



CARBON NEUTRAL COMMUNITIES

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Conceptualising everyday practices: composition, reproduction and change

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Dr Yolande Strengers

Research Fellow, Carbon Neutral Communities

Centre for Design, RMIT University

yolande.strengers@rmit.edu.au; 03 9925 1916

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Abstract

Behaviour change and demand management strategies currently overlook the reasons *why* people use resources, *how* these 'needs' and 'wants' are constituted, and *how* they are changing within the broader context of everyday life, where day-to-day practices, such as bathing, cooking, laundering and house cleaning, take place. This oversight is concerning because practices are continuing to shift and change, often in more resource-consuming directions, potentially negating the resource savings achieved.

This paper draws on social practice theorists and researchers (Bourdieu 1977; Giddens 1984; Reckwitz 2002a, 2002b; Schatzki 2002; Shove & Pantzar 2005, 2007; Warde 2005) to develop a conceptual framework for understanding and analysing household practices using examples of indoor comfort and cleanliness, such as bathing, laundering, house cleaning, heating and cooling. The paper contends that, in order to change practices and move towards carbon neutrality, we must first understand how they are composed and transformed in everyday life.

Practices are defined as a co-ordinated entity of four inter-related and mutually reinforcing 'components' (practical knowledge, common understandings, rules, and material infrastructures), which are reproduced at particular moments in time and space. The paper discusses how these components (and therefore practices) are established, sustained and changed through processes of reproduction and routinisation. In conclusion, several empirical questions are identified for the CNC program that emerge from this alternative starting point to understand and facilitate change.

1. Introduction

A plethora of behavioural and demand management programs currently dominate the policy arena and form the basis of organisational agendas for achieving carbon reductions and efficiencies. Approaches to ‘managing’ demand and ‘changing’ behaviour include consumer education, social marketing, consumption feedback, information campaigns, variable pricing schemes, and new technologies and devices designed to make resource usage more efficient (see Jackson 2005; Moloney *et al.* 2009; Shipworth 2000 for good summaries). Such strategies assume that individuals weigh up the costs and benefits of consuming resources in accordance with their desires, opinions, values, attitudes and beliefs. Furthermore, they ignore the ways in which systems of energy (and water) provision — including technologies and infrastructures inside the home, and dams, pipes and wires outside it — shape this consumption (Van Vliet *et al.* 2005).

In focusing on either empowering, educating and/or coercing consumers to reduce their demand, or designing more efficient supply systems and household technologies, demand managers and behaviour change professionals overlook the reasons *why* people use resources, *how* these ‘needs’ and ‘wants’ are constituted, and *how* they are changing within the broader context of everyday life, where day-to-day practices, such as bathing, cooking, laundering and house cleaning, take place (Wilhite *et al.* 2000). Dominant understandings of consumption and demand therefore leave important questions about the nature of everyday life unanswered, and obscure other understandings of demand from view. This is problematic because everyday practices are continuing to shift and change, often in more resource-intensive, expensive and environmentally damaging directions, thereby subsuming the efficiency gains achieved through behavioural and demand management strategies.

Examples of the problems arising from ignoring the changing dynamics of everyday practices are numerous and widespread. Energy consumption is continually rising as new or more energy-intensive appliances, such as plasma TVs, home entertainment systems, personal computers, dishwashers, clothes dryers, air-conditioners and central heating and cooling systems, are incorporated into day-to-day living (Akmal & Riwoe 2005; DEWHA 2008; Harrington *et al.* 2006). While urban water consumption is in a temporary growth hiatus, it is expected to rise again as water restrictions and targets are lifted when new energy-intensive supply systems, such as desalination, interconnected pipelines and wastewater recycling, are brought online (Besser 2007; England 2009; Ker 2009; VLP 2007). With climate change scientists warning of the severe dangers facing the planet if emissions are not drastically and urgently curbed (IPCC 2007), there is a critical need to refocus attention on the constitution and transformation of everyday practices at all levels of policy and practice.

This working paper begins to address this issue by reframing demand in terms of people's everyday practices and developing useful conceptual tools for understanding how they are established, sustained and transformed. In particular, I ask: how can we understand everyday life and everyday practices? How are they composed and transforming? And; why might this alternative conceptualisation be useful for analysing day-to-day practices and facilitating change?

