

The Response of the Hermeneutic Social Sciences to a 'Post Carbon World'

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Abstract: Sociology has taken a 'back seat' in much of the debate, within policy and social science circles, about 'post-carbon' societies, in which our dependence on hydrocarbons is significantly reduced. The low profile of sociology does not reflect a lack of relevance, but rather an inability to follow up on the debates being generated in several congruent areas, including geography, international relations and particularly environmental economics. Sociology has much to contribute to the discussion of societal alternatives, not least in the work being undertaken on utopias and governance. It is suggested that sociologists can enhance the role of the social science disciplines, and that of sociology in particular, by re-engaging in the wider discussions, lending a hermeneutic understanding to the current policy debates about responding to climate change.

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Introduction

The environment poses real problems for the social sciences, especially the growing sense of urgency surrounding climate change (Rayner and Malone, 1998; Cock and Hopwood, 1996;

Dyson, 2005; Altvater 2007; Brunnengraber, 2007; Lever-Tracy, 2008). This is partly because some disciplines, among them sociology, have longstanding difficulties with policy agendas (with which they often co-evolved historically, and to which

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they usually offered a critique). In the case of sociology the difficulties were also compounded by the question of naturalism, and the unwillingness to accept what have often seemed facile or insufficient 'biological' explanations of human behavior (Benton, 1994). Other disciplines, notably human geography, have given much more attention to the environmental terrain including climate change, and located it firmly within their domain of interest, in this case the growing field of political ecology (Bryant and Bailey, 1997; Keil, Bell, Penz and Fawcett, 1998; Biersack and Greenberg, 2006). In this paper I take up some of the issues in an earlier contribution, and examine whether they can benefit from being considered within a broader interdisciplinary perspective (Redclift, 2009).

The way in which the social sciences respond to the climate change agenda is likely to assume more importance in a world where, in principle at least, ways need to be found out of the dependence on carbon, and the search for alternatives. In particular it means revisiting what 'we know', and subjecting environmental knowledge to new and unfamiliar investigations. It means investigating future alternatives to the 'hydrocarbon' societies with which we are most familiar, rather as Max Weber investigated unfamiliar 'whole societies' in Antiquity (Norgaard, 1984; Weber 1991).

In many ways, it can be argued, this quest for an analysis of transitions out of carbon dependency (including more understanding of their ideological and political dimensions) is one which should be heartening for sociologists. The discipline has long been interested in the way in which everyday behavior

is institutionalized and naturalized. In addition, sociology has proved an acute lens through which to explore alternative ways of living, and imaginaries, and the way they correspond to and connect with, wider human purposes (Kumar 1976; Kumar, 1987; Abrams and McCulloch 1976; Green, 1988). Sociology, and particularly environmental sociology, should be well placed to analyze the way in which social formations have been 'captured' by carbon, and the possible routes out of this dependence. It may be, of course, that to develop this new landscape of sustainability we need to be more familiar with work in other contiguous social science disciplines. In this paper I suggest a sociological perspective on 'decarbonisation' that takes us beyond the current impasse and suggests some areas for theoretical development.

A Post-carbon Politics?

'The transition to a low-carbon economy will bring challenges for competitiveness but also opportunities for growth (...) Reducing the expected adverse impacts of climate change is therefore both highly desirable and feasible' (Stern Review: *The Economics of Climate Change*, UK 2007: p 13).

This quotation from the highly influential report by Lord Stern illustrates the way in which what had previously been viewed as a 'threat' could quickly become an 'opportunity'. The immediate responses to Stern (and the IPCC 4th Assessment of 2007) were effusive and optimistic in tone. One commentator on business and

the environment wrote that 'people would pay a little more for carbon-intensive goods, but our economies could continue to grow strongly (...) The shift to a low-carbon economy will also bring huge opportunities (...) Climate change is the greatest market failure the world has seen' (Welford, 2006: 37).

The characterization of climate change as a 'market failure' immediately offers economists and business a lifeline. There is a strong teleological drive to much of the work on climate in environmental economics illustrated by these brief quotes.

