

# DESIGNING FOR SOCIETY

PRODUCTS AND SERVICES  
FOR A BETTER WORLD

Nynke Tromp and Paul Hekkert

B L O O M S B U R Y



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BLOOMSBURY



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Products and Services for a Better World

**NYNKE TROMP AND PAUL HEKKERT**

BLOOMSBURY VISUAL ARTS  
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# Preface

Typically, when designers see opportunities to improve people's lives, they feel the urge to take action. When they see parents struggling with a stroller, they design a better one; when they see people lost in airport terminals, they design better signage systems or develop new navigation apps; when they hear about emerging sensor technology, they design smart wearables; and when they understand the power of interactive storytelling, they design compelling video games. But how do they respond to the social issues confronting our societies? When they witness social tension, increasing polarization, gender inequality, the mistreatment of animals, the overconsumption or refugees on the run, do they also feel the same urge to act?

We certainly hope so. It is our conviction that designers are needed to solve the challenges our planet is facing – among others. This book is, first and foremost, a call to designers to get rid of their modesty, have the courage of their convictions and actually believe design can shape our society for the better. Fortunately, we see a growing number of designers around the world doing precisely this. At the same time, we ask designers to be modest about their impact. Designed interventions will not change everything, and any changes will not be immediate. We have to accept that often we can only make a minor difference. But just like one event can change the course of history, one modest intervention can have a massive impact. This is the beauty of design; this is the beauty of *social design*.

What do we mean when we say 'social design'? As our title suggests, social design for us means designing *for* society. Society is what we share – the places we meet, work, debate, laugh, learn and forget, and the systems that enable this. Whether in our streets, a village or city, the region of Catalonia, the country Myanmar or a refugee camp in Jordan, these are societies we have built together and where we feel at home. They are also places that offer us a certain sense of pride – at times. Most societies function

well, yet could do with considerable improvement. We see social design as a field that primarily aims to achieve social impact by creating interventions that foster community life in the long run, instead of solving people's everyday problems. This book is for those designers who dare to take this responsibility.

While researching and eventually writing this book, we experienced many moments of joy and excitement, and probably an equal number of moments of despair and frustration. We are aware, though, that both are needed to awaken the best of our abilities. But it goes without saying that the presence, collaboration and support of many people around us have been crucial to the successful completion of the process. We are grateful to them all – the critical, intelligent and lovely people who made the journey what it was.

We owe much to our fellow researchers at the Delft department of Industrial Design and ID Studiolab, for believing in our research and enabling it to grow. When we started in 2008, social design was a term that was barely being used. It was not always easy to find the (financial) resources for research in this emerging design field, and we are happy that we could count on their unconditional support.

Important drivers in and for our research have been – and still are – our students. We are lucky that so many of them have been willing to devote their time and energy to design projects of a social nature – and to sharpening our thinking. In particular, we are indebted to Floor Borgonjen, Annet Bruil, Fleur Derks, Sascha van Ginhoven, Maarten Heijltjes, Femke Heikamp, Floris van der Marel, Anna Peeters, Amine Rhord, Joep Serrarens, Inga Villerius, Lysanne van der Voort and Kaila Vreeken.

Some organizations shared our beliefs and created the perfect circumstances for us and our students to flourish, including the Dutch Police LAPV2010, housing corporation Estrade/Vestia, psychiatric institute Parnassia, foundation for animal welfare IFAW, foundation for social welfare Pulse, foundation What Design Can Do, the Dutch Kidney Foundation, foundation Nature & Environment, regional government province Overijssel and the Behavioural Insights Team (BIT) at the Dutch Ministry of Infrastructure and the Environment.

An important platform for our research was design agency Reframing Studio, including all its amazing employees. To Matthijs van Dijk and Gijs Ockeloën: it is incredible to see how you have built a design agency that is so relevant for today's society. We truly hope for more collaborations in which



we will explore new territories for design while improving the world at the same time.

We have learned a lot from the experts who advised us or allowed us to interview them, and we wish to mention some of them specifically. To Marco Steinberg, Thomas Prehn and Anna Noyons: the fact that you were willing to share your experiences as pioneers in social design has been vital to the quality of this book. To Ellen van der Werff: the fact that you were willing to explore the crossover between design and environmental psychology has been of great value to our work. There is no limit to our gratitude to all the scholars on whose ideas and findings this book relies. A prime example is Peter–Paul Verbeek, whose thoughts on the impact of technology have profoundly shaped our work. Our work is integrative by nature and builds on theories from the behavioural sciences, concepts from philosophy and approaches in systems theory. We can only but hope that scholars from these diverse fields consider our uptake of their work a valuable one.