Drawing on social practice theorists and researchers (Bourdieu 1977; Giddens 1984; Reckwitz 2002a, 2002b; Schatzki 2002; Shove & Pantzar 2005, 2007; Warde 2005), this paper develops a conceptual framework for understanding and analysing household practices using examples of indoor comfort and cleanliness practices, such as bathing, laundering, dishwashing, teeth brushing, toilet flushing, house cleaning, heating and cooling. These practices constitute most of Australia's potable water consumption in urban centres, which is threatened by climate change and drought (ABS 2006; AWA 2001), and represent most of household energy consumption (ABS 2008). In addition, new household cooling practices involving air-conditioning appliances are the major contributor to the nation's rising peak electricity demand, which overloads the electricity system on hot days, costing consumers millions of dollars each year (Wilkenfeld 2004).

The paper begins with an overview of everyday life, where day-to-day practices are carried out, and its significance in evaluating strategies which seek to reduce or shift energy and water consumption. I argue that social practice theories provide a useful set of concepts to understand and analyse this everyday realm. I distinguish between four intersecting theoretical concepts that constitute a practice, which I refer to as 'components': practical knowledge, common understandings, rules, and material infrastructures. I consider how these components (and therefore practices) are established, sustained and changed through processes of reproduction and routinisation. The paper concludes by outlining an empirical starting point for understanding and facilitating change.

2. An introduction to everyday practices

2.1 The significance of everyday life

Framing consumers as rational actors operating in a market of energy and water consumption generates common 'blind spots' (Stern 1986) and limitations in our understanding of how demand is constituted and changing. Instead, it is useful to think about *why* people consume energy and water. Rather than viewing householders as consumers of aggregate resources such as kilowatts and kilolitres, we can reconceptualise consumption as a by-product of everyday life. In other words,

'consumption is not itself a practice but is, rather, a moment in every practice' (Warde 2005, p. 137). Therefore, people consume resources in order to carry out the day-to-day *practices* that they make possible (Wilhite *et al.* 2000). Following this understanding, behaviour change and demand management strategies are responding to changes in everyday life, as well as the resource constraints and challenges these pose.

However, everyday life is rarely the focus of research, nor is it easy to study. Its mundane, taken for granted and seemingly inconsequential nature led Sofoulis (2005, p. 448, emphasis in original) to remark that 'the problem with researching — or transforming — everyday water use is precisely its everydayness; so normal it retreats into the background of awareness as part of *inconspicuous consumption*.' Despite its silent and hidden characteristics, it is within the everyday realm that nearly all consumption takes place (Gronow & Warde 2001; Patterson 2006; Shove 2003a), from getting up in the morning and brushing our teeth or taking a shower, right through to preparing an evening meal and going to bed. However, everyday life is by no means stable. The myriad of 'normal' routines householders engaged in when they rose from their slumber last century are very different to those we take for granted today (Shove 2003a). It is the dynamic and transforming nature of everyday life, and in particular the everyday practices which constitute it, that make this realm so critical in addressing resource management issues. As practices are modified and introduced, so too is the consumption required to maintain them.

2.2 Situating everyday practices in social analyses

Understanding consumption through the lens of everyday practices differs from the two master concepts of individuality and totality on which social and cultural theory has predominantly been based (Schatzki 1997). Individuality encapsulates the rational action framework of demand, whereas totality is the conceptual opposite, whereby people are framed as social 'dummies', blindly following collective norms and rules (Reckwitz 2002b). In contrast, a practice-based analysis places key focal points on the 'organization of the practice and the moments of consumption enjoined. Persons confront moments of consumption neither as sovereign choosers nor as dupes' (Warde 2005, p. 146).

A body of literature referred to as social practice theory provides useful insights into understanding and analysing everyday practices. However, practice theory has been criticised for being too philosophical and difficult to transpose into empirical analyses. According to Warde (2005, p. 135), 'as general theories of practice they tend to be idealized, abstract, and insufficiently attentive to the social processes involved in the creation and reproduction of practices.' A further complication in applying practice theory to empirical data is that each theorist has their own unique understanding of how

practices are constituted and reproduced. Nonetheless, this diverse body of literature provides a useful starting point for identifying analytical concepts to examine and understand everyday practices.

