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## Towards a phronetic approach to pro-environmental behaviour: Seeking context, interaction and power in behaviour change processes

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**Towards a phronetic approach to pro-environmental behaviour: Seeking context, interaction and power in behaviour change processes**

by

Tom Hargreaves

*CSERGE Working Paper EDM 10-03*

**TOWARDS A PHRONETIC APPROACH TO PRO-ENVIRONMENTAL BEHAVIOUR:  
SEEKING CONTEXT, INTERACTION AND POWER IN BEHAVIOUR CHANGE  
PROCESSES**

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January 2010**

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## **ABSTRACT**

This paper outlines and attempts to develop an original and innovative approach to research on pro-environmental behaviour (PEB) by, for the first time, applying Flyvbjerg's (2001) call for the development of *phronetic* social science to this burgeoning empirical subject. Based on this novel application of Flyvbjerg's work, it contends that most current research on PEB is misguided, and even potentially dangerous. After outlining Flyvbjerg's argument, it reviews existing work on PEB and argues that, to date, it has predominantly sought after the Aristotelian intellectual virtues of either *episteme* or *techne*, and has neglected *phronesis* which Aristotle himself saw as most important. It then briefly presents a case study of a PEB change initiative as an attempt to demonstrate how a *phronetic* approach to PEB might be pursued. It concludes by calling for an improved and more reflexive dialogue between PEB researchers regarding the purpose and approach of their work, both in order to improve the relevance and impact of their research, and in order to help individuals and communities understand and confront the significant environmental challenges they currently face.

## **KEYWORDS**

Pro-environmental behaviour change; Phronesis; Context; Interaction; Power.

## **ACKNOWLEDGEMENTS**

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## 1. INTRODUCTION

This paper calls for a more informed dialogue concerning the purpose and effectiveness of research on pro-environmental behaviour (PEB) change. It is prompted by the recognition of two related trends in research and policy for sustainable development, more specifically sustainable consumption and lifestyles. First, that “behavioural change is fast becoming a kind of ‘holy grail’ for sustainable development policy” (Jackson 2005, 105). Second, that despite more than 30 years of research into PEB change, during which time environmental problems have worsened considerably, the interventions and recommendations this research has produced have failed to make a significant impact on behavioural patterns or their environmental effects.

To move beyond this situation, this paper considers the implications of Flyvbjerg’s (2001) call for the development of *phronetic* social science for research on PEB for the first time. This provides a valuable and original frame of reference for an improved dialogue between researchers in cultural geography, environmental sociology, environmental psychology and social marketing, and including policy makers and the public, which seeks to make explicit what the study of PEB seeks to achieve and how it should go about doing so. What is at stake in such a debate, is not only improved solutions to potentially catastrophic environmental changes, but also the continued relevance and vitality of the social sciences.

The paper begins by outlining Flyvbjerg’s (2001) argument that much existing social science research is misguided and irrelevant, but that an approach based on the Aristotelian intellectual virtue of *phronesis* offers a way forwards. Section 3 then reviews existing research on PEB in the light of Flyvbjerg’s argument and Aristotle’s virtues. In section 4 it briefly presents some new empirical research conducted by the author as a means of identifying some of the shortcomings of current approaches to PEB research and as an attempt at, if not an example of, a *phronetic* approach. The paper concludes by considering the implications of this argument for future research on PEB. Here, it points towards a new and innovative research agenda based around the concept of *environmental socialisation* that seeks to develop contextually-sensitive solutions to contemporary environmental challenges.

## 2. SOCIAL SCIENCE AS PHRONESIS

Flyvbjerg (2001) argues that in its current form social science has ‘failed as a science’, and that it will remain unreliable and even irrelevant until it is substantially re-oriented. The basis of Flyvbjerg’s critique is that, for the last two centuries at least, social science has attempted to emulate natural science in producing universal, invariable and context-independent models and theories of social life. Flyvbjerg argues that this is misguided because such productions are inappropriate for social analyses. The reason they are inappropriate is because context is fundamental to social phenomena and therefore attempts to explain them using context-independent theories, however well-developed and sophisticated, fundamentally fail to capture the situatedness of normal everyday life.

To support these claims, Flyvbjerg draws on a series of heavyweight social thinkers. He invokes Giddens’ (1984) double-hermeneutic to argue that, as they are always and only interpretations of interpretations, social theories are only ever as stable as the interpretations of their subjects. He borrows Foucault’s (1973) archaeological insight that humans create the very human sciences of which they are the subject

and therefore whilst a form of ‘objectivity’ may exist within these sciences, “no science can objectivize the skills which make it possible” (Flyvbjerg 2001, 47). Finally, he draws on Bourdieu’s (1977) observations that social behaviour draws its meaning from its temporal and social context and therefore a stable and cumulative social theory of such behaviour is unlikely because it would, of necessity, rely on a context-independent interpretation of context-dependent phenomena. In short, that “practice has a logic which is not that of logic” (Bourdieu 1977, 109).

As a result, comparisons between social and natural sciences in terms of their theory-producing capabilities render social science weakest at precisely the point where natural science is strongest. Flyvbjerg’s response, however, is to halt such misleading comparisons and instead create a social science that is strong where natural science is weak:

“[J]ust as the social sciences have not contributed much to explanatory and predictive theory, neither have the natural sciences contributed to the reflexive analysis and discussion of values and interests, which is the prerequisite for an enlightened political, economic, and cultural development in any society.” (Flyvbjerg, 2001, 3)

To achieve this, Flyvbjerg calls for a rejuvenation of Aristotle’s intellectual virtue of *phronesis* as the core aim and purpose of social science.

