SCIENCE POLICY RESEARCH UNIT

Innovation Systems Energy Sustainabi Growth Development Emerging Techno Borrowing, energy demand and COVID: a model for disruption

Ralitsa Hiteva & Tim Foxon 9th June 2021 Socio-teclECEEE Summer Study, Panel 1 Session 4 Sitions For Poverty Low Carbon Infrastructure In nclusiver Industries C R E D S Centre For Research INTO ENERGY DEMAND Solutions Patient Industries

Sharing & borrowing

- Library of Things (LoT) a specific community-based model for borrowing, based in London, UK
- **Borrowing**: activities which deal with the "recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets" (Schor, 2014, p.2)
- The connections between energy demand and the LoT model of borrowing, analysed through the lens of wellbeing
- Engaging with energy demand's "narrowness" and "invisibility"
- How does energy demand manifest in the way borrowing is organised? And to what extent have the interlinkages between energy demand and borrowing been disrupted by the COVID pandemic?





Library of Things

- LoT's model a 'feel good' story (Murillo et al., 2017)
- Community-based model of borrowing: involves meaningful and affective relationships based on shared experience or interests (Marquis et al., 2011: xiv), intended to empower communities and serve as a vehicle for wider social change, emancipation and solidarity
- The LoT's model promotes <u>environmental benefits</u>: a more sustainable use of resources (avoiding landfill, borrowing to upcycle) and less carbon emissions; and <u>economic benefits</u> (cheaper to rent than buy) and <u>social benefits</u> (community building)
- Electrical items (pressure washer, carpet cleaners; hedge trimmer) most borrowed items in the LoT before and during the pandemic
- Electrical waste is the fastest growing waste stream in the world, its environmental impact comparative to that of plastic



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Energy demand & wellbeing

- Energy demand: a emergent property of people's involvement with multiple socio-technical regimes across different areas of everyday life (Cass and Shove, 2017).
- Widening understanding of energy demand: examining the mediating infrastructures, technologies, practices and policies which shape associated energy demand – the LoT model of borrowing
- Wellbeing: being able to cope with problems and crises in life; and being interested and involved in things in one' live (Donovan et al. 2003)
- Drivers of wellbeing (crossing over individual and community levels) through the lens of the ABC' framework for wellbeing
- ABC: Act, Belong, Commit a hierarchy for increasing levels of involvement, and thus a deeper contribution to wellbeing







Community-based model of borrowing

- Built around and through <u>local partnerships</u> (such as the Norwood Library in Crystal Palace); <u>direct and sustained engagement with local borrowers</u>; an <u>empowerment and education agenda</u>, focusing on the environmental benefits of borrowing vs buying and owning items which are less frequently used; <u>support</u> <u>activities</u> (maintenance, cleaning); <u>use of local volunteers</u>
- Focus on the borrowing (customer) journey the quality of the borrowing experience has direct implications for energy demand
- LoT claims that for every £10 that local people spend borrowing with LoT, £8.50 stays local, helping to create jobs for people in the community
- *Things on Wheels* trial during the pandemic offered free collection and delivery service within a two mile radius





Energy demand & borrowing

- Drivers for borrowing: 1) the cost saving; 2) the need to carry out an activity; and
 3) concern for the environmental impact of buying an item which will not be used most of the time
- How much energy an item uses or the cost of energy does not influence borrowers decision on whether to borrow or not. For 20% of borrowers energy use matters but only when borrowing items that use a lot of energy or need to be charged
- For most borrowers (70%) how much energy an item uses does not impact on the frequency of borrowing
- Few consider the energy use only for items which use a lot of energy, or limit themselves to borrow only when they absolutely need to
- Only 10% of the survey respondents were inclined to avoid borrowing items which need to have their batteries charged before being returned or used.





Energy demand invisible in the borrowing journey!

- Limited information on charging and battery usage at home, such as the model of the batteries and how to charge the batteries optimally. No information on the average energy used by the item or advice on how to reduce this
- The cost of energy hidden for LoT (included in the rent no pressure for LoT to monitor or evaluate its use of energy)
- Pre COVID: charging display at the kiosk (charging done within the kiosk)
- Post COVID: relative visibility of energy to LoT but for majority of borrowers energy demand associated with borrowing remains invisible
- "You don't really think about it, the energy. You think about how much it is per day to borrow and might even try to do it as quickly as possible but not about how much energy it uses or how much that costs" (Borrower H, 2020)





Energy demand, borrowing and wellbeing

- Some awareness of the energy cost and that borrowers now needed "to use extra energy" but saw it as a form of service to the local community
- Borrower D (2020) although constantly looking to make small adjustment to ensure that "we are doing our bit for protecting the environment and saving energy", saw the need to charge the batteries of the carpet and pressure washer borrowed during the pandemic as the "communal...right thing to do".
- Awareness of increased energy demand due to the pandemic carpet cleaners focal items of borrowing
- "With everyone spending more time at home, things like carpets, sofas, cushions and blankets get dirtier quicker and you are kinda sitting in your bedroom or living room and that tiny stain on the edge of the room is all you see and it suddenly becomes imperative that you do something about it..... things that I wouldn't have noticed or wouldn't have bothered me before, because I was in and out most of the time, now become a priority".



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Energy demand, borrowing and wellbeing

- During the pandemic wellbeing started to feature more prominently in the reasons for borrowing and the way borrowed item were used in the home and as part of the borrowing cycle
- The importance of "keeping getting on with things" and "keeping oneself busy"
- A few exceptions: not borrowing because unsure if that "is not going to put another fiver on the meter, if I do all the carpets in the house" and opting for carpet washing by hand, while knowing that "it will never make it as clean as it could be if cleaned with a machine".
- For those borrowers the cost of energy and how much energy an item would use is as important as the cost of borrowing
- Disruptive changes to the borrowing model due to the pandemic did increase interest in the borrowing of more energy intensive items, such as carpet cleaners and pressure washers





Conclusions

- Borrowing enabled different ways of "keeping going" and fighting negative feelings of being "helpless" and "idle" -
- Increased wellbeing in the way people borrowed to cope with the new demands of spending more time inside their homes and an enabler for looking after others, and connection and belonging to the local community – led to shrouding the associated energy use in a positive light
- Despite energy demand becoming more visible to both the LoT and borrowers due to the pandemic, it did not lead to changes within the organisational (LoT), community or individual levels that recognise the implications of borrowing/the borrowing model on energy demand
- Powerful linkages between borrowing, wellbeing and energy demand could be used for developing a more just community-based model of borrowing and better understanding of the environmental benefits associated with borrowing





Thank you for listening! Please do get in touch: <u>R.Hiteva@Sussex.ac.uk</u> T.J.Foxon@sussex.ac.uk



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