Future visioning for sustainable household practices: spaces for sustainability learning?

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Despite widely articulated concerns about unsustainable production and consumption processes, governance interventions have led to only incremental shifts in routinised production and consumption behaviour, particularly within households of western, industrialised societies. In response, techniques of future visioning have been mooted as more ambitious governing mechanisms that could help to liberate policymakers and other stakeholders from current patterns of disjointed incrementalism in the field of sustainable production and consumption. At the heart of these claims is the assertion that visioning promotes learning that can lead to the emergence of innovative approaches to sustainability challenges from problem redefinition to practical action. This paper examines the extent to which participatory visioning creates spaces for sustainable learning using empirical evidence from workshops focused on transforming household consumption practices in Ireland. It is concluded that participatory visioning approaches do provide supportive physical places and intellectual spaces for personal and collaborative learning with regard to potential sustainability transformations. The bounded nature of the particular workshops examined, in terms of duration, focus and participants, means that embedding such learning within wider organisational structures and practices is likely to be a much less certain process that, if it does occur, will unfold over longer timescales and in unpredictable ways.

Key words: Ireland, sustainable production and consumption, visioning, sustainability transition, governance, geographical imagination

Introduction

The role of the imagination in geographical endeavours has a long history rooted in travellers’ tales of early explorations and the cartographic licence driven by limited knowledge of the globe. Intellectual scrutiny of geographical imaginations, particularly as related to concepts of power, knowledge and spatiality, remain a central feature of debates within the discipline (Massey 2005; Harvey 2006; Cosgrove 2008; Gregory 2009). As evidenced in the selection of ‘The Geographical Imagination’ as the theme for the Royal Geographical Society (RGS-IBG) Annual International Conference in 2011, the disciplinary relevance of imagined geographies and related practices of mapping, visualising, environmental reconstruction and climatic scenario-building remains strong (see Gregory and Brierley 2010). As evidenced in the selection of ‘The Geographical Imagination’ as the theme for the Royal Geographical Society (RGS-IBG) Annual International Conference in 2011, the disciplinary relevance of imagined geographies and related practices of mapping, visualising, environmental reconstruction and climatic scenario-building remains strong (see Gregory and Brierley 2010). Indeed, it has been argued by Derek Gregory (2009), following Benhabib (1986), that genuinely critical geographical enquiry must include both explanatory-diagnostic and anticipatory-utopian dimensions.

Imaginative endeavours are not the disciplinary preserve of geography and there are many examples of such work in other parts of the academy and beyond. One burgeoning, but also historically embedded, locus for such activities relates to envisioning sustainable futures. With roots in the literary utopian visions there has been growing attention to ecotopias as navigational compasses for exploring potential pathways towards more sustainable practices (see de Gues 2002). Much of this more recent research seeks to address the criticisms that have been directed toward literary utopian visions in the past; essentially that they describe unrealistic, unattainable and potentially undesirable places in which to live. De Gues in particular argues for a reflection on holistic literary utopian visions for original insights, points of reference, ideas and perspectives that might provide ‘a distant point of orientation’ rather than a blueprint for a sustainable future (2002, 191). Related to this vein of thought, Janssens (2008) calls for the advancement of ‘critical design’ in the field of urbanism and sustainability based on
merging design approaches with utopian thinking. Visioning is a key goal of this critical design in urbanism, which strives ‘to bring present and future, problem-solving and problem-finding, explicit knowing and imagination, different modes of thinking, different time-scale aspects into a complex relation’ (2008, 10).

Running parallel to this coincidence of utopian and critical design thinking is research focused more pragmatically on transition management for sustainability. This body of work argues that a combination of social and technological innovations are required to make significant changes to the way we live and that future-oriented, multi-stakeholder mechanisms are likely to be essential to shape those innovations (see for example, Jégou and Manzini 2000; Kemp et al. 2006; Quist 2007; Robinson 2008; Meadowcroft 2009). From this perspective, participatory design processes for formulating desirable futures followed by working back to devise practical transition steps has been proposed as a means for developing ‘new insights into the nature of the problems and ... new directions for solutions’ (Sondeijker et al. 2006, 15) that break from current trends. This contrasts with other foresight methods of scenario planning and forecasting commonly based on extrapolation from current trends, which are considered unlikely to yield transition-inducing innovations (Dreborg 1996).1