2.3 Defining everyday practices

I use the term *everyday* practices to refer to a loosely bundled group of practices which are seemingly inconsequential, inconspicuous and mundane, but nonetheless essential to our day-to-day lives. While there is no unifying definition of a practice, it can be loosely described as an interwoven activity in a social domain (Schatzki 1997), or, 'a "bundle" of activities, that is to say, an organized nexus of actions' (Schatzki 2002, p. 71).

Practices are social phenomena, in the sense that, firstly, 'participating in them entails immersion in an extensive tissue of coexistence that embraces varying sets of people', and, secondly, their organisation is part of the 'nexuses of doings and sayings that compose them' (Schatzki 2002, p. 87). Schatzki distinguishes between practice as both a co-ordinated entity and a performance which is actualised and sustained through individuals' reproduction of them. Reckwitz (2002b, p. 250) describes this regular reproduction as 'a routinized way in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood.'

However, this does not mean that the routinisation of a practice is separate from its composition. As Giddens (1984, p. 2) argues, practices are recursive:

that is to say, they are not brought into being by social actors but continually recreated by them via the very means whereby they express themselves as actors. In and through their activities agents reproduce the conditions that make these activities possible.

Practices are therefore created, sustained and transformed through their reproduction in everyday life.

Practices are often misunderstood as relating only to what people do, or to what they say about what they do, rather than the ways in which these 'doings and sayings' are constituted and interconnected. In these instances, practices are reframed as 'behaviours', which are viewed as the product of individuals. For example, we often describe 'doings' as taken for granted and socially understood facts, such as doing the laundry, or taking a shower. Furthermore, we often analyse these doings based on what people say about them, understanding them to be the product of beliefs, attitudes, opinions and values (Ajzen 1991), or of some external social 'force' such as norms (Schultz *et al.*

2007; Turner 1991). These understandings obscure the historical, social, cultural and material configurations which shape what we do and how we explain what we do. Drawing on analytical concepts from practice theories, we can go beyond this shallow exterior to consider the factors which *constitute* and *link* doings and sayings.

A useful place to begin is to 'dissect' everyday practices. Although practices cannot be segmented in everyday life, distinguishing between various 'components' assists in establishing a conceptual grounding for analysis. Put simply, we often need to pull something apart before we can view it as an integrated whole. In the section that follows, I elaborate on the components and processes of practice reproduction that actualise and sustain them in everyday life.

3. A conceptual framework of everyday practices

In this section, I identify four common theoretical features of everyday practices which I refer to as 'components' (see Figure 3.1). My aim is not to represent all practice theories, but rather to identify useful analytical concepts for empirical research. I discuss firstly 'practical knowledge', which provides people with the tacit skills required to undertake a particular practice; secondly, common understandings, which are acceptable and 'normal' benchmarks or expectations for particular practices; thirdly, rules, which are sanctions or mandatory aspects of practices which must (or must not) be done; and, fourthly, material infrastructures, such as technologies, infrastructures and systems of energy and water provision, which provide the means by which many practices are undertaken and made possible. Using examples of comfort and cleanliness, I demonstrate how these components intersect to create an 'organised nexus of actions' (Schatzki 2002, p. 71). I continue by discussing how these components are conjoined through a continual process of reproduction in everyday life.

3.1 Practical knowledge

Practical knowledge is a submersed layer of information and understandings which informs everyday action. What makes sense for a person to do at any given moment is, to a large extent, informed by what they have always done (Schatzki 2002). For example, when a person feels hot or cold, they draw on practical knowledge to establish what practices they should undertake, such as having a hot bath or cold shower, putting on a jumper, shutting curtains and blinds, or turning on an air-conditioner or heater. Practical knowledge is therefore learned social know-how which is accumulated through everyday experience. Practice theorists discuss practical knowledge in different ways, referring to it as *practical consciousness* (Giddens 1984), *habitus* (Bourdieu 2005), and *practical intelligibility* (Schatzki 2002). While significant distinctions can be drawn between these concepts, these theorists agree that some form of practical knowledge is embodied in actors (and, to different extents, objects and

systems) and the practices they undertake. Practices therefore follow a logic — not the logic of conscious decision-makers, but ‘the embodied logic of sedimented history in everyday activity’ (Sterne 2003, p. 375).

