



Waterwise: Extending Civic Engagements for Co-creating more Sustainable Washing Futures

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Introduction

As indicated in the introduction to this collection of interventions interrogating civic geographies, there are many definitions of ‘civic’ and by association, of ‘civic engagement’. However, there is general agreement that such terms most often refer to the connections between individuals and wider communities in the ways affairs are managed (Philo et al., this issue). Building on this, and as explored in this intervention, the practices surrounding household water consumption might be seen as inherently ‘civic’. Certainly, from the construction of aqueducts and wells in ancient Rome to more extensive infrastructural developments embodied in the initiation of mains water and waste water systems in the 19th Century, access to and use of water has been seen as a matter of civic responsibility. Yet, in many places water is becoming redefined as a private



commodity and its use characterised as a commercial transaction between consumer and supplier (Gandy 2004). At the same time, water consumption practices, and in particular personal washing habits, are often hyper-privatised (Hand et al. 2005); performed behind closed doors and shower curtains. This manifold privatisation of water use means engendering debates about personal washing practices and their contribution to wider [un]sustainabilities is challenging.

Contributing to wider deliberations about creating spaces for civic engagement around issues of water use, this intervention reflects on the authors' experiences of developing and exhibiting an interactive installation, 'WaterWise'. WaterWise emerged as a serendipitous spin-off activity from a formal collaborative co-design research project exploring how personal washing might be conducted more sustainably in the future². While there is no space here to go into the intricacies of this research, it is important to flag its practice-oriented participatory (POP) backcasting approach. This approach involved collaborative processes of brainstorming, scenario-building, assessment and transition framework development with key stakeholders from policy, industry, research and non-governmental sectors (see Davies et al. 2012). The goal of this activity was to co-design mutually reinforcing policy, devices, services, as well as positive educational supports focused on achieving sustainable washing practices. There was also an element of public interaction in the POP backcasting process through workshops with people not directly involved in the governance of water other than as the ultimate practitioners of personal washing. Their involvement added to and provided feedback on the future washing scenarios, particularly exploring opinions on the division of responsibility between things, institutions and individuals in the performance of sustainable washing practices (see Figure 1).

This public-facing component was, however, inevitably limited by the constraints of a delimited research project. So, when the Science Gallery in Dublin, a "new type of venue where today's white-hot scientific issues are thrashed out and you can have your say"³, called for proposals for the exhibition, 'Surface Tension: The Future of Water' in 2011, an opportunity to widen the project's civic engagement spaces emerged⁴. WaterWise was subsequently constructed by the authors' working with a professional illustrator, Chris Judge, from initial sketches of alternative future washing scenarios derived from the stakeholder vision phase of POP backcasting. A pared-down version of WaterWise featured in the Civic Geographies Exhibition at the RGS Conference in Edinburgh in 2012, while the entire Surface Tension exhibition was displayed at the Eyebeam Art + Technology Center⁵ in New York between June and August 2011 and at The Museum⁶ in

² This co-design research was part of the 'CONSENSUS: Consumption, Environment and Sustainability' project, details of which can be found at: www.consensus.ie

³ See: https://sciencegallery.com/this_is_science_gallery

⁴ See <http://sciencegallery.com/surfacetension>

⁵ See <http://eyebeam.org/events/summer-exhibit-surface-tension>

Kitchner, Ontario in October 2013.

