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What is This?

Practice-ing behaviour change: Applying social practice theory to pro-environmental behaviour change

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Abstract
This article applies the insights of social practice theory to the study of pro-environmental behaviour change through an ethnographic case study (nine months of participant observation and 38 semi-structured interviews) of a behaviour change initiative – Environment Champions – that occurred in a workplace. In contrast to conventional, individualistic and rationalist approaches to behaviour change, social practice theory de-centres individuals from analyses, and turns attention instead towards the social and collective organization of practices – broad cultural entities that shape individuals' perceptions, interpretations and actions within the world. By considering the planning and delivery of the Environment Champions initiative, the article suggests that practice theory provides a more holistic and grounded perspective on behaviour change processes as they occur in situ. In so doing, it offers up a wide range of mundane footholds for behavioural change, over and above individuals' attitudes or values. At the same time, it reveals the profound difficulties encountered in attempts to challenge and change practices, difficulties that extend far beyond the removal of contextual 'barriers' to change and instead implicate the organization of normal everyday life. The article concludes by considering the benefits and shortcomings of a practice-based approach emphasizing a need for it to develop a greater understanding of the role of social interactions and power relations in the grounded performance of practices.

Keywords
ethnography, pro-environmental behaviour change, social practice theory, sustainable consumption, workplace

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Behavioural change is fast becoming the 'holy grail' for sustainable development policy. (Jackson, 2005: x)

It should be borne in mind that there is nothing more difficult to handle, more doubtful of success, and more dangerous to carry through than initiating changes. (Machiavelli, 1961: 21)

Introduction: Changing behaviour or changing behaviour change?

It is becoming increasingly clear that environmental challenges such as climate change are caused by unsustainable patterns of human activity, and that they will demand large-scale changes to everyday life across all sectors of society (e.g. UNEP, 2007). Within the UK over the last decade, attempts to promote pro-environmental behaviour and sustainable consumption have become important policy responses to such challenges (e.g. DEFRA, 2008; DEFRA and DTI, 2003; SCR, 2006). A key theme running throughout these policy debates has been the extent to which sustainable consumption or pro-environmental behaviour change is within the capacity of individual agents to bring about alone, or whether it requires more fundamental structural change in society (e.g. Maniates, 2002; Shove, 2003). In line with neoliberal political economy, most current policy responses favour the former and seek to encourage more sustainable choices among sovereign consumers (e.g. Hobson, 2004; Shove, 2010). Given continued rises in material and resource consumption and their associated environmental impacts however, the effects of such policies have so far been disappointing (e.g. Burgess et al., 2003).

This article seeks to provide a partial explanation for this apparent failure by suggesting that existing attempts to change behaviour rest on a narrow view of social change. Further, that close examination of behaviour change processes as they occur in situ reveals many more aspects and complexities of daily life than existing approaches capture. Theories of social practice are proposed as offering a broader and more holistic conceptualization and, for the first time, this article applies these ideas empirically to the issue of pro-environmental behaviour change. Specifically, it reports on an in-depth ethnographic case study of a single behaviour change initiative – Environment Champions – conducted in a workplace.

The next section explores the theoretical basis of current policy approaches before the third section outlines the alternative that social practice theory offers. The fourth section then details the methodological approach adopted in this study and the fifth section provides a detailed account of the Environment Champions initiative as it occurred in the head offices of a UK construction company called Burnetts.[1] The article concludes by exploring the conceptual implications of the empirical case studied for the further development and application of social practice theory.

Understanding behaviour and how to change it

Over the last 40 years, and particularly in the sub-discipline of environmental psychology, numerous attempts have been made to construct models of human behaviour that identify its determinants in order that it may be directed into more pro-environmental channels (see either Darnton, 2008 or Jackson, 2005 for extensive reviews of such models). Specifically, such models have looked to individuals' beliefs, attitudes and values as predictors of behaviour. If only pro- or anti-environmental beliefs could be identified and modified, the models suggest, behaviour might be changed. Central to this approach has been the assumption that behaviour is 'the outcome of a linear and ultimately rational process' (Harrison and Davies, 1998: 2) of decision making undertaken by more or less rational individuals.

Perhaps the most widely used of these models is Ajzen's (1991) 'theory of planned behaviour', developed as an extension of the earlier 'theory of reasoned action' (Fishbein and Ajzen, 1975). This theory posits that behavioural intention, which necessarily precedes actual behaviour, results from interactions between an individual's *attitude* towards the behaviour in question, their beliefs about what others think about the behaviour – the *subjective norm* – and their perceived level of control over the behaviour, or *perceived behavioural control*. One attractive feature of this model is its openness to the inclusion of additional variables (cf. Ajzen, 1991) and, as such, through multiple applications of the model many more factors have been added, including: belief salience, past behaviour/habit, moral norms, affective beliefs, self-identity, and perceived behavioural control versus self-efficacy (e.g. Conner and Armitage, 1998; Mannetti et al., 2004). As more and more variables are added-in to such models, however, there are diminishing returns to the enhancement in their predictive capacity, and their increasing complexity renders them less amenable to practical application (cf. Jackson, 2005).

