

# WHY DESIGN MATTERS MORE TODAY THAN EVER BEFORE

HÅKAN EDEHOLT

OSLO SCHOOL OF ARCHITECTURE AND DESIGN

HAKAN.EDEHOLT@AHO.NO

## ABSTRACT

Sciences have certainly done their best to blow the whistle, warning for an escalating climate disaster. And today seemingly powerful leaders also start to talk boldly about the present need of profound and radical changes. Still, too little seems to change in the directions proposed and if it changes at all, these changes seem to be far too small, far too inconsistent and far too slow to meet the requirements specified by the scientific community. Why is this so? And what could design and design research possible do about it?

This explorative paper gives an outline of the matters underpinning two initiatives (D-side and Shaping Futures) taken at the Institute of design at the Oslo School of Architecture and Design (AHO) in Norway. It is an illustration on the importance of utilizing design competences in what sometimes is labelled Discursive Design by merging different design methods with Foresight and Radical Innovation. The intention with the paper is to call out for a long overdue debate about- and actions that urgently needs to be taken towards the seemingly pretentious, but still designerly, vision of a different, prosperous and 'better' future world.

## BACKGROUND

Today there is a growing number of very pessimistic future scenarios that are forecasting that ever-escalating 'Climate Wars' probably are the most likely among all possible outcomes (Dyer 2008, Welzer 2008). Notably, they are not pessimistic because – *technically speaking* – it would be impossible to avoid climate crisis or wars. They are pessimistic because it seems very unlikely that *in due time* we will be able to unleash ourselves from the path we currently follow. For instance, in Dyer's scenario – "Northern India, 2036" – he speculates how the already tense relation between India and Pakistan might escalate when the Indus river system fails to deliver enough water to Pakistan (Dyer, 2008, pp 113-23). In this scenario the processes of climate changes results in an unfortunate trajectory of events that eventually ends with a nuclear war no one really wants or gains from. According to another scenario – "the year of 2045" – Scandinavia will probably face corresponding challenges. According to Dyer this might happen when the EU collapses and reorganises itself in an attempt to protect the Northern part of Europe from the overwhelming migration pressure coming from both a very dry Mediterranean and from elsewhere (Ibid pp 1-2).

Even though these are projected scenarios, they still reveal one of the most perilous path dependency ever faced by humankind; we envisage here a predominant path that profoundly depends on a continuous economical growth that primarily is fuelled by lifestyles that seems to require an ever increased consumption of finite resources (Jackson, 2009). This is a path dependency that most experts claim we urgently need to overcome *on a massive global scale* in order to avoid a disastrous social situation that even might occur long before Climate Change makes certain areas completely uninhabitable.

## PRESENT APPROACH

Science and technology are often seen as both containing the reasons and the solutions to our societies' present predicaments. Knowledge and mindsets from these domains are therefore also predominant when we try to address the social and environmental problems Climate Change cause. But as the research director Knut H Alfsen (2009) at CICERO says; "This is well and good [...but...] what's sad and entirely wrong [in the 2010 Norwegian governmental budget] is that the investments in technological and scientific research not are followed up by corresponding investments in order to achieve a better understanding on how new technologies and changed behavior can become accepted and implemented in our societies".

Arguably, "understanding" is just one precondition for making the research community fit to address these urgent problems. This particular case obviously also require a *public* "understanding" of the needs of new behaviors and technologies. So in a less linear approach between *research and society*, we might *also* see it as a necessity to nurture a more mutual dialogue between these two domains. Elisabeth Gulbrandsen (2009) points us to Demos (2005) who claims that it rather is about: "moving away from models of prediction and control, which are in any case likely to be flummoxed by the unpredictability of innovation, towards a richer public discussion about the visions, ends and purposes of science. The aim is to broaden the kinds of social influence that shape science and technology". Andy Stirling (2008) follows suit by advocating the need of diversity in robust systems and to make distinctions between the different and specific requirements needed for 'opening up' vs. 'closing down' in social appraisal and justification of technology, i.e. between finding new alternatives vs. choosing the best alternative among those already available.