But there were also voices that dissented from this rather sanguine account of the converging interests of business and the environment 'The fundamental victory of late-twentieth century environmental politics was precisely to highlight and isolate environmental destruction as the integral result of capitalist patterns of production and consumption. If still incompletely, the market has now retaken and recolonized environmental practices (...) The extensive production of nature that has characterized capitalism since its infancy has, since the 1970s, been challenged and increasingly superseded by an intensive production of nature' (Smith, 2007: 26).

As Neil Smith and others have argued, environmental concerns represent not just an opportunity for policy, but an opportunity for capital to employ new technologies in the search for profit. Their critique of capital and nature takes us below the surface of a society unable to manage the deepest contradiction to which it is exposed: relinquishing its dependence on carbon.

The Continuing Influence of Natural Science Paradigms: Complexity Theory and 'Emergent Structures'

In approaching the challenge of a 'post carbon' sociology we might take our bearings from the work on complexity theory undertaken by John Urry (2000) which emphasises the importance for the social sciences of natural sciences thinking about 'flows', and argues for the changing character and role of (transnational) state power in a network society of flows, fluids and scapes (Spaargaren, Mol and Buttel, 2006). However, this work does not recognise a specific need to address a 'post carbon world' as urgent for human survival, or identify the heavy dependence on hydrocarbons as a distinguishing feature of advanced industrial societies. Urry has sought to address these questions in more recent work (Urry, 2011).

Another point of departure, from a sociological standpoint is the analysis of the way that different 'environmental knowledges' are being put to use for example, in predicting extreme weather events, in green labelling of consumer products, in the ethical responsibilities of tourism and consumption generally (Bryant, Goodman and Redclift, 2008). This renewed use of distinct 'environmental knowledges' is also being deployed in explanation for rising energy and water bills. These examples, often drawn from 'everyday life', benefit from being considered within an interpretive sociological context (Berger and Luckmann, 1966) and the discussion of the 'familiar' (*doxa*) in the work of Pierre Bourdieu (Bourdieu, 1998). Environmental knowledges, in other

words, are increasingly used by ‘lay’ as well as ‘expert’ opinion, and in support of different groups, against a background of social assumptions, and contested claims on society (Yearley, 1996).

These examples illustrate the differences between ‘lay’ and ‘expert’ knowledges, but they cannot help us resolve differences about the utility of these knowledges. As ‘elite science’ environmental knowledge is part of a specialised, esoteric knowledge that can assist, among other things, in offering judgements about the probable consequences of global climate change. However, as science critique, environmental knowledge is employed by NGOs, social scientists and others to critique science itself. It is reflexive, and is taken as evidence of the fact that we cannot remove ourselves from the consequences of our own social constructions. The recognition of environmental issues, on this reading, is a socially-determined event. Sustainability and environmental discourses thus provide illustrations of the deeply political nature of climate policy and science, they do not supersede it, nor can they be subsumed into the ‘post-political’ policy consensus represented by economists like Stern (Swyngedouw, 2007).

Awareness of our increasing dependence on carbon, and the difficult choices it implies for society suggests that we are confronted by a challenge in social learning, as much as in policy responsiveness. As we become more dependent on prediction in areas such as climate change, so prediction is increasingly difficult and uncertain: the past is an unreliable guide to the

future. The conditions of the natural world are changing so fast, that the lessons we learn from ‘nature’ need to be constantly revisited. In the domain of environmental policy established markers for the future based on the past are increasingly unworkable. They are historicist, in that future acquisitions of knowledge cannot be predicted from past experiences (Popper, 1957). We are travelling in new and hitherto unexplored territory when we grapple with climate change and analogies lie in areas like the new genetics (Finkler, 2000), where ‘taken for granted’ assumptions provide an unreliable guide.

Does the acknowledgement of the need for a major shift in perspective assist in making science and policy more accountable or does it leave us powerless to act? To answer this we need to look at the broader issue of environmental governance.

Contradictions between Changing Materiality and Changing Institutions: Environmental Governance

‘When developing forms of scientific cooperation between the natural and social sciences, the key tasks for the social sciences are to formulate forms of governance that trigger reflexivity by de-routinising social practices, activate human agency and outline possible choices in ways that fit the specific risks dynamic of second modernity’ (Spaargaren, Mol and Buttel, 2006: 24).