Although intensely geographical in their imagining of alternative nature–society interactions in specific places or sectors, what neither the proponents of transition management nor the architects of literary ecotopias consider in any explicit detail are the spatial practices involved in creating alternative visions of sustainable futures. In response, this paper considers the construction and efficacy of physical and cognitive spaces for sustainability learning that the visioning process potentially provides. Reflecting on existing literature in conjunction with new empirical findings from visioning workshops, conducted as part of a project examining sustainable household consumption in the Republic and Northern Ireland (CONSENSUS: consumption, environment and sustainability; see http://www.consensus.ie), this paper provides a spatially sensitive and hence a more geographically rounded reading of visioning as a creative practice for imagining sustainable futures.

**Visioning techniques and sustainable household consumption**

Current techno-economic and communicative policy responses have achieved only marginal advancements towards sustainability and are often criticised for their narrow understanding of the social world and the complex forces shaping consumption patterns (Jackson 2005; Shove 2010). In both the Republic and Northern Ireland, for example, levels of household energy and water consumption in particular have been shown to exceed those found in many other European countries, with home heating and personal washing being the most resource intensive practices in each case (EEA 2005; SEAI 2008). Practices in this context are understood to be ‘forms of bodily activities, forms of mental activities, “things” and their use, a background knowledge in the form of understanding, know how, states of emotion and motivational knowledge’ (Reckwitz 2002, 249).

As a result there has been a coalescing of views that more systemic and future-oriented approaches are required to conceptualise and promote sustainable consumption (Shove 2003; Elzen et al. 2004). Responding to this perspective, interdisciplinary visioning workshops were conducted with the aim of brainstorming innovations for more sustainable personal washing and heating practices in Ireland in the future. The year 2050 was selected as a target date for the visioning process to free participants from the strictures of current norms, constraints and regulations, and allow for the creation of more radical solutions compared with thinking from the present (Jungk and Mullert 1987). This is thought to be especially valuable in the realm of domestic consumption practices, where assumptions about user needs, standardisation in design, norms of practice and a focus on eco-efficiency amongst actors have been found to stifle the development of novel solutions for the promotion of sustainability (Arentsen et al. 2002). Another frequently mentioned contributor to system inertia is the lack of integration between stakeholders who serve to create and maintain elements of a given socio-technical system (Guy and Shove 2000). A fundamental feature of the workshops was therefore the participation of civil, public and private stakeholders from a variety of backgrounds.

A stakeholder mapping exercise was conducted in order to identify socio-technical actors shaping washing and heating practices in Irish households. Participation by stakeholders in the fields of regulation, policymaking, research, business, design, architecture, engineering, water/energy supply, retail, consumer behaviour and planning was considered necessary. A broad spectrum process of identification and selection was conducted in order to map relevant participants from all governing spheres. This included reading key policy documents in order to establish those who had participated in their drafting, shaping or consulting. In addition to public documents, websites of state, semi-state, non-governmental and research organisations were examined and industry lists of private-sector actors such as consultants, designers, entrepreneurs and architects were consulted. Where the potential pool of participants was large, for example in terms of architectural firms, preferred participants were identified by examining their client base and experience in the relevant sector.
referencing published documents and utilising processes of snowballing (see Reed 2008). A relatively high response rate to initial enquiries was achieved (57%) with 21 attendees secured for each workshop. Table 1 details the number of workshop participants present (indicated by figure in brackets) according to their sector (public, private, civil society) and field of expertise (e.g. architect, engineer, consultant).

The workshops took place in a suite of meeting rooms within a newly constructed building at Trinity College Dublin. With the exception of the researchers coordinating the project, this was not a space that the invited participants had been to before. While being located within an historic academic institution may have led to preconceptions from some participants, establishing ‘neutral’ territory in such interdisciplinary discussions is unlikely to be entirely achievable. One benefit of the location was that it was not explicitly linked to government, private-sector or civil-society affiliations. Each workshop began with a presentation providing an overview of current issues, trends and problems associated with washing and heating practices. Following this, participants were divided into three sub-groups for a futures brainstorming session, each facilitated by a member of the research team. The group size (around seven individuals) and diversity of participants (each group contained people from a variety of backgrounds) was designed to encourage ideas beyond typical territories of discipline, business scope and professional experience.

