

Design approaches to reshaping the domestic nexus

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This talk is about design approaches to reshaping the domestic nexus. In the talk I will argue how a designerly approach offers a particular type of understanding future change, and in particular potential for change towards less resource intensive configurations. I will mainly be drawing on material from my PhD research which explored the implications of social practice theory for sustainable design. My apologies to those of you who have already seen some or most of the material I am about to present. I hope placing it in the particular context of this workshop will offer something new and valuable for you as well. I will begin by saying a bit more about design research.

Design

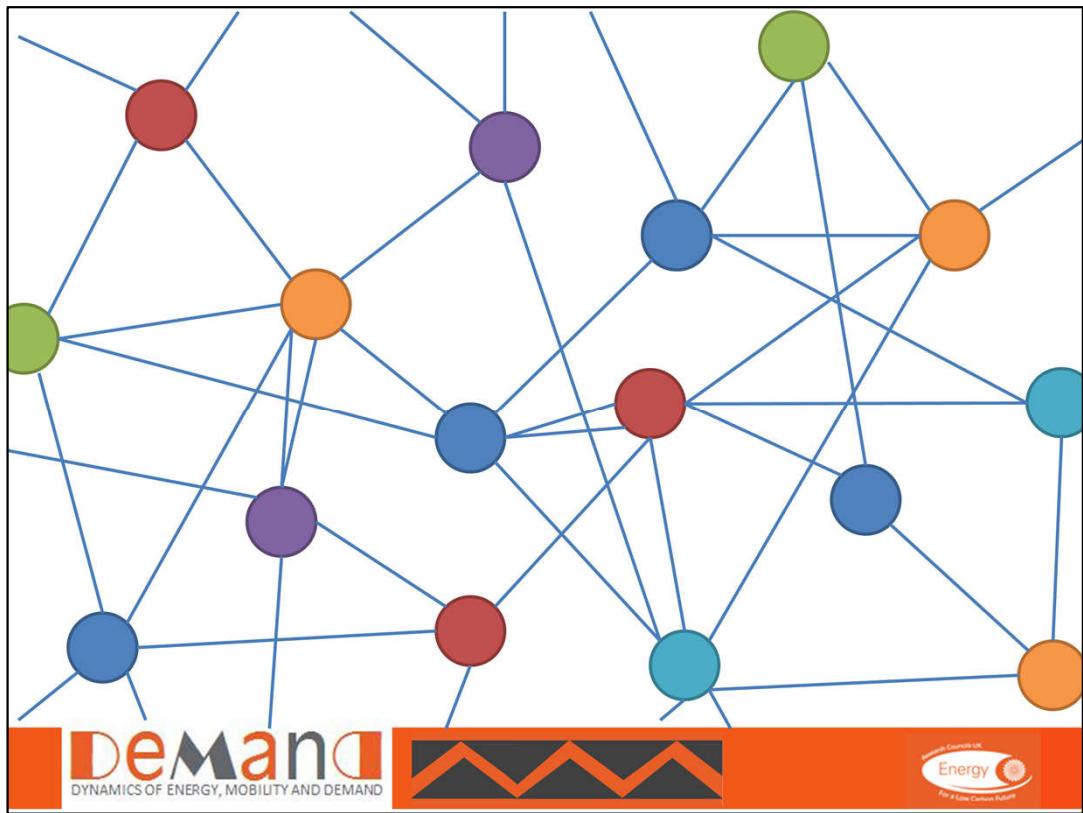
- Design disciplines: 'the arts of planning, inventing, making and doing'
- 'Designerly': approaching complex design spaces by proposing satisfactory solutions

