression, without the need to prove the absolute existence of those structures and mechanisms. Retroduction also has implications for democracy. Positivism’s logic of deduction makes so-called ‘scientific’ knowledge the only valid knowledge and insists that this knowledge is fully available only to the scientific elite. However, retroduction

is available to everyone, and if it were to be a socially acceptable way of determining knowledge – it currently has a taboo status – it would satisfy the activist's criteria that communities have equal standing with scientists. In this version of epistemology, measuring and reporting facts and correlations is demoted to a technical activity, rather than being the epistemological high point of knowledge. It is only one way amongst several of identifying facts, and these facts only become useful once they have been used as the basis for transfactual theory (theory that suggests structures and mechanisms that are implied by the facts). 'Scientists' who currently enjoy elite status must, in the epistemology that I advocate, share their currently cloistered world with other people, who just as rightly can claim the title of scientist. These non-statistically trained scientists (admittedly, these would be – the 'mob' – just about everyone in the world) routinely use retroduction to arrive at theory that explains the facts. Elsewhere, I have argued that retroduction is the logic of indigenous knowledge claims (Price, 2005a). The decision as to which competing theory should be used to decide action then turns on discussions as to which theory best explains the facts. If we take an everyday example of retroduction, imagine a family who can't agree as to what condiment is missing from their soup – some think it needs salt, others paprika. They might resort to a vote, but the person who loses the vote is not necessarily wrong, just outvoted. Unlike the situation in participatory research, the voting in this context is not linked to epistemology. Instead, democracy is evident in the collective process of deciding the best theory that explains the evidence, and in deciding on the best course of action implied by the theory.

How the discourse of post-structuralism seizes power

Post-structuralism surfaced in France during the 1960s. It was a response to general discontent with the social status quo, most especially with the hegemony of institutional monopolies regarding truth. These monopolies were enabled by the dominance of the discourse of positivism, as described above. Post-structuralism and its associated cultural movement, postmodernism, is therefore, like the participatory methodologies, a transgressive methodology.

For some post-structuralists, there are no special political advantages to their position, because they flatten all truth claims into the same thing, namely fiction. Therefore, they would maintain that they do not seize power, as there is nothing inherent in a post-structuralist epistemology that gives one power. The most powerful get to decide what is true, no matter what one's epistemological position. For many, this leads to an inability to act and they become nihilistic and ineffectual (Eco, 2000:47).

However, for other post-structuralists, the idea that there is no way to determine better or worse versions of truth provides the promise of empowerment; it does allow one to seize power. This is because no one is allowed to challenge whatever position one might hold. Bauman (1991:260) calls this 'the protective wall of playful unconcern...'. If positivism and participation are offensive positions, then post-structuralism is a defensive one, but they are all fighting in a dirty war. Positivists and participation practitioners win their war by insisting that they have the epistemological trump card – special access to what is true. Post-structuralists win their war by insisting that we all have epistemological trump cards, so there can be no epistemological winners, only winners of the struggle for power. This leaves them free to believe as they please, even if this leads to actions that are underhanded.

There is another questionable advantage offered by post-structuralism which might explain its popularity. Specifically, I would like to identify a subset of this group, whom I will call the 'non-labellers'. I take this term from Blumberg and Soal (1997). The non-labellers problematise the whole process of categorisation. As Lather states (2003:205), 'I am suspicious of the desire for definitions (...)'. Oppression cannot be carried out if there are no markers of difference. I would like to suggest that this methodological position is particularly (although not uniquely⁶) attractive to many individuals who find themselves labelled as belonging to the previous oppressor groups, such as men or people whose ancestors were colonisers.

We know that the previous oppressors can themselves suffer oppression. Freire (1970:29, 30) puts it thus: 'But almost always, during the initial stage of the struggle, the oppressed, instead of striving for liberation, tend themselves to become oppressors, or "sub-oppressors" (...). Their ideal is to be men; but for them, to be men is to be oppressors.' Examples might include, from Rwanda, the treatment of the Tutsis by their previous subordinates, the Hutus (Mamdani, 2001), or, from Zimbabwe, the mass murders by the Shona of their previous oppressors, the Ndebele (Catholic Commission for Justice and Peace in Zimbabwe, 1999). Another previous (?) oppressor group which suffers oppression is men. The oppression of men has been documented by New (2001).

