

**Energy Infrastructures  
Social Practices & Low Carbon Transitions**

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system transition only happens if  
enough people do  
enough things differently  
enough

transition therefore has to be a  
transition in *practices*

(Watson, 2012, 488-89)

# Practice theories

For Reckwitz, a practice is:

a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.  
(Reckwitz 2002, p. 249)

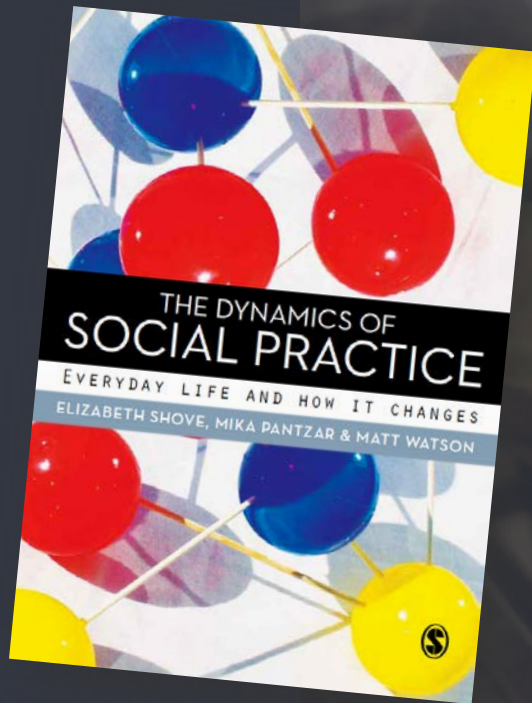
Practices are the fundamental unit of social existence:

*'both social order and individuality...result from practices'*  
(Schatzki 1996)

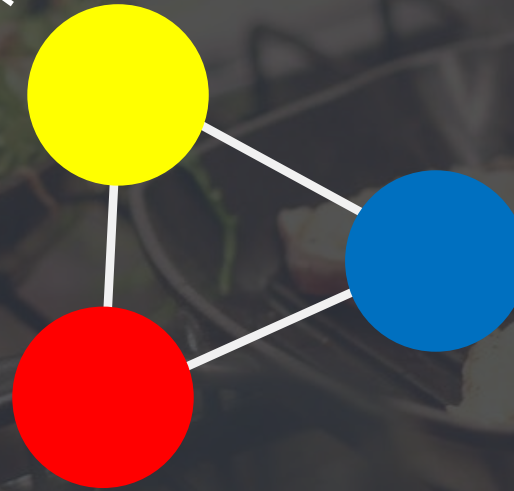
Practice is not simply 'what people do':

- Practice as a coordinated **entity**  
Something enduring across moments of doing; can be represented
- Practice as a **performance**  
Processes of doing through which practice-as-entity is sustained, reproduced and potentially changed

# Conceptualising cooking as a practice



Meanings  
of cooking



Meanings  
of cooking

Competences  
of cooking

# DeMand

DYNAMICS OF ENERGY, MOBILITY AND DEMAND

[demand.ac.uk](http://demand.ac.uk)



# Why does energy demand matter for transition to renewable energy?

We need to appreciate the detail of *what energy is for* if we are to match demand with a transition to renewables:

1. Flexibility/responsiveness to dynamic supply
2. Reducing overall demand will make it easier to meet

# Energy and practices

Energy **is not** used by householders.