Cross, 1982

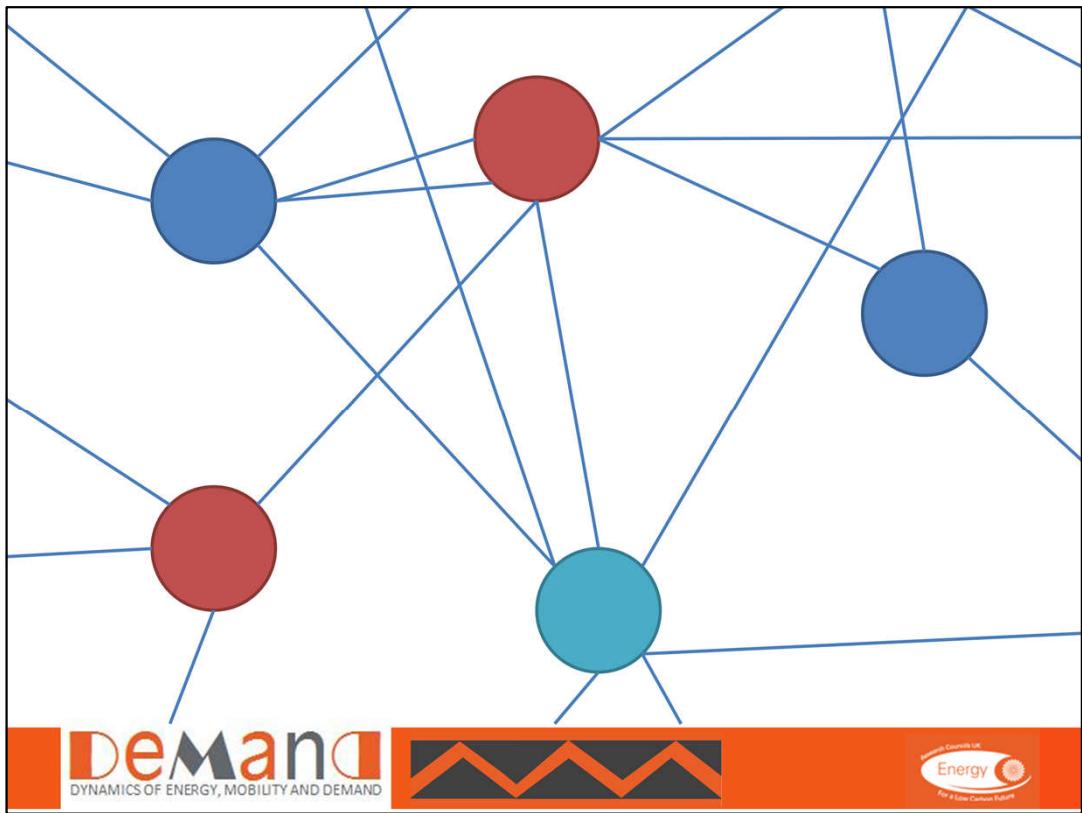


Although trained as a product designer, I would now refer to myself as a design researcher. Design research as a field was founded in the 1960s and 70s and has since grown into an international community with its own journals, conferences and icons. Design researchers have as their main subjects and audience the design disciplines, which are broadly defined in as 'the arts of planning, inventing, making and doing'. Important in the positioning of design as an area of theory and research has been the idea of "designerly" ways of doing and knowing (Cross 1982). Because design projects are expected to produce 'working' results in the face of generally complex design spaces, trained designers were found to adopt so-called solution focused strategies (Lawson 1979). A solution focused strategy engages with a design space in interaction with an emerging proposition. In the process, both the designer's understanding about the design space and the proposition change each other through a series of iterations (Dorst and Cross 2001).

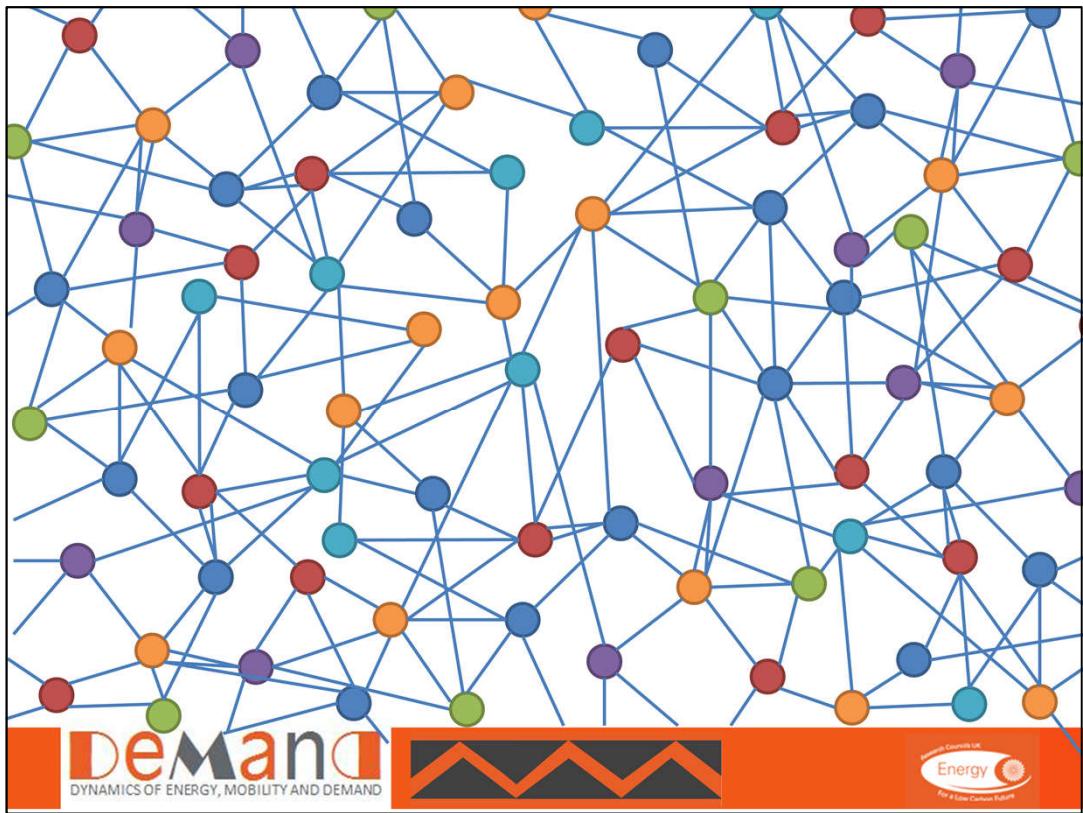
I would argue that when the objective is to reshape it, the domestic nexus becomes a design space. This pursuit might therefore find some useful, distinct methodologies in design theory. To explain how these approaches are distinct and might be of value, I will use a simplified representation of the nexus as a network or configuration of elements and links.



