5th Reading Room

Space, time and contestations over demand response and infrastructure access

Wednesday 17th March 2021, 12.00-15.00 UK time

https://wp.lancs.ac.uk/flexibility/events/

*Introduction*

This event is part of an ongoing collaboration between the CREDS flexibility theme and Mikko Jalas, Aalto University, Department of Design, and is linked to a project entitled “Rhythms of Infrastructure Services” (submitted to the Academy of Finland) that is set to examine demand management and the rhythmicity of rail and electricity infrastructure services.

The extended reading room, which has been designed by Mikko Jalas and colleagues, aims to bring together a small group of researchers interested in discussing rhythmicity and access to infrastructure services such as energy, water and transport. In broad terms, we will consider themes of temporality; (energy) justice and the availability of infrastructure services. More specifically, we would like to explore infrastructure services as spatio-temporal landscapes. Finally, we have a special interest in thinking about how access to services under peak loads or other difficult-to-serve situations/locations is and should be regulated, and about the conflicts which arise in relation to such regulation.

*Programme*

12:00-12:35 Session 1: Mikko Jalas and Sini Numminen (Aalto University, Department of Design): “Prime-time Access for whom? Emerging Rhythms of Consumption of Electricity and Road Infrastructures”  
Break (5 min)  
12:40-13:15 Session 2: Ibo van de Poel, (TU Delft, Department of Values, Technology and Innovation): "Equal access to infrastructure services? The importance of value and time"  
Break (10 min)  
13:25-14:00 Session 3: Udo Pesch, (TU Delft, Department of Values, Technology and Innovation): “Energy justice and controversies: Formal and informal assessment in energy projects”  
Break (10 min)  
14:10-14:45 Session 4: Eva Heiskanen, Jenny Rinkinen, Kaisa Matschoss and Eeva-Lotta Apajalahti (University of Helsinki, Centre for Consumer Society Research): “Electrification and flexibility: opportunities, tensions and alternatives”  
**15:00** End of seminar

Each session consists of a 20 minute presentation followed by 15 minutes of discussion.

*Abstracts*

Session 1: **Prime-time Access for whom? Emerging Rhythms of Consumption of Electricity and Road Infrastructures**

Mikko Jalas and Sini Numminen (Aalto University, Department of Design)

**Abstract:** Capital-intensity of electrical and road infrastructures necessitates their efficient uses in time-space. As one set of tools, dynamic pricing of electricity is frequently used to match demand with the capacity of production, and to flatten demand curves. Congestion charges for road usage similarly aim to influence driving hours. The economic and environmental benefits of these schemes have been demonstrated, but the social consequences remain under-explored. In this presentation, we discuss how understanding of collective social rhythms could offer pathways for designing more efficient and socially acceptable demand management market mechanisms.

Session 2: **Equal access to infrastructure services? The importance of value and time**

Ibo van de Poel, (TU Delft, Department of Values, Technology and Innovation)

**Abstract:** Infrastructure services, like electricity, transport and internet help to fulfill basic human needs, and they enable valuable human experiences. How should we fairly distributive access to such services, particularly in times of scarcity, like peak hours?  Beyond meeting basic needs, we might want to consider how much value such services provide to (different) individuals and groups. Philosophers often think of value and values (like truth, beauty and well-being) as eternal and unchangeable. However, what is valuable to an individual or group may change over time. Moreover, for some goods their value may largely depend on timing (think of a birthday card). Some activities have more value if they are done at the same time as others (e.g., having dinner together), while others have more value when they are *not* done at the same time by (too many) others (e.g., having a walk alone in the woods). The value of goods, or in our case access to infrastructure services, thus is time-indexed. I will explore how this should effect our thinking about what distributive justice entails for the access to such services. I will also explore what it means for strategies that are aimed at better distributing infrastructure demand over time (e.g., avoiding or lowering peak demand).

Session 3: **Energy justice and controversies: Formal and informal assessment in energy projects**

Udo Pesch, (TU Delft, Department of Values, Technology and Innovation)

**Abstract:** In this presentation we develop a framework for understanding how justice-related claims play a role in the dynamics of controversy in energy projects. We do so by distinguishing two interacting trajectories of assessment: a formal trajectory that is embedded in the legal system and an informal trajectory that is mainly embedded in public discourse. The emergence of an informal assessment trajectory can be seen as a response to a (perceived) lack of attention to particular concerns or values in the formal trajectory, i.e. ‘*overflowing’*. The emerging informal assessment may subsequently lead to adaptations in the formal trajectory, which we refer to as ‘*backflowing'*. Based on insights from case studies on Dutch energy projects and literature on energy justice we identify three justice-related attributes that facilitate understanding of the emergence of controversies. These attributes are based on differences between the two trajectories in terms of 1) the way in which values are expressed, 2) the dimension of energy justice that is taken as a starting point, and 3) the democratic legitimization of assessment trajectories. In order to allow for legitimate and effective energy policy, overflowing and backflowing need to be addressed as interrelated rather than as separate processes.

The presentation is linked to paper: Pesch, U., Correljé, A., Cuppen, E., & Taebi, B. (2017). Energy justice and controversies: Formal and informal assessment in energy projects. *Energy Policy*, *109*, 825–834. <https://doi.org/10.1016/j.enpol.2017.06.040>

Session 4: **Electrification and flexibility: opportunities, tensions and alternatives**

Eva Heiskanen, Jenny Rinkinen, Kaisa Matschoss and Eeva-Lotta Apajalahti (University of Helsinki, Centre for Consumer Society Research)

**Abstract:** In the energy system, flexibility is closely linked to the need for electrification as fossil fuels are phased out and other alternatives than wind and solar power cannot be expanded greatly sustainably. Thus, in an energy context, flexibility is often linked to flexibility in electricity demand, and it is expected that opportunities for flexibility evolve together with electrification (e.g. electric heating via heat pumps). Electrification can have positive connotations in everyday life, such as cleanliness and automation, but it can also lead to less flexibility in individual households (e.g. lack of local storage compared to e.g. spare canister of petrol, inability to self-repair). In our presentation, we examine popular images of electrification in households and personal mobility, and consider how alternative concepts of flexibility might be introduced that address tensions arising from the drive for electrification.