Energy **is** used by technologies

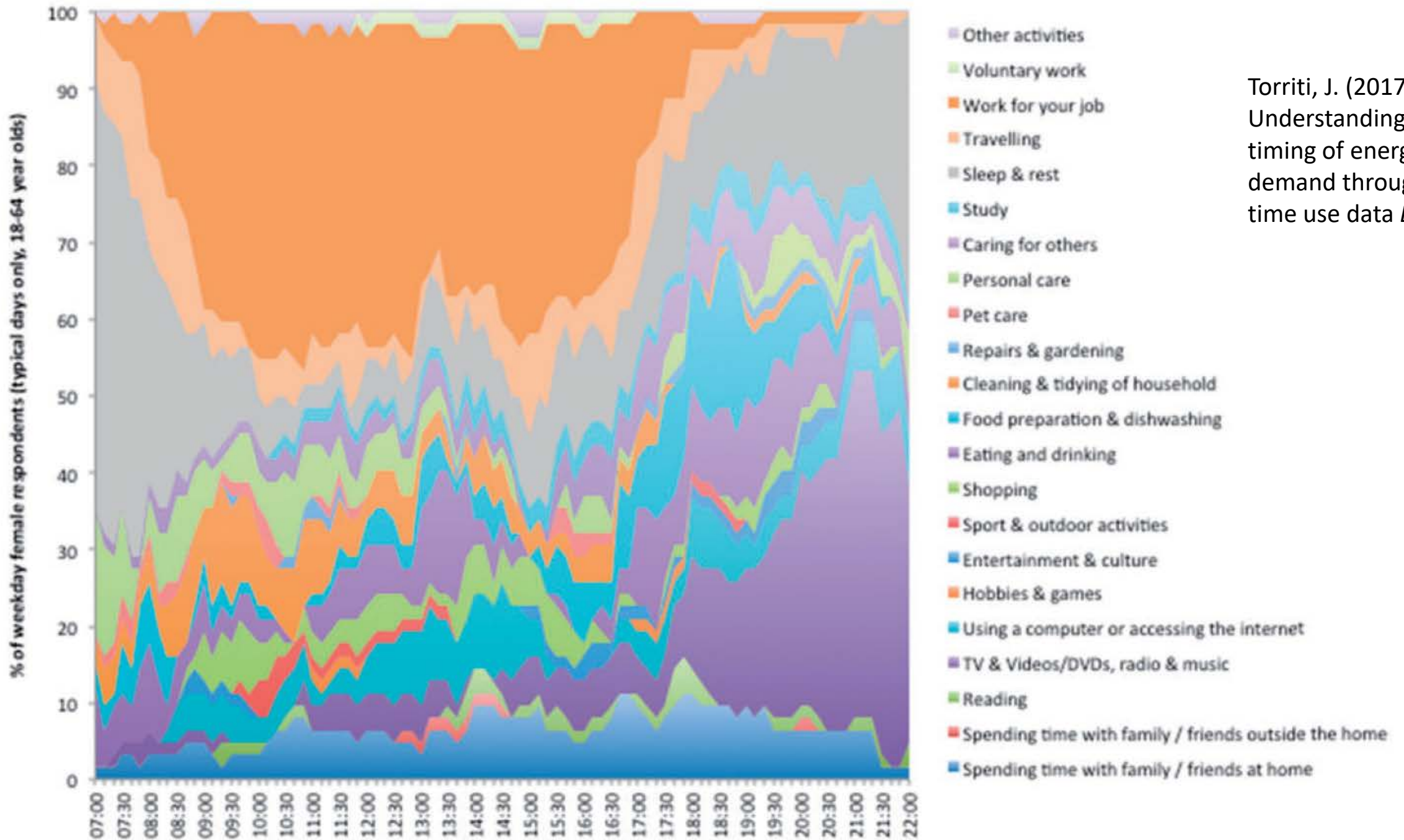
which provide services

which are means for performances of practice  
by householders.

So...