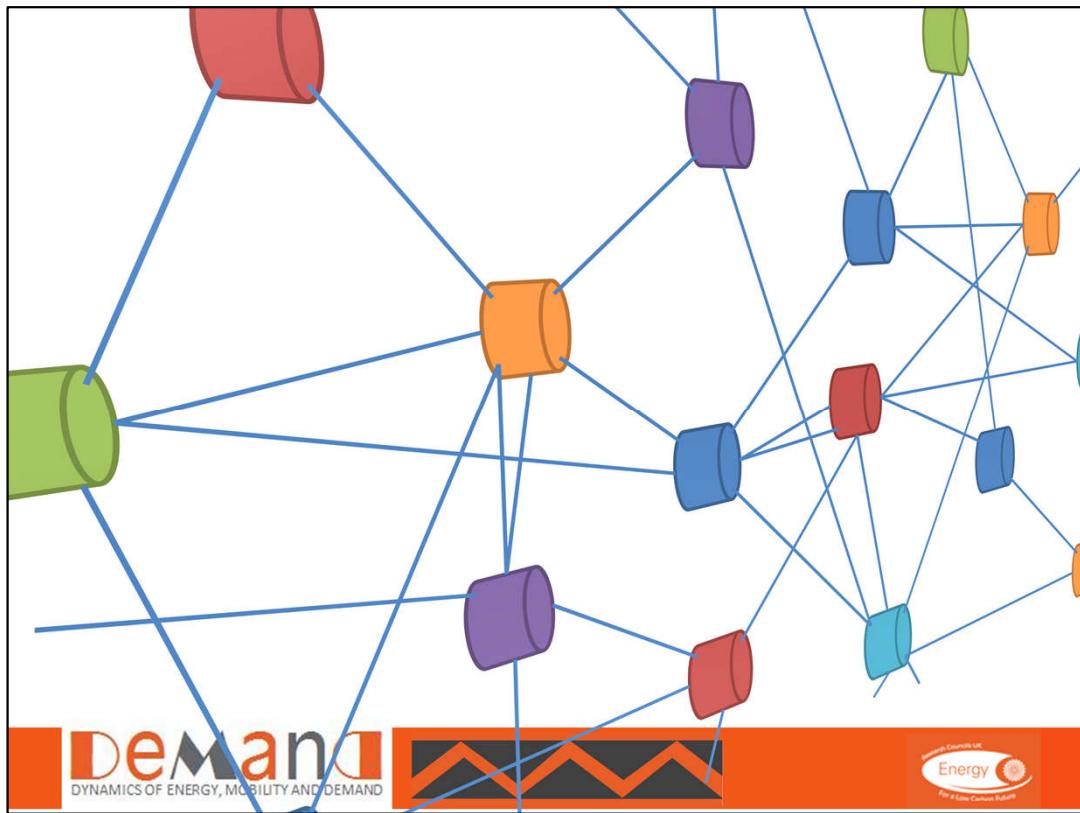
So this is a schematic, highly simplified representation of the domestic nexus as a complex configuration of elements and links that can be analysed