Much of the debate about sociology and nature has proceeded as *if* human institutions endure while the environment changes. But human

institutions also change, although usually in ways which are not 'co-evolutionary' with the natural environment (Norgaard, 1988). For example, as societies change the problems of sustainability are frequently those of providing access to limited, 'positional goods' (Hirsch, 1976) – the countryside, clean coastlines, and uncongested cities. However, as economies develop, these same 'positional goods', to which people expect greater access, either suffer from more scarcity or overcrowding. One of the challenges of reducing carbon dependence, then, is to understand the institutional complexes from which materialities gain their legitimacy.

The 'solution' to these problems of material and institutional 'dysfunction' is often described in terms of environmental *governance*. This is usually invoked in terms of 'improving' governance – either promoting more ethically informed governance or proposing new institutions to do the governing. Interestingly, new environmental regimes, such as the Millennium Ecosystem Assessment (MEA), which was undertaken in 2005, do not provide any insights into how in a 'post carbon' world governance might change. In place of new ideas about how environmental issues might alter governance they offer information about the framework of planning, of institutional 'value added', of promises to govern nature. This is another illustration of how thinking on environmental governance has failed to stir sociology or inform policy (Schlosberg, 2004).

It also reveals something of significance about the sociology of

environmental 'crises'. The principal innovations in conceptual thinking about the environment and society have arisen because of the scale of likely damage caused by climate change. They examine institutional reforms within the context of material changes. For example, note the way in which disaster studies considers 'emergent structures' within societies in the period just after major disasters, and illuminates the contradictions between disaster and risk 'management' and the trajectories of economic development policy (Pelling, 2003). These are situations in which 'normal' or pre-existing structures of governance are often challenged, and provide another example of the way in which changes in materiality can lead to new political and democratic openings.

Post-structural Political Ecology?

Another approach which critically examines the assumptions behind 'normal' environmental governance is post-structural political economy and, particularly, the work of Arturo Escobar (1996). Escobar's position is based on a more reflexive understanding of the conditions prevailing at the geographical 'margins' of global society, such as the Pacific coast of Colombia where he has undertaken fieldwork. As an anthropologist Escobar brings to our attention the more 'emic' dimensions of behaviour – how people respond is linked to distinct cultural understandings, which should not be universalised. In his ethnographic work Escobar seeks to combine the insights of political ecology with the more discursive approaches reviewed

above, suggesting a concern with materiality combined with an interest in its discursive expression, as an instrument or response to the exercise of power.

The approach elaborated by Escobar begins with ‘the growing belief that nature is socially constructed’ and goes on to explore the discourses of ‘sustainable development’ and ‘biodiversity conservation’ in the belief that ‘language is not a reflection of reality but *constitutive of it*’. Space, poverty and nature are then seen through the lens of a discursive materialism, suggesting that local cultures ‘process the conditions of global capital and modernity’. Escobar argues, like Neil Smith (2007), that capital is entering an ‘ecological phase’, in which nature is no longer defined as an external, exploitable domain, in the classic Marxist tradition, but as ostensible self-management and ‘conservation’. However, in his view, this is something of an illusion and one that is advanced for economic motives. Capital seeks to use conservationist tendencies to create profit, through genetic engineering for example, and to identify new areas of high profitability, like sourcing biomaterials for pharmaceuticals, which are often outside the traditional domain of finance capital.

This approach significantly qualifies views on the dialectic of nature and capital in several ways. First, the argument is that capitalist restructuring takes place at the expense of production conditions: nature, the body, space. Second, this can take the form of *both* outright exploitation of nature and also ‘the sustainable management of the system of capitalized nature’. Third, this, the ‘second contradiction’

of capitalism entails deeper cultural domination – even the genes of living species are seen in terms of production and profitability. Fourth, the implication of this is that social movements and communities increasingly face the double task of building alternative productive rationalities while culturally resisting the inroads of new forms of capital into the fabric of nature and society. This ‘dual logic’ of ecological capital in the North and the South is increasingly complementary, and needs to be viewed as an historical conjunction. What remain to be discovered are the precise forms of political and social resistance which will come to characterize the withdrawal from carbon dependence.

As the quote from the Stern Report at the beginning of this paper suggests, climate change is now regarded as a ‘given’, markets are now considered more relevant to policy solutions than ever before, and the reduced dependency on hydrocarbons is widely regarded as the single most urgent policy challenge facing us. The evidence of a global economic recession, beginning in autumn 2008 with the so-called ‘credit crunch’ requires a response that links post-carbon futures to the new economic and financial circumstances, under which weak regulatory frameworks put governments at the mercy of international banking institutions.