Bamberg (2003) argues that a major reason why such models have received so much attention is because they treat attitudes (and the same essentially applies for values, beliefs, needs and motivations) as 'situation invariant orientation patterns' (Bamberg, 2003: 22). In short, if the necessary cognitive components can be identified and modified, behavioural changes will cascade across contexts throughout all areas of an individual's lifestyle. More recently, however, it has been recognized that individuals do not exist in a social vacuum and, indeed, that in some cases the surrounding context overrides all of the cognitive factors included in the models (Stern, 2000). Rather than challenge the basic assumption of the models that individual decision making is 'maladaptive' (Maloney and Ward, 1973) and in need of correction, however, such insights have instead led to the gradual incorporation of various proxies for context (e.g. as social norms, social networks or surrounding infrastructures) as yet more variables in individual decision-making processes (e.g. Barr, 2003; Martin et al., 2006; Olli et al., 2001).

The persistence of such linear models of behavioural correction is perhaps partly explained because they render policy responses relatively straightforward.

Early approaches, for example, sought to provide information to fill a presumed information deficit (cf. Burgess et al., 1998; Owens, 2000) among the population and educate them to hold more (eco)rational attitudes, beliefs and values as seen, for example, in campaigns such as 'Helping the Earth Begins at Home' (Blake, 1999; Hinchliffe, 1996) and 'Are You Doing Your Bit?' (DEMOS, 2003). More recently, the contextual sensitivity of such approaches has been enhanced in social marketing interventions that seek to identify and remove real and perceived contextual 'barriers', and then to tailor messages to carefully selected audience segments in order to create new social norms that, it is hoped, will motivate individuals to adopt the desired behaviours (e.g. Barr, 2008; DEFRA, 2008).

Whilst Barr (2008) applauds the incrementalism of social marketing, that it 'works with' rather than against existing lifestyles and patterns of consumption, others, and most prominently Shove (2003, 2004, 2010), argue that such an approach is fundamentally flawed and in fact serves to legitimize, rather than challenge, a whole range of unsustainable social conventions. In particular, critics have argued that such approaches are excessively individualistic and fail to appreciate the ways in which, variously, social relations, material infrastructures and context are intrinsic to the performance of social practices (e.g. Bedford, 1999; Hobson, 2003; Nye and Hargreaves, 2010; Shove, 2003; Southerton et al., 2004; Spaargaren and Van Vliet, 2000), and not merely variables among many others within individuals' decision-making processes. More recently, an emerging approach based around ideas and theories of social practice has sought to address many of these shortcomings. This will form the subject of the next section.

Understanding social practices and how they develop

In contrast to the undersocialized methodological individualism of the behavioural models outlined above, social practice theorists, from Giddens (1984) and Bourdieu (1977, 1990), to more recent work by Reckwitz (2002), Schatzki (1996, 2002), Shove (2010, and see Shove and Pantzar, 2005) and Warde (2005), have all sought a middle level between agency and structure. This has been found in the everyday and routine performance of social practices such as cooking, driving, washing, shopping or playing football. The practice itself, rather than the individuals who perform them or the social structures that surround them, thus becomes the core unit of analysis. As Giddens observed:

> the basic domain of study of the social sciences . . . is neither the experience of the individual actor, nor the existence of any form of societal totality, but social practices ordered across space and time. (Giddens, 1984: 2)

In this view, anti- or pro-environmental actions, and more or less sustainable patterns of consumption, are not seen as the result of individuals' attitudes, values and beliefs constrained by various contextual 'barriers', but as embedded within and occurring as part of social practices (Warde, 2005). In turn, the performance of

various social practices is seen as part of 'the routine accomplishment of what people take to be ''normal'' ways of life' (Shove, 2004: 117).

Social practice theory thus diverts attention away from moments of individual decision making, and towards the 'doing' of various social practices and the inconspicuous consumption (Shove and Warde, 2002) they entail. Further, individuals themselves are removed from centre-stage and instead become the 'carriers' (Reckwitz, 2002) of social practices, carrying out the various activities and tasks that the practice requires. As individuals pass through life, they come into contact with, get recruited to, have 'careers' within, and occasionally defect from a wide variety of different practices. Importantly, practice theory emphasizes that it is through these engagements with practices that individuals come to understand the world around them and to develop a more or less coherent sense of self (cf. Warde, 2005). This does not, however, render individuals as passive dupes beholden to the dictates of practice, but instead conceives of them as skilled agents who actively negotiate and perform a wide range of practices in the normal course of everyday life. Bringing about pro-environmental patterns of consumption, therefore, does not depend upon educating or persuading individuals to make different decisions, but instead on transforming practices to make them more sustainable (cf. Southerton et al., 2004). As Warde (2005: 140) notes, 'the principal implication of a theory of practice is that the sources of change behaviour lie in the development of practices themselves'.