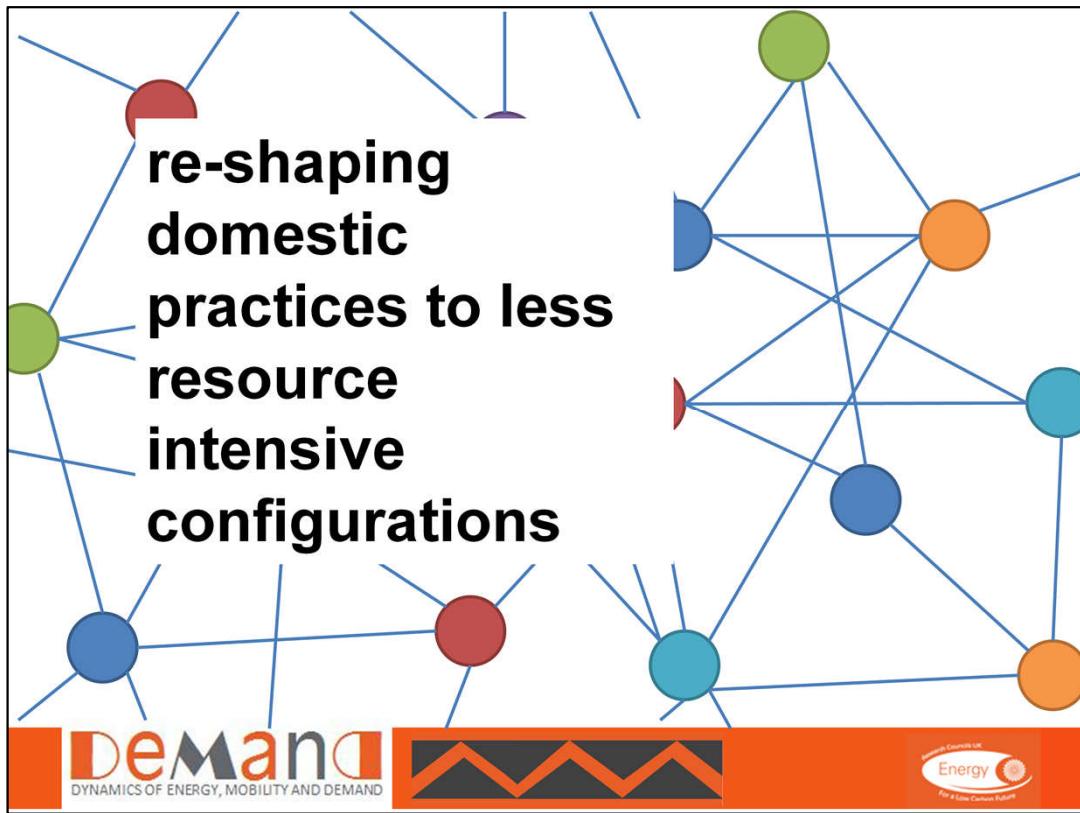
You can zoom in



Zoom out



Approach it from a different angle and learn all kinds of things about it
... but I would say such an analytic approach has some limitations when the objective is
to re-shape it towards less resource intensive configurations

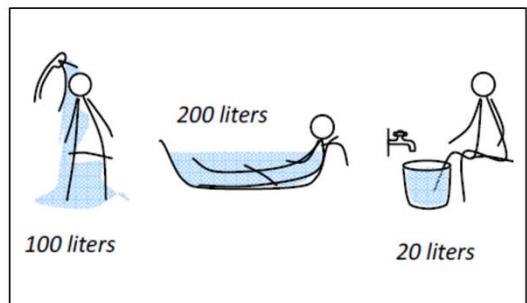


What are less resource intensive configurations?

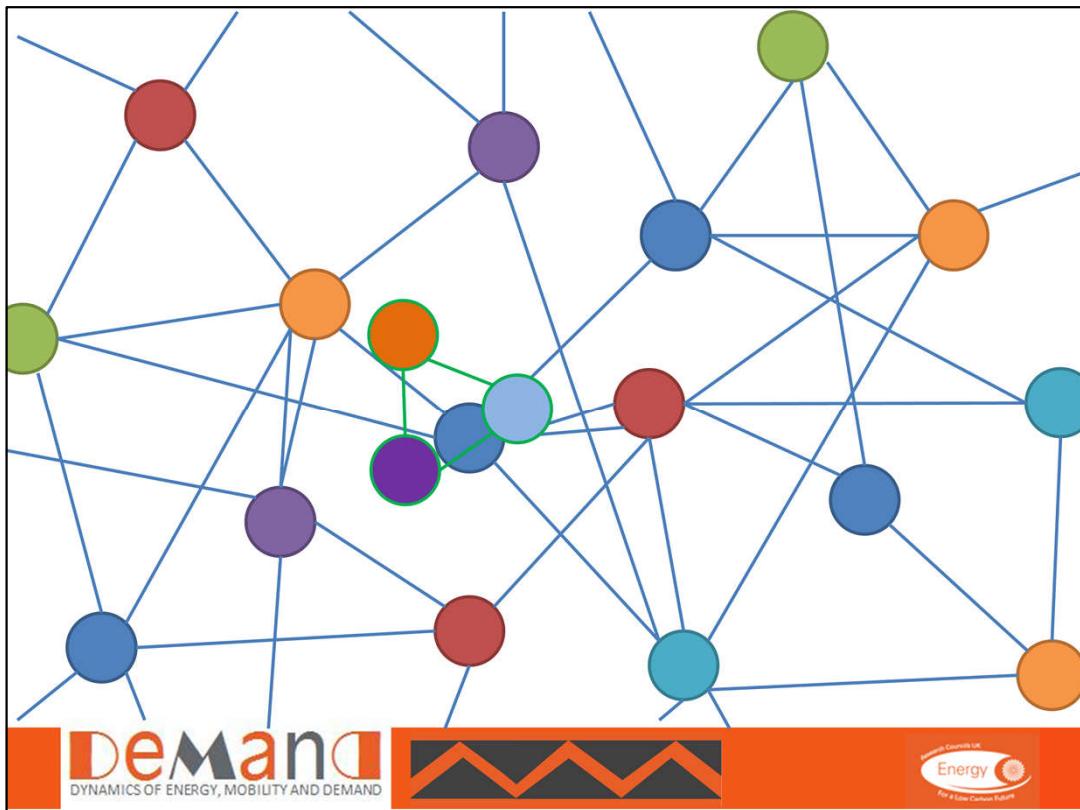
Opportunities for change do not tend to automatically present themselves in analysis of the current configuration, especially not radical ones. Generating alternative configurations is a creative process. Creativity involves imagining what could be and although everyone can be creative to a certain extent, design theory offers a wide range of theory and methodologies to creatively synthesize alternative configurations. A technique that I have used in my project on reshaping personal washing for example was looking at similar, strongly lower resource intensive alternative configurations that exist or have existed.