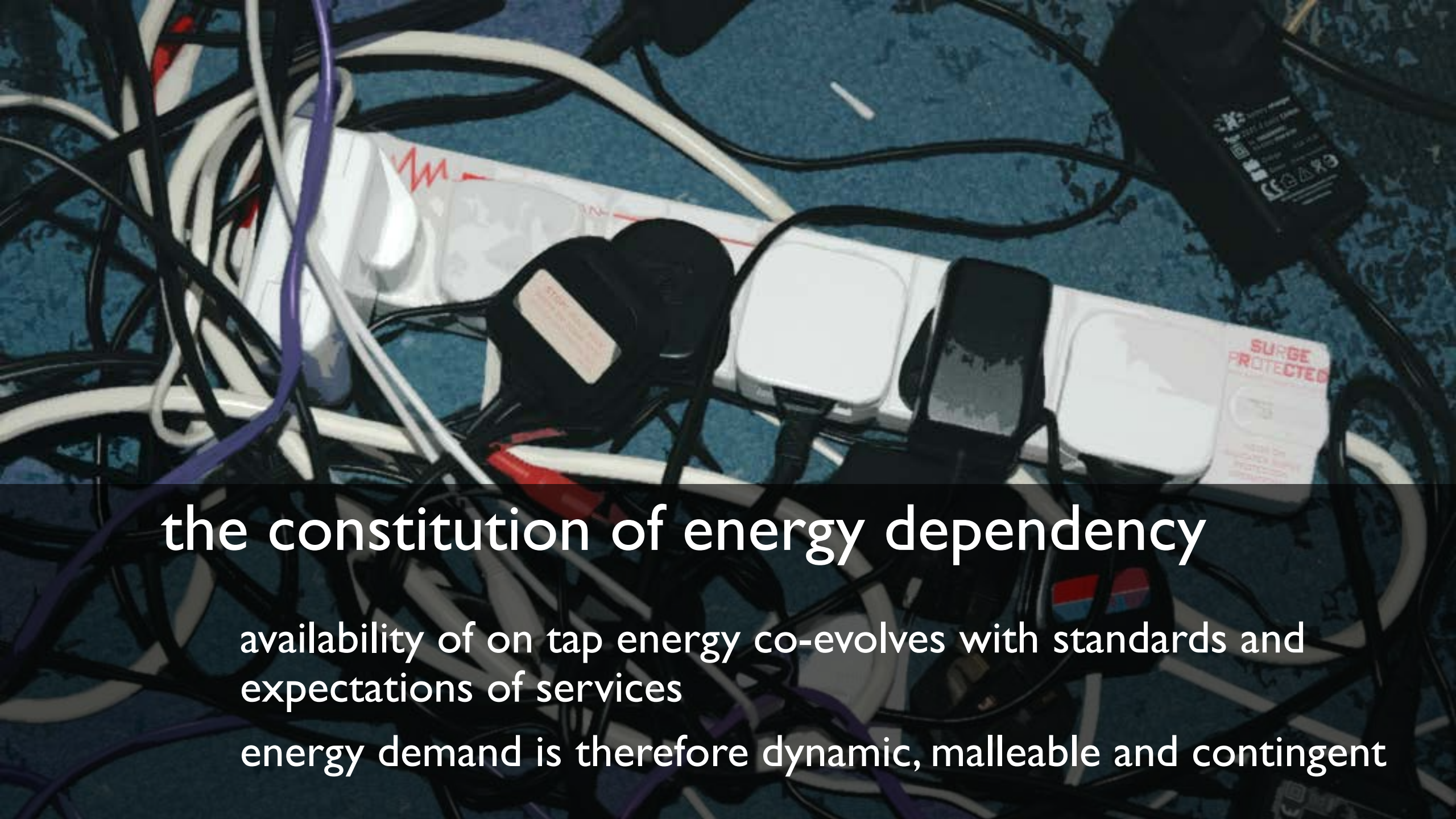
Understanding energy demand means understanding the dynamics of practice.