While it is not necessary to elaborately distinguish between each theorists’ different interpretations of practical knowledge, it is useful to consider the contributions they make to understanding and analysing the composition of practices. Both Bourdieu’s and Giddens’s understandings of practical knowledge refer to a deeply embedded layer of understanding which is replicated in nearly everything we do. Giddens (1984, p. xxiii) argues that such knowledge consists of ‘all the things when actors know tacitly about how to “go on” in the contexts of social life without being able to give them direct discursive expression’. Whereas Giddens distinguishes between practical, unconscious and discursive forms of consciousness, Bourdieu (1998) arguably encompasses all states of consciousness in his concept of habitus, which can unconsciously regulate our emotions — generating feelings, tastes and urges of disgust and desire. Thus, deeply embedded routines can become ‘absorbed’ into the body as feelings, such as the ‘need’ to shower every day in order to ‘feel’ clean (Wilk 2002).

Schatzki (1997, p. 301) criticises Bourdieu and Giddens for relying too heavily on the unconscious and submersed nature of practical knowledge given the ‘garden variety fact that people can explain almost all their actions in great detail’. Rather, he refers to practical intelligibility as a skill or capacity that underlies activity. However, Giddens (1984, p. 5) also contends that people can articulate their actions through ‘rationalization’: ‘by the rationalization of action, I mean that actors — also routinely and for the most part without fuss — maintain a continuing ‘theoretical understanding’ of the grounds of their activity.’ The distinction Giddens (1984, p. 6) makes is that, while actors can ‘explain most of what they do, if asked’, they cannot necessarily do so for their motives. For example, while people may be able to clearly articulate how they shower and perhaps even why they do it, they may not be able to express where this practice has emerged from. Therefore, practical knowledge can be used to refer to both consciously reflected *and* semi or deeply embedded knowledge which informs action.

Importantly, practical knowledge is not something natural or inborn, but rather a product of social history, i.e. of education, upbringing and social experience. For example, Bourdieu (2005, p. 45) claims that habitus provides individuals with:

a set of *acquired* characteristics which are the product of social conditions and which, for that reason, may be totally or partially common to people who have been the product of similar social conditions.

Thus, while practical knowledge is individually experienced, it is a product of socially shared and culturally similar conditions and experiences with practices. For example, taking a shower in order to clean one's body makes sense not only to one individual, but to many people in a particular historical, social and cultural context. In this sense, practical knowledge is produced, shared and reproduced by people undertaking socially similar practices.

Practical knowledge is therefore not a fate or destiny. As Bourdieu (2005) argues, it can be changed through awareness and 'pedagogic effort'. Nor is it the product of mere repetition, which Bourdieu (2005) argues is the distinction between habit and habitus¹. Rather it has a generative capacity which can produce a variety of outcomes (and habits) within any given context: 'this means, that in rapidly changing societies, habitus changes constantly, continuously, but within the limits inherent in its ordinary structure, that is within certain bounds of continuity' (Bourdieu 2005, p. 47). Thus, practical knowledge can be understood as an accumulated history of experience with a particular practice, which may or may not be consciously expressed, and, while individually experienced, has a commonality with other participants of the same practice.

3.2 Common social understandings

Closely linked to practical knowledge, and indeed absorbed into it in Bourdieu's (2005) concept of habitus, are common social understandings about 'right' and 'wrong' ways of doing things. Often referred to as norms, conventions, customs, traditions, common sense or public opinion (Turner 1991), common understandings inform acceptable and unacceptable practices. I distinguish between practical knowledge and common understandings to highlight social expectations of appearance, smell, hygiene and cosiness which inform how and when comfort and cleanliness practices should be undertaken (Shove 2003a; Wilhite *et al.* 1996). Schatzki (2002, p. 75) makes a similar distinction: 'what makes sense to someone to do is not the same as what someone thinks is appropriate, right or correct'. Importantly, people may have their own particular ways of maintaining, interpreting or rebelling against common understandings. For example, a person who showers once a week (or not at all) may still uphold and maintain the same presentability and body odour expectations as a person showering every day by drawing on different practical 'know-how' regarding how to clean the body.