Less resource intensive forms of bathing

- Flannel wash 1950s
- Indian bucket bath



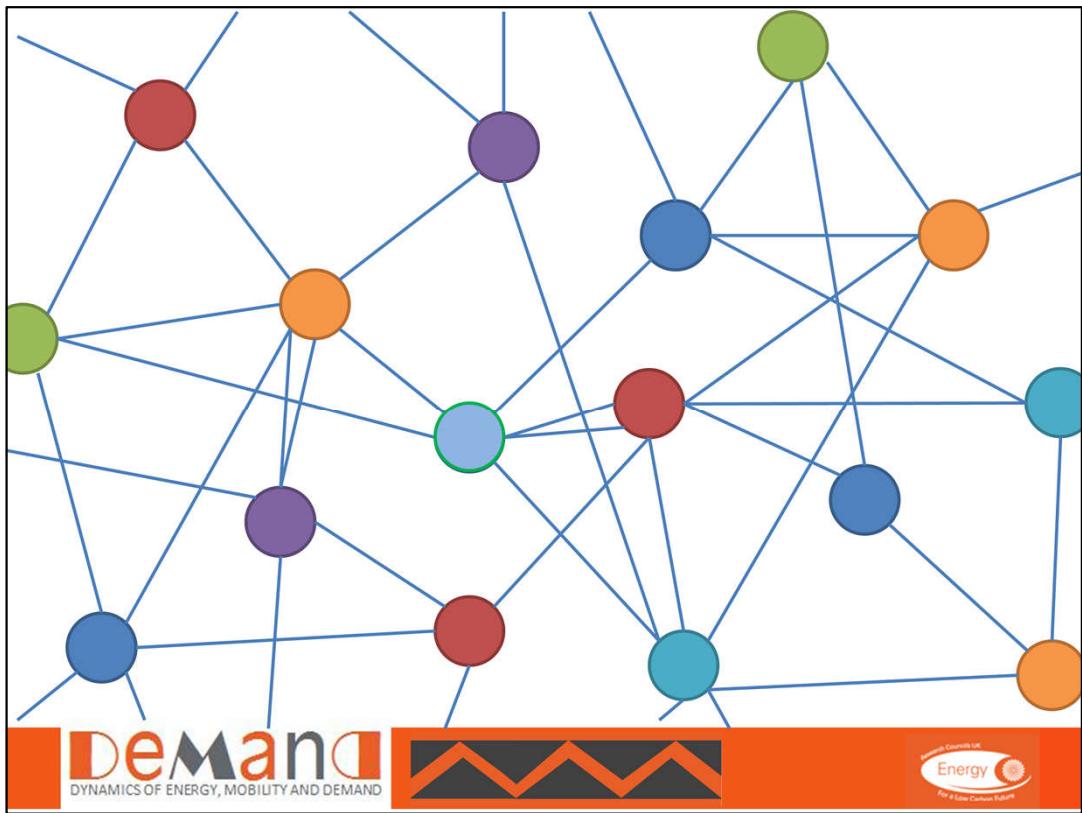
In the bathing case these were the flannel wash, common in the Netherlands up to about the 1950s and the Indian bucket bath, still common today and requiring about 20 litres of warm water, as opposed to an average shower in The Netherlands requiring 62 litres (Kuijer and De Jong 2011, Kuijer 2014, Matsuhashi et al. 2009).



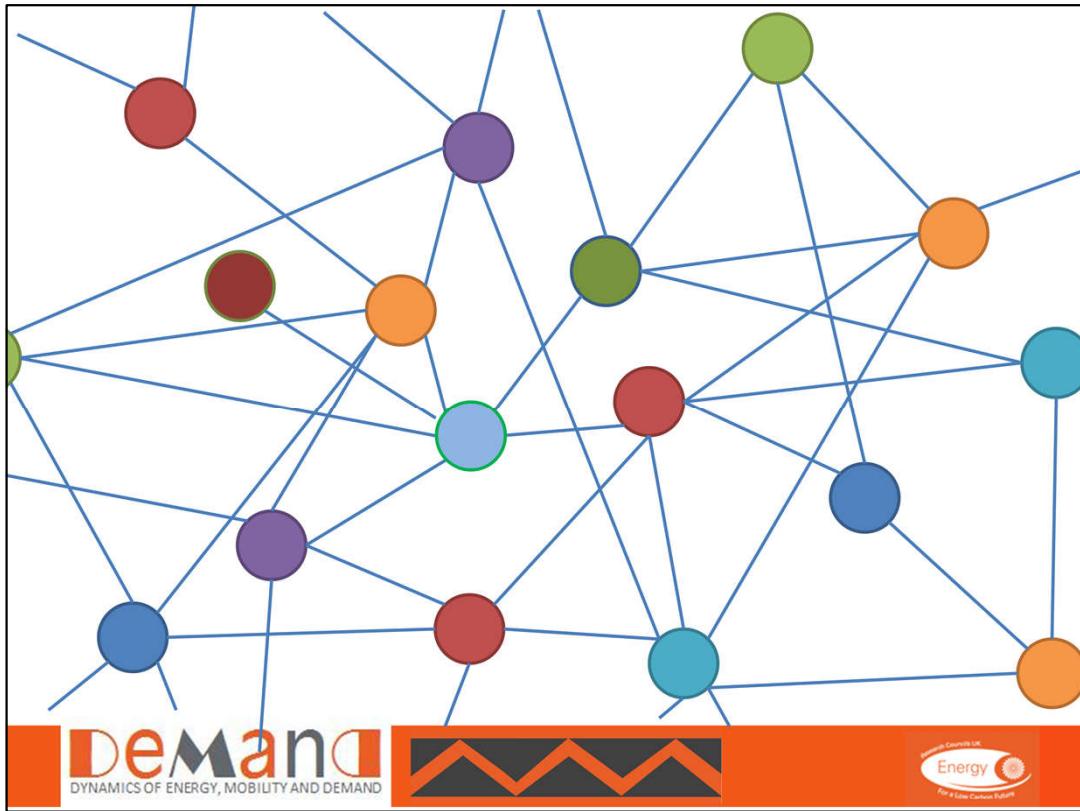
But, reshaping complex configurations of elements and practices is complex. It is not simply a matter of 'inserting' the bucket or flannel wash into the system.