### 2.1 Aristotle’s Virtues

Aristotle distinguished between 3 ‘intellectual virtues’: *episteme*, *techne* and *phronesis*. These are summarized in table 1. *Episteme* concerns knowledge that is invariable across space and time and is epitomized by, for example, the laws of physics. Such a virtue is pursued through analytical rationality enabling generalization beyond specific cases. In contrast, *techne* involves the application of technical skills and knowledge in order to solve particular problems. Unlike *episteme*, *techne* is context-specific as it involves the use of a pragmatic instrumental rationality that is oriented towards a conscious goal. Finally, *phronesis* represents a form of practical wisdom or prudence. It involves the use of a value-rationality not only to find solutions, but also to help understand and define complex and dynamic problems. In Aristotle’s words: “it is a true state, reasoned, and capable of action with regards to things that are good or bad for man” (Aristotle, in Flyvbjerg 2001, 56). As such, it involves context-dependent deliberation about values as the basis for conduct.

**Table 1: Summary Of Aristotle's Intellectual Virtues**

<i>Episteme</i>	Scientific knowledge. Universal, invariable, context-independent. Based on general analytical rationality. The original concept is known today from the terms ‘epistemology’ and ‘epistemic’.
<i>Techne</i>	Craft/art. Pragmatic, variable, context-dependent. Oriented toward production. Based on practical instrumental rationality governed by a conscious goal. The original concept appears today in terms such as ‘technique’, ‘technical,’ and ‘technology’.
<i>Phronesis</i>	Ethics. Deliberation about values with reference to praxis. Pragmatic, variable, context-dependent. Oriented toward action. Based on practical value-rationality. The original concept has no analogous contemporary term.

(Source: Flyvbjerg 2001, 57)

Flyvbjerg (2001) argues that *phronesis* is commonly involved in normal, everyday social practice, present in the kinds of tacit skills or 'practical consciousness' (Giddens 1984) that enable individuals to go on in the world "in the manner of a virtuoso social and political actor" (Flyvbjerg 2001, 2). In this respect, *phronesis* is what makes individuals expert 'practitioners of everyday life' (Holstein and Gubrium 2003, 73) and, as such, must be understood and incorporated in any analysis of behaviour.

Despite the importance Aristotle placed on *phronesis*, since at least Kant and Descartes the pursuit of *episteme* has become dominant, leading to the rise of a narrow, analytical and instrumental rationality, and to the 'disenchantment of the world' (Flyvbjerg 2001, 136). Such a state of affairs is deeply troubling because not only are the virtues irreducible to each other – for example *techne* and *phronesis* cannot be captured in rule-based formulae (*episteme*) - but *phronesis* is vital to ensure that *episteme* and *techne* are employed prudently. As Flyvbjerg argues:

"*Phronesis* is most important, from an Aristotelian point of view, because it is that intellectual virtue that may ensure the ethical employment of science (*episteme*) and technology (*techne*). Because *phronesis* is today marginalized in the intellectual scheme of things, scientific and technological development take place without the ethical checks and balances that Aristotle saw as all-important." (Flyvbjerg 2004b, 289)

Flyvbjerg thus argues that instead of continuing to emulate natural science or engineering in pursuit of *episteme* or *techne*, social science should seek to act as a form of *phronesis* for society. It should no longer seek universally-applicable models or theories of human behaviour, but instead attempt to make contributions to value-rational debate about 'things that are good or bad for man'. To do this, Flyvbjerg proposes 4 value-rational questions which he suggests should be used to guide social inquiry. These are:

1. Where are we going?
2. Who gains and who loses, by which mechanisms of power?
3. Is this desirable?
4. What should be done? (Flyvbjerg 2001, 60)

Here, 'we' represents whichever social group is being studied, and indicates that there can be no absolute or final answers to these questions, only partial and contestable answers made as contributions to ongoing social debate. Such an observation does not pave the way to relativism however, for Flyvbjerg not only calls for the inclusion of multiple perspectives within the dialogue, but also for a form of contextualism which recognizes that "our sociality and history is the only foundation we have, the only solid ground under our feet" (Flyvbjerg 2001, 130). *Phronetic* social science therefore seeks to make a better argument, subject to the same validity claims as all others, as a means of advancing social dialogue until a still more valid case can be made.

Finally, Flyvbjerg (2001, chapter 9) offers 9 methodological guidelines to help in the pursuit of such partial answers. These are not intended as directives, imperatives or even as encompassing all that might be possible within a *phronetic* approach, but do provide a helpful starting point:

1. *Focus on values*: Research should seek to provide context-specific answers to the 4 value-rational questions outlined above.