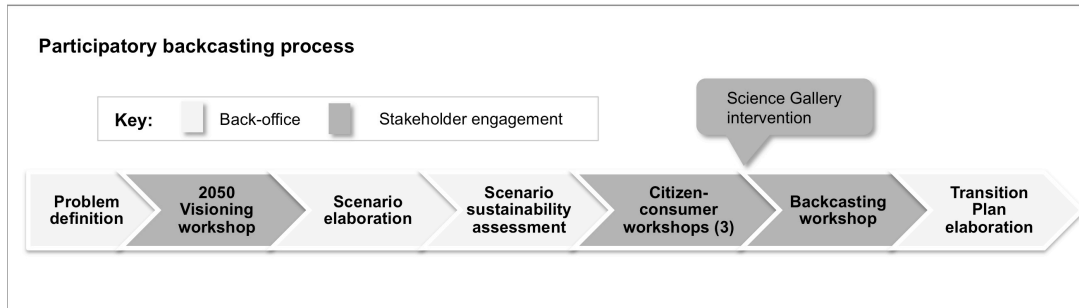


Figure 1. Practice-oriented participatory (POP) backcasting phases

The remainder of this intervention considers whether the formation and execution of WaterWise, as an exhibit derived from a wider formal research project, might be seen as a site where new civic geographies, in this case around washing and water use, can begin to take shape.

WaterWise: An experiment in complementary civic engagement

In Ireland and the UK, daily personal washing activities account for around 60 litres of water use per capita and are often performed without conscious deliberation or an appreciation of the environmental impact of water consumption (Lavelle et al. 2012). By 2050 it is predicted that a 50% increase in hot water consumption from 2007 levels could occur within British households due to economic growth, a higher number of water using appliances and an increased intensity in their usage (HM Government 2009). This has implications for both energy and water consumption, strengthening the case for addressing water use as part of action on climate change. In Ireland, at the time of developing the WaterWise exhibit in 2011, the rules connecting citizens with water services were being re-drawn due to the shift in management from public administration to a centralised semi-state provider, Irish Water. With this reorganisation comes an impending removal of free water services and introduction of metered water charges (due 2014). Initial announcements by Irish Water indicate continued commitment to 'predict and provide' models of water management, with water users depicted as customers and little scope for public involvement in the new governing structures or debates surrounding sustainable norms of water use. This is despite the widely documented limitations of such expert-driven processes within environmental governance, particularly in terms of curtailed social learning, over-emphasis of techno-efficiency strategies and poor stakeholder engagement (Börjeson et al. 2006; Quist and Vergragt 2006).

Research has established that it is common to bathe once or sometimes twice a day in many western parts of the world. Such routinisation has been enabled by

⁶ See: <http://www.themuseum.ca>

the advancement of large-scale water mains systems making piped water, treated to drinking standards, available for all water-use purposes. This, in combination with the proliferation of high-intensity showering technologies, has fed into heightened societal expectations of washing frequency and cleanliness (Hand et al. 2005). Therefore, when considering how everyday household activities may be made more sustainable, increasing attention to how 'ordinary' consumption practices evolve through time is necessary (Shove 2010; Warde 2005). Key shapers of daily practices identified in this literature include; systems of provision, regulatory structures, material objects, practical knowledge and bodily actions along with related socio-cultural meanings. While this social practice-focused research has typically been rooted in analysing present configurations of living, an increasingly influential body of future-oriented research seeks to promote long-term transitions towards more sustainable socio-technical systems relating to water, energy or transport (Geels and Schot 2007; Rip and Kemp 1998). Techniques of visioning, backcasting and scenario planning, which are central to these endeavours, offer a means to create and explore alternative, normative future realities. Whilst often expert-led, such research does not exclude possibilities for higher levels of public engagement or even the creation of new civic spaces for discussion about alternative ways of meeting our everyday needs. It was from this perspective of exploring the possibilities for wider civic engagement through interactive science-art collaborations that WaterWise was formed.

