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Publication date
2018

Document Version
Final published version

Published in
Can Design Catalyse the Great Transition

Citation (APA)
Mulder, I., & Loorbach, D. (2018). Rethinking Design: A critical perspective to embrace societal challenges. In G. Kossoff, & R. Potts (Eds.), *Can Design Catalyse the Great Transition: Papers from the Transition Design Symposium 2016* (pp. 16-24). Carnegie Mellon University.

Rethinking Design: a critical perspective to embrace societal challenges

Ingrid Mulder and Derk Loorbach

Introduction

Across modern, developed economies we are confronted with the need to completely reinvent our economies and its associated systems of consumption and production. Whether we look at our energy, mobility, water management, or construction systems, or at our labour market, education, and health care systems, they are all increasingly under pressure. The way our modern society has been developing along parameters of economic and demographic growth, specialisation and optimisation, efficiency and planned innovation no longer produces the kind of social innovation, sustainability, and quality of life we aspire. In other words, we can no longer rely on optimising existing systems, infrastructures, and technologies as well as knowledge infrastructures to deliver the kind of radical alternatives that we need to come towards a zero emission built environment, completely renewable energy systems, electric and shared mobility, inclusive economies, sustainable food production and consumption as well as affordable and human-based health care.

In the current work, we frame these challenges to reinvent our modern welfare society, its institutions and economy, as a collective societal design challenge. We will draw from the research field of sustainability transitions and transition management to formulate how design thinking is a critical part of moving away from unsustainable, locked-in regimes through processes of societal experimentation, iteration, prototyping, and scaling guided by inspiring visions and future images. We will link this multi-level perspective approach to the emerging debate around 'Transition Design'. Rather than to building upon the existing dominant regimes in the world of design research and practice by broadening its scope and methods, we take a critical perspective and argue that we need to rethink how design thinking and the profession of designers could be of value in societal transitions. This, consequently, implies a transition in the design regime

itself. We conclude by formulating a number of (radical) design principles enabling Transition Design to cope with the challenges of a transforming society.

Transitions

Transitions are understood as long-term, complex, and non-linear processes of systemic change. They usually take decades to mature and become visible at the societal level – think about the current energy transitions, which roots can be traced back as far as the 1970's – and are only fully recognisable in hindsight. This also implies that transitions are highly unstructured, uncertain, and ambiguous: they cannot be predicted or planned in linear or top-down ways. In transitions research, they are defined as structural changes of societal regimes: i.e., dominant cultures, structures, and practices in a societal subsystem. Differently phrased, regimes are the general term referring to the dominant way in which a societal function is organized, including dominant values, technologies, institutions, routines, and practices. Taking the energy transition as an example, we can argue that the historical energy transition has led to a dominant regime of centralized, efficient energy production based upon fossil fuels in which consumers have been disconnected from production, and professionals organize the system.

Such regimes are highly dynamic: there is continuous innovation and change to adapt to changing contexts (new technologies, economic and political changes, changing consumer demands etcetera). However, such regimes also develop path-dependently building upon established cultures, structures, and practices. A transition occurs when such regimes are confronted with increasing pressures from their context (landscape), are increasingly unable to adapt to these changes by incremental improvement, and are confronted with radical alternatives that become competitive. This pattern then leads to internal crises within the regime, creating more space for alternatives until a tipping point (or multiple) are reached after which the system shifts towards a new regime. In practice, this often implies turbulent processes in which incumbent actors seek to prolong their existence, trying to delay transitions by for example trying to fight off alternatives and increasing tensions and conflicts between the old and new. In the energy system we clearly see this pattern in which by now consensus about the need and desirability of a shift to a sustainable energy system is there (landscape), there are multiple crises facing the fossil energy regime (resistance, divestments, low oil prices, bankruptcies, diverging interests) and competing alternatives (zero energy buildings, electric cars, renewables etcetera).

From historical research, we learn that regimes including existing institutions and government policies and regulations, are by themselves unable to proactively guide and manage transitions. It are individuals within such regime organisations combined with outsiders, that over time develop new ways of thinking, organizing, and working that eventually might evolve into a new dominant regime through the described process of transitions. The approach of transition governance is based upon this idea that specific actors have the ability, capacity, and desire to reflect upon the path-dependent development of a particular regime, and develop alternative ideas and practices. By bringing these together in transition arenas, processes of societal design are facilitated: going through a process of reframing and problem structuring (understanding a societal challenge in terms of reinventing a regime), developing guiding principles and future images, formulating back-casting scenarios and pathways, and ultimately developing and implementing transition experiments. Such processes are designed as social learning processes in which the objective is to inspire, motivate, and connect change agents in society so that they act more strategically and reflexively to become influential in the transition context they operate in. The developed future images, scenarios, or experiments in themselves are much less relevant: it is about how the actual actors and organisations take decisions in their everyday practices.