## SUGGESTED NEW APPROACH

With this backdrop this explorative paper suggests that we bring together knowledge from different design, scientific *and* public domains in order to develop means facilitating discourses that not only are reacting on scientific results as they are, but also are able to 'open up' new additional alternative solutions to some of the seemingly dead ends of the paths followed by our present societies. The actual approach we suggest is fairly humble and straightforward. In fact, we just suggests that we make a temporary deviation from the typical analytical and linear step-by-step production and implementation of scientific knowledge, by making a conscious leap from what we know today to where we possibly would like to envision us to be in the future. We are not talking about any grand utopias but rather "*Design[s] for Micro-Utopias; making the unthinkable*

*possible*" (Wood, 2007); i.e. several possible "micro-scenarios" that are presented in ways that are 'opening up' present discourses by inspiring, provoking and triggering an intense and rich public discourse about the opportunities inherent in the knowledge (creation) of science and technology.

Compared to normal analytical forecasting the intention is therefore to be slightly more detached from current beliefs and trends in both the scientific and the public realm. We call it Foresight, others have referred to this as doing back-casting (Burns, 1999) as it rather back-cast future visions than fore-cast present trends. Regardless the term used, the most salient feature of the process is probably that it's rather driven forward by alternative *conjectured solutions* than by strictly sticking to analyses of *identified problems*. This means that we actually talk about *complementing* the normal problem driven forecasting with a counter-force of solution driven back-casting. As a consequence, it means that we primarily need to integrate competencies and mindsets from two profoundly different domains of knowledge, ideal-typically described by the late Nobel laureate Herbert Simon (1969) who claims that "... natural sciences are concerned with *how things are* ... design, on the other hand, is concerned with *how things ought to be*..." (italics added).

However, those who see upstream design engagement as a means of just providing persuasive illustrations of solutions based on peoples' tacit wishes, in a manner resembling a marketing campaign, are missing the point. This is because inherently in a solution driven approach lies the ability to 'open up' the 'iron cage of technical rationality' (Weber, 1905) within which science and society otherwise might be stuck. Tim Jackson (2009) claims that progress crucially relies on the construction of *credible alternatives*. *Design cannot do that alone*, but has on the other hand a rather unique competence that seems fit to *complement* scientific knowledge and *credibility* by – *albeit in concert with science* – developing and bringing *alternatives* to our public agenda. Design's assumed strengths will therefore both be: (i) its potential ability to bridge justifications and appraisals of science, from science on one side, to society, on the other, *and* (ii) to move required changes beyond mere technology- and knowledge transfer by 'opening up' the 'space of solution' and spark the development of entirely new concepts and ideas.

The table below gives a very brief summary and overview, demonstrating why the approach is so utterly crucial and why design probably matters more today than ever:

Table 1: Some fundamental statements and assumptions underpinning our approach

	Statements	Assumed challenges
<b>Climate</b>	Climate Change <i>might quite soon</i> get out of control and thereby threaten the survival of human kind. Step-wise adjustments will in that case neither be sufficient nor, as it used to be, the safest approach.	In order to reduce the risk we promptly need to implement radical changes on a massive scale. But this has proved to be extremely hard to achieve, not least, in democratic countries, let alone on a global scale. So how to simplify this process without applying totalitarian measures?
<b>Global</b>	The climate change is global but also unevenly distributed in kind and time. Thus, it initially creates both losers and those who will gain. If not addressed, this trend of polarization will escalate.	Such change will cause an extreme stress on global solidarity and tax our ability to avoid Climate Wars. So how to promote and facilitate an ethical standard that seriously advocate global fairness instead of a regional self-protectionist attitude?
<b>Development</b>	The development path of the western world is inherently unsustainable. The global transfer of this path to e.g. China and India makes the time frame at hand for changing this path <i>much</i> shorter.	We urgently need to find an alternative path that is more equal and instantly rewarding for people, societies and the environment <i>as a whole</i> . So how to create real capabilities for people to flourish in less materialistic ways without creating socio-economic chaos?
<b>Time lag</b>	The inertia in the Climate System requires that actions need to be taken decades before the full effects can be experienced by those acting.	This makes it hard for people to realize the magnitude of possible effects due to behaviours employed today. So how are we to make both <i>future</i> opportunities and threats more concrete and intelligible already today?
<b>Science</b>	The scientific mindset has key words like knowledgeable, rigorous and analytical as their highly respected hallmarks. Typically, scientific works are driven by well-defined and rational problems.	However, other domains of justification, whose actions often are underpinned by entirely different and <i>seemingly</i> less rational sets of justification, are often detached. So how may we get these completely different domains to interact in a creative manner?
<b>Design</b>	Design has a more speculative mindset as its hallmark. Its methodologies are primarily driven by conjectured solutions that also try to address users' seemingly irrational behaviour.	Design has proved instrumentally effective to persuade consumers to consume more and more; arguably doing so it also facilitates unsustainable economical growth. So how are we to utilize similar measures to promote less and more sustainable consumption?