2. *Place power at the core of analysis*: The operation of power in specific contexts should be analysed as central to how action proceeds.
3. *Get close to reality*: Research should focus on problems that are relevant and important to the group(s) being studied, and should at all stages (data collection, analysis and publication) be undertaken close to the group being studied to ensure its relevance and to gain feedback.
4. *Emphasise little things*: Research should not be distracted by what appear to be 'big problems', but should focus on the ubiquitous details and minutiae of specific cases to find the big within the small.
5. *Look at practice before discourse*: Research should focus on what is actually done, how events unfold in everyday situations, before making judgements about their significance or meaning.
6. *Study cases and contexts*: *Phronetic* social science should concentrate on developing detailed knowledge of specific examples and case studies, rather than seeking to generalize beyond specific situations.
7. *Ask 'how?' – Do narrative*: Research should focus on processes as they unfold, taking account of their complexity and history, rather than dissecting social life into static and isolated factors or events.
8. *Join agency and structure*: Research should analyse the interplay of agency and structure in specific, concrete cases asking how structures are created by agents and how, in turn, those structures shape action.
9. *Dialogue with a polyphony of voices*: *Phronetic* social science should not seek to be the omniscient commentator on social life, but should actively incorporate multiple voices within its account, and should perceive itself as simply one voice among many, albeit (hopefully) a well-informed one.

Such guidelines do not necessarily demand either qualitative or quantitative approaches, although for Flyvbjerg (1998; 2006) they do emphasise the importance and value of the often neglected and widely derided case study method. Crucially, however, a *phronetic* approach favours whatever methods or combination of methods is helpful in seeking answers to the four value-rational questions, and in improving understandings of, and solutions for the challenges faced in everyday life.

In summary, Flyvbjerg suggests that social science has been misguided in its pursuit of *episteme* and *techne* and that this has led to unfavourable comparisons with natural science and, ultimately, to a lack of relevance in contemporary life. Instead, Flyvbjerg proposes that social science should re-invent itself in pursuit of *phronesis*, to provide context-dependent, concrete, situated and modest but vital contributions to social debates. Given the current crises posed by issues such as climate change, which some argue have stemmed from a narrow instrumental rationality running more or less unchecked by social deliberation and values (e.g. Beck 1992), such a re-invention seems essential. To date, Flyvbjerg, among others, has sought to apply a *phronetic* approach to political science (Flyvbjerg 2004a; Schram 2004); planning research (Flyvbjerg 2004b), and organization research (Flyvbjerg 2003). In the rest of this paper, and for the first time, I will explore the relevance and importance of Flyvbjerg's call in the context of research on PEB change.

### **3. THE VIRTUES OF PRO-ENVIRONMENTAL BEHAVIOUR RESEARCH**

Since at least the 1970s the efforts of numerous sub-disciplines of social science have been directed towards reducing the impact of human behaviour on the environment. In this section, I will briefly review some of the major approaches to this endeavour stemming from social and environmental psychology, marketing, cultural geography and environmental sociology. Following Flyvbjerg I will argue that, to date,



the pursuit of *episteme* and *techne* has dominated research on PEB, but that some more recent developments are pointing towards *phronesis*.

### 3.1 Pro-environmental Behaviour Research As Episteme

Early research on PEB analysed the problem as the result of faulty human decision-making and aimed to apply a corrective to 'maladaptive human behaviour' (Maloney and Ward 1973). In this approach human behaviour is analysed as the outcome of a linear and ultimately rational process of individual decision-making (see Harrison and Davies 1998 for a critique). The negative environmental impacts of such behaviour are seen to derive from either a lack of sufficient environmental awareness, beliefs, attitudes or values, or from the presence of insufficient incentives or penalties to encourage PEB (see Dwyer *et al* 1993 for a review of studies adopting this view).

Research to address this issue has adopted two related approaches, predominantly within American environmental psychology. The first seeks to map generalized environmental values across society in scales such as the New Ecological Paradigm (Dunlap and Van Liere 1978, Dunlap *et al* 2000). Here, the aim, using large scale social surveys, is to identify parts of the population in which environmental education is required to fill a presumed information-deficit (*cf.* Burgess *et al* 1998; Owens 2000) and to inspire pro-environmental attitudes and values therein, in the hope that this will lead to PEB.

The second, and more relevant to this paper, seeks to understand how such environmental attitudes and values, seen as 'situation invariant orientation patterns' (Bamberg 2003, 22), become incorporated (or not) in behavioural decisions. In this approach, the aim has been to identify the cognitive factors that correlate with PEB (or occasionally with anti-environmental behaviour – Pelletier *et al* 1999) and to construct theoretical models of behaviour to explain, and occasionally to predict, how it will respond to particular interventions. These models are then tested and refined typically, through the use of self-report questionnaire surveys (Corrall-Verdugo 1997), to help identify new factors to include and enhance the models' explanatory capacity (see Jackson 2005 for a comprehensive review of such models).

The most widely applied of these models is Ajzen's (1991) Theory of Planned Behaviour, which developed from the earlier Theory of Reasoned Action (Fishbein and Ajzen 1975). Here, behavioural intention is seen as resulting from a combination of the individuals attitude towards performing the behaviour (attitudes), her perception of the social pressure to perform the behaviour (subjective norm), and her perception of her ability to perform the behaviour (perceived behavioural control). Through application and testing (e.g. Bamberg 2003; Knussen *et al* 2004; Mannetti *et al* 2004; Davis *et al* 2006), subsequent research has added many more factors to this model. For example, Conner and Armitage (1998) identify 6 potential additions: belief salience, past behaviour/habit, perceived behavioural control versus self-efficacy, moral norms, self-identity, and affective beliefs.