What does it mean for design as a discipline?

Within the design discipline, there has been a growing attention for the role of design in addressing societal issues. Once started as a discipline focusing on products and objects, later much more attention was given to services, processes, and networks, and the attention is currently shifting even more broadly to sustainability and the future. The concept of DesignX (2014) is exemplary of this gradual shift. Even more noteworthy is the discussion on the PhD-Design mailing list that the corresponding DesignX article by Norman and Stappers (2016) evoked; see for example reactions as: 'observations from PlanetX' and 'education for big stuff' that illustrate design as being a regime. With DesignX Norman and Stappers (2016) suggest that "designers cannot stop at the design stage: they must play an active role in implementation" (p. 83) and wonder "how design could address the complex issues that he world current faces" (p. 84). Moreover, they stress that "designers must develop new ways of dealing with these complex systems" (p.91). In short, the stance is on expanding the design discipline. DesignX as a future path for design is in fact a further step along the path-dependent optimisation of a design regime in which the designer is the central figure, the quality of the design is assessed by peers rather than its societal relevance, and it is about how to better supply designs

and design expertise to society. These changes, adaptations of the regime, are a response to societal changes in which the design discipline is criticized for not delivering enough value, is forced to engage more with society to gain legitimacy and support from society. From this perspective, DesignX is not so much different from enhanced participatory policymaking or even a highly efficient coal-fired power plant: they are further optimisations of a regime of which we can ask ourselves whether it is sustainable on the long run as a whole.

If we look more broadly to the role of design in the context of societal challenges, we do see a large number of niches: initiatives, experiments, and places in which design thinking, design expertise, or designers are working in a completely different way: outside in, reflexively, facilitating social innovation. These niches are still too often not taken too seriously by the regime, and oftentimes ridiculed or dismissed. In the current work, we turn to these niches as the weak signals that might provide us the contours of a transition perspective for the design discipline, aiming to enable a better framing of Transition Design. In other words, the question is whether the current design regime is sustainable for the future, or whether more systematically and strategically experiments with new ways of thinking, organizing, and working in and with design should be welcomed. In our view, Transition Design should accept the latter challenge: a transition toward a field of Transition Design.

Participatory City Making as a niche experiment

One of our current niche experiments is conducted within the project called Participatory City Making (Mulder, Loorbach, & van Waart, 2015), which is briefly introduced below.

Societal challenges ask for a new paradigm in city making, which combines top-down public management with bottom up social innovation (e.g., Bria, 2015; Mulder, 2014; Loorbach, 2014). Not only are new strategies, ideas, and ways of organisation needed to cope with societal challenges, but also co-creative partnerships demonstrating a sustainable relationship to make a transforming society happen. It is not about who drives, but finding a mutual drive (Mulder, 2014). The biggest challenge is to embrace a new collaborative attitude, a participatory approach, and have a proper infrastructure that supports this social fabric.

This new city making process is not only about bringing various disciplines together that address urban developments, but foremost to establish a collaborative effort of defining

a new way of working between professional designers, academics, policy makers, and citizens. Differently put, a shift from 'city management' to 'participatory city making'.

In the Participatory City Making project we enable the different city makers to collaboratively explore alternatives and to articulate their different viewpoints. Contemporary city making asks to go beyond disciplines, leveraging spatial, technical, and social disciplines through a trans-disciplinary approach, anticipating the unpredictable and rapidly changing futures and dealing with societal challenging. In this, the role of the objects (prototypes) moves from the object of design (elements of the hard city, such as buildings) towards facilitating values-oriented trans-disciplinary and participatory city making. The object of design is, consequently not the main focus anymore, the collaborative framing through participatory prototyping of what (object) to design has all eyes focused upon to develop more complete and integral viewpoints enabling designing for resilience.

The Participatory City Making approach connects current top-down initiatives with bottom up social innovation and uses a human-centred design perspective to guide the entire design process. Participatory city making processes seek to envision desirable futures, experiment with radical alternatives and work towards a process of collaborative experimentation, testing, redesign, and improvement related to sustainable urban environments. We address societal challenges and the corresponding complexity on three levels: the level of society itself, the level of the problems facing our society, and the level of dealing with these problems (Loorbach, 2010).

Such a participatory city making process envisioning liveable and sustainable urban environments goes far beyond simple, or even complex, product-service design; it has political, organizational, and even cultural implications. Next to that, solutions only work when they fit in with and arise from the everyday settings people live in. Therefore, the citizen's need is taken at the heart of the city making process, which is studied by using real-life context and the actual stakeholders involved.