Beyond these points of relative agreement, however, 'there is no unified practice approach' (Schatzki, 2001: 2). One area of disagreement, for example, centres on defining exactly what a practice is. Here, some theorists focus on the various components or elements that make up a practice (e.g. Reckwitz, 2002; Shove and Pantzar, 2005), others on the connections between these elements (e.g. Schatzki, 2002; Warde, 2005), and still others on the position of practices as a bridge between individuals' lifestyles and broader socio-technical systems of provision (e.g. Spaargaren and Van Vliet, 2000). In this article, however, I will adopt Shove and Pantzar's (2005) empirically helpful understanding of practices as assemblages of images (meanings, symbols), skills (forms of competence, procedures) and stuff (materials, technology) that are dynamically integrated by skilled practitioners through regular and repeated performance. To provide a simple example, football involves a specific set of images (e.g. about the rules and aim of the game and the appropriate level of emotional engagement), skills (e.g. of dribbling and kicking a ball), and stuff (e.g. a ball and a goal). The links between these elements are then (re)produced and maintained by skilled practitioners in the course of a game of football. In this understanding, practices thus emerge, stabilize and ultimately die out as the links between elements are made and broken (cf. Pantzar and Shove, 2006). By implication, generating more sustainable practices calls for the links and elements of existing, unsustainable practices to be challenged and broken before being replaced and re-made in more sustainable ways. Warde (2005) offers a vital insight into how the making and breaking of these links might occur, as he shows that despite their considerable

inertia, change in practices emerges both from the inside – as practitioners contest and resist routines and conventions and as they improvise new doings and sayings in new situations – and also from the outside, as different practices come into contact with each other.

Social practice theory, in this view, raises a series of radically different questions about how to create more sustainable patterns of consumption. The focus is no longer on individuals' attitudes, behaviours and choices, but instead on how practices form, how they are reproduced, maintained, stabilized, challenged and ultimately killed-off; on how practices recruit practitioners to maintain and strengthen them through continued performance, and on how such practitioners may be encouraged to defect to more sustainable practices.

In the rest of this article I will attempt to address some of these questions empirically through a detailed ethnographic case study of a pro-environmental behaviour change initiative. Before this can proceed, however, it is necessary to clarify my use of the terms behaviour and practice simultaneously. As may be seen from the reviews above, social practice theory represents a wholly different paradigm of social research than that found in linear models of behaviour. As such, some (e.g. Shove, 2010) argue that the terms practice and behaviour are incompatible, and that a continued focus on behaviour serves to obscure more than it reveals. This article does not fundamentally depart from this position, but it also contends that given the contemporary 'doing' of numerous 'pro-environmental behaviour change interventions', it would be unwise to ignore them altogether, and empirically misleading to call them by another name. Whilst preserving this important distinction, therefore, the aim in the rest of this article is to use practice theory's broader and more holistic perspective as a means of exploring what actually happens within behaviour change interventions and, in so doing, to try and understand the effects they have on the social practices they tackle (even if they tackle such practices unwittingly). Such analyses, it is hoped, will not only extend and improve policy and practical interventions in this important area, but also augment and develop social practice theory in an area where a more sophisticated understanding of social life and change is urgently needed.

Methodology: Environment Champions at Burnetts

Social practice theory directs research attention towards the practical accomplishment or 'doing' of everyday practices. Accordingly, it implies the use of methodological techniques capable of observing what actually happens in the performance of practice such as ethnography, rather than relying solely on the results of either questionnaire surveys or interviews as is typically the case within conventional approaches. Although this may restrict the ability of practice theory accounts to make universal generalizations that hold true across different contexts, an issue that would be seen as a significant disadvantage in the conventional quantitative

psychological paradigm, at the same time it leads to richer and more subtle accounts of action in context that, whilst more modest, might also be more valuable (cf. Flyvbjerg, 2001; Hargreaves, 2010).