However, those belonging to groups identified as the previous oppressors find it hard to be taken seriously should they try to draw attention to their plight, since they still have many of the trappings of their privilege and there is still ill feeling towards them. Furthermore, many might distrust their motive as attempting either to maintain privilege or regain lost privilege, rather than innocently trying to insist on their human rights. For these previous oppressor groups, the activist process of identifying themselves as an oppressed group is counterproductive. There is no sympathy for their situation and to label themselves is to attract negative attention. Their hope for survival becomes attached to the removal of categories which enables them to vanish into a sea of sameness. I argue that the advantages to the previous oppressors of non-labelling explains, at least in part, why, for some authors such as Habermas (in Lather, 2003:206, note 3) and Van Staden (1998), post-structuralism and its close relative postmodernism are associated with neoconservative, elitist positions.

Nevertheless, the attempt to reject categorisation has internal contradictions. Very often, those same researchers who intuitively identify as non-labellers for their personal safety are nevertheless activists for other groups, for whom they intuitively suspect a better strategy is to label. Alternatively, they may have dual, even multiple, identities, one of which is linked to a previous oppressor group and one of which belongs to a currently oppressed group, such as a white female or a gay black male. Furthermore, to avoid labels is to find it hard to speak, because what then does one speak about? Kottler and Long (1997:56) have demonstrated how 'the resistance to naming denies individuals much of what is subjectively and politically important to them'.

Contradictory Subject Positions

Each of the three approaches to research methodology outlined above, namely positivism, participatory research methodologies and post-structuralism, are associated with their own particular discourses. Environmental educators, at the time that I was writing my PhD, were encouraged to choose amongst them. As demonstrated by Blumberg and Soal (1997), the

power bestowed on a person through the identification with one discourse can result in the loss of power in other ways. In the context described by Blumberg and Soal (1997), to identify as a 'normal' bisexual, for example, bestows certain social advantages, but it also constrains behaviour, because one has then to remain within the social confines of 'normal'. To problematise the idea of normality, and claim the acceptability of transgression, allows greater freedom of identity, but at the expense of potentially easier acceptance by society.

In the context of our methodological identities, we can see that the same applies. For example, to be a post-structural non-labeller confers some advantages whilst removing others. One can (arguably) avoid discrimination, but at the expense of being able to speak. Furthermore, the structural oppression remains, and is even enabled, if it is hidden by the act of 'not labelling'. Participatory research can ensure that marginalised agendas are advanced, but a problem arises when there is a majority consensus within a marginalised group that another sector of that group should remain marginalised. This would be the case where a majority (of a minority) condone the subjugation of women or discrimination against homosexuals. Many researchers try to maintain the relative advantages of all the methodologies by attempting a contradictory combination of them. Thus we find:

- Critical phenomenological methodologies – mix critical (positivist) and phenomenological methodologies;
- Critical post-structuralist methodologies – mix critical (positivist) and post-structural methodologies; and
- 'Mixed methods' methodologies – suggest a pragmatic commitment to any methodology, depending on the required outcome.

Practitioners who can justify their research identity as a mix of methodologies have access to the idea that truth is 'what the majority say it is', 'what is best for society', 'what the marginalised say it is', 'what is beautiful', or 'what is an empirically validated reality'. Some researcher/activists are aware of this contradiction, merely seeing it as a pragmatic necessity. For example, Beck (in Irwin, 2001:186) writes: 'The decision whether to take a realist or a constructivist approach is for me a rather pragmatic one, a matter of choosing the appropriate means for the desired goal.' Before I came across critical realism, I identified with Lather who grappled with the question: 'How do the very efforts of educators to liberate perpetuate relations of dominance?' (Lather, 1991:16). This aporia was the result of engaging with both: post-structuralism and its sceptical view of 'emancipation' as yet another form of domination; and the intuition that, nevertheless, we need to act to change unfair power relations, that is, we need emancipation (Lather, 1991:2).

I will briefly try to outline an optimistic alternative to the idea that 'power over' and relations of dominance in educational contexts are unavoidable.

Imagining an Alternative Science

Foucault (1975) and Lather (1991) were right; our discourse choices are about gaining power and achieving agendas, but this is only problematic if one does not distinguish between:

power₁ – which is the transformative capacity of the agent; and power₂ – which are relations of domination, exploitation, subjugation and control, which can also be described as generalised master–slave(-type) relations (Bhaskar, 1993:60).