Regarding the writing process, we wish to mention some people specifically for their help in finally getting the book out there. To Kaila Vreeken, Eefje Ernst and Kees Dorst: we are thankful that you were willing to read parts of the book and provide us with critical and constructive feedback on its content and title. To Stephane Vial: thank you for keeping our spirits high at a time it was most needed. We are incredibly grateful to the anonymous reviewers who clearly dedicated quality time to their reviews and provided us with critical, yet invaluable, feedback. To Rebecca Barden and Claire Constable at Bloomsbury: your patience and thoughtfulness during the editorial process have been much appreciated. To Joana Portnoy: your eye for detail when making the artwork, and especially your flexibility in the process of doing so, was pure bliss. And finally, we are endlessly indebted to Jianne Whelton, our editor and oracle: your thoroughness, intelligence and curiosity, and your incredible spirit are amazing. Thanks to you, the book has become something we feel even more proud of.

Needless to say, the process has taken its toll on our social life. Without the support and love of David, Mira, Darwin, Bodhi and Sies, this book would have been far too long.

Nynke and Paul

*Dear David, thanks for your belief and high-level feedback, at all times.*

*Let's write the next one together.*

Nynke, October 2017

# Foreword: The Art of Designing for Society

*Fools rush in where angels fear to tread.*

– ALEXANDER POPE, ‘AN ESSAY ON CRITICISM’ (1771)

**S**ocial design projects have a certain beauty to them. We would all like to be the one who effortlessly creates a masterful, well-considered intervention that leads to a deep, appropriate, clear and refreshing solution. Elegance ... where before there was only the stuckness and ugliness of a wicked problem.

When you are a student or professional and you want to improve the world, how do you do that?

You concentrate on a problem that speaks to you and motivates you, and allow yourself to be inspired and challenged, and then give it all you have. What you have to give are the abilities you have built up through experience – the skills, knowledge, methods and tools of your profession, as well as your personal strengths and qualities. That is quite a rich package. Inevitably, however, you will also bring your own assumptions about the world and the hidden limitations of your profession to the table. Design practice has arisen in a certain environment, and has been shaped to suit that environment. It is wise to remember that moving design (or any other profession) out of its native environment and into another one exposes it to possible failure in unexpected ways.

Over the last fifteen years, design has boldly moved away from its roots and has taken on the challenge to address the big problems facing society. Designers have rightly realized that they have a lot of unique practices to bring to bear in this space. But to be honest, this has proven to be only a qualified success. Some attempts to do ‘social design’ by directly applying

design practices to society are very naïve. At worst, they are disrespectful of the knowledge and work of the people that are already working in the social domain. Problems in the social domain are incredibly complex, in a way much more complex than the typical problems in many design fields. So you just can't move in and expect great results from applying your existing design practices without engaging with the experts on the ground. This is naïve, or even arrogant. Many of these unfortunate social design projects aren't the result of bad thinking or bad design, but if a project is based on assumptions that are wrong, nothing good will ever come of it. Social design seems to be particularly vulnerable to this mistake: in social design it is often difficult to establish who the (main) client is, so assumptions easily remain unchecked. This is not good, not good at all.

Is design overextending when it tries to move into the social realm? Should we just give up, and turn away?

No.

In this book, Nynke Tromp and Paul Hekkert present a middle way. They expand design into the social realm but are careful not to go too far beyond what design can do – and realistically deliver. They show that the art of social design is actually to stop and think, question, enquire. The design methods they present are helpful in just the right way: they do not tell you what to do, unthinkingly (as in a recipe), but they present steps that slow you down and ask you to be more thoughtful – methods are not meant to help you get to a solution more quickly, they are meant to slow you down and help you avoid jumping to conclusions.

The authors are prudent, pragmatic and sometimes a bit dry in their descriptions – but behind that academic distance the book is actually incredibly driven, wildly ambitious and at times utopian. This drive is carefully channelled in a direction where design can do good work, as demonstrated in the many examples. Social design's role is defined as a helper of mankind, as a servant of the common good. Through this humble and caring attitude, these projects are all the more effective and impactful.