This article takes as its empirical subject the pro-environmental behaviour change initiative 'Environment Champions' run by the environmental charity Global Action Plan UK (GAP – see GAP, 2010) in the head offices of a UK construction company called Burnetts. As with all of GAP's programmes (see Hargreaves et al., 2008 for a review), Environment Champions begins with a team of volunteer Champions conducting an audit of their organization's environmental impacts (e.g. by weighing waste and taking utility meter readings). A series of planning meetings are then held to design a campaign aimed at involving both the Champions and their colleagues in reducing their environmental impacts. Finally, after the campaign, which usually lasts from three to six months, a second audit is conducted to evaluate any changes made. This model was followed at Burnetts between January and November 2007. A team of 16 Champions was recruited with an equal gender balance, ranging in age from mid-20s to late-50s, drawn from all departments and all three buildings at the head office site, and of a range of levels of seniority in the organization (although none of the senior executives were involved). The initial audit was conducted in January/February, planning meetings commenced in April, the campaign ran from May to September, and the second audit was completed in October.

During this time, I conducted nine months of participant observation that involved attending all Champions meetings and events, as well as a series of voluntary internships in different parts of the organization. Further, I conducted 38 semi-structured interviews with all 16 Champions, with a range of influential figures identified as the initiative progressed, and with several employees whom the initiative was seeking to influence. Interviews lasted between 30 and 120 minutes, were digitally recorded and transcribed verbatim. The field diary (FD) and interviews transcripts were then analysed using a constructivist grounded theory approach (Charmaz, 2006) to identify the core themes and issues raised.

The next section reports the findings of this ethnography that are most relevant for a social practice-based interpretation of the Environment Champions initiative (for a full account of the ethnography and methods used, see Hargreaves, 2008).

Findings: Process and practice in Environment Champions

This section traces the development of the Environment Champions initiative at Burnetts chronologically. First, the audit process and results are introduced, next the team's planning meetings are considered, then the roll-out of the initiative to other employees is examined, focussing specifically on a long-running attempt to challenge waste practices before, finally, the outcomes of the initiative are considered.

The audit: Challenging and re-materializing practice

The initial audit took place over a period of three weeks and involved the Champions team weighing all of the office's waste, taking electricity meter readings, and staying late after work to record which appliances had been left on. The headline results were then compiled by GAP to reveal that the site annually emitted 297 tonnes of CO_2 and sent 11.7 tonnes of waste to landfill, of which 58 percent could easily have been recycled.

Reflecting on the audit process in meetings and interviews, many of the Champions commented on how awkward it had felt to monitor their colleagues' normal practice:

> Melissa[2] said 'you feel rude looking over people's shoulders and in their bins, especially if they're still in the office as it's hard to hide what you're doing', and Melanie concurred: 'you do feel rude.' They felt a bit uneasy about this, like they were 'checking up on people'. (FD, p. 19)

Such comments arguably reveal the difficulty of challenging the *practical consciousness* (Giddens, 1984) or even the *habitus* (Bourdieu, 1984) that enables practitioners to go on in everyday life in an unthinking manner. Further, the effect of 'looking over people's shoulders' may be seen as a disruption to what Goffman (1963) calls *civil inattention*. Rather than allowing normal practice to proceed by ignoring it, the Champions were beginning to pay attention to it and to challenge it in new ways.

When GAP first revealed the audit results to the team, they were met with many gasps and expressions of shock and surprise at the size of the impact the offices were having:

> I found them [the audit results] really shocking...it's astonishing the amount of rubbish that the place actually produces...I wasn't the only person who just sat there and went 'crikey, how much do we throw away? [laughs]. We've got to do something about this'. (Melanie, FD, pp. 8–9)

As this quotation reveals, the waste products and environmental effects of normal working practices are largely invisible. The audit process was thus vital in helping to re-materialize inconspicuous consumption patterns, and also in localizing and connecting 'the environment' to everyday practice. Indeed, many of the Champions emphasized that the local nature of the audit results was important. That the results referred to *their* practice, as opposed to more general facts and figures about the environmental consequences of everyday life, seemed to be crucial in localizing the environment, making it real and relevant (cf. Burningham and O'Brien, 1994). Further still, the quotation also shows how the audit process served a motivating function, encouraging the Champions to 'do something about' routine practices that had previously gone unquestioned.

From a social practice-based perspective, the audit can be seen as problematizing the links between the images, skills and stuff of a whole bundle of practices. Quite suddenly, a critical environmental perspective was cast upon the unthinking disposal of waste and the habitual leaving-on of lights and appliances, amongst other things. In this respect, the audit appeared to provide the Champions with a certain amount critical distance from the bundles of practice in which they were normally closely entangled. Whilst they could never detach themselves from such practices entirely and 'steer [them] from the outside' (Shove and Walker, 2007: 769), the audit appeared to create a space within existing practices that enabled the Champions to question them and develop a sense of the new, pro-environmental directions they wished to travel in, a process that continued in the subsequent planning meetings.

