Why social theory is important for energy research and the built environment

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RESEARCH LEGACY: personal reflections on a career in research

Sociologist [Elizabeth Shove](#) (Lancaster University) reflects on key drivers that have helped to shape a part of her intellectual career for understanding energy demand in the built environment: the invigorating force of social theory, intellectual curiousity and the importance of challenging what others take for granted.

In this contribution I reflect on the importance of social theory for energy research and the built environment, and I do so from a personal point of view. I am a sociologist: I did a degree and PhD in sociology, and I have worked in a department of sociology for some 25 years. It is true that themes of energy and the built environment run through much of what I have written, but I can now admit that I have no interest in these topics, not as they are conventionally understood.

What went wrong? How did I get drawn into energy research and how did I end up running a £5 million centre focusing on the Dynamics of Energy, Mobilty and Demand (DEMAND 2013-2018). The truth is that this was a bit of an accident. Having finished my PhD I got a six month contract in 1985, not as a sociologist but as an all purpose researcher at York University's Institute of Advanced Architectural Studies. When I left, 8 years later, I had never had more than a one-year contract, I had no respectable publications to my name and I had made no recognizable contribution to sociology either.

Not a great start. However, I had acquired many really useful experiences: writing research proposals, was one. Being repeatedly

annoyed by what I took to be exceptionally simplistic understandings of society, technology and social change, was another. My PhD was not in science and technology studies (it was about concepts of power), but the more short term projects that I did with architects and engineers, the more I saw the value of a sociological imagination.   Much academic research is propelled by some kind of intellectual or practical frustration and these irritations have kept me going ever since. The next few paragraphs describe some of the irritations that have animated my research and outline my responses to them. In selecting three such 'itches', I hope to give a sense of the invigorating force of social theory, and the importance of challenging what others take for granted.

Itch No. 1. Designers and engineers should provide solutions that meet peoples' needs

The Ventilated Man. The ventilating costume, cool in summer, warm in winter. Woodcut by Bellows, 1877. Source: Bettman Collection via Getty Images.

At first sight there is nothing controversial about the conclusion that designers and engineers should provide solutions that meet peoples' needs. What else are they expected to do? My problem is that such positions suppose that needs exist in advance and that they are already out there, waiting to be met. Instead, and as we know from sociology in general and from science and

technology studies in particular, 'needs' are not like this. They are made, transformed and enacted and they have social histories of their own.

Consider thermal comfort. The idea that people are comfortable at around 18-22 degrees C is now enshrined in design guides and standards adopted around the world. In following this advice and in making built environments that deliver these conditions, designers are actively involved in reproducing conventions and expectations that depend on unsustainable levels of energy demand. Far from being natural, these dominant interpretations of comfort have a very short history, rooted in a swathe of questionable assumptions about clothing and culture. So where did this interpretation come from, and how has it taken hold?

In writing about the making of comfort as a 'universal' concept I smuggled ideas from the sociology of knowledge into what remains a largely unsuspecting field (Shove 2003; Shove et al. 2008).   One contribution was to explain that design standards are 'performative', meaning that they have effect in the world, generating rather than reflecting trends in demand. Another was to demonstrate that comfort is a culturally and historically specific concept, not a biological condition. On both counts my point was that needs are social and historical constructs: they are made and not simply met.

These ideas have implications for carbon reduction. If current understandings of comfort underpin escalating levels of energy demand, why persist with them? As the history of comfort shows, other much more flexible options are possible. For example, instead of assuming that everyone is wearing the standard 1 Clo (i.e. a business suit) there is scope for radically reconfiguring this convention. To do so would involve designing buildings and environments that are 'uncomfortable' as judged by present, exceptionally narrow, standards. Such a strategy would also upset what have become entrenched conventions of producing engineering 'solutions' that are, in this analysis, part of the problem. Less controversially, it is at the very least important to recognize that buildings

are not inert: they are implicated in establishing, carrying and sometimes transforming social conventions and practices.

Itch No. 2: Social science is about understanding human behaviour

A second itch has to do with the place of social science in the realm of engineering and design. In energy research, especially, the social sciences are thought to have an important role in overcoming 'non-technical' barriers and persuading people to adopt more efficient technologies. These lines of thinking reflect hugely influential models of choice and change. The basic idea is that human behaviour is an outcome of driving factors including attitudes, beliefs and economic interests. From this point of view, promoting the uptake of more efficient appliances depends on careful price signaling and social marketing and this is where the social sciences come in. I have had many requests to provide this kind of input and I have resisted them all.

I am a sociologist, but this is definitely not the kind of work I do. This needs a bit of explanation. For the most part, policy makers and those who fund energy research do not differentiate between psychology, economics, anthropology or sociology. All count as social science and all deal with the very important topic of behaviour. In my view, this representation compounds two significant problems. One is the clear-cut distinction between technology on the one hand and behaviour (narrowly defined) on the other. Decades of research in sociology reaches the opposite conclusion, repeatedly demonstrating the social foundations of science and repeatedly documenting the extent to which things – buildings, appliances, tools – 'script' what people do (Akrich 1992). Second, casting social scientists as experts in overcoming non-technical barriers (Shove 1998) overlooks what I take to be really important differences of epistemology and social theory. Psychology is *not* the same as sociology, and there are relevant theoretical divides within disciplines as well.