The Economic Depression, Macroeconomic Policy and Post Carbon Society

General optimism about the economy in the United Kingdom, Spain, Ireland

and the United States during the last decade, and the escalation in property prices, had served to discourage saving (Bernthal, Crockett and Rose, 2005; Braucher, 2006). At the same time the level of indebtedness had increased, even prior to the banking crisis of 2008/2009. In a society in which increased equity in housing seemed assured, and borrowing was easy (if not cheap) individuals were prepared to buy property to rent and re-mortgage their homes with apparent alacrity (Tucker, 1991). More disposable income meant enhanced personal consumption, rather than saving, and *sustainable* consumption represented another consumer choice in a buoyant market. It was one way in which the citizen, passenger, or neighbour could be re-labelled as a 'customer', a discursive practice which had grown since the 1980s, and which drew attention to the ubiquity of market relations (Cross, 1993). The interest in so-called 'sustainable consumption' was fuelled by the expansion of credit and market opportunities (Bernthal, Crockett and Rose, 2005). It consisted largely of widening consumer choice, and making new or ethical products more available on the market, rather than in narrowing choice to fewer, more sustainable products and services. On a positive reading this only served to strengthen the process of ecological modernisation that appeared to offer a sustainable solution to the 'environmental' and consumer crises of the early twenty-first century. This 'model' of 'stabilised' debt management and enhanced personal consumption might at first appear at odds with what I have referred to as 'post-carbon' society, but in fact it was

quite consistent with the individual consumer-based policy discourses of the last decade. The increased purchase of consumer goods and services which carry an 'environmental', 'natural' or 'ethical' imprimatur has been bolted on to a loosely regulated market that prioritised individual choice and profitability. The context for most sustainable consumption discourses during the last few years has elements which were consistent with credit expansion and indebtedness, rather than 'self-sufficiency' and deeper green credentials, (OECD, 2002). In fact the sustainable consumption discourses were several, and often mutually contradictory throughout the period in which green consumerism has become established.

Conclusion

This paper has eluded to several areas of sociological work which can inform our analysis of the transition from carbon dependency towards more sustainable, lower energy intensity paths. One is the investigation of societies as utopias and imaginaries, freed from the heavy burden of 'real world' policy and practice. In re-imagining a future free from carbon dependency we will need to re-think physical and social infrastructures, and transport and energy production, from the 'supply' side, as well as consumer demand.

Similarly, sociology, by framing environmental policy problems within the context of the understood 'blind' commitments of everyday life, also has the potential to recognize those behavioral commitments, and to

address how societies meet ‘needs’ as well as ‘wants’. It has provided a critical stance on the ‘path dependency’ that has characterized hydrocarbon societies. Rather than speak loftily of the need to ‘transform’ human behavior, we could make a start by analyzing how current behavior is tied into patterns and cycles of carbon dependence. There are gains to be made in exploring why and how social and economic structures are unsustainable, the real costs of naturalizing social practices which carry important environmental consequences.

Finally, the ‘post-carbon’ dependent world will be one of increasingly mobile materialities, in which sustainability needs to be viewed within an increasingly global context. If societies are to manage the transition out of carbon dependence then the process of ‘de-materialization’ will have to be examined sociologically. We will need to know whether waste matter is being reduced, and ‘throughput’ made more efficient – or simply being dispersed to new spatial locations. We will need to grapple with scale, as well as materiality, with spatial relations as well as social relations.

The debate about the shift from carbon dependence has not benefited from much thoughtful sociological analysis until very recently. The difficulty in separating material evidence for climate change from its discussion has not only spawned ‘climate deniers’ on the one side, but a fear of democratic accountability and engagement on the other. Perhaps, in the ‘post-political’ world governance needs to be re-thought, to take account of new forms of power, and the political economy of the withdrawal from carbon

dependence needs to be analyzed, rather than evangelized. The weakness of environmental governance needs to receive closer sociological attention.