Drawing on design thinking (Bakker et al. 2010) and in particular needs-based design (Brezet et al. 2001), the desired results of the practices (for example, cleanliness and refreshment for washing, warmth and safety for heating) were taken as a starting point in the brainstorm sessions. Idea generation then proceeded using a brainstorm format where all ideas are considered legitimate and criticism is withheld to promote the open expression of views. As a result more than 100 ideas were proposed in each workshop and included concepts for high-tech devices (e.g. personal body odour and bacterial monitoring), architectural advancements (e.g. second-skin home insulation bubble), new systems of provision (e.g. smart rainwater harvesting systems) and ideas for shifting social norms towards sustainability (e.g. mandatory eco-service). Many suggestions implied simultaneous shifts across technological, social and organisational spheres. For example, concepts proposed for waterless washing solutions involve technological advancement but are also predicated upon a co-evolution of cultural norms towards acceptance of alternative washing behaviours. Following the brainstorm, the group reconvened and reported on their ideas in a ‘rating and clustering’ session using the ‘metaplan’ technique. Devised by Schnelle (1979), and applied in similar visioning research by Carlsson-Kanyama et al. (2008), the metaplan process began with a member of each subgroup placing their visioning ideas (on post-its) in one central location (e.g. wall or table). Similar ideas were then grouped together into clusters with participants debating and rating ideas they thought worthy of further investigation.

The visioning process stimulated face-to-face interaction between diverse stakeholders, most of whom had not met prior to the workshops. Many ideas were developed and the nature and implications of the innovations were discussed. However, as Jungk and Mullert state, the success of a [visioning] workshop is not . . . to be measured solely in terms of the schemes or catalogues of

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Table 1 Number of visioning workshop participants according to profession and sector

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proposals it generates but also by how it subsequently affects the participants’ minds and behaviour. (1987, 72)

Establishing the precise impact of the visioning process on the learning of stakeholders is not a simple task however, and requires explicit evaluation. As articulated by van de Kerkhof and Wieczorek, while transition management writings emphasize the importance of ‘learning’ in the process of induced change towards sustainability . . . the literature on transition management is not explicit enough about the methodological organisation of the learning process. (2005, 733)

Below we argue that a significant element of that methodological organisation relates to the spaces created and utilised for sustainability learning; that is, the novel time, place and cognitive arenas that lead to imaginative co-creation of knowledge.

Evaluating visioning spaces for sustainability

As emphasised in work by Quist (2007), stakeholder involvement in visioning (as described above) provides opportunities for interdisciplinary engagement amongst professionals who may rarely otherwise interact. At this most basic level there is clearly a material geography, a physical space, to the visioning process whereby people are gathered together in a particular place (the site of the visioning workshop) for a particular time period to discuss social practices that impact on wider environments. This conceptualisation of space is familiar within the geographical community, although it remains the locus of much debate (Massey 2005; Harvey 2006). More ambitiously, some practitioners of the visioning method suggest that the technique can promote creative learning processes at the cognitive level (Brown et al. 2003). The physical space of the workshop then becomes an agent of change, opening up imaginative or reflective intellectual spaces where knowledge can be exchanged, created and challenged. This sense of reflective space is more aligned with the work of geographers who have drawn on feminist (Robinson 2004) and psychoanalytic theory (see Bondi 2005) to interrogate spatiality, and more specifically those who have adapted psychotherapy methods as tools to enrich understanding of nature–society interactions (e.g. Burgess et al. 1988).

The types of learning that can occur in the physical and reflective spaces of visioning processes have been categorised into two main domains: ‘lower order’ (or adaptive) learning, which implies the development of new policy instruments and strategies in the case of policy learning (Hall 1993), and operational procedures and tools in the case of organisational learning (Argyris and Schon 1978; Kim 1993); and ‘higher order’ (conceptual) learning, which may lead to both problem and goal re-definition and quite fundamental changes of values, attitudes or underlying convictions (Quist and Vergragt 2006). Such learning not only amongst sectoral stakeholders, but also across society at large, is often said to be a necessary condition for the design and implementation of system innovations for sustainability (Robinson 2003).