Since the 1960's the growth in forms of collaborative enquiry between artists and scientists has led to a number of artist interventions in a variety of settings from commercial science labs, to more established civic institutions such as museums and galleries, as well as in public city spaces and everyday locations (McDougall et al. 2012; Arends 2009). The Science Gallery in Dublin, however, provides a unique space for the engagement of wider publics with the interface of art and science. It adopts the guise of a mainstream civic institution, but its practices transgress the more 'establishment' elements of civic institutions described by Philo *et al.* (this issue). As proclaimed on its website⁷, the Science Gallery aims to be "[a] place where *ideas meet* and *opinions collide*" (our emphasis). Rather than being the "endemically polite" (Philo et al. this issue), the Science Gallery actively seeks to create a space where citizens can critically engage with creative scientific and technological developments through the exploration of often ethically charged exhibitions. While far removed from the radical sites of contemporary occupation movements, the Science Gallery and the other settings where WaterWise has been displayed (e.g. Eyebeam in New York and The Museum in Ontario) do aim to challenge rather than reify existing configurations of the civic and associated civicness. As such they may be considered to be 'neo-civic' institutions in that they are clearly related to civic spaces as traditionally conceived, but are novel incarnations posing provocative questions and admitting

⁷ http://sciencegallery.com/this_is_science_gallery

oppositional perspectives.

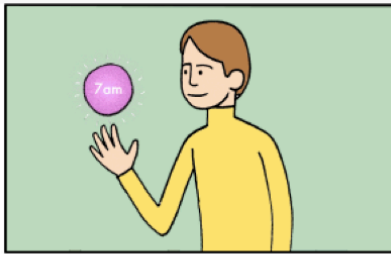
Adopting a playful interpretation of graphic novels and the instructional quality of aircraft safety manuals, WaterWise was constructed from three sketched scenarios that emerged from the visioning phase of the POP backcasting process to pose questions and initiate reflection. These scenarios were translated into high resolution illustrations each show-casing a mix of emerging, latent and imagined technologies, societal norms and regulations. These illustrations were framed and placed within a pseudo bathroom setting comprising a tapless sink, tiled wall and a pull out mirror (See Figures 2, 3, 4, 5).

Scenario 1: De-Waterise, indicates a future of washing with high levels of technological change. In this scenario cultural norms have shifted so that it is acceptable to wash only when an actual need for cleanliness is demonstrated, assisted by products that either remove or dramatically reduce the need for water use in meeting washing needs. Scenario 2: Water Control, presents a future of enhanced regulation and monitoring of water usage through personal water quotas. Advanced greywater systems allow for the reuse of water multiple times within the home and the efficiency of existing washing devices has increased dramatically. Scenario 3: Aqua Adapt, outlines a future dominated by high levels of cultural change assisted by extensive rainwater harvesting systems. Rainwater has become the only source used for washing, making these practices more aligned with natural fluctuations. Social norms encourage lower levels of washing than the present day and public bathing has, once more, become a socially acceptable means for achieving deep-cleansing.

WaterWise drew upon artistic work in the critical design field which presents hypothetical products, services and systems to “explore the space between reality and the impossible ... speculating, imagining and even dreaming in order to encourage debate about the kind of technologically mediated world we wish to live in” (Dunne and Raby 2010, 131). However, critical design interventions are often technology-led and lack a means for direct citizen feedback. WaterWise attempted to address this limitation by inviting viewers to reflect on and react to the visualised futures before them. The provocative nature of the scenarios, challenging current norms and habitual behaviours, were deliberately emphasised to encourage viewers to think through the possibilities of what future washing might look like. A mounted mirror within the installation was engraved with text ‘which future for you?’ and ‘tell us what you think’. Luggage tags and pens were provided for viewers to write down their reactions to these questions and the tags could be attached to the exhibit creating an organic, evolving installation (see Figure 5). Although gallery exhibits can provoke private reflection and enhanced personal insight amongst visitors, this feedback mechanism sought to explicitly and materially bring those thoughts into the public, and therefore civic, realm. Visitors could contribute personal reactions, read the reactions of others and start conversations about the exhibit.