While common understandings convey a feeling of 'oughtness' about certain practices, I refrain from referring to them as social norms because of this term's common association with social totalitarianism. As Turner (1991, p. 3) describes, social norms are defined as: 'external to the individual, being the property of a culture, and constrain the actions of individuals'. Using social practices as the unit of

¹ Barnes (2001, p. 26) makes a further distinction between habit and practice, arguing that: 'habit is not enacted well or badly, but practice is'.

analysis dissolves the division between individuality and sociality. I therefore use the term 'common understandings' not to dismiss the role of norms, but to assist us in thinking about them as understandings that emerge *from* a practice, rather than being imposed *onto* it from an external social force.

3.3 Rules

Practice theorists have defined rules in several different ways. Schatzki (2002, p. 79) describes them as 'explicit formulations, principles, precepts, and instructions that enjoin, direct, or remonstrate people to perform specific actions.' This is distinct from Giddens's (1984, p. 21) broader use of the term, which he uses to refer to 'the rules of social life', which are 'techniques or generalizable procedures applied in the enactment/reproduction of social practices'.

The types of 'rules' I refer to most closely resemble what Giddens calls 'formulated rules' or 'codified interpretations of rules', which are 'those that are given verbal expression as canons of law, bureaucratic rules, rules of games and so on'. In the context of comfort and cleanliness practices, rules might be the embodiment and reproduction of regulations, restrictions, targets, standards, theories and recommendations developed and/or introduced by influential or institutional bodies, which are not necessarily subject to monitoring and enforcement, but can hold the same status as many laws, becoming the source of social censure and new common understandings about appropriate and inappropriate practices. In other words, rules constitute the aspects of a practice that *have to be done*.

The Cleanliness Institute provides an historical example of the role of rules in reconfiguring cleanliness practices. The Institute was an influential organisation composed of soap manufacturers established in the 1920s to promote the biological discourtesy and potentially dangerous effects of spreading germs (Lupton & Miller 1992; Vinikas 1992). The Institute recommended regular hand, house and body cleaning practices, which are now common and accepted. Importantly, the Institute did not focus on the product it was trying to sell (i.e. soap), but rather on the *common understandings* associated with its use. The Institute targeted school children and mothers, providing them with new practical knowledge about the most effective ways to maintain a germ-free body and home (Vinikas 1992). Thus, the Cleanliness Institute was involved in a successful campaign of redefining 'normal' cleanliness practices, through which soap became implicated in the everyday compulsory maintenance of the body, clothes and home.

Riding on the back of 'the fear of the microbe' (Tomes 1998, p. 10), heightened by the actions of the Cleanliness Institute, came advertisers and marketers who Vinikas (1992, p. vii) describes as powerful

'social institutions', which 'promulgate[d] a cluster of social values and beliefs' around new cleanliness expectations. Advertising created new cleanliness 'problems', and solved them through new cleanliness 'solutions' such as the development of Listerine to treat halitosis, and deodorant 'needed' to cure body odour, both of which were repositioned as socially undesirable and offensive conditions of the body (Vinikas 1992). As this example demonstrates, the promotion and subsequent reproduction of these new rules has significantly defined our understanding of the courteous, acceptable and desirable cleanliness practices we now consider 'normal'.

However, rules should not be thought of as institutional 'forces' that are interjected into practices. Rather, like common understandings, rules also emerge out of practices, and are often interpreted and incorporated into practices in different ways than originally intended. For example, Australia's urban water restrictions, which regulate 'discretionary' practices such as garden and lawn watering, have emerged out of the assumption that regular bathing and laundering practices are 'non-discretionary', and have therefore been more readily accepted and reproduced by the carriers of outdoor water practices. Furthermore, by *explicitly* regulating outdoor water practices, water restrictions *implicitly* reinforce and legitimise indoor cleanliness practices as essential and necessary aspects of everyday life — i.e. activities that *must be done*.