While it is presumed that participating in visioning processes workshops can lead to lower order and higher order learning (see van de Kerkhof and Wieczorek 2005), there is little reflection in the existing literature as to how such learning is embodied in the participants’ experience of the process. In order to test these presumptions, participants were surveyed regarding whether they felt novel ideas were developed (lower order learning) and/or whether they had been stimulated to think about sustainability in different ways (higher order learning) and their reactions to participating in a visioning exercise. The response rate for the evaluation questionnaire was 85% in the energy workshop and 95% in the water workshop. Responses were transcribed, categorised and analysed after the event. Some categories were directly delineated by questions on the evaluation form, for example with respect to higher order or lower order learning. Other categories were emergent in that they relate to responses to general questions about the workshop experience. For example, many participants responded positively to the opportunity to engage with people from a range of backgrounds (coded as interaction) and to the time and space to think about important issues beyond the confines of their daily workload (coded as reflection). Ultimately three interrelated themes, futurity, collaboration and reflection, all of which intersect with expanded notions of space, emerged strongly through the survey responses and these are summarised below.

Imagining future spaces

Across both workshops there was wide agreement (97%) that the process of visioning had prompted new ways of thinking about sustainability problems. In particular, the liberation from the constraints of current practices required by the visioning workshop environment for permitting was seen as a key driver for attaining higher order learning, as was the requirement to adopt a positive solutions-focused approach. This was articulated by an architect in the water group who stated that ‘it [visioning] is a way of breaking our narrow bands of thinking’, while a consumer interest organisation representative noted it was ‘[r]efreshing to commentate on the positive without having to “over-think” the plausibility. It did prompt me to think in a different way. [I] will consider using this technique in my own work’. In particular, participants responded positively to the integrative social practice lens...
of the visioning process. As one architect noted ‘[i] liked the opportunity to imagine the future of society and technology’, while a designer commented that there were ‘interesting ideas with regards merging of devices to fulfil water using practices (e.g. machines that wash body, clothes and dishes) [and] [i]nteresting discussions on cultural changes and their influence on water consumption’. The workshops therefore stimulated an understanding of the interactions between the techno-material landscape and the cultural norms of consumption and social relations embodied within it.

 Nonetheless some participants (predominantly designers, architects and futures researchers who tend to be more experienced with brainstorming activities) felt that on occasion other participants had difficulty in imagining dramatically altered realities in 2050. As a water engineer commented, ‘pragmatism is hard to suppress’. However, according to van de Kerkhof and Wieczorek it ‘may be wise to, next to visionary people, also involve participants with more practical, strategic, executor and near-term thinking styles’ (2005, 739). Certainly the tangible outputs of the workshops suggest that the range of participants led to a productive mix of creative input, technical skill and professional background.

**Spaces for collaborative engagement**

There was strong support for the views expressed in Meadowcroft (2009) and Quist (2007) that participant diversity is a positive mechanism in the generation of a spectrum of holistic ideas. As one designer suggested, ‘the large group opened up a large range of insights, I see it as a valuable way to achieve a unique perspective on sustainability problem areas’. An architect concurred with this, suggesting that the workshop produced ‘a good melting pot of people who wouldn’t perhaps share ideas normally’. Accessing the creativity of a wide variety of individuals in order to generate alternative solutions to problems is, of course, not restricted to processes such as visioning. Open source innovation (Chesbrough 2003), crowdsourcing (Tapscott and Williams 2006), and innovation contests (that generate new seeker–solver relationships) as facilitated by the work of organisations such as InnoCentive Inc. and Innovation Exchange Inc. are becoming familiar features of high-tech industry environments seeking solutions to contemporary challenges. While aiming to be expansive, creating many potential solutions to particular problems, these innovation interfaces rarely involve a variety of social actors, seldom focus on issues of collective purpose and largely presume engagement is driven by a profit motive or personal reward. In addition, many of these innovation interfaces are virtual, taking place in spaces bounded by precise rules of engagement, contrasting the more open discussion format of the visioning workshop.