Such models have been readily adopted by policy makers who have sought to provide environmental education to fill the presumed information-deficit, and to appeal to latent environmental attitudes and values through large-scale information campaigns such as, in the UK, Helping the Earth Begins at Home (Hinchliffe 1996) and Are You Doing Your Bit? (DEMOS 2003; Barr 2008). Unfortunately, despite the growing sophistication and complexity of the models, to date such approaches have led to "virtually no substantive changes in behaviours at all" (Burgess *et al* 2003, 271), and the troublesome 'value-action gap' (Blake 1999) gapes as wide as ever. In short, as more and more refined and specific factors are added to the models, not only do environmental attitudes and values lose their value as 'situation invariant

orientation patterns', but the models themselves exhibit a "tension between parsimony and explanatory power" (Jackson 2005, 100). As a seemingly infinite regress of factors are added to the models with only incremental improvements to their explanatory capacity, the models become harder and harder to apply, and their ability meaningfully to explain human behaviour recedes further into the distance.

In Flyvbjerg's (2001) analysis, such an approach to PEB clearly represents the pursuit of *episteme*. The models seek to unravel the complexity of human behaviour and reduce it to its fundamental laws and rules. The addition of more and more factors to the models implies a will to universality, to contribute to the behavioural science's ambition for a complete theory of human behaviour. According to Flyvbjerg (2001) therefore, it is no surprise that such models have had little success for they are misguided in their approach as they are unable adequately to capture the role of context, values and power in social life. More recently, and as the next section will demonstrate, the pursuit of such universal, context-independent and linear models of behavioural correction appears to have stalled as a new interest in the situation-dependent aspects of behaviour has emerged. Even within this new approach, however, it remains an open question to what extent the pursuit of a complete context-independent theory has been entirely abandoned or remains the ultimate goal. For example, as Stern (2000) observes:

"Environmentally significant behaviour is dauntingly complex, both in its variety and in the causal influences on it. Although a general theory lies far in the distance, enough is known to present a framework that can increase the theoretical coherence." (Stern 2000, 421).

Accordingly, such a pragmatic attitude might be more appropriately analysed as the pursuit of *techne*.

### **3.2. Pro-environmental Behaviour Research As Techne**

Barr (2008) outlines the nature of this more pragmatic approach in the distinction he draws between 'models' and 'frameworks' of PEB. A 'modelling approach' seeks to provide rigid theoretical links between independent and dependent variables. The key point is that once the model is constructed, "variables cannot be adjusted, added, excluded and nor indeed can the relationship between them be altered" (Barr 2008, 99). By contrast, a 'framework approach', which Barr himself favours, "is characterised by far less theoretical rigour than the modelling approach. It might even, in certain circumstances be termed 'ad hoc'" (Barr 2008, 99). Here, predominantly empirical understandings are used to build a framework for the behaviour in question. Although, as Barr acknowledges, the two approaches may look similar, in a framework approach the inclusion, positioning and relationship between variables can be manipulated based on empirical and other evidence. The imperative, therefore, is not to produce a universal, context-independent model of behaviour, but to start from the behaviour itself and attempt to understand what factors cause or prevent it from coming about in particular circumstances. Such a framework can then be used to help identify what 'barriers' need to be removed, and what other factors made present, to bring about PEB.

This approach has made several important advances on prior modelling work. I will outline just three: First, it has abandoned the pursuit of generalised environmental attitudes or values recognising that 'the environment', as Ungar (1994, 292) observed, represents an 'all-embracing macrocategory' that has meaning only in specific contexts. Thus, instead, this approach pursues more specific psychological factors, recognising that these are context-specific (Dunlap *et al* 2000; Bamberg 2003; Poortinga *et al* 2004; Nye and Burgess 2008). Second, it notes the

inappropriateness of a 'sectoral approach' to PEB which uses policy-based terms such as 'energy', 'waste' or 'water' rather "than placing emphasis on the actual types of activity performed" (Gilg and Barr 2005, 608). Instead, it illustrates that PEB should be analysed as embedded in the context of an individual's wider lifestyle. Third, it acknowledges the vital importance of context or 'situational variables' on behaviour. Analysed variously as service availability (Derksen and Gartrell 1993; Guagnano *et al* 1995; Martin *et al* 2006), social networks (Olli *et al* 2001), and as a carrier of social norms (Barr 2003), contextual factors, where strongly supporting or inhibiting the behaviour in question, are seen to override all others in determining behavioural outcomes (Stern 2000).

In policy terms, these developments have given rise to a new breed of intervention termed 'social marketing' (e.g. McKenzie-Mohr 2000; Haq *et al* 2008) that has been rapidly adopted by UK policy makers (e.g. DEFRA 2008). Here the aim is not, as before, to broadcast environmental messages to a public that is assumed to be a *tabula rasa*, but to segment the audience according to different pro-environmental characteristics and to use a range of sophisticated marketing and communication techniques to tailor attractive 'intervention mixes' that address specific situational variables to bring about the desired PEB.

As its proponents highlight, social marketing has made significant advances on previous approaches (McKenzie-Mohr 2000; Barr 2008; Haq *et al* 2008). To the critical reader, however, questions remain as to whether this represents a substantial departure from what came before. Although the pursuit of a universal, context-independent model of behaviour has been at least temporarily put aside, this approach still sees pro- or anti-environmental behaviour as the logical outcome of specific context-dependent factors. In short, it still attempts to uncover and manipulate the 'rules' that underlie and determine behaviour, even if these are now recognised as multiple, inter-related and situational.