DE-WATERISE – WASHING WITHOUT WATER

SET YOUR REVITE-ALARM



Set your revite-alarm

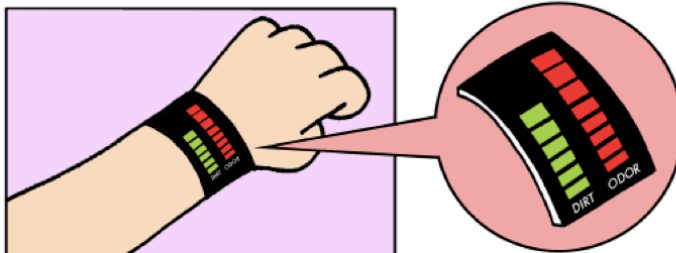


This will leave you refreshed in the morning



No need for a shower to wake up

CHECK YOUR 'SMELL-STATUS'



Relieves anxiety over body odour

LOW DIRT AND ODOUR LEVELS



Apply clean spritz



Pop on your odour eating clothing



HIGH DIRT AND ODOUR LEVELS



Take a nano-clean



Use your waterless hair wash



Figure 2. De-Waterise

WATER CONTROL - WASHING WITHIN LIMITS

CHECK YOUR WATER ALLOWANCE

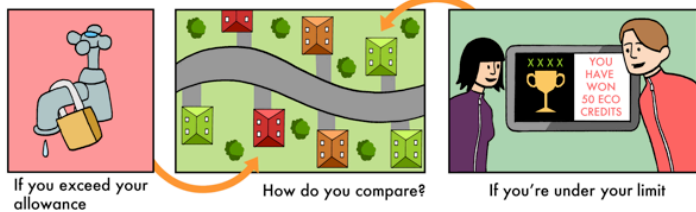


Activate with finger print

Record and review your use

Have a 'Smart Shower'

NEIGHBOURHOOD WATER WATCH



If you exceed your allowance

How do you compare?

If you're under your limit

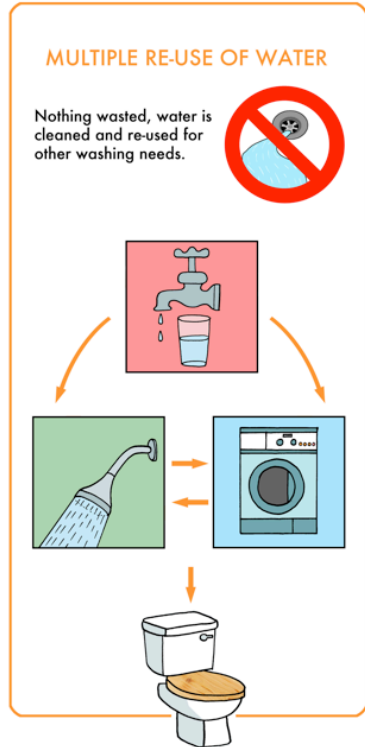
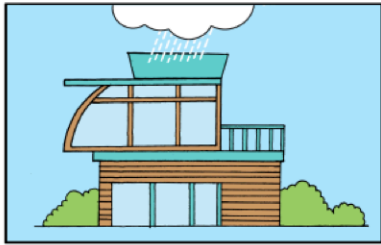


Figure 3. Water Control

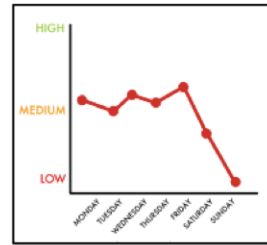
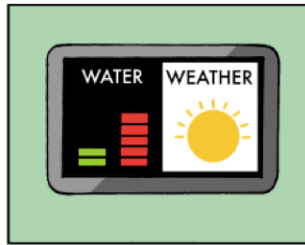
Over 150 luggage tag comments were collected during the Surface Tension exhibition. A high number of comments contained ideas supporting altered behavioural strategies for prudent water usage, for example; “take a shower every second or third day”; with suggestions for a “share it, spare it” water campaign. Others posed questions about water charging; “why should an island nation where it rains two-thirds of the year pay for water?”, while some general feedback was provided on the exhibit itself, with most stating that it was interesting and informative. However, overall, the quantity of responses was relatively limited (and, ironically, no luggage labels have travelled back to the researchers from the exhibitions in New York and Ontario); perhaps a function of the time and attention required to support and encourage interaction even within spaces designed to facilitate it. Additionally, much feedback related to general water issues and the exhibition itself rather than making a direct link to WaterWise, which may have been because few opportunities were available to voice opinions on the issues raised by the Future of Water exhibition as a whole. Equally, while the Science Gallery expresses a commitment to co-create knowledge with visitors (Gorman, 2012; Science Gallery 2011), it faces broader challenges of curating exhibitions that contain levels of interactivity without compromising the artistic integrity of individual pieces, making excessive demands on visitors, or promoting particular agendas. While the responses to our invitations to engage with WaterWise were perhaps a little on the