Torriti, J. (2017). Understanding the timing of energy demand through time use data *ERSS*

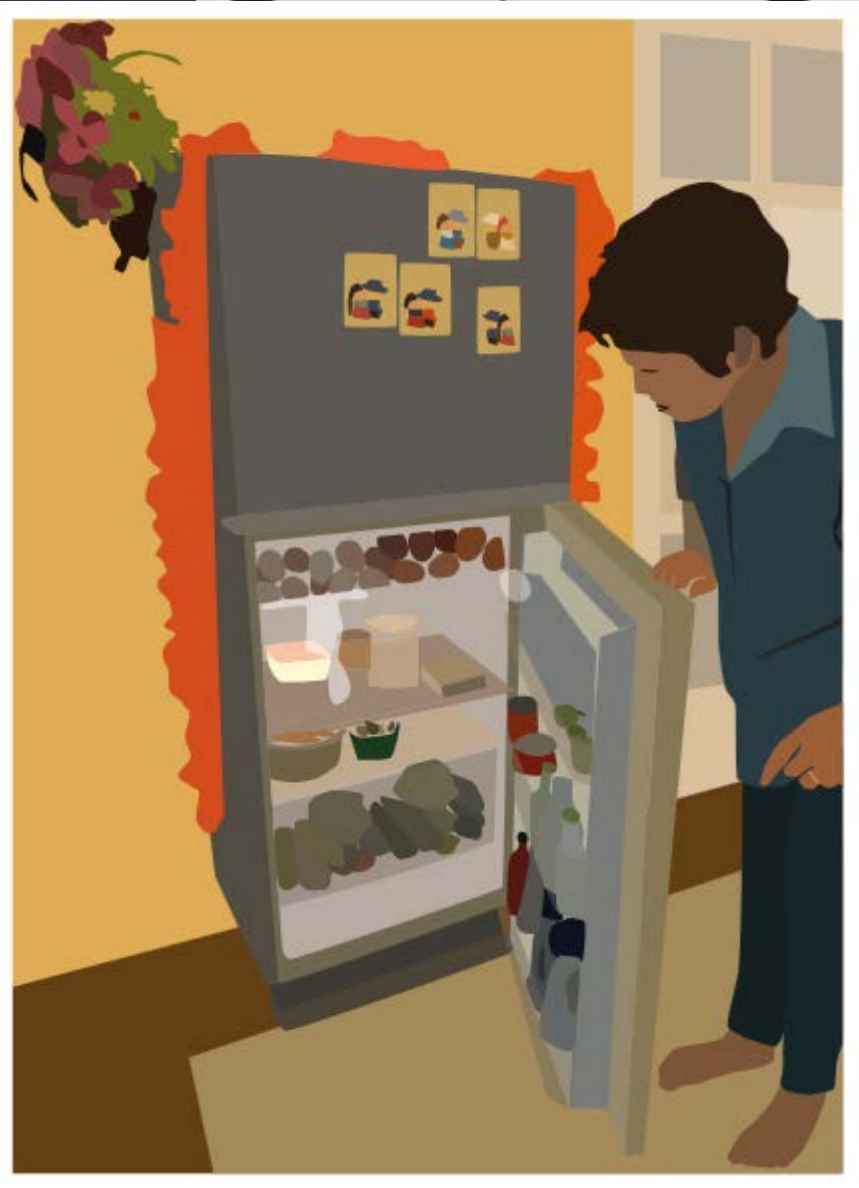


A photograph showing a chaotic arrangement of various cables (black, white, purple) plugged into a white surge protector. The surge protector is labeled "SURGE PROTECTED" and "NEEDS ON-BOARD SURGE PROTECTION". The scene is set on a blue carpeted floor.

# the constitution of energy dependency

availability of on tap energy co-evolves with standards and expectations of services

energy demand is therefore dynamic, malleable and contingent



How do infrastructures  
relate to practices?