Consequently, to emphasise the human scale, a Quadruple helix approach emphasising a human-centred focus is vital for engaging stakeholders from public sector, industry, education and research as well as citizens in a shared process of knowledge production in which they collaboratively envision desired future cities (Brodersen, Dindler, & Iversen, 2008; Carayannis & Campbell, 2012; van Waart, Mulder & de Bont, 2016).

Participatory City Making has its roots in participatory design and transition management, and uses best of both worlds to deal with the complexity of engaging all stakeholders and beneficiaries representing the quadruple helix are engaged throughout the city making process in co-creative practices, avoiding the dominant stake of todays' top-down service providers (e.g., government, large ICT companies). Interestingly, participatory design and transition management have many things in common; both disciplines are future-oriented, address people and institutions, and increasingly deal with uncertainty, fuzziness, complexity, as well as cultural issues. Moreover, participatory design and transition management negotiate the needs of different stakeholders, aiming at developing more complete and integral viewpoints. These disciplines however, act on a different (urban) scale.

Design principles for Transition Design

Elaborating upon these 'niche'- experiences and taking a transition perspective, we have come to formulate a number of (radical) design principles for a design transition towards a field of Transition Design. Of course, we cannot see such a transition of the design regime isolated from other societal changes. For example, the participatory turn and the maker movement have contributed largely to fact that 'everybody is a designer', as is the current debate on 21th century skills.

Below, we list a variety of design principles that need further action to transition 'Transition Design' as a field that embraces societal challenges. These, are, however, strongly related and intertwined and meant to contribute to the current debate, not to be exclusive:

- Everybody is a designer;
- and if not yet, everybody needs to have design skills.
- Rethinking design expertise.
- Design expertise need to address reflexivity and sensitivity as increasing important values
- Rethinking the object of design.
- The object of design is becoming less relevant and moves to the background, instead societal impact is key.

- Actions speak louder than words. It is no longer ‘what design can do’, but the value of design, as an evidence-based approach, needs to be evidenced by its impact.
- Objects are increasingly used as ‘boundary objects enabling collaborative framing.
- Rethinking design processes. Doing design as a collaborative process.
- Embracing societal challenges and corresponding complexity rather than ‘dealing with them’
- This complexity needs to be embraced on three levels: the level of society itself, the level of the problems facing our society, and the level of dealing with these problems.
- Societal challenges are ‘wicked problems’ and ask for multiple perspectives and trans-disciplinary approaches.
- Rethinking the design field
- Rather than expanding the design discipline along the path, design should be embedded in other disciplines.
- Rethinking the role of designers
- The designer is no longer the sole change agent.
- Designers are increasingly facilitators of social innovation.
- Designers are orchestrators of the multiple stakeholders and disciplines involved, as well as the relationships between people, products, services, and infrastructures.
- A shift from human-centred to citizen empowerment
- Citizens need to be in the heart of change: in order to drive social changes, empowerment is crucial; without willingness and personal commitment, challenges cannot be met.
- Design for resilience needs the development of more complete and integral viewpoints
- Different disciplinary (non-)designers need to team up as co-creative partnerships
- Co-creative partnerships demonstrating a sustainable relationship can make a transforming society happen.

- Collaboratively envisioning desirable futures, experiment with radical alternatives and work towards a process of collaborative experimentation, testing, redesign, and improvement related to sustainable urban environments.
- Rethink collaboration and ownership. Transitions are understood as long-term, complex, and non-linear processes of systemic change. Thus, designers need to handover the project and process.
- New forms of collective action (instead of design-driven).
- Societal challenges ask for a new design paradigm, which combines top-down management with bottom up social innovation.
- The biggest challenge is to embrace a new collaborative attitude, a participatory approach.
- It is not about who drives, but finding a mutual drive.
- Establish a collaborative effort of defining a new way of working between professional designers, academics, policy makers, and citizens.
- Design for the ripple effect: societal impact, systemic change, self-sustaining, and self-organisation.

In Conclusion

In this paper, we have elaborated upon transition management and used the multi-level perspective as a lens to illustrate the current design regime. Next, we introduced the research through design project Participatory City Making as a niche experiment that challenges current regimes. With the proposed approach of research through design and the design principles that we presented, we aim to contribute to the field of Transition Design both to make the different levels and Transition Design activities more explicit, but more importantly, to enhance the dialogue and discourse in Transition Design.
A better framing process, in combination with more systematically and strategically experimenting with new ways of thinking, organizing, and working in and with design, is an essential next step in addressing societal issues in the context of a sustainable future and the design of a resilient society.

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