As I have explained, positivism, participatory research and post-structuralism are all, in one way or another, complicit in seizing power – reproducing master–slave relations – despite the emancipatory objectives frequently held by their proponents. Among other things, all of these methodologies have agendas cloaked by their epistemologies. Specifically, they have the objective to advance the interests of certain sections of society, whilst pretending that their primary objective is simply truthfulness, even if, in the postmodern and participatory versions, this is a relativist ‘truthfulness’ based on individual or collective truths. Hiding information is a way of taking power by removing another’s power, and therefore it is likely to be evidence of power₂. It is important that we develop our personal ‘power to do’, but not in a way that dominates others, that is, not by assuming ‘power over’ others. Making our agendas naked would allow readers of our work to make informed decisions as to its integrity and its relevance to their lives. However, in our unjust world, where there may be real threats to our security if we were to reveal ourselves completely, perhaps some cloaking is a pragmatic necessity. We may need to leave it to others, outside the realm of our dangerous social milieu, to make a case for us. Nevertheless, it is the use of dishonest, manipulative methods that perhaps turns victims into oppressors. Perhaps, wherever possible, we need to bravely insist on naked science, even where there is personal risk.

One of the places where we might encounter methodological choices that evoke issues of personal risk is within the confessional forum of the academy. I do not have any simple answers to the regulatory nature of our student/lecturer/peer interactions, but the fact that I have passed through an academic system dominated by a non-labelling, irrealist version of the discourse of post-structuralism and emerged an ontological realist, albeit an epistemological relativist, perhaps demonstrates that the confessional may not be entirely determinist and disempowering. Possibly, a precondition for this might be the open-mindedness of the community into which one confesses. Nevertheless, my PhD research process was not without a sense of danger, as the following excerpt from my confessional methodological chapter suggests:

[Self-reflexive note – wanting to fit in:] The greatest self-reflexive step that I made to help me solve my methodological riddle was my movement away from doxa, my strongly held, socially generated, beliefs. In this difficult process, I was worried that I would lose my peer approval, and with it, symbolic capital, not to mention my self-esteem. When I first began exploring what seemed to be the heretical possibility of realism, my language was extremely tentative in my discussions with my peers. Fortunately, my research friends’ commitment to honest inquiry has meant that they have allowed me much leeway on my journey, even when I was moving in a direction with which they were unfamiliar and of which they were at times unsure (Price, 2007:87).

One might ask what prompted me to make the uncomfortable move beyond my set of fundamental beliefs (termed ‘doxa’ by Bourdieu, 2000) to solve my methodological riddle, of being both a social activist for the environment and a non-labeller. There were many socially comfortable solutions

to this riddle, in the form of a variety of mixed methodologies. To answer this question, it seems it is necessary to explain that, in analysing the appropriateness of our methodological practice (reflexivity), we can use different measures of our success or failure. In one type of reflexivity, we examine our claims for truth through the lens of our faith in socially acceptable ideas of right and wrong (fideism). In another type, we might examine our truth through a vulgar, pragmatic lens of: 'Does it achieve my goals, or the goals of those that I represent?' The kind of reflexivity that I unwittingly adopted was one in which we examine our truth by considering the contradictions we have noticed; instances where what we think does not add up to how we act or where the expected outcomes of our actions are not achieved. It was the existence of these contradictions that insisted I keep searching for resolution. Bhaskar (1993) would call this 'meta-reflexivity'.

Meta-reflexivity assumes our deep and meaningful unity with the world; knowledge is possible because we have immediate access to the world through being a part of it and not only because of our socially constructed learning, although the social construction of our knowledge is not insignificant.⁷ Meta-reflexivity is reflexivity based not on a subjectivity that is informed solely by socially constructed meaning, but by a subjectivity informed in some sense, or overreached, by objectivity (Bhaskar 1993:249). Haraway (2004:50) is perhaps suggesting meta-reflexivity and linking this to ethics when she writes: 'I believe that all ethical relating, within or between species, is knit from the silk-strong thread of ongoing alertness to otherness-in-relation.' Reflexivity based on alertness to otherness-in-relation would require some sort of objectivity, or links to the other – Haraway's silken threads. This is different from fideistic or vulgar, pragmatic reflexivity based only on what others are telling us or what we would find convenient to be true. Meta-reflexivity is also what gives people the confidence to speak truths against the beliefs of an entire population and at significant personal risk. My response to the postmodern question, 'How do we escape discourse?' (Parker, 1992:20) or, equally, 'How do we escape the power₂/knowledge dynamic?', lies in this engagement with meta-reflexivity.

