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Everyday Water Demand

1) What are the challenges and the key insights Social Practice Theories (SPT) offers?

Water use is often simplified as an 'average demand'. Using SPT increases our understanding of how and why water is used in the home, and recent research demonstrates how SPT might improve the way the water sector understands and manages water demand. SPT is different to many existing approaches to water demand (behavioural economics, psychology) by focussing on the practices (watering the garden, showering, clothes washing etc) and how and why they are performed.

"A practice approach allows us to move beyond the average consumer to look at this diversity in the population in the everyday practices which shape water use" - Patterns of Water

Much research, including work on SPT, demonstrates that traditional socio-demographic characteristics and values are generally flawed predictors of final water use. Using SPT to analyse water demand deepens understanding as to how and why a certain activity such as laundry routines are performed by a particular person. It also helps you understand the wider influences on demand, such as shared cultural norms and meanings, systems of provision and technologies. SPT approaches allow you to zoom into nuanced and detailed accounts of everyday practice of an individual or household but also to zoom out to changes at a population, societal or infrastructural level.

2) What is the key study and what does it show?

A key study that expanded the potential use of SPT for the UK water sector is the ARCC-Water and SPRG Patterns of Water Projects (2014). This work was born out of a recognition that water demand management was rising on the agenda as a tool to maintain balance in the water supply and demand system (DEFRA, 2008, EA 2009a, 2009b), but approaches to forecasting future demand are based on behavioural models of household water use which capture little of the observed variance between and within households. The project (2014) sought to evidence the utility of social practice ideas to enhance how water industry understands and approaches water demand forecasting and interventions (see also Rapid Evidence Assessment for Defra by Orr et al., 2018).

Pullinger et al. (2014; 2015; Browne et al., 2014) revealed substantial complexity and variations in water use that are masked by averages, this included substantial difference in practice performance such as a mixture of casual, high-tech and hands off gardeners (Pullinger et al., 2015). These variations in practices had implications in not only how, when, and why practices were completed but the amount of water used for each practice, information masked by their similar PCC and occupancy rates (see. Pullinger et al. 2015). The researchers identified direct policy and interventions questions from their practice approach for example, questions around 'out and about' showering, increased personal hygiene practices amongst younger age groups and the weak links between how one set of practices affect another.

Patterns of Water projects demonstrated how a mix of quantitative (survey, quantitative data) and qualitative data (interviews, focus groups etc) is helpful in analysing water practices at a variety of scales (from household to population level changes).

3) What does our Knowledge Transfer Partnership (KTP) primary research reveal?

Patterns of Water deploys a practice approach in a mixed methods (quantitative and qualitative) study. When implemented, it was the first of its kind in water research. We build on the research agenda sketched out within this and other related research and policy research projects.

In the KTP, we conducted mixed method data collection aiming to explore the everyday practices of water use in Summer 2022 (covering events such as the pandemic, drought, extreme temperatures, cost of living crisis etc.). We used four methods within our research design. This included i) interviews (exploring how water use was completed in everyday life), ii) home tours (exploring materials, objects and infrastructure of practices at a household level), iii) focus groups (revealing shared social norms and meanings), iv) individual household consumption data (revealing patterns of consumption and routine at a household level).Together the data revealed interesting dynamics linked to work, study and leisure lives, household infrastructures and social norms and shared expectations.

4) How could you plan to take these ideas forward in your work

A social practice approach to water demand, helps you think differently about an issue or data set. By embedding both SPT and mixed methods data in your work, it is easier to recognise the diversity in everyday practices and how people consume water. This helps you overcome some of the pitfalls of 'averages' and become reflexive to how practices may come to change.

When selecting what data to use in current and future projects to understand the complexity of water demand, there is not a one size fits all approach. There are a variety of ways and methods we can use to embed SPT. Potential approaches include the methodologies highlighted above as well as broader methods including i) surveys (population level analysis), ii) secondary data (for example, sales data which can be used as a proxy for practice at a population level), iii) wider consumption data (which can be used as a variety of scales, from individual up to a population level, to reveal patterns of routine and traces of practice).

It is a balance between the resources (time, money etc.) available and the scope of the problem or issue you want to explore. For example, if you are trying to understand Water, Sanitation and Hygiene (WASH) routines you might deploy a mixture of i) focus groups (to understand social norms and expectations around cleanliness)

ii) home tours/interviews (to explore how exactly people complete cleanliness and hygiene practices, in the context of their wider routines and household infrastructure) and iv) secondary data analysis (proxy data relating to hygiene activities, everyday life etc.). Making time at the start of a project to explore what data could help address your aims and what methodologies could be feasibly used to gather data is crucial. Being creative with how you might address a problem might help you reveal new approaches, reframe issues, and create insights which help you understand everyday water demand.

References

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