**Reflective spaces**

Although reflective practices in a general sense are ongoing and, according to psychoanalysis, perhaps largely unconscious (Bondi 2005), the evaluation of the workshops revealed particularly stark moments of overt and explicit reflection. The first came during the brainstorming phase and is encapsulated by a response of a participant who felt that while the workshop had not personally generated any new ideas, it had stimulated him to think more critically about his understandings of the issues being discussed, saying, ‘[the process] has helped me to review or reconsider previous views on certain topics’. The second key moment for reflection occurred during the consolidation phase of the visioning workshop when the facilitators reported on the discussions of the sub-groups. Once the feedback was complete, there was an opportunity to discuss commonalities across the sub-groups responses and to consider how the ideas might come together in more coherent commentaries, before a voting activity to identify favoured aspects was undertaken. As one communications consultant commented ‘I really enjoyed the “voting” and the follow up talk. It was so interesting to see how the ideas could merge into a theme’. Of course, while the whole workshop could be seen as a reflective space in its entirety, it remains a delimited arena. The workshop lasted just 3 hours and this was seen as a negative aspect of the process. As one architect commented there were ‘lots of interesting people, not time to talk to enough of them’. A consumer council representative reiterated this sentiment: ‘[the brainstorm] was good fun. The least enjoyable [element] was the length – it should have been longer!’ Of course, there is a difficult balance to be struck in terms of time commitment and maximising attendance of the required diversity of people. Equally, it is not necessarily the case that personal or collaborative reflection and learning ceases as people leave the physical space of the workshop. It is, however, clearly much more difficult to trace how such learning evolves.

**Conclusion**

The visioning processes examined in this paper certainly provided novel opportunities for the creation of, and engagement with, imagined futures. Such activity maps directly onto anticipatory–utopian pathways of geographical enquiry that Gregory (2009) and Benhabib (1986) argue are necessary for genuinely critical geographical work. The previous sections indicate that participants’ preconceptions about innovating for sustainable practices of heating and washing were often challenged, sometimes modified and even radically altered in some cases by the interactions within the workshops. Individuals from different professions, normally operating in rather contained
spheres (both physically and intellectually), with quite exclusive professional vocabularies, and diverse motivations and drivers, were willing to come together, at least temporarily, with the common purpose of imagining alternative and more sustainable ways of doing things. Informal interactions in between more structured elements of the workshop led to animated networking and requests were made to circulate attendee lists following the event, suggesting that the impact of the session would spill over into other arenas, albeit in some undefined and unpredictable way.

The evaluation of the workshops revealed that the spatial practices inherent in the visioning processes were significant in a number of ways to participants and to the nature and form of the outcomes. The opportunity for participants to meet, engage, challenge and create would not have occurred without the physical intervention of the workshop itself. While such interventions need not necessarily be directly physical (indeed virtual interfaces are now commonplace for many communities of interest), the face-to-face setting of the visioning workshop was found by participants to be effective in promoting engagement among people who would not normally interact. In contrast to much popular discussion of sustainability, frequently characterised by scenarios of impending doom, visioning processes demand positive, solutions-focused activity; perhaps even the creation of ‘spaces of hope’ (Harvey 2006). Nevertheless, visioning workshops are inevitably isolated experiments in interaction, creativity, reflection and innovation. Certainly, as evidence from organisational learning suggests (e.g. Argyris and Schon 1978; March and Olsen 1975), there are dangers that the cross-fertilisation of ideas generated in visioning exercises may be temporarily bounded. Equally, learning impacts may be transient unless ‘tacit’, or context-specific knowledge gained by workshop participants can be successfully translated into ‘explicit’ knowledge that can be incorporated into the modus operandi of the organisations from which participants derived. As Kolb (1984) notes, the embedding of individual learning into organisational structures is a dynamic process that transcends individual stimuli.

More longitudinal studies of personal, inter-personal and organisational change are necessary here to fully evaluate degrees of learning beyond the visioning workshop. This is important work, but beyond the scope of this paper and the research project on which the paper is based. Given this, visioning remains a target for criticism because influencing social, technological and regulatory change is highly complex without any scientifically agreed blueprint for successful transition management. That said, the collaborative, multistakeholder processes inherent in the visioning workshops reported here are far more expansive and deliberative than any current decisionmaking procedures concerned with household practices such as washing and heating, certainly within Ireland, both North and South. Ultimately the evidence from the visioning experiments suggests that both higher and lower order sustainability learning can and does take place at a personal and interpersonal level, at least in the short term. Whether this learning can be translated into more wide-ranging and embedded change demands both extensive and expansive longitudinal studies of socio-technical systems and an intricate analysis of links between individual and organisational decisionmaking. Ultimately geographical enquiry with its traditionally porous disciplinary boundaries and its engagement with scale, place, space and nature–society interactions is well placed to undertake such an endeavour.

Notes
1 Furthermore, given the complexity of interactions between human and environmental factors, as Dreborg (1996) notes, projections of trends into the future remain at best imprecise.
2 See their website at: http://www2.innocentive.com
3 See their website at: http://www.innovationexchange.com

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