In Flyvbjerg's (2001) analysis, such an approach arguably represents *techne*, or perhaps *episteme* as *techne*. Its aim is not to produce general laws necessarily, but to adapt various tools and techniques to local circumstances in order to produce PEB. The aim of such approaches is not to ask broader value-rational questions about the desirability of the directions in which society is moving and to which PEB may contribute, but simply and unquestioningly to bring about PEB. As McKenzie-Mohr (2000) betrays, its prime audience is not the individuals whose behaviour is interpreted as in need of correction, but the policy makers and programme managers who seek to do the correcting:

"Until we reach out to the individuals who design and deliver environmental programs, our efforts will remain invisible to those who can most benefit from them." (McKenzie-Mohr 2000, 544)

Despite the many advances it has made, therefore, this approach adopts a narrow instrumentalism to act as a consultant or, in Blühdorn and Welsh's (2007) term, a 'handmaiden' to the interests of ecological modernisation. Accordingly, it is of little surprise that such approaches call only for incremental reforms (Barr 2008) that align with and potentially reinforce, rather than call into question the dominant social conventions which many see as the root cause of the current environmental challenges (Shove 2003; Blühdorn and Welsh 2007; Seyfang 2009). For Flyvbjerg, this represents a " 'headless' form of ad hoc social engineering" (Flyvbjerg 2001, 167) but, vitally, he does not dismiss such an approach as inherently flawed. Instead, he calls for a revival of *phronesis* to provide the necessary value-rational checks and

balances on such an approach, to create *techne* “with a head on it” (Flyvbjerg 2001, 168).

### 3.3 Towards Pro-environmental Behaviour Research As Phronesis

This section will argue that although, as yet, there has not been a sustained attempt to conduct PEB research as *phronesis*, there have been two distinct lines of enquiry that have begun to lean in its general direction. These have emerged in cultural geographical work on discourses of environmental behaviour, and in sociological research on social practices. I will briefly highlight each of these in turn.

First, within cultural geography there has been a long-running focus on environmental discourses and their role in enabling or constraining PEB. Amongst others, the work of Burningham and O'Brien (1994), Harrison *et al* (1996), Myers and Macnaghten (1998), Burgess *et al* (1998, 2003), and Hobson (2002) has illustrated clearly that ‘the environment’, and ‘environmental change’ are not essential, static entities that exist ‘out there’ or in individual attitudes and values. Instead, they are seen to represent discursive constructions that are performed and enacted anew in specific local contexts, always in relation to, and often against, other more powerful discourses (e.g. Evans and Abrahamse 2009). The challenge for research within this approach, therefore, is not to model the relationships between specific pro-environmental attitudes, values and behaviours, but to understand the construction, circulation and competition between particular discourses in specific contexts. To do this, instead of relying on self-report questionnaires, this approach has tended to adopt focus groups or in-depth interview techniques (e.g. Burgess *et al* 1988a, 1988b) in order to explore how the environment is constructed in different discursive arenas. Unfortunately, such lines of enquiry have tended to conclude that the absence of strong environmental discourses, and the dominance of other arguably anti-environmental discourses in most modern situations means that: “to attempt to live a green lifestyle across different spaces and social contexts is almost an impossibility” (Burgess *et al* 2003, 284).

This approach points towards *phronesis* in its attempt to take seriously the idea that behaviour is differentially negotiated across social contexts. Unlike social marketing approaches, context is not seen as merely another variable influencing individual decision-making, but as intrinsic (Nye and Hargreaves, in press) to what gets defined as PEB in the first place. Further, in attempting to observe the structuration (e.g. Hobson 2003) of environmental discourses in specific settings, this approach has sought, more than most others, explicitly to link structure and agency. Nonetheless, the approach does not entirely match Flyvbjerg’s understanding of *phronesis* because it lacks a detailed focus on either the operation of power (although see Darier 1996a, 1996b), or on the grounded performance of social practices.

The second approach I will highlight emerges in the work of, for example, Spaargaren and Van Vliet (2000); Shove (2003; 2004); Southerton (2004) and Røpke (2009), on social practices. This work focuses on how the different elements and ‘doings and sayings’ of particular social practices are combined and performed in specific contexts that are themselves structured by broader systems of provision and social rules and conventions (e.g. Spaargaren and Van Vliet 2000; Shove 2003). This approach argues that patterns of behaviour “follow from the routine accomplishment of what people take to be ‘normal’ ways of life” (Shove 2004, 117). Rather than starting from ‘the environment’ and what it does or does not signify in specific situations, therefore, this approach prefers to concentrate on what it is people actually do. It concentrates on the evolution and organisation of social practices and conventions which typically have very little to do with ‘the environment’, and which are way beyond the scope of individual decision-makers to change

voluntarily. The challenge this work poses, therefore, is not how to encourage individuals to make pro-environmental decisions, but how to re-orientate the broader 'socio-technical' regimes (Rip and Kemp 1998; Shove 2004) that pervade society.

The social practice approach represents another valuable nod towards PEB as *phronesis* as it explicitly challenges the broad social rules, conventions and values that underpin social practices. It also implies an analysis of power by considering the strength of the connections between the elements of practices, how they may be made or broken, and thus how whole socio-technical systems may be re-directed. Such an analysis, however, has not yet been made explicit. Where the social practice approach falls short of *phronesis* is in its relative neglect, to date, of the situated performance of practices in favour of analysing their broader organisation and structure. As a result of this focus, it has tended to isolate specific social practices from the fabric and flow of everyday life rather than concentrate on the interconnectedness of bundles of practices across space and time (although recent work is beginning to address this – see Shove *et al* 2009). As a consequence, it has downplayed the agency of individual, and communities of, practitioners in favour of a more structuralist reading. This, in turn, has caused it to overlook both the social interactions between the polyphony of voices involved in any social practice (*cf.* Røpke 2009), and the operation, or 'micro-physics of power' (Foucault 1977, 26) in the situated performances of practice.