Our ultimate goal is to address these challenges with a long-term effort that utilize design and some of its tools to spur a creative public debate of our coming future, i.e. what sometimes is labelled 'Discursive Design'. Arguably, our approach can be considered as a Designerly Foresight where the innovation Process, both time- and solution-wise, is taken to the far end. This implies that we rather are talking about spectacular and radical alternatives to the solutions already existing today, than incrementally developed (or optimized) ones with only minor changes. However, in order to nurture debate, proposed solutions should still communicate and connect to issues that is relevant for people and our way of living today. So, with other words, we suggest to integrate Design, Foresight and Innovation because:

**Design** has a long tradition of discussing future use-situations by suggesting products that not yet exist. Arguably, this could even be considered as the core component of a designer's competence and toolbox. However, usually the timeframe is limited to the next product release.

**Foresights** have, as a contrast, a longer time-frame when discussing possible future scenarios. However these foresights are still often based on the path we seem to follow today (i.e. it's rather a forecast than foresight). In addition, the professions usually involved typically lack the designerly tools needed to make the scenarios experience- and graspable; and thereby they also become less debateable.

**Innovation** or radical change implies that we don't accept seemingly for given taken premises. Instead it means that we question these premises by investigating other, radically different, alternatives. However, experience shows that both companies and society in general have severe problems to embark on entirely new paths (Narula, 2002).

#### WORK DONE SO FAR

Obviously we –as a global society- urgently need to change the way we live, consumes products and natural sources. Therefore the integration of design, foresight and innovation seems, to us, utterly appropriate. At our institution (IDE/AHO) we therefore explore different

opportunities to do that within both teaching and research. In the master-course “Shaping Futures” architect and design students work with foresights that have a time-horizon far beyond the next product release. For example, this year the theme is Oslo 2100. Within that frame we expect the students to come up with creative foresights, scenarios and products based on a simple given forecast claiming that Oslo 2100 has, due to climate immigration, grown 20 times in population and that Norway (as everyone else) no more can rely on fossil resources like oil and natural gas. As an example, alternative views on mobility and the kind of transport systems it might involve, then become typical issues to scrutinize. Other interesting issues are to rethink the underlying assumptions for work and the tools it might require. In a society with an abundance of labour force the quality of work and the kind of social interaction it might facilitate might e.g. be much more important than the pure efficiency it gives each worker. This will of course influence how the tools we use are designed.

In research we have several projects running that scrutinize the conditions for innovation, or radical change. Especially the D-side project is occupied with new tools for making it easier for companies to take more radical leaps by developing and integrating different means of prototyping. We call it an Integrated Prototyping Environment (IPE); an environment that *integrate* physical and interactive prototypes with new technologies for scenario-telling.

However, we see these examples merely as initial steps in a direction we hope many design (research) environments will follow. In that effort we are open for both critique and suggestions of feasible kinds of cooperation within both education and research.

#### ACKNOWLEDGMENTS

To my colleagues and students in the master course ‘Shaping Futures’; thanks for all inspirational discussions. Special thanks to; Børre Skodvin who believed enough in it all to use the budget at the institute of Architecture to facilitate the course and to Bellona for inspirational inputs (e.g. Bellona, 2009). To my colleagues and partner companies in the research project D-side, thanks for the opportunities achieved to scrutinize and get ‘inside’, insights, concerning the bumpy road to real radical change. Special thanks to the Norwegian Research Council, who made the project possible. Finally, to Andrew Morrison and Martina Keitsch, thanks for your comments on earlier drafts concerning some of the topics I here briefly try to convey.

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