Part 1

Making Connections

Once again, I have lost my mobile phone cable. No matter how organised I try to be, it is never where I expect. Very unlike charging places. They seem to be everywhere. At my work computer. The power outlet beside my train seat. The USB port built into my fancy new sofa. But what good is a charging outlet if you can't find the cable? It's not like I could just leave my phone battery dead either. People expect me to be connected. To be in contact at all times in case my son's cough has gotten worse at preschool, or the delivery person gets lost trying to deliver my package. I've come to rely on it so much. No way could I go back to having my personal and work calendars on paper. But maybe I'll find out what disconnection is like if I can't find the stupid cable.

As the first three chapters of this book demonstrate, understanding how energy demand is constituted and transforming depends upon tracing a diverse set of connections between people's practices and the energy-using technologies, infrastructures and social norms upon which they depend. Some of these connections are materialised quite obviously within everyday spheres—mobile phone cables are tangible evidence that this technology and the multiple practices it facilitates intrinsically depend upon energy in the form of electricity. Yet as these chapters highlight, energy demand must also be understood as embedded systemically, in ways that stretch beyond the activity or observation of any one person. The use of mobile phones is thus connected to the practices of companies

that develop and provide both electrical and digital communications infrastructures, which support the growing assumption that mobile phones should be used everywhere. Social practices, infrastructures and the shared understandings that underpin and reinforce both are co-produced, with important consequences for energy demand.

In different ways, all three chapters are interested in what can be learned from the transformation and normalisation of particular infra-structural arrangements that facilitate patterns of energy demand and provide part of the setting amidst which everyday practices occur. Whether considering the evolution and lock-in of material arrange-ments within the home, the embedding of new infrastructures to sup-port digital connection on the move, or the dynamics of temporary infrastructures supporting music festivals, the authors demonstrate how 'normal' levels of energy demand for particular practices depend upon infrastructures. What exactly 'normal' is, however, both varies across space and is continually changing. Whilst both festival goers and wealthy expats cook meals and wash themselves, they do so with differ-ent understandings of what is 'good enough', amidst very different infrastructural arrangements and using differing levels and forms of energy. In both cases there is also an identifiable historical transforma-tion wherein the energy routinely demanded by these practices in these settings has been steadily increasing, alongside changing standards for cooking and washing. The chapters thus take infrastructures to be dynamic, and multiply connected to everyday practices, as studies of science and technology have well established. As a consequence, energy demand is constituted in part through the co-production of infrastruc-tures, which are situated at the intersection of the practices of those who design, assemble, provision, manage and use them.

Taking different spatio-temporal framings, each author highlights often overlooked aspects of such intersections. Alan Wiig juxtaposes a fictionalised train journey with a story of proposed changes to make digital infrastructures more robust, enabling mobile communications to expand and take on even more territory. Whilst these two stories pivot around the same infrastructures, the actors and materialities that are central to one are largely absent in the other. Marlyne Sahakian focuses on how practices and materials are normally arranged within

the home. Yet the 'normal' arrangements under investigation are unlike those many people experience, as they facilitate the lives of wealthy expats for whom, for example, owning and using multiple dishwashers is a part of ordinary life. The question thus becomes how historically and comparatively excessive infrastructures are normalised within a particular context. Michael Allen's chapter takes on an explicit temporal framing, asking how 'temporary' events are dependent upon social and infrastructural dynamics that are in fact anything but fleeting. In effect, his chapter asks what happens if the seemingly exceptional and excessive demand associated with temporary events and infrastructures are seen in a different light. He shows that moving beyond duration to think about other temporalities and spatialities of events raises important questions about how the energy demand of music festivals compares with the patterns of everyday living that they temporarily displace.

As each chapter illustrates, the spatio-temporal dynamics of these processes are crucial to understanding how particular connections matter for energy demand. The specific siting of infrastructures is highly consequential, whether in terms of shared social understandings of 'normal' home appliances, the extent to which the provision of mobility and digital communications infrastructures can overlap, or the need for temporary, rather than more permanent, installations. So too are historical developments that can establish implicit understandings surrounding need, excess and accessibility, and lead to the ratcheting up of energy demand. Most importantly, however, the authors raise important questions about the potential for change. While increasing the accessibility of digital infrastructures may promote convenience, it also comes with consequences for overall levels of energy demand and the potential for even more data centres that use energy to keep the possibility of digital connection always available. While household appliances and professional cleaners who help to use them might be convenient for sustaining a presentable home, their presence can also lead to situations where cleaning is done out of habit or contract rather than 'necessity'. While music festivals are easily singled out as requiring problematic levels of energy demand, pointing to how they also involve low-energy forms of everyday living raises important questions about which energy-using practices need to

change. Whilst there is no straightforward answer to how practices, infrastructures and social norms together contribute to the constitution of energy demand, these chapters point to many of the connections that need to be better understood in order to start thinking creatively about future transformations.