AQUA-ADAPT - WASHING IN TUNE WITH RAINFALL

CHECK YOUR RAINWATER LEVELS



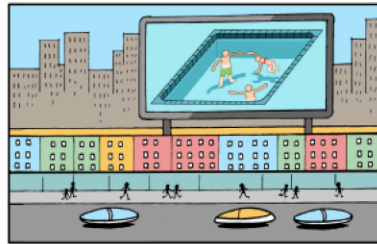
Rain is the only source for washing



LOW RAINWATER LEVELS



It's o.k not to wash today



Visit the Waterfall Salon



MEDIUM RAINWATER LEVELS



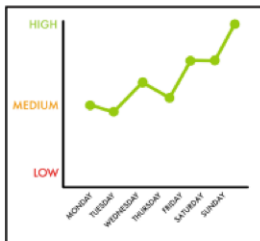
The basin: small on water, big on results!



Water-free gel clean



HIGH RAINWATER LEVELS



Treat yourself to a bath!

Figure 4. Aqua Adapt



Figure 5. WaterWise exhibit and visitor engagement

disappointing side, it was never envisaged that engagement with the exhibit alone would result in dramatic transformations either in public values or washing behaviours. Instead such experiments may be better seen as creating additional spaces for social and cultural conversations about, and critique of, present practices and the possibilities for future reconfigurations of those practices.

Conclusion

With the assistance of a graphic illustrator and using the spatial platform of the Science Gallery, one element of a wider social science research process was translated into a more visually engaging, provocative and mobile product, ultimately extending its reach through a variety of ‘neo-civic’ spaces. The Surface Tension exhibition, of which WaterWise was a part, was seen by more than 50,000 people in the Science Gallery. It was covered in mainstream international media (including TIME, Wired, Huffington Post and the New York Times) as well as high-profile scientific journals including Scientific American and Nature. In addition, its subsequent travels to New York, Ontario and Edinburgh, means that WaterWise, and by association the parent research project, has travelled much further than ever anticipated.

WaterWise opened up new spaces where private household water practices might be reframed as matters of collective responsibility, at a time when restructuring of Irish water services is emphasising water users as ‘captive consumers’ rather than ‘active citizens’. Nonetheless, while provoking reactions and reflections, the very mobility of the project meant that control over the

interactive element of the exhibit got a little lost along the way. Certainly, the use of more active formats for gathering feedback, for example using smart phones or touch screen technologies on the exhibit or show-casing the scenarios using Web 2.0 media would offer opportunities for extending the intervention beyond the confines of physical institutional settings. However, the aim of the exhibit - to cultivate curiosity and inquiry into the possibilities of washing differently by visualising dramatically different ways of living - was achieved. Stimulating such curiosity and inquiry may be an important step towards questioning emerging socio-technical innovations and regulatory responses for sustainable washing, indeed for sustainable consumption more broadly, perhaps assisting in the cultivation of new ways of seeing and knowing. Our experience of developing and implementing WaterWise therefore points to the potential for using co-created, artistic and futuristic installations to ignite social conversations about the assumptions, values and visions that guide the way people live; creating spaces for moments of civic engagement, which may initiate journeys towards societal transformation in the future.

Acknowledgements

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