Planning meetings: Dis-assembling and reconfiguring practice

Following the audit, discussion in the early planning meetings questioned and challenged multiple aspects of working life within Burnetts. The bosses and their cars came under particular scrutiny, as did the material fabric of the buildings on the head office site, the environmental impacts of the construction sites the company operated, as well as more mundane aspects of office practice such as recycling or turning appliances and lights off. Over the course of several meetings, the Champions gradually channelled this critical discussion towards addressing the audit results. What was interesting in these discussions was that whilst there was some focus on their colleagues' attitudes, values and beliefs, and the ways in which good communications strategies might be used to change these, this was dwarfed by the detailed attention the Champions paid to the various elements of everyday practice.

Much of the team's discussion centered on the 'stuff' and 'skills' of working practices and how they might be replaced with more pro-environmental alternatives. For example, as Figures 1 and 2 show, the Champions explored ways in which the normally unquestioned stuff of office practices could be reduced or replaced, as well as setting out detailed instructions – such as for a 'leaving the office checklist' or on how to photocopy and print double-sided – to try and introduce new pro-environmental skills around the offices. The images or meanings of existing practices were also discussed. Conventional approaches to behaviour change perhaps come closest to social practice theory here as attitudes and values might be seen as proxies for meaning. The difference, however, is that in a practice approach meaning is seen as residing within the practice rather than in individuals' heads. Throughout the team meetings the meanings of existing practices were invoked and challenged in various ways. A particularly clear example occurred when the team discussed setting targets for the reductions in environmental impacts they hoped to realize. As I recorded in my field diary:

> Anna [the GAP programme manager] then got the group to commit to certain targets. This led to an interesting set of discussions . . . [someone] emphasized that 'we should

- 'Don't use **lights** unless needed, look into **low energy light bulbs**.
- Look at **desk layouts** to maximise use of natural light.
- Remove some **lighting tubes**.
- Have a switch off lunch hour once a week, where all non-essential **equipment** must be switched off.
- Reduce number of **printers** to make people think twice about printing.
- Reduce energy use from heating and cooling, replace **broken thermostats**, Brian Ellis to provide staff with **fleeces**.
- Improve access to **plugs** to make it easier for staff to switch off.
- Print fewer emails, create folders in your drive to store emails for reference rather than printing.
- Have **pot** by bin/small containers by printers for stationery such as **paper clips** and **pins** to be reused.
- Use staple-less **staplers**.
- Fewer **magazine** subscriptions, pass copies around departments rather than for individual use.
- Reduce **post-it** note usage & reduce **post-it** note purchasing.
- Make **scrap pads** – one person per department in charge of this.
- Reduce **envelope** usage, reuse **envelopes**.
- Duplex printing and photocopying set defaults, communicate this to all staff, print two to a side.
- Reduce **printer cartridge** use, less printing, lower resolution printing, establish guidelines on good printing practice.
- Reduce the proportion of **paper** going into general waste **bins**.
- Investigate localised shredding and increasing capacity for general paper recycling.
- Get staff to use recyclable **lunch storage items**.
- Make sure all **plastic cups** are being recycled.

Figure 1. List of 'Short-term actions' from the second training meeting.

Extract from an Email to all Staff – sent at 16:46 on a Friday Afternoon
'Choosing to act positively, even in a small way, we can make a significant difference, together!
If you are leaving early or staying later, don't forget you do have time to switch off your…………….
     PC
     Power transformer
     Docking Station
     Screen
     Plug (- sometimes easier to switch everything off at the wall)
     Gang socket (that little LED on the end uses about 0.3Watts)
     Phone Charger
     Printer
     Lights – if you're in a shared office, who is going to turn out the lights when you go?
     Is there a photocopier near you? Does that need to be left on? – one copier uses
     enough power when on standby at night to print one thousand five hundred copies!'

Figure 2. 'Leaving the office' checklist.

select low targets as then it'd look better when we achieve all of them'…she said 'How will we look as a group of people if we miss all of our targets? We'll look bloody stupid.'…In the end they agreed that they wanted to set 'challenging but achievable' targets although there was then some reluctance to commit to them…Liam expressed this as 'not wanting to under-deliver, but instead to over-achieve'. (FD, p. 23)

Irrespective of the Champions own individual environmental values, this extract reveals that issues of professional status, competence and one's personal success or failure were at stake in the Champions initiative. Accordingly, deep green environmental meanings were rapidly dismissed as inappropriate to the workplace. As Graham put it, the team wished to avoid being seen as 'a bunch of tree-huggy saps' (FD, p. 33). Instead, they appealed to already well-established meanings, preferring to emphasize the cost-savings, efficiency improvements and additional convenience of pro-environmental alternatives. This example is particularly insightful because it reveals that whilst the skills and stuff of practice appeared relatively easy to question, their meanings and individual practitioners' experiences of them were more resistant to challenge and change (cf. Hitchings, 2010).