In this sense, regulations can serve to reinforce and maintain existing rules rather than reconfigure them. For example, the recent blackouts across Victoria during the 2009 heatwave prompted public debate about the provision of electricity (AAP 2009; Coster 2009; Dowling 2009; Zappone & Grace 2009). However, this did not result in an extensive discussion regarding the recent incorporation of air-conditioning into the practice of cooling, which was largely responsible for the blackouts (Coster 2009). Indeed, it is feasible that new regulations could now be introduced to *strengthen* air-conditioned cooling practices and its emerging status as a 'need' by requiring the upgrade of electricity provision systems to cope with peaks in demand. In this sense, rules can also become embodied in things (Reckwitz 2002a) through appliance standards, building codes, four-minute shower timers or, in the example above, policy and utility decisions about appropriate electricity infrastructure systems.

In sum, rules are absorbed into, and emerge out of, practice. While rules often emerge out of explicitly stated or inadvertently implied by influential institutional or commercial bodies, they are also subject to extensive public debate and manipulation with reference to existing 'normal' practice. Importantly, rules can contribute both to the reconfiguration of a practice and to its continuation. Thus, what a rule says about a practice is just as important as what it overlooks.

3.4 Material infrastructures

Material infrastructures, encompassing objects, technologies, infrastructures and systems of provision form a pervasive and ubiquitous component of everyday life. Latour (1987) describes objects as the 'missing masses' and argues that they should be considered 'non-human actors' which carry as much agency as humans do themselves. Similarly, Reckwitz (2002a) criticises practice theorists for failing to adequately account for the role of 'things' in practices. He argues that we are currently witnessing an 'unprecedented expansion of hybrids, "quasi-objects", non-human creatures' which have become integral components of everyday practices (Reckwitz 2002a, p. 207). Indeed, households are part of a vast material infrastructure involving dams, power stations, pipes, wires, taps, drains, appliances, gadgets and switches. All practices undertaken in the household require multiple forms of artefacts and technologies. Rather than being passive bystanders in a practice, objects often *shape the practice itself*. Akrich (1992) describes this process as 'scripting', whereby an object prescribes or recommends certain practices and outcomes. A washing machine, for example, 'scripts' a range of methods or 'cycles' used to produce appropriately clean laundry.

History is characterised by the making and remaking of material infrastructures for the home (Schwartz Cowan 1999). Most of these are developed by specific commercial interests who wish to sell a particular product, such as power (Hughes 1983), washing machines (Schwartz Cowan 1989), soap (Vinikas 1992) or air-conditioners (Ackermann 2002). Through historical accounts of these material infrastructures we can see how the rules discussed in the previous section are both scripted into, and emerge out of, these objects. Jelsma (2006, p. 222) argues that the designers of material infrastructures can also script morality and immorality into them, which invite us to use more or fewer resources than needed or than we can afford. In some cases, 'immoral' objects can contradict or counteract the recommendations and 'moral' appeals of governments, who encourage us to cut back or limit consumption. Jelsma (2006, p. 222) argues that these problems could be avoided if it were recognised from the outset that technologies and infrastructures guide 'patterns of unconscious actions... acting like beacons and signs'.

However, material infrastructures can be extremely difficult to change. Many are long lasting and path dependent, 'locking in' particular practices that may outlive the common understandings and material landscape they were intended for (Arthur 1989). This is compounded by 'the modernist solution to infrastructure [which] has been to seek "the one best way" and apply it at the largest scale' (Newman 2008). Such legacies and the 'connective tissue' on which they rely can pin particular practices into place (Chappells & Shove 2004). In response to the persistent nature of many objects, new compensatory artefacts have emerged to counteract 'legacy mindsets' (Patterson 2006), path

dependence and 'immoral' technologies (Jelsma 2006). For example, water-efficient showerheads, shower timers and trigger nozzles attempt to overcome the saver-unfriendly scripts embedded in existing showers and garden hoses (Sofoulis 2005).

In sum, material infrastructures 'are able to mediate our sensory relationship with reality, and in doing so they transform what we perceive' (Verbeek 2006, p. 56) and, perhaps more importantly, what we do. Nonetheless, their ubiquitous and often hidden nature has led to their overlooked status in understandings of practice. Because many are persistent and difficult to change, they are often overlain with other material infrastructures or rules in an attempt to reconfigure the practices they are implicated in.