### 3.4 Summary

This section has reviewed existing work on PEB in the light of the Aristotelian virtues of *episteme*, *techne* and *phronesis*. It has suggested that while recent work in cultural geography and sociology leans towards a *phronetic* approach, there is still some way to go. Specifically, what is needed are more detailed case studies of PEB and PEB-change processes that focus on its situational specificity, highlighting how it is played out in specific interactions, and negotiated within and against existing practices and sets of discursive and power relations. Such a programme of research will inevitably take a long time to fulfil, demanding the painstaking collection of thousands of detailed case studies as a pre-requisite to the development of true expertise in PEB (*cf.* Flyvbjerg 2006). Nonetheless, the next section tentatively attempts to begin this task by presenting some recent empirical research conducted by the author. I do not present this as an example of *phronetic* PEB research, or as a model to be copied. Indeed, I have only come to re-interpret it as an attempt at *phronesis* since its completion and, as such, it too falls some way short of the Flyvbjerg-ian ideal (e.g. Flyvbjerg 1998). The purpose of its inclusion here is to demonstrate how *phronetic* PEB research may differ from what has gone before, and hopefully to inspire further attempts at its development.

## 4. CONTEXT, POWER AND INTERACTION IN PRO-ENVIRONMENTAL BEHAVIOUR CHANGE

Between January and November 2007 I produced an ethnographic case study of the PEB change initiative 'Environment Champions', delivered by the environmental charity Global Action Plan (GAP) in the head offices of a construction company called 'Burnetts'<sup>1</sup>. During the intervention I conducted 9 months of participant observation in and around the head office, Bridgeford, site. This involved attending

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<sup>1</sup> To help preserve anonymity, throughout this paper the name of the organisation and of its participants are pseudonyms.

all meetings and events relating to the initiative as well as acting as a volunteer intern around the Bridgeford site. In addition, I conducted 38 semi-structured interviews with all participants in the initiative and with other influential figures that emerged as it progressed. Interviewees were recruited using theoretical sampling (Glaser and Strauss 1967) and 'snowballing' (Valentine 1997) strategies and interviews lasted between 30 and 90 minutes. During this time interviewees were asked about their position in the organisation and to reflect on their contact and involvement with the Environment Champions initiative. The aim of this research was to take seriously Burgess *et al*'s (2003) observation that context is central to PEB-change processes, and particularly to explore such processes in a workplace given that most work in this area has focussed on domestic settings (Tudor *et al* 2008).

To begin the initiative, Burnetts recruited a team of 16 'volunteer' Environment Champions from around the Bridgeford site who were charged with planning and running the initiative with assistance from a GAP programme manager. The Champions were drawn from all departments present at the Bridgeford site, involved 8 men and 8 women, ranging in age from mid-20s to late-50s, and whilst some might fit into DEFRA's (2008) 'Positive Greens' segment, others had either been 'volunteered' to participate by their managers or saw the initiative as an opportunity for career advancement. Crucially, the Champions themselves noted that none of the team were new employees and, as such, all knew the offices and their colleagues well, and were experienced, well-respected and therefore potentially influential practitioners.

#### **4.1 Putting Pro-environmental Behaviour Change In Context**

The first stage of the Environment Champions, as with all of GAP's team-based programmes (see GAP 2006, and Hargreaves *et al* 2008), was to conduct an audit of the Bridgeford site's electricity use and waste production. Over the course of three weeks, meter readings were regularly taken and all site waste collected, sorted and weighed to reveal that the site annually emitted 297 tonnes of CO<sub>2</sub> and sent 11.7 tonnes of waste to landfill, of which 58% could have been easily recycled. These audit results, although not uncontested, played several critical roles in how the initiative developed.

First and foremost, they were used as motivational tools to 'shock' others into realising the environmental impact of their normally inconspicuous working practices. Their ability to do this, however, stemmed from the fact that they were local and contextual data. In interviews, I asked why other publicly available, and often more shocking, facts and figures had not been preferred and was told that the local audit results had power because they made 'the environment' seem more real and more closely linked to the Bridgeford site. This, I would argue, does not represent an awakening of latent environmental attitudes and values, but rather the active construction and performance of a localised and contextually embedded environment (*cf.* Burningham and O'Brien 1994).

This process of constructing the environment was then further refined in the early team meetings during which the existence of the audit results as 'hard', objective numbers, rather than 'soft' environmental ideals, was emphasised as critical in the context of an organisation populated by engineers and scientists. In their early planning meetings, the Champions regularly appealed to, and discussed these facts and figures, often using them in conjunction with an economic rationality to demonstrate that their suggestions were 'cost neutral or cost beneficial' which they saw as critical in order to win support from 'the Execs'. From the outset, therefore, the specific context and set of social relations in which 'the environment' was being addressed was absolutely central to how PEB was made sense of and approached.

As the initiative developed, and the Champions plans were rolled out to try and influence their colleagues, however, this contextualised environment was contested and weakened as it came into contact with other dominant values and forms of 'power/knowledge' (Foucault 1980) that held sway at the Bridgeford site.