As the meetings progressed, the Champions began not only to challenge existing practices, but also to re-assemble images, skills and stuff in new ways. Numerous suggestions for how practices should be changed were offered, ranging from fairly radical reconfigurations of practice involving removing bins, switching off electricity supplies and closing the car park, to the more mundane substitution of existing elements of practice with pro-environmental alternatives such as replacing light-bulbs, double-sided printing or getting new recycling bins.

Before considering the implementation and roll-out of these suggestions, it is worth briefly reflecting on how this practice-based account departs from more conventional understandings. First and foremost, the discussion so far has revealed that the conventional approach's exclusive focus on individuals' attitudes and values, or on the contextual 'barriers' to pro-environmental behaviours is too narrow to capture all that is involved in behaviour change interventions. The practice-based approach adopted here broadens the perspective beyond a narrow 'rationalisation framing' (Hobson, 2002) to include other mundane aspects of daily practice such as normally unquestioned skills and stuff that, whilst they would be ignored in more cognitivist accounts and may, on the face of it, have little to do with 'the environment', nonetheless appear central to what the Champions were trying to achieve. Second, where conventional accounts stop at individuals' cognitive states and how they change, a practice-based account demands the further step to consider 'doings'. Here, for all the critical edge of the Champions planning meetings and the new practices they assembled, they must be recognized as what Schatzki (1996, 2002) calls *practices-as-entities* that, vitally, are not the same as *practices-as-performances*. As is often pointed out, it is only through their repeated performance that practices are sustained (Shove and Pantzar, 2005; Warde, 2005). As such, and as will be discussed in the next section, the challenge for the Champions team was how their new practices-as-entities could be rolled-out

across the head office site and made to replace existing and well-established prac-
tices-as-performances.

Roll-out: No Bin Day

There is insufficient space in this article to discuss the implementation of all of the
Champions' many proposals (see Hargreaves, 2008 for a more detailed discussion).
Instead, this section will focus on one specific proposal that ran throughout the
entire initiative and was emblematic of the challenges the Champions faced in
questioning and replacing existing practices-as-performances: No Bin Day.

At the start of the initiative all employees had a bin by their desk, and by
photocopiers and in kitchens there were paper/cardboard recycling bins, plastic
cup recycling bins, and blue bins for confidential business waste, which was shred-
ded before being recycled (see Figure 3). The No Bin Day proposal was to remove
under-desk bins for a single day in order to de-routinize existing waste habits and
re-routinize new ones (cf. Spaargaren and Van Vliet, 2000) based around the
improved recycling facilities the Champions proposed to put in place beforehand.
As the initiative progressed, however, it became very clear how difficult it was to
challenge, let alone to replace, existing waste practices.

As soon as the No Bin Day proposal was mentioned, it ran into problems. First,
David suggested that it may breach Burnetts' contract with its cleaners as it would

Figure 3. Existing waste disposal facilities at the offices.

leave them less work. Next, when the proposal was sent to Brian (non-Champion) the Facilities Manager, who was responsible for waste management at the site, he raised a number of objections: that waste in the wrong bin could breach data protection laws, that the lack of a bin for food waste could lead to hygiene problems and that placing new recycling bins in corridors could be a fire hazard. Whilst these may seem to be fairly trivial issues, in an interview with Brian he proudly pointed out the Facilities Management team's excellent health and safety record and suggested that, far from being anti-environmental, he had a 'duty of care' to all employees that forced him to consider a range of legal obligations:

> People forget that they have to be clean to a certain standard, they have to be lit to a certain standard, they, you know, and all the things that Facilities Management do. They have to choose the right chairs, you know, and the right desk heights, and the right equipment you know ... I've got a duty to protect [them] here. (Brian, interview, FD, p. 49)

As these initial objections show, bins are involved in and support a number of different practices, serving a wide range of different purposes at the head office site, a point Brian expressed in an email to Peter, one of the Champions, by arguing that it is 'someone's right to expect [a bin] as part of a normal office' (FD, p. 112).

As the Facilities team's objections mounted, the proposal faced its first serious challenge from within the Champions team at a meeting in May. Here, Louise argued that taking people's bins away was 'an invasion of privacy' (FD, p. 109) and referred to the CHANGE programme (a parallel initiative being run at Burnetts), which was 'all about encouraging people to *choose* the right thing, and then we're taking bins away and not offering them a choice' (FD, p. 109). Further, she imagined a scenario in which the Chief Executive was with a high-profile client who'd sneezed and had a dirty tissue: 'is he supposed to say, ''oh just go to the bin at the end of the corridor?'' ' (FD, p. 110). Rather than abandon the idea altogether, she suggested the Champions should offer people a choice of whether or not to relinquish their bin.