The model and approaches presented here are evidence-based, solid and inspiring. Most importantly, the project examples show that these models and approaches can lead to real outcomes. We need this. In our times social design is not a choice, it is not a luxury. Our generation finds itself in a man-made world, where our actions have an overwhelming influence that cannot be denied or reversed. We have to shoulder this responsibility, and give it

everything we can. We need to design ourselves out of a mess and into a desirable future.

This book is highly timely. It is thoughtful, hands-on, inspiring and exciting. While teaching at design schools, I meet many highly motivated students who really want to use their newly acquired design skills for the common good. This book helps them to do so safely.

Kees Dorst

Sydney, Eora Nation, Australia



## Introduction:

### Why Do We Need This Book?

#### **The crisis of politics**

**O**ur globalized world is encountering problems on an unprecedented scale. Many of the problems we face as societies actually extend beyond the borders of our nations. Phenomena such as terrorism, climate change, immigration, cybercrime, poverty or malnutrition can no longer be truly understood without considering the complex sociotechnical systems that support our way of living. For instance, the famine that is yet again becoming a pressing problem in particular parts of Africa cannot be addressed as a resource issue alone. It is the result of a complex web of interrelated factors that operate beyond commonly known agricultural conditions. Famine is a consequence of trade dependencies driving food distribution, factors that shape consumption patterns in wealthy countries and internal political factors (and power struggles) in the areas suffering from food scarcity.<sup>1</sup> The simple fact that our most pressing issues are complex, dynamic and increasingly networked<sup>2</sup> reveals that the power politicians in one country have to counteract them – and foster a better future for us all – is shrinking.

It is widely acknowledged that to contend with any of the pressing issues of our time – be it climate change or intercultural tension – we have to substantially adapt our lifestyles. We have to adopt behaviours that may be considered unappealing in our current context. We have to give up our cars,

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simply because a world with billions of people owning and using cars is unsustainable. And we have to learn how to connect with people from different cultural backgrounds, simply because we have evolved into multicultural societies over time. These are no matters of debate in terms of necessity, but the question remains how to get there.

In democratic countries, the repertoire of measures a politician has to foster such behavioural change is deliberately quite limited. A key characteristic of a democracy is that the power of governance is restricted to prevent abuse or tyranny. In fact, having the freedom to live the life one desires is, in theory, one of the main benefits of living in a democracy. Naturally, governments can effectively pass laws and regulations that set boundaries and curb unacceptable behaviours. Although such measures are (sometimes) needed, they are also the kinds of drastic measures that can lead to large-scale resistance. At best governments can provide subsidies, offer incentives or initiate public schemes. But it goes without saying that such measures are not enough to fundamentally shift how we treat each other and our planet.

Let's take a look at a beautiful example of a campaign to fight discrimination and sexism against women. In this campaign by the United Nations, women revealed effectively just how omnipresent gender inequality still is in many countries. Posters and videos featured a portrait of a woman with a Google search bar over her mouth. The bar shows the words 'women shouldn't', 'women cannot', 'women should', 'women need to' and reveals how Google autocompletes the sentence based on previous searches in her country. The result is striking (see [Plate 1](#)). 'Women shouldn't vote.' 'Women need to be put in their place.' 'Women should be slaves.' Clearly, women are still being marginalized around the world – even in countries that take pride in guaranteeing equal rights. In terms of the publicity it generated, the campaign was a tremendous success. It went viral, and the hashtag #womenshould became a trending topic on Twitter and other social media, raising an immense amount of awareness. Nevertheless, the extent to which the campaign actually had any real impact on discriminatory behaviour is difficult to determine. Generally, campaigns of this nature generate little behavioural change. Information-intensive campaigns may effectively lead to attitude change, but do not necessarily have the power to spur behaviour change (Gerritsen & Van der Noort, 2004; Rijnja, Seydel, & Zuure, 2009). Clearly, we need something to support a behavioural change – even when our beliefs, values and attitudes may already be aligned with it. In fact, to

adequately counteract the problems of our time, we need interventions that help us actually adopt the behaviours that lead us towards a more sustainable and ethically just future.

Many designers have noticed the limitations of our governments and taken them as a call to action. In fact, those limitations have opened up a whole new territory for design. Many new design practices seek societal improvement. Not only are the efforts of these practitioners being recognized by the design community (for instance the design platform *Core77* hands out a ‘Design for Social Impact’ award), they are actively encouraged. An outstanding example is the momentum created by the annual ‘What Design Can Do’ conference. It has established an online platform for its community to share social design activities and motivate the design community to use their skills to combat specific social and global issues. In 2015, it initiated a design challenge that invited designers (or anyone interested) to use their creativity to fight the refugee crisis happening across the globe ([Plate 2](#)). It received 631 entries from seventy different countries, and the organization provided practical and financial support to help realize the five ‘winning’ ideas. Whether driven by moral consciousness or opportunism – or a bit of both – the many entries to the challenge reveal that designers do not shy away from tackling the world’s biggest problems.