Two case study towns, combination of:

- Archival research with local authority records
- Life history interviews with residents tracing change over decades

Stocksbridge



Stevenage

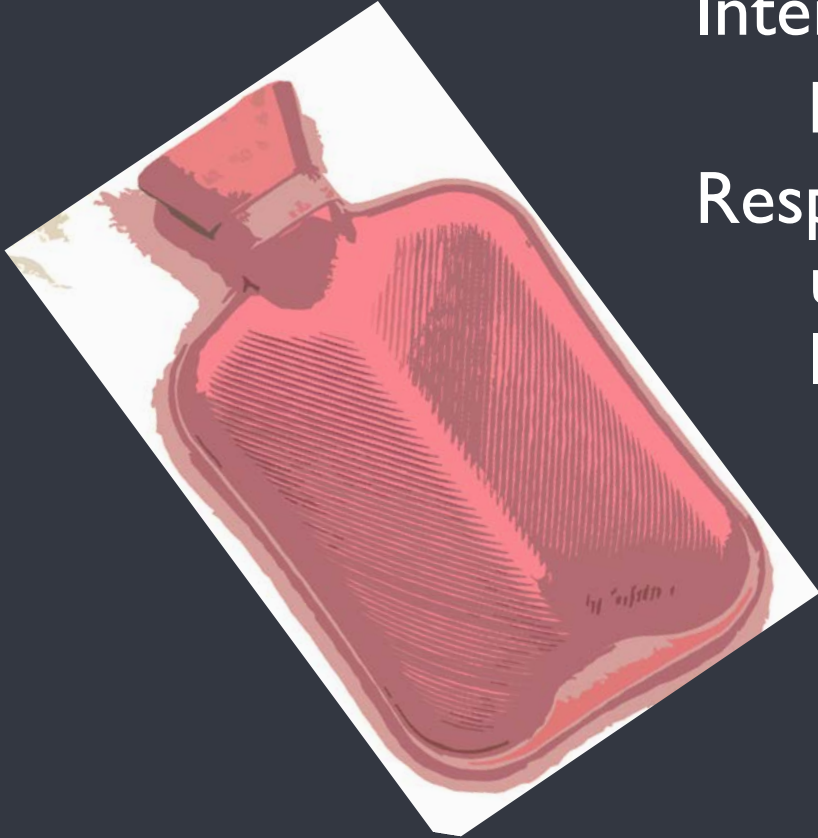


various routes through which  
infrastructural provision enabled the  
development of practices, standards and  
expectations which relied on higher levels  
of energy supply

# Infrastructures shape practices

Interviewer: so upstairs there was no heating in that part of the house?

Respondent: No. There was a fire place but nobody used it. **Nobody heated bedrooms**, you just had lots of blankets and that was that really.





# Infrastructures shape practices



“Well I mean everything happened in the kitchen in those days. You virtually lived in the kitchen. Rarely did you put a fire on in the living room, but there was an open fire in the living room as well. You really didn’t live in the living room because there were no tellyes ... you only used it for parties and Christmas if that.”



1. A single performance of a practice rarely has significant consequence for infrastructure – it is action in **aggregate** that has effect
2. Local infrastructural provision ‘pushed’ by practice, but changes in practice are enabled by earlier infrastructural change and consequences for bundles of practices - recursive relations involved are **multiple**
3. Practices of use rarely effect infrastructures directly but effects are mediated through practices of providers, planners, legislators and more – relations comprising infrastructure are **distributed**



# Understanding relations between infrastructures and practices shows:

- Socio-technical systems are comprised of practices and the arrangements they collectively produce. System change therefore includes and results from changes in practice
- Energy demand – its flexibility and overall level – results from practices which are shaped by infrastructures of provision as well as appliances, standards, institutions, norms, spaces, rhythms and more
- Energy demand is therefore *constructed* and *contingent*, amenable to change in response to changing supply, infrastructure, etc.



## Implications of a practice theory approach:

- System change lies in changes that necessarily involve changes in what people *do*. It lies therefore in changes to *practices*
- Focus on practices highlights different sites of intervention to effect change
- Intervention to reshape practice in one situation may better start at a different site (as practices relate and shape each other)
- New avenues for research in bringing together complex systems and practice approaches to:
  - identify key practices and locales of practice for effecting change,
  - understand the relations through which those practices may be changed