These kinds of arguments continued and the Champions progressively watered down the proposal until, in Sally's words, it ultimately 'fizzled out' (FD, p. 146) in late July. The Champions ended up offering employees the choice of relinquishing their bin, an option no-one selected, and in conjunction with the Facilities Management team, rather than removing bins they in fact distributed additional desktop recycling trays (see Figure 4) to all employees. Brian also mentioned that these recycling trays had the added advantage of reducing fire risk by limiting the amount of paper people kept on their desks and ensuring it was stored flat.

Despite the active and committed effort of the Champions team, operating in an ostensibly supportive organization, as the No Bin Day proposal progressed, the manner in which under-desk bins mesh with other practices, professional and normative standards, legal regulations and even social interactions was gradually revealed, and the proposal was blocked at almost every step. The disagreements

Figure 4. Desktop recycling tray.

between the Champions and Facilities Management team further reveal that some groups of practitioners, or communities of practice (Wenger, 1998), have vested interests in preserving the precise bundles of practice that make up the status quo. In this particular dispute, Facilities Management should be seen as a powerful group within Burnetts, possessing a proud health and safety record (an understandably important issue within the construction industry e.g. DTI, 2006), and able to back this up with legal arguments. By contrast, the Champions team were a newly formed, informal and voluntary group of practitioners who had little more than the normative power of the environment on which to make their case. Perhaps unsurprisingly, this argument proved too weak.

These vital issues, and the at times surprising connections between practices, would be missed in more conventional and functionalist analyses of pro-environmental behaviour change processes that focus exclusively on individuals' explicitly 'environmental' attitudes and values (cf. Hobson, 2002; Ungar, 1994). At the same time, this example has offered at least three ways in which social practice-based analyses might be extended. First, it suggests a need to look beyond single practices and towards the relations within and between whole bundles of practice that co-exist in particular domains of everyday life (cf. Warde, 2005). Second, it has

illustrated the close relationship between practices and the power and social relations that they support and uphold and which, in turn, ensure that those practices are maintained, stabilized and reproduced. These social aspects and (micro)politics of practice are often neglected (cf. Røpke, 2009) but it would appear they deserve closer attention, particularly in studies concerning attempts to change practices. Finally, this example has shown empirically how social order exists in and is supported by practices (Reckwitz, 2002: 251). By logical implication, changing practices means changing the social order and, as was seen in the Champions long-running dispute with the Facilities Management team, is a process that may well result in both winners and losers. Unsurprisingly, therefore, and as the Champions team gradually discovered, current arrangements of practice are likely to be strongly protected, leaving relatively little room for manoeuvre for those who wish to introduce changes.

Results: Interactions, identities and rules

As the preceding sections have shown, despite the best efforts of a committed, intelligent and well-informed team, as the initiative unfolded they found their ability to challenge, let alone replace, existing and taken-for-granted practices to be extremely limited. Indeed, at the end of the initiative a superficial examination of everyday working life at the offices would reveal no obvious changes. Employees still routinely used computers, printers, drinks machines, etc. as they got on with their work in much the same way as they had done prior to the initiative. The second audit, conducted in October, revealed a 29 percent (3.4 tonnes) reduction in the total amount of waste sent to landfill, and a 5.4 percent (6 tonnes CO_2) reduction in electricity use at the site. These are relatively modest savings but, given the severe challenges the Champions faced and the lack of obvious changes to the practices people were performing, they beg the question 'what actually happened?' Here, close observation of working practices at the site revealed some subtle changes. In particular, and as this section will show, the manner in which practices were approached, understood and experienced by practitioners appeared to have changed significantly.

Towards the end of the initiative, whilst conducting observations around the offices, I began to notice that employees, whether members of the Champions team or not, started to interact with one another in new ways. As the quotation below illustrates, during the course of previously inconspicuous activities such as photocopying, disposing of waste or walking through a room in which the light was on, employees began conspicuously to perform their environmental credentials:

> As a Champion, we now sort of walk past a photocopier and in the past where you'll just walk past and someone will be at the photocopier photocopying, erm, I've personally found that people will now acknowledge that I'm a Champion and say 'oh I'll just check that I'm double-siding, I definitely am double-siding'. (Louise, FD, p. 7)

These sorts of performances of what might be called 'conspicuous environmentalism' became increasingly common whether or not a member of the Champions team was present. Another example occurred regularly at lunchtimes or the end of the day as groups of colleagues who shared the same room began jointly to remind one another to switch appliances off.

> It's certainly made a difference...in my office anyway, you will see somebody say, 'have you done with the photocopier?' 'Are you done with this light?' and people as they leave the office do make those checks that everything's been turned off before they go, which I don't remember that being done beforehand. (Karen, non-Champion, FD, p. 9)

I observed numerous situations like this around the offices as pro-environmental actions were jointly negotiated. These were incidental occurrences, but their regularity suggests they were significant. The key point is that both Champions and non-Champions were suddenly being 'picked up' (David, FD, p. 23) and called upon to justify their actions along environmental lines.