In practice theory terms I would argue that reshaping happens in performance.

What I have therefore done in my projects was to distil certain elements from these inspirational practices based on understanding of current Dutch bathing practices obtained from studying its current configurations and historic career. Through several studies, we have intervened by 'inserting' modified elements and 'removing' others in order to trigger and facilitate reconfiguration in practice



What happens is that a complex process of reconfiguration takes place in response, one that I argue is very difficult to imagine or predict.



this complex response teaches us something about the way the current practice is configured, how it might change and whether our proposed solution has potential to work (and result in lower levels of demand for resources). I will now briefly show an example from the bathing studies where I've interfered to trigger reconfiguration in performance.

Generative Improv Performances

- Lab environment with rough prototypes and props
- “Perform splashing as if it were your normal way of bathing with which you are satisfied”
- Improvisation actors

➤ Fleshed out idea of how washing from a bucket might work in Dutch contemporary context



Kuijper et al. 2013



What this study did was basically to replace the shower with a bucket and ask people to act as if washing from a bucket was their normal and routine way of personal washing. To facilitate creative reconfiguration, the study was conducted in a lab environment, where acting out of the ordinary was expected to be more normal than at home. For practical reasons, it was not possible to use water. This is of course a highly challenging assignment that requires creativity, imagination and courage. Because they are trained to improvise in challenging situations and use their body to act out scenarios, I recruited improvisation actors for this study. They turned out to be able to perform splashing and creatively reconfigure personal washing into something that had potential to work. To learn more about how they reconfigured personal washing, and other related practices, participants were interviewed afterwards while still in their role.

Beyond interviews: what design has to offer

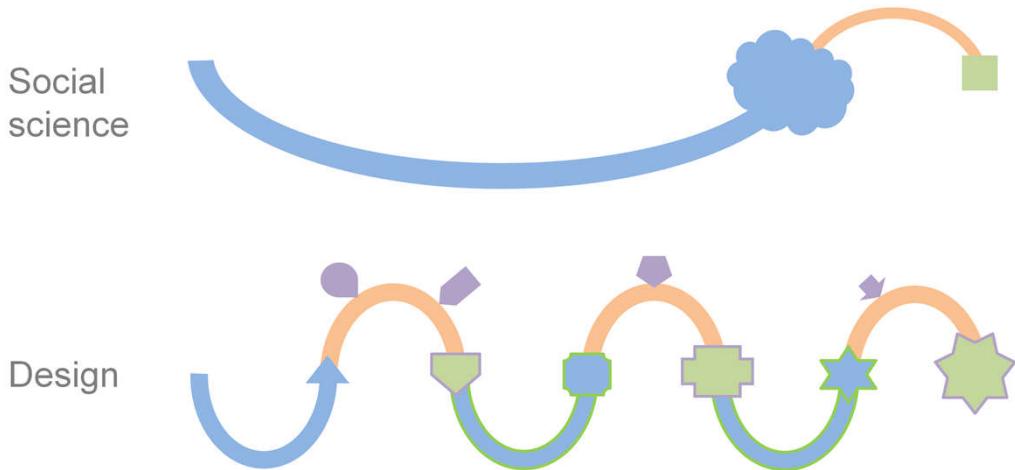
- Designerly approach of complex design space > understanding present configurations and potential for change by proposing alternatives
- Creative generation of alternative configurations > thinking beyond the status quo and usual suspects
- Reconfiguration as a complex process that happens in and through performance



So design theory has a few things to offer social science in a pursuit to reshape the domestic nexus. And there are certainly examples that deviate from the 'standard' social science approach that feature today, such as looking into a history of social housing or at exceptional situations such as festivals. Living Labs are another example of where reconfigurations are formed in performance and cover a wider set of practices than the bathing lab study was able to do.

However, I would say that there are challenges too in applying design theory in social science projects, because there are some fundamental differences in process.