Furthermore, meta-reflexivity, which also includes retroductive logic, acknowledges that there are different layers of reality: the real, the actual and the empirical. Often, our meta-reflexive process will reveal deeper realities to us. Having access to these deeper realities of structures and mechanisms is the reward available to us when we give up trying to dominate by hiding our agendas to gain unfair advantage. However, the downside is that we can no longer claim that our knowledge is absolute or certain. Fortunately, this is not troublesome because, if we could achieve a research culture where meta-reflexivity, transfactuality and retroduction were accepted, then the playing field would be levelled and we would realise that no one's knowledge is certain. If we do not have something, but also do not need it, we do not experience its absence as a lack. This is the case with absolutism and certainty. Since we do not need them to function, their absence is unlikely to be experienced as a lack. As Latour (1999:15) puts it: 'We do not lack certainty, because we never dreamed of dominating the people.'

Conclusion

A way to summarise some key points of this think piece is to return to the metaphor of methodolatry. The discourses of positivism, post-structuralism and participatory research are all

kinds of ‘methodolatry’. This word joins together ‘idolatry’ and ‘methodology’. Idolatry is the assumption that something replaces a real God. There are arguably several kinds of idolatry. In one kind, the existence of a real God is not denied, but the generally accepted words for God are confused for the God itself. Religious fundamentalism is one example of this kind of idolatry; it does not deny the existence of God but takes ‘God’s Word’ as an absolute, thereby denying any possibility of different interpretations and different relationships with God depending on changing times and contexts. This would be similar to extreme versions of participatory research whereby people’s words – what they say or agree is the truth – is considered to be unquestionably true. Certain kinds of Gnosticism might also be an example of idolatry whereby what is experienced is deemed to be the only true knowledge of God – thus experience becomes the worshiped idol. This kind of idolatry is similar to empiricist, positivist and phenomenological accounts of reality which assume that what is experienced or measurable exhausts reality. Another kind of idolatry denies the existence of a real God and worships only the human-constructed images of God which are considered to be God. This kind of idolatry is similar to extreme versions of post-structuralism which deny the existence of reality. For these post-structuralists, there is nothing under the human-constructed words; the words are themselves reality.

Hollway (in Wilbrahim, 1997:80) suggests that it is awareness of the contradictory empowering effects produced by particular discourses that serves as a first step towards resistance and/or discursive and social transformation. All of the methodological discourses (positivism, participatory research and post-structuralism) outlined above exhibit such contradictions. In my own early research, I eventually had to adjust my methodological commitments because of the performance contradiction of being a non-labelling post-structuralist, but also an activist who needed labels to identify oppressed groups and to describe the status of the environment. My personal PhD story is evidence against social determinism; it is possible to resist our construction by dominant discourses if we consider the contradictions of those discourses.

My aim for this think piece is therefore that it might allow us to move beyond ‘methodolatry’ in our scientific research. I suggest some reasons for why we should avoid methodolatry and indicate how many mainstream research discourses are guilty of such methodolatry. However, it is not possible to fully outline an alternative. Instead, I merely suggest one such alternative, namely the critical realism of Roy Bhaskar (1944–). Critical realism allows us to achieve meta-reflexivity and, through its conception of reality as having a layered ontology, it gives us a purchase from which to tackle many of the political deceptions that are made possible through the questionable epistemological manoeuvres of mainstream research methodolatry.

Notes on the Contributor

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Endnotes

1. Latour referred to naked rather than loaded science in an interview with Hugh Crawford (1993).
2. In the think piece I use the term 'science' to refer to the epistemological process that we use for all research, not just empirical or statistical research. Thus I reclaim the meaning of 'science' to include all research traditions, even those, such as anthropology, which traditionally have been denied the label of 'science'. Hence anthropological methods must be applied in certain contexts, whilst experimental techniques must be applied in other contexts. I assume the existence of a meta-theory of science, which allows methodological unity but also method plurality, in which the methods used are determined, inter alia, by the unique nature of that which is being researched.
3. There are many definitions of 'discourse'. Three definitions most appropriate for this think piece are: '...a form of social practice, rather than a purely individual activity or a reflex of situational variables' (Fairclough, 1992:3); '...products and reflections of social, economic and political factors, and power relations' (Widdicombe, 1995:107); and '...a particular network of meanings, their heterogeneity and their effects' (Hollway, 1989:38).
4. The chapter, Being vulnerable and being ethical, by Tisdale (2003) is a good example of a confessional methodological text. Indeed, so is this think piece.
5. For example, legal clerks' methodological choices with regard to the interpretation of the United States Constitution were found to reflect their political agendas (Furgeson, Babcock & Shane, 2007).
6. For a discussion of non-labelling bisexuals, see Blumberg and Soal (1997).
7. Refer to Price (2005b) for a discussion of the way that truth is both social and not-social.

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