3.5 Practice as a co-ordinated entity

While the above discussion has divided practices into components for the purpose of analysing them, we cannot continue without once again reconceptualising them as an integrated and dynamic whole. Dividing practices into components runs the risk that each one is viewed as an individual entity which is 'imposed on' and 'driven by' individual, social, institutional and/or material 'forces'. This is not my intention. Rather, as discussed above, components intersect and emerge out of a practice with reference to each other.

For example, to say that water restrictions are a 'rule' imposed onto a practice would be misleading for several reasons. Firstly, water restrictions are not a rule in and of themselves, but in some cases have become embodied into water-consuming practices as a rule, that is, something that must be (or not be) done. Secondly, this embodiment is likely a result of water restrictions being both a response to *existing* practices (i.e. what we already consider discretionary and non-discretionary) as well as a means to moderate *future* practices. Therefore, the notion that watering a lawn during a drought is something that should not be done (i.e. a rule), and that it is less essential than taking a shower (for hygiene, presentability and body odour reasons), arises out of the complex interplay between the different components of intersecting practices.

How then, do these components unfold, take shape and change? How can we understand practice's dynamic and seemingly intangible continuity? And what might this tell us about moments when opportunities exist to alter the course and composition of everyday activity?

4. Performing, reproducing and changing practices

Everyday practices are not 'one-off' occurrences, but rather repetitive, routine and mundane activities. The reproduced nature of practices has the crucial role of establishing 'a secure and liveable everyday life, where we are not compelled to do the overwhelming task of reflecting on every single act' (Gram-Hanssen 2008, p. 1182). These reproductions form a continuous stream of taken for granted activity (Halkier 2001). Indoor cleanliness routines, for example, encompass regular showering, laundering, dishwashing, toilet flushing and house cleaning practices, as well as routine ways of carrying out these activities, whereas comfort routines might involve common responses to particular environmental and social triggers, such as turning on a heater when the temperature reaches a certain level, or when guests are visiting the household.

Practice theorists argue that the regular performance of a practice sustains and legitimises it as a practice (Warde 2005). Put simply, in order for a practice to exist, it must be performed. In this sense, the introduction of a new rule or material infrastructure is not influential in and of itself, but only when it forms part of the reproduction and performance of a practice. Regular showering, for example, became a common practice long after the invention of the 'power shower' (Bushman & Bushman 1988; Southerton *et al.* 2004). When the shower was first introduced into the domestic environment, it was thought to be dangerous for the skin, particularly for women (Lupton & Miller 1992). Southerton *et al.* (2004, pp. 43-5) argue that showering only became a common and desirable household practice after new common understandings of 'speed, immediacy and convenience', along with 'personal health, moral well-being and social respectability', became associated with it. Such arrangements are 'pinned' into place through the regular performance of showering, which sustains and legitimises this particular notion of normality (Shove 2003b).

In some ways, this seems like a contradiction. If practices are held together through their performance and reproduction, how can their reproduction also result in change? Furthermore, if practical knowledge is largely hidden or unconscious, then, as Turner (1994) asks, how are such presuppositions implanted, imparted and transmitted so that change (and establishment) can occur? Giddens (1984, p. 2) provides a seemingly cryptic answer to these questions, arguing that practices 'are not brought into being by social actors but continually recreated by them via the very means whereby they express themselves as actors'. Thus, through their recursive reproduction of a practice, actors contribute to its transformation by contesting, resisting and adopting shifts in its composition, with reference to their prior experiences and interactions with it. Similarly, Warde (2005, p. 141) points out that 'practices also contain the seeds of constant change. They are dynamic by virtue of their own internal logic of operation, as people in myriad situations adapt, improvise and experiment.'

What, then, makes a carrier of a practice contest, resist or adopt it? Barnes (2001, p. 24) suggests that this question can be answered by viewing human beings as 'interdependent social agents, linked by a profound mutual susceptibility, who constantly modify their habituated individual responses as they interact with others, in order to sustain a shared practice.' In other words, as participants in a social practice discuss it with each other, they mutually interpret the 'correct' ways of undertaking it, and modify their routines to either conform to, or deviate from, this new understanding. However, this only provides part of the picture.