In need of radical change, many governments and public sector bodies are opening their doors to creatives – and not only to develop new solutions. Many organizations in the public sector are becoming increasingly eager to learn about the ways designers think and go about their work. And to answer the general need to increase the public sector’s capacity to innovate, many organizations now offer design education to public sector professionals. For example, the renowned UK innovation foundation Nesta is launching its ‘i-school’ to strengthen the innovation capacity within governments. Design thinking is becoming an important asset when dealing with complex and social issues.

## **Designers are chasing their own tails**

That designers wish to direct their efforts towards the benefit of society is nothing but laudable. And so we are making a plea for designers to focus on societal issues. Yet very few designers recognize the fact that they are actually fighting the problems their discipline helped to create in the first

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place – and keeps creating. This may sound disturbing, but the designer's share of the responsibility for the social issues we face is indisputable. In designing our man-made world, we have designed our problems too.

Nowadays, no one would contest the environmental implications of design; they are easy to see. Designers have created the cars of people's dreams, and now they have to design us right out of those cars, to save us from the environmental destruction they cause! However, design has played a role in the 'softer' social issues of our time as well.

To illustrate this, let's consider how a set of mundane designs – buildings, smartphone applications and grocery services – may have created and heightened intercultural tensions. These intercultural tensions are the same ones targeted as the source of today's many riots. In fact, many societies close their doors to immigrants, and even refugees, due to these tensions. This reveals how design actually contributed to the intercultural tensions that many politicians desperately seek to minimize nowadays.

In many of our largest cities, people from various backgrounds live together side by side. The clash of norms and values that can arise when differing religions and cultures coexist in the same neighbourhood can easily lead to stereotyping and gross misinterpretations of people's behaviour. And we all know how this can get out of hand – racial profiling, excessive police violence and even terrorist attacks are all too common consequences. For many countries, 'integration' has therefore become a serious focal point in national politics: how can we ensure cohesion in multicultural neighbourhoods and prevent segregation? One of the answers appears to be that, for integration to happen at all, people have to meet each other. They have to experience for themselves that their differences are not a barrier to humane interaction. This change in social interaction is therefore at the core of many integration policies. Such meetings do not necessarily have to be geared towards creating close friendships; regular, mundane interactions can themselves lead to less tension – or prevent it from rising in the first place – since they increase familiarity among neighbours.

Facilitating the kind of day-to-day interactions that increase familiarity seems like a fairly moderate goal. But let's analyse how designers – of all kinds, those who give form to the ideas of politicians and planners – have actually complicated the issue over the last several decades, without ever meaning to.

First of all, developers and urban planners have certainly not contributed to

more social small talk between neighbours over the years. Housing the growing number of people in metropolitan cities has required a more optimal use of space. Gradually, front gardens have become side roads, cycle paths or even part of widened main roads. Living in a city has begun to imply living in an immense tower or a block of flats. In these structures, even though living side by side, people have little opportunity to say more than just 'hi'. Blocks and towers offer little in the way of 'hybrid zones' – blended public and private spaces (Van Ulden, Heussen, & Van der Ham, 2015) – where people might pitch their foldable chair on a sunny day, or place some flowers and spend time outside to carefully nurture them. Frequent gardeners interact significantly more with their neighbours (Kullberg, 2016). In addition, there's the phenomenon of the privatization of public spaces, and the neoliberal 'gated community' where people live on private roads or estates, behind gates and security systems.

Secondly, digital technology and the services it enables have removed any banal reason we might have to knock on the neighbour's door. After all, that cup of sugar can be bought at the 7/11 around the corner – which is open all night. Even when we are laid up for a longer period of time, we do not have to rely on a good relationship with our neighbours for daily support. Grocery stores can deliver groceries to our front doors, and we can easily find, book and pay someone to walk our dogs online.

Thirdly, we see no need to relate to our neighbours as friends anymore, like we did in the old days before the internet. Friends who lived far away were considered 'out of sight, out of mind', and the daily grind was shared with those who lived next door, or across the street. Today, however, maintaining close relationships with our friends (people who share our ideas and have similar