#### 4.2 The Power Of The Environment

In initial planning meetings, the Champions devised a plan to try and reduce the environmental impacts of the Bridgeford site. This involved numerous suggestions, from putting 'Switch Off' stickers on lightswitches, producing scrap pads and re-setting default printer settings to closing the car park for an afternoon, removing people's bins and installing a rainwater recycling system. Not all of these suggestions were carried out, however, and the processes through which they were negotiated and either implemented, compromised or abandoned reveal much about the dynamics of power at the Bridgeford site. Space permits just two examples.

First, despite the 'objective' evidence of the audit results, the environmental rationality espoused by the Champions was contested by the Facilities management team who invoked other more established and more powerful rationales to justify why certain things could not be changed. Arguably, the Facilities team became 'Champions' of a healthy, safe and law-respecting workplace. For example, in negotiations about removing people's under-desk bins for a single day, the Facilities team argued that this could breach data protection laws if confidential waste was incorrectly disposed of; that the lack of a bin for food waste could cause hygiene problems, and that the provision of large, communal recycling bins in corridors could pose a fire hazard (Interview with Brian, Facilities Manager). All of this at the same time as reminding people of their proud record of 5 years without a reportable health and safety incident. Ultimately, the Facilities management team proved too powerful for the Champions' more radical proposals. In the case of removing under-desk bins for a day, the final outcome was that this was impossible. Instead every employee was provided with an additional 'desktop recycling tray' which, the facilities managers pointed out, had the added benefit of reducing fire risk by limiting the amount of waste paper kept on desks at any one time (Brian interview). Whilst this may seem like petty office politics, it illustrates how the Champions' pro-environmental proposals challenged, but ultimately lost out to, the more powerful, institutionally and legally embedded health and safety values that underpinned much of office life. In this example, the web of power/knowledge at Bridgeford prevented wider reaching pro-environmental change.

Second, at the same time as the Facilities management defeated many of the Champions' more radical proposals, they also recognised that in so doing they had come to be seen as 'the baddies' (Rob interview, Facilities assistant) around the offices with respect to environmental issues. In this respect, the normative value-rationality being spread by the Champions began to undermine the more practical, instrumental rationality that the Facilities team had operated with so successfully and for so long. As the initiative progressed, the Champions utilised this normative power of the environment (albeit unintentionally) through a range of Foucauldian disciplinary techniques (*cf.* Foucault 1977). These included regular *observation* in the form of lunchtime 'spot checks' of appliances and lights left on, *normalising judgements* in the form of league tables of how successfully different sections of the office were recycling their waste, and occasional *examinations* in the form of staff surveys and the audit procedures. These 'humble and mundane mechanisms' (Miller and Rose 1990, 8) may seem insignificant, and certainly were not utilised as coherently as the disciplinary techniques Foucault describes as swarming through French prisons, schools, hospitals and factories in the early 1800s. They do illustrate, however, that the Champions at least partially introduced new forms of surveillance and discipline,

based on a pro-environmental power/knowledge, to underlie existing working practices (cf. Darier 1996a, 1996b).

As Flyvbjerg (2001) would anticipate, these examples illustrate clearly that, in this case study at least, power is implicated at the very core of PEB change processes. Nonetheless, it is normally neglected in PEB research which tends uncritically to interpret such processes as either neutral or benign. This would appear an area ripe for further research and, arguably, a *phronetic* approach would be ideally suited to the task.

#### **4.3 (Inter)acting For The Environment**

To conclude the Environment Champions initiative, a final audit was conducted using the same methods as the first. This revealed a 29% (3.4 tonne) reduction in waste sent to landfill and a 5.4% (6 tonnes CO<sub>2</sub>) reduction in electricity use. These are modest savings, even compared to those normally achieved by Environment Champions initiatives (GAP 2006). What was notable, however, was that such quantitative savings occurred despite day-to-day working practices being, at least on the surface, almost entirely unchanged. Through close observation, however, it became apparent that although working practices had remained intact, the manner in which these practices were approached, understood and performed had changed significantly. Quite suddenly, employees around the Bridgeford site began actively to perform their pro-environmental credentials in the course of otherwise unremarkable activities. For example, at photocopiers they would proudly announce they were copying double-sided, at bins they would point out how 'good' they were being by recycling plastic bottles and drinks cans, and at lunchtimes or the end of the day whole teams began to discuss who would turn off lights, printers and close windows.

Whilst such performances of what might be termed 'conspicuous environmentalism' were incidental and even trivial, what is significant is that the environment had apparently become an issue on which one could be challenged and asked to justify oneself at any given time around the Bridgeford site. In this respect, the "normal and acceptable standards, practices and ways of life [that] are rarely articulated or questioned either in social environmental theory or in policy" (Shove 2004, 117) appeared to have been challenged and partially redefined by the Champions initiative. Although the environmental success of the initiative was modest, the social and collective impact on the underlying meanings of everyday social interactions and working practices seems vital and potentially much more significant.