These itches have energized different contributions over the years. Sometimes I have taken an uncompromisingly critical stance. In an article

entitled 'Beyond the ABC: climate change policy and theories of social change' (Shove 2010) I was very clear about what I took to be the limits and dangers of behavioural economics. More often I have got involved in detailing the recursive co-constitution of infrastructures and social practices (Shove et al. 2015; Shove and Trentmann 2018), and the interpenetration of supply and demand at different 'scales' (Hand and Shove 2007; Rinkinen et al. 2017).

Much of my work takes social practices, as these extend across space and time, to be the central topics of conceputalisation and analysis. The simple observation that energy is not used for its own sake, but as part of accomplishing social practices at home, at work and in moving around underpinned the DEMAND Centre's research (www.demand.ac.uk), the range and extent of which puts paid to the view that social science is about understanding human behaviour.[1]

Itch 3: Energy transitions depend on increasing energy efficiency and decarbonizing supply

There is no doubt about the importance of energy efficiency and decarbonizing supply in current research and policy.[2] Since efficient technologies use less energy than those they replace it is difficult to argue with this approach, but that is just what I have done (Shove 2018). My problem here is that all technologies, efficient ones included, help sustain and reproduce specific interpretations of 'normal' consumption and practice. From this point of view, the pursuit of efficiency (delivering the same standards for less energy) perpetuates expectations and assumptions that are often part of the problem. This is not to suggest that efficiency measures should be dropped en masse, but it is to argue for a much more thoughtful approach: one that takes account of how infrastructures and technologies are mobilized in practice, and one that pays attention to the forms of demand that follow.

Making just a bit of a difference?

As this is a personal reflection it is also a chance to consider what I've

learned about methods of making a difference from the margins of mainstream debates in energy research and in sociology as well. In responding to what have proved to be inspiring irritations, I have often been rather stubborn. In my view, being a bit annoying or at least uncompromising is a consequence of asking different sorts of questions and of holding fast to unconventional theories and ideas. This makes sense. After all, it would be impossible to carve out new and more challenging roles for social theory by giving way and taking on allotted tasks – providing 'behavioural insights', or offering advice on methods of accelerating the uptake of more efficient technologies. On this point, I have persisted, persevered and pushed on. At the same time I am well aware of the fact that quoting social theory does not help (Giddens 1984; Schatzki 2002). Instead, I have favoured more subversive tactics: giving a lecture wearing a full length fleecy medieval style gown works better as a means of making a point about history, clothing and comfort. (See: http://www.demand.ac.uk/wp-content/uploads/2018/06/The-Cloak-of-DEMAND.pdf).

Marginal positions are not easy to occupy, especially not if you are alone. Through the 1990s, Hal Wilhite, Loren Lutzenhiser, Willett Kempton and I acted separately and together in ways that amplified the effect of what we had to say. Later, and when I'd finally got a proper academic post at Lancaster University, I made a concerted effort to cultivate international networks of PhD students, Early Career Researchers and policy makers who were interested in matters of consumption, sustainability and everyday life, and who were ready for an intellectual adventure as well.[3] Successive generations of academics have been party to these processes and in the more exclusive settings of workshops and summer schools we have gathered a critical mass of people and a certain momentum, piecing ideas together constructively, and not in opposition to others. The acquisition of funding, and my early experience in writing research proposals, has been important, along with the increasing significance of climate change as a topic of academic and policy concern. These various strands culminated in the creation of the DEMAND centre, involving some 45 researchers over a 6 year period.

This enabled a spectacularly generative drawing together of people with different expertise but with the shared ambition of adding to the sorts of story lines sketched above.

Has any of this really made a difference to mainstream thinking in energy, engineering and built environment? Not yet. Dominant paradigms remain dominant. On the other hand, some things have changed. There are fewer references to non-technical barriers and more to sociotechnical change, and the talk is now of practices and not behaviours. It is hard to tell if these shifts of terminology are more than skin deep. However, there is another more important feature and that is the writing: not only mine, but that of many others as well. Once concepts and ideas are in the public domain it is impossible to tell whether they will travel or where they will go: some catch the imagination, some disappear without trace and some are widely misunderstood. What matters is that there is now a substantial body of published work that demonstrates what more social theory has to offer.

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Notes

1. Examples include a series of short films (http://www.demand.ac.uk/videos/#1); the *Demand Dictionary of Phrase and Fable* (http://www.demand.ac.uk/wp-

content/uploads/2018/07/Demand-Dictionary.pdf) and more conventional publications such as *Energy Fables: Challenging ideas in the energy sector*(Rinkinen et al. 2019); and *Conceptualising Demand: A distinctive approach to consumption and practice* (Rinkinen et al. 2020).

2. See, for instance, the Clean Growth Strategy, or the work of the Centre for Research into Energy Demand Solutions.

3. See: https://www.lancaster.ac.uk/fass/projects/esf/introreader99.htm – a European Science Foundation funded series of workshops and summer schools, followed later by a programme of working parties as part of an ESRC fellowship on 'Transitions in Practice'. See, for instance the collaboratively produced 'Extraordinary lecture' on how social science can help climate change policy – https://www.youtube.com/watch?v=ldEp3r1-8eo&feature=youtu.be

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