In addition to the emergence of these new forms of social interaction, in interviews both Champions and non-Champions alike began to talk about themselves and their colleagues in new ways. As the following quotation shows, employees began to question and redefine the meaning and nature of working at Burnetts, and specifically to incorporate pro-environmental aspects into their professional identities:

> It's part of you working for Burnetts that they're encouraging you to erm, be kinder to the environment...they're asking you to do that as part of your job...So, you know, if you don't do it, you're not being a good Burnetts person really are you? (Lynn, non-Champion, FD, p. 15)

Alongside the changes in social interactions, quotations such as this suggest that the initiative gave rise to new identities around the offices, re-socializing practitioners as 'environmental employees'.

These examples illustrate that whilst the practices had not been radically transformed by the initiative, for reasons explored in the previous section, practices had been modified from the inside out, as new pro-environmental meanings, skills and stuff were incorporated into normal working life. Sally described this process as a change in 'the rules':

> I almost think that what we have done is made it the rule to a certain extent that you have to recycle your stuff...So why an office light left on looks weird is because it's not what the rules are anymore....It's not that it [doesn't] look right because you're imagining global warming...I don't think we've converted everybody on site to saving the world. (Sally, FD, p. 26)

Such statements clearly refute the core assumptions of conventional approaches to behaviour change that pro-environmental action must be preceded by pro-environmental attitudes, values or intentions. Instead, and to extend Sally's metaphor, whilst the aim of the 'game' of working at Burnetts had remained constant, important changes had occurred within it.

This section has focused on a number of subtle shifts in the performance of working practices around the offices. Whilst the practices themselves had not been fundamentally transformed, these observations suggest that the way practices were approached, understood and experienced by practitioners had changed, and so too had the sorts of interactions and identities that these practices sustained. Crucially, these social dynamics of practice are often underplayed in both conventional behaviour change approaches (Nye and Hargreaves, 2010) and in practice-based accounts (Hitchings, 2010; Røpke, 2009). What this analysis suggests, however, is that if practices are indeed (re)produced through their regular performance (cf. Shove and Pantzar, 2005; Warde, 2005), it is precisely these subtle shifts in the elements of practice and in how they are experienced by practitioners that will prove central to their broader transformation.

Discussion and conclusions: Developing pro-environmental practice

This article has used social practice theory to illuminate the workings of a single behaviour change intervention – Environment Champions – as operated in the head offices of a UK construction company called Burnetts. In so doing it has revealed that conventional accounts of behaviour change, with their focus on individuals' cognitive states and contextual 'barriers', are too narrow to capture the full range of what is involved in behaviour change interventions. Through close observation and the use of a practice-based approach, this article has reconceptualized behaviour change initiatives as attempts to intervene in the organization of social practices. Such a conceptual shift reveals the often surprising links between seemingly unrelated practices, the surrounding material infrastructure, legal, social and power relations as central to such interventions, even if they are normally neglected, or even actively bracketed out, in conventional accounts.

It should be stressed, however, that these observations are based on only a single case study and, as such, excessive generalizations should be avoided. Instead, further research and experimentation, particularly the pursuit of more detailed case studies in more settings, appears absolutely vital. Nonetheless, the analysis presented here does lean towards several ways in which social practice theory might be improved through further empirical application of this kind. First, it reveals the shortcomings of analyses that focus only on single practices and neglect the connections, alliances and conflicts between practices (cf. Warde, 2005). This perhaps suggests a need to consider particular domains of everyday life, such as homes or workplaces, as the empirical arenas in which to study the grounded performances

and negotiation of whole bundles of practice. Second, it emphasizes the social and power relations involved in practices that they produce and that, in turn, sustain them. In particular it points towards a focus on communities of practice (Wenger, 1998) and the relationships between them, because it is within these collective groupings that practices are always being negotiated and transformed. Third, and finally, this analysis has stressed the experience and identities of practitioners as offering important insights into how practices are reproduced and changed (e.g. Hitchings, 2010). The processes of environmental socialization that practices bring about (or fail to), in which new social identities, interactions and relations are forged, would seem to deserve further empirical attention.

Ultimately, this article argues that the significant challenges posed by issues such as climate change, and the extensive transformations they appear to require across whole domains of society demand, in turn, a broad and sophisticated understanding of social life and change. If pro-environmental behaviour and sustainable consumption are to be achieved at the rate they are needed, conventional narrow models of individual behaviour change may need to be abandoned. In their place, greater research and policy attention should be paid to the complex task of generating more sustainable practices, an effort this article has attempted to begin.

Acknowledgements

Notes

1. Burnetts is a pseudonym. Pseudonyms are used throughout this article to protect the anonymity of all research participants and the company being studied.
2. All names are pseudonyms and all participants are members of the Champions team unless otherwise stated.

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