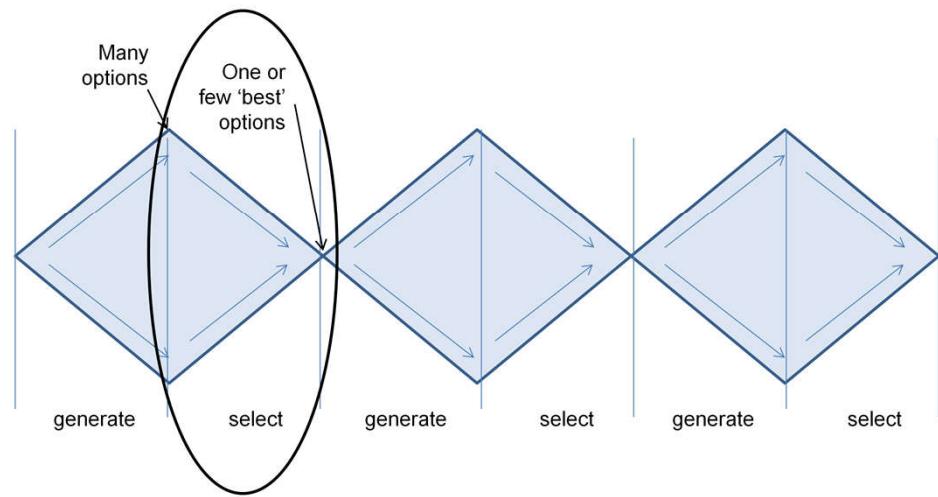
Different approaches to 'reshaping'



[please forgive me for the graphics] In a social science approach, emphasis lies on in-depth analysis of the topic area (such as the domestic nexus) which results in a rich, complex description of this topic area. The final step, drawing on this in depth understanding is the identification of opportunities for change and suggestions of recommendations for intervention.

A design process views this topic area as a design space. Analysis is more superficial and focused on quickly identifying opportunities for change. These insights are then, early on in the process, fed into a first creative synthesis leading to an idea for an intervention. This is then fed back into the design space, responses are analysed and another cycle is performed, eventually leading to a fleshed out idea for reshaping the design space that is strongly informed by reconfigurations in performance.