#### **4.4 Summary**

Arguably the Environment Champions initiative is simply a form of community based social marketing (see Barr 2008 *contra* Hargreaves *et al* 2008). What this analysis has hopefully shown, however, is that although PEB change might be interpreted in narrow instrumental terms regarding individual attitudinal change and the removal of 'barriers' to PEB, such an analysis would neglect the fundamental roles of context, power and social interaction in such processes. For example, were this case study approached in pursuit of *episteme*, it may well reveal something about how employees' attitudes, values, perceptions of behavioural control or subjective norms had changed throughout the intervention. Whilst such observations might serve some valuable purposes they would cast aside alternative and superficially irrelevant factors, and would entirely obscure the context-specific processes through which these isolated 'factors' were (re)negotiated and (re)formulated through grounded social relations and interactions. In short, by attempting to isolate the supposedly essential factors involved in PEB change processes and generalise beyond this unique case, such an approach would ultimately obscure more than it revealed. Further, if approached in pursuit of *techné*, this example might yield some neat and



context-specific tricks about how, for example, the Champions might have communicated more effectively with the Facilities management team, or encouraged their colleagues to do more by appealing to their underlying values and motivations. In focussing solely on this surface level, however, and in assuming that both environmental problems and their solutions were clearly defined and attainable, such an approach would fail to see the broader processes at play in this intervention that were ultimately concerned with the structure and purpose of Burnetts as an organisation, the respective roles of its employees, and just what relevance 'the environment' has in such a dynamic context.

Instead, by approaching this case study in pursuit of *phronesis*, this analysis illustrates that PEB change processes involve new forms of interaction that unsettle and contest the existing sets of values that underpin everyday practices in particular settings. Such a process of contestation occurs in the face of existing and powerful sets of power relations meaning that pro-environmental changes have a significant fight on their hands. At the same time, however, the case study demonstrates that PEB change interventions exert and bring about power effects of their own. This process, I would argue, represents a form of re-socialisation, or '*environmental socialisation*' (see Wallenborn 2007), in which what it means to exist and behave as a 'normal' person in a particular context is re-negotiated, even if this does not necessarily translate into drastically reduced environmental impacts.

Such a dynamic, collective and contextual process demands a form of research that attempts to grasp the different sets of cherished values in play, and to analyse the organisation of power in particular contexts that either supports or challenges them. Yet it is precisely these issues which are neglected when PEB research is conducted in pursuit of *episteme* or *techne*. This case study thus demonstrates the richness of PEB change processes that a *phronetic* approach attempts to capture, and which cannot be reduced to context-independent and rule-based theories, models or even frameworks. More importantly, however, it demonstrates the urgency of developing such an approach to PEB research across many more cases and contexts. This will not produce universal laws or theories of human behaviour, but will hopefully produce a form of PEB research that matters in the sense that it helps individuals and communities to understand and confront the significant challenges posed to normal, everyday life by current environmental changes.

## **5. CONCLUDING REMARKS: FINDING PHRONESIS**

This paper seeks an original, radical and exciting departure from existing work on PEB by calling for a dialogue about its very purpose and approach that is informed by Flyvbjerg's (2001) concept of *phronetic* social science. Drawing on Flyvbjerg, it has argued that, to date, most research in this area has pursued the Aristotelian virtues of *episteme* or *techne*, whilst *phronesis*, which Aristotle saw as most important, has been almost entirely neglected. Such a state of affairs, it contends, is both misguided and even potentially dangerous. It is misguided in the sense that social science as *episteme* or *techne* fails adequately to capture certain crucial dynamics of everyday life. It is potentially dangerous in that such research serves, albeit unintentionally, to reinforce a narrow instrumental rationality and thus act as a 'handmaiden' to unsustainable political and economic systems (*cf.* Beck 1992; Blühdorn and Welsh 2007). A *phronetic* approach, by contrast, seeks answers to a range of broader value-rational questions, focussing on the operation and interplay of values and power in specific settings as a means of helping communities to understand, confront, and find contextually appropriate solutions to the challenges the face. Accordingly, the paper closed by drawing on a single ethnographic case

study of a PEB change intervention in a workplace as an attempt to demonstrate what a *phronetic* approach might look like, and one way in which it might be achieved.

To begin the debate this paper calls for, Flyvbjerg (2001) notes that it is first necessary for PEB researchers to be more reflexive in their work and more explicit about which of the virtues they are seeking to achieve, how and why. Currently such questions are almost entirely ignored in PEB research. Only once they are addressed, however, might a broader discussion begin which seeks, ultimately, to identify and define precisely what it is that research on PEB is seeking to change, and what it is seeking to sustain. Such a discussion might focus on the extent to which PEB research is complicit in what Blühdorn and Welsh (2007) call the ‘politics of unsustainability’, that is, a politics which seeks to sustain what is known to be unsustainable. Further, the discussion might focus on ways in which PEB research might challenge such a system, what alternatives it can suggest, and how it can give voice to currently marginalised groups, approaches and sets of values. Achieving such a dialogue does not necessarily favour one disciplinary contribution over another, nor does it favour one methodological approach, whether qualitative or quantitative, over others. As Hobson (2006) suggests, such a discussion calls for the active participation of all disciplinary perspectives on PEB, which share many common aims. What it demands, however, is that all such unique perspectives think critically about how they can help to deliver *phronesis*. In short, how they can make a valuable, contextually-sensitive and ultimately wise contribution to solving the environmental challenges currently faced by society.

If this can be achieved, it paves the way to a new kind of relevance and impact for research on PEB, and for environmental social science more generally. In Flyvbjerg’s (2001) terms, it leads to social science:

“done in public for the public, sometimes to clarify, sometimes to intervene, sometimes to generate new perspectives, and always to serve as eyes and ears in our ongoing efforts at understanding the present and deliberating about the future.” (Flyvbjerg, 2001, 166)

This is a radical and innovative agenda, but would help to develop a kind of environmental social science that matters. Given the scale of the environmental problems currently being faced, I would argue that achieving it is something that all PEB researchers should see as an urgent priority.

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