Shove and Pantzar (2005, p. 58) offer a more complex viewpoint, arguing that 'the emergence and demise of practices has to do with forging and failing links between materials, images and skills (i.e. the ingredients of any one practice)'. Therefore, different configurations of practice components lead to change. However, as these authors conclude in their analysis of Nordic walking, practice change is always set 'against the backdrop of previous, related and associated ways of "doing"' (Shove & Pantzar 2005, p. 62). In short, history is important. Furthermore, what works in one context may not work in another: 'new links have to be made and old ones broken' (Shove & Pantzar 2005, p. 60). In the case of Nordic walking, this involved, amongst other things, the successful positioning of 'walking with sticks' as a normal extension of, and alternative to, skiing during the summer months, with important health and leisure outcomes.

Reckwitz (2002b, p. 255) is more explicit, arguing that 'breaks' and 'shifts' in the reproduction of practices take place in the:

everyday crises of routines, in constellations of interpretative interdependency and of the inadequacy of knowledge with which the agent, carrying out the practice, is confronted in the face of the 'situation'.

In the context of household comfort and cleanliness practices, such crises of routines might involve the introduction of water restrictions, power blackouts, a new household member, or the 'death' or introduction of an appliance. In other words, 'crises' occur when there is a shift in the composition of a practice. Even seemingly individual 'crises', such as an illness in the household, may lead to modified comfort and cleanliness practices which emerge out of: common understandings about health, hygiene, cosiness and 'wellness'; practical knowledge about how to maintain these understandings; available material infrastructures such as 'hot water bottles', heaters or baths; and rules about how to care for a person with a particular illness. While sickness might only result in the temporary configuration of practices, others, such as the acquisition of air-conditioning during pregnancy, result in the installation

of a permanent material infrastructure that potentially reconfigures the practice of cooling beyond pregnancy for all household members. The transformation of practices is therefore a dynamic process involving shifts and breaks in their everyday reproduction, which occur with reference to their historical and current composition.

5. Next steps

I have suggested that an essential first step in facilitating change in the resource management sectors involves understanding the dynamics of what people do and why they do it. For this task, we require a number of empirical questions focused on understanding how practices are currently constituted and changing in Australian households. Such questions include: how and why are infrastructures and appliances implicated in everyday practices? What kinds of common understandings are embedded in these practices and how do they shape them? How are everyday practices reproduced in daily life and what, if anything, disrupts these routines? What rules constitute specific practices and how do they affect what householders do? To what extent do householders' past experiences and upbringings influence their practices? How and why are practices currently changing? And, how are practices managed and negotiated within and between households?

Having explored these dynamics, we are then able to consider how effective specific strategies are at changing practices, and, perhaps most importantly, *why* they are effective, if indeed they are. For this task we need another set of questions such as: how do the assumptions embedded into demand management and behaviour change programs reconfigure or reinforce existing practices? How do these programs shift the composition and reproduction of everyday practices? And, why are these strategies effective, or ineffective, in shifting everyday practices?

What these questions point towards is a clear need for empirical research that identifies the current and changing nature of everyday practices in households, and the role of behaviour change and demand management strategies in reconfiguring them. From this empirical starting point, we are able to consider the role of demand managers and other change agents in shaping practices, thereby identifying opportunities for better accounting for, responding to, and facilitating changes in the composition of everyday life.

6. Conclusion

This paper has argued that a new understanding of consumption and demand is required in the behaviour change and demand management sectors — one which identifies consumption as *part of* social practices (rather than a practice in and of itself) and positions individuals as carriers of those

practices (rather than autonomous consumers of aggregate resources). In order to begin conceptualising practices as a unit of change in their own right, this paper has reviewed a selection of social practice theory literature to map out a conceptual understanding of how practices are composed and changing.

As such, this paper has undertaken three crucial roles. Firstly, it has highlighted the importance of everyday practices in constituting the consumption of energy and water resources in the home. Secondly, it has provided a conceptual framework for understanding and analysing existing and changing practices in households. And, thirdly, it has identified a number of empirical questions which are required to better understand the current and changing composition of everyday practices, the ways in which demand management and behaviour change programs can and/or do reconfigure them, and to begin identifying alternative approaches that achieve long-term resource reductions. The next steps for the CNC Project, and indeed for the wider body of professionals working in the behaviour change and demand management sectors, will be to identify where opportunities exist to deliberately alter the course and composition of practices, and what measures are required to allow such approaches to be trialled and implemented.

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