Selection the ‘best’ options

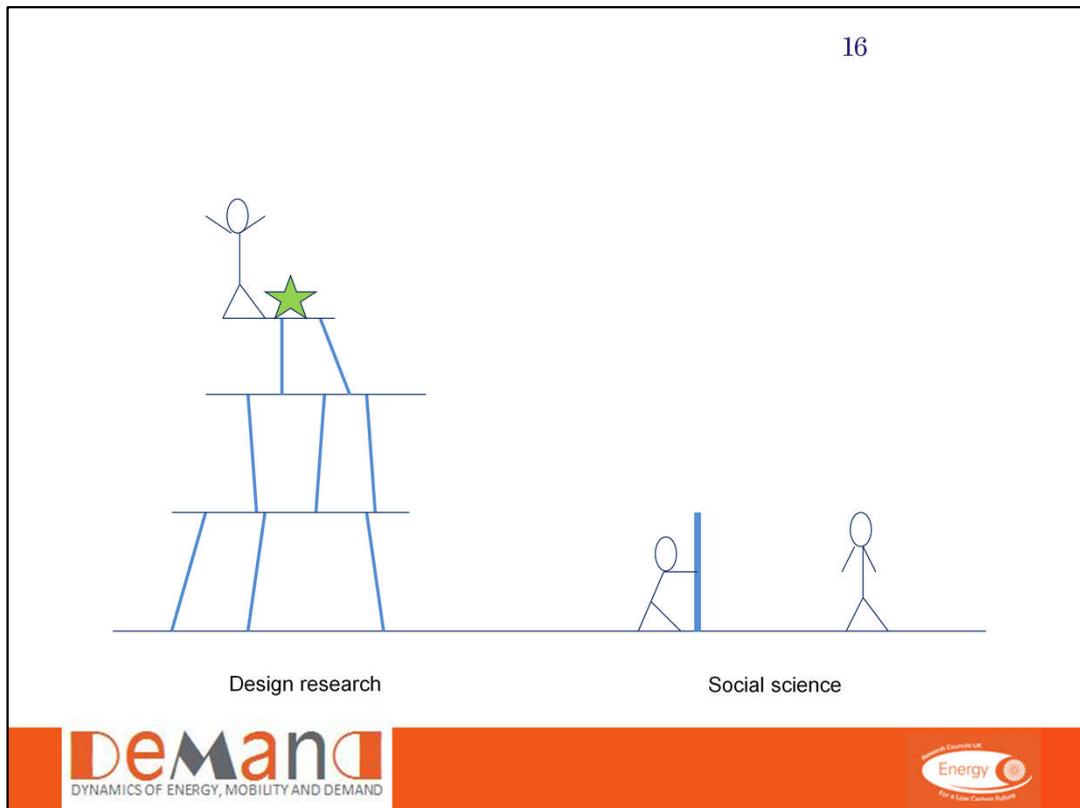


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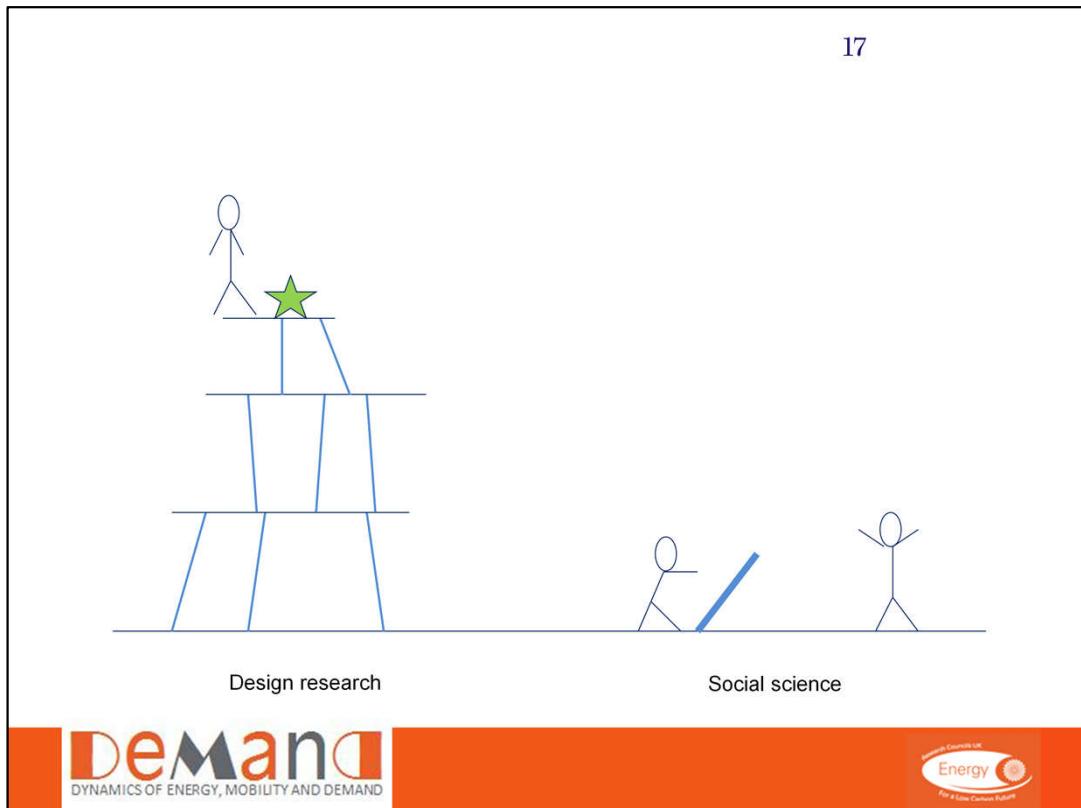


Energy
For a Low Carbon Future

Finally, another, important aspect of design that I have not yet mentioned in any depth is the necessity to make choices based on assumptions. A design process involves cycles of the generation of many ideas and options for design propositions (a creative process), followed by phases of selection and decision in which one or a few options are selected to take further. This process is tends to be represented as a series of diamonds as in this image (see for example Tassoul and Buijs 2007). Because the actual effect of a design on the design space can never fully be known, these decisions are necessarily based on assumptions.



This image on the left represents how a design proposal is thus built on assumptions and decisions made on the basis of them. These assumptions are based on more or less elaborate research of the design space, but in general can be argued to be less founded than assumptions made in social science. And even when assumptions are based on elaborate research, social scientists are trained and encouraged to always remain critical and question these assumptions.



You can imagine the effect such a disposition can have in a design context ...



References

Archer, Bruce. "Design as a discipline." *Design Studies* 1.1 (1979): 17-20.

Cross, Nigel. "Designerly ways of knowing." *Design studies* 3.4 (1982): 221-227.

Dorst, Kees, and Nigel Cross. "Creativity in the design process: co-evolution of problem–solution." *Design studies* 22.5 (2001): 425-437.

Kuijjer, L. (2014). Implications of Social Practice Theory for Sustainable Design.

Kuijjer, L., & Jong, A. d. (2009). *A Practice Oriented Approach to User Centred Sustainable Design*. Paper presented at the Sixth International Symposium on Environmentally Conscious Design and Inverse Manufacturing Sapporo, Japan.

Kuijjer, L., Jong, A. d., & Eijk, D. v. (2013). Practices as a Unit of Design: An Exploration of Theoretical Guidelines in a Study on Bathing. *Transactions on Computer-Human Interaction*, 20(4), 22.

Lawson, B. Cognitive strategies in architectural design. *Ergonomics*, Vol 22 (No 1) (1979), pp. 59–68

Matsuhashi, N., Kuijjer, L., & Jong, A. d. (2009). *A Culture-Inspired Approach to Gaining Insights for Designing Sustainable Practices*. Paper presented at the EcoDesign 2009: Sixth International Symposium on Environmentally Conscious Design and Inverse Manufacturing Sapporo, Japan.

Tassoul, Marc, and Jan Buijs. "Clustering: An essential step from diverging to converging." *Creativity and Innovation Management* 16.1 (2007): 16-26.