Underlying Structural Issues and ‘Post Carbon’ Sociology

The prospects for ‘post carbon’ sociology are encouraging. The emergence of green technology as a positional good, a good to which only a minority has got access, is only one of several indications that climate policy is insufficiently grounded in our knowledge of social structures. The existence of embodied carbon, and its acknowledgement in the discussions (but not the policies) surrounding global trade agreements is another (Kejun, Cosbey and Murphy, 2008). Climate policy, and the piecemeal attempt to provide incentives for individuals to reduce their own carbon dependency, is rarely linked to wider global experience outside the OECD countries. In what ways does it contribute to the transfer of much needed cleaner technology to the global South? What are the international and distributive consequences *within* the global South of our attempts at limited decarbonisation in the North?

We might, indeed, dig deeper still. What other forms of human agency, other than those of the ‘informed’ consumer, have been left out of the equation? What are the wider social and cultural implications of placing so much emphasis on trading in a ‘bad’ (pollution) rather than a ‘good’ (such as cleaner technology)? This is an area in which social learning can provide real insights. What

forms of human agency, innovation and collective action lies outside the compass of 'entrepreneurship', but help distil community support and engage environmental citizens (Dobson, 2003)? Climate scientists are seen as the 'guardians of the dogma' on climate change, but there is evidence of low levels of public trust in science, including climate science. What is required, then, to mobilise areas in which there are high levels of public mistrust, such as climate change, while other institutions and practices command more widespread public support, such as community-based credit unions and some of the financial mutuals? New forms of Web communication and networking suggest widespread support for organisations which are embedded locally in communities and which acknowledge, rather than ignore, social and economic inequalities. As in previous historical periods, addressing structural inequalities, international as well as national, might become the engine of new transitions, creating new social solidarities, and means of liberation, from the path dependency associated with our heavy reliance on hydrocarbons (Redclift, 2008).

Is there a 'Bright Narrative?'

In this paper I have argued that a meaningful transition to a low-carbon economy is impossible as long as we rely on models of market choice and normative science policy that leave little room for collective and group behaviour and ignore the underlying social commitments that govern our everyday lives. The dual crises of global financial debt and climate

change are reaching a 'tipping point' beyond which it will be difficult to move.

Already there is evidence that some behavioural responses to the environmental and financial crisis are taking forms that are not easily accommodated to the prevailing approaches to environmental policy favoured by most governments. They lie in challenges to conventional food systems, alternative recycling and re-use activities, small scale attempts to provide sustainable renewable energy at the level of communities as well as individual households, and the brave efforts of enthusiasts to hold back ecological damage. Much of this activity is 'informal' in a new sense, too: it is often funded within the 'formal' market economy but depends heavily on Web-based organisation and group and community loyalties without formal institutional ties. These partial, but evolving, challenges to conventional thinking and behaviour are often only weakly connected to each other, since they cover a number of apparently isolated social fields. What they do reveal are fissures in the fabric of governance and the management of nature, and a need felt by some third sector organisations to transcend anxiety over the environment. They reveal ways in which conventional path dependency is shifting, allowing new kinds of social organisation and governance to emerge, often in unexpected places, building new forms of social and ecological resilience. Can alliances be built from these small innovative 'alternatives'? Can a 'brighter narrative' be developed for the future?

In the recent past, extreme traumas

such as those experiences during and after World War II have transformed many of the taken-for-granted assumptions that characterise modern industrial societies. Major shifts in behaviour, such as rationing, women's employment and dramatic changes in resource and energy use, have come about as path dependency has been transformed by events on the world stage. Societies and economies have been mobilised for different purposes. Although historically conjunctural, such experiences might help inform us today. The challenges of the 'new' conflicts associated with climate change today are much greater of course, and carry fewer political imperatives. The 'tipping point' is no longer the prospect of military occupation by an enemy but 'retreat' in the face of a self-induced problem: anthropogenic climate

change. In exploring the possibilities of transition to a post-carbon future we might begin by examining the 'pieces' – fragmented, virtual and local – with which such a narrative might be constructed. They need to be constructed from peoples' lives and the resilience of their households and communities, rather than simply from their performance in consumer markets that are often transitory and unstable. The 'Bright Narrative' may elude this generation, but we need to examine solidarities and social commitments in the next generation, drawing on the perspectives of sociology and anthropology, perspectives which have offered criticism of path dependency, and might offer a more promising account of oppositional political and social positions.

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