**The History of Energy**

Professor Frank Trentmann shares research about managing energy shortages in Britain, Japan, and Germany

Energy scarcity has profound implications for economies and societies, but also for the day-to-day routines of individuals and families. In the twentieth century, the realities of energy shortages extended beyond blackouts to changing work patterns and debates about the energy usage of industry versus household consumers.

Shortages were a feature of life in socialist East Germany (German Democratic Republic, GDR), from its creation in 1949. Peak-time restrictions led to factories operating late into the night from East Berlin to Karl-Marx Stadt. In Japan, following World War Two, wood charcoal and firewood were rationed and electricity and gas supplies were controlled both by official regulations and planning. Britain also faced ongoing difficulties, with frequent load shedding in the 1940s, regular power cuts into the early 1950s, and three years of unstable power supply after the big freeze of 1963.

Understanding the history of such disruptions is one of the four aims of the new ‘Material Cultures of Energy’ research project based at Birkbeck. The four-year, £766,268 initiative is funded by the Arts and Humanities Research Council. The project focuses on the lived, material and imagined world of energy, drawing on film, objects, fiction, fact, use, consumer manuals and oral history, as well as official and industrial archives. The research examines how culture and energy shaped each other and seeks to advance the debate about the role of consumers in energy transitions, past, present and future.

The focus on energy shortages is partly to overcome amnesia and to suggest that shortages were an integral feature of affluence and growth – not only of recession. The interest in shortages is also motivated by what they can reveal about the coping mechanisms of advanced modern societies.

In November 2014, I presented some early findings about energy shortages with my co-presenter Dr Halski Shin, then Research Associate at the Sustainable Consumption Institute at the University of Manchester at the California Institute of Technology (Caltech) in Pasadena, California. At this Cogging with Scarcity conference, historians, social scientists, engineers and scientists examined various types of scarcity, including water, food and energy, and the interplay of natural, economic and political forces. The two-day event uncovered the complexity of scarcity, past and present, as well as the myriad proposals for its solution.

We showed how energy disruption did not affect all energy users equally. For example, in Japan in the late 1940s, families would have seen their dark homes brightly lit factories, as the country was frantically trying to recover from the destruction of war. In the same period, British factory managers were blaming shortages on ‘excessive’ household consumers.

Past disruptions tell us how unevenly burdens were distributed between different groups of consumers. In a very real sense, the course of disruption was often determined by society, based on ideas about who should have more energy and who less, and who should have it at what time of day or night. Culture and society shaped where and when the lights went out – not just nature or technology. It is therefore no surprise that tensions emerged not only between suppliers and consumers but also among consumers themselves. In historical sources, we can see how different consumers were weighed against each other. After the Second World War, British homes, for example, were far more favourably treated than Japanese households, which until the 1950s were placed at the bottom of the supply list. Yet, people did not always accept their fate. In Japan, dissatisfied consumers organised protest movements. Some just ‘cheated’ suppliers.

Such distributional conflicts also affected the rhythm of day and night, as governments tried to shift electricity use out of peak hours. The lack of energy triggered a reconfiguration of work and everyday life. During the 1946-1947 fuel crisis in Britain, waking up late would have meant missing out on hot water and hot breakfast. Household chores needed to be done within specified hours when electricity was permitted, or they had to be done without the use of electrical appliances at all. In East Germany, industrial workers were told to work into the night – in order to shift the peak hours. Such shift work had knock-on effects on eating rhythms, sleeping, shopping and child care that were particularly hard on mothers.

Today, there is once again talk among politicians and energy providers in Britain and Europe about future blackouts and a more precarious allocation of energy. Developing nations cannot expect smooth growth and energy security either. If there is one lesson from the past, it is that it is too simple to trust that technology will fix the problem. Abundance and scarcity go hand in hand. Shortages involve politics and culture, as do societies’ strategies to deal with them. What people did when the lights went out in the past could tell us something about our flexibility and resilience in the future.

In addition to the research on the disruption of energy, the ‘Material Cultures of Energy’ research project includes three other themes: energy futures, how rural spaces were transformed by grids; and how people managed and experienced the transition from one fuel to another. We investigate these themes by comparing Britain, Germany, Japan, North America and India, with their different energy systems, cultures and everyday practices. The research will lead to a better understanding of the past, which will then inform how we think about, and approach, the future of energy – a subject set to grow in importance in the decades ahead.

Frank Trentmann is Professor of History at Birkbeck, and the Principal Investigator for the Material Cultures of Energy research project. Dr Shin, the Co-Investigator, began working at Birkbeck in January 2015. The project team also includes Dr Heather Chappells, of Saint Mary’s University, Halifax, Canada; Dr Vanessa Taylor, a former Birkbeck PhD student who now works at the University of Greenwich; and Rebecca Wright, who is currently completing her PhD at Birkbeck. The project will run until December 2017.

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**Left:** More electricity for building socialism, East Germany 1952, Image: Susan Birthall

**Far left:** Electrical campaign, c.1950, Image reproduced by permission of the Museum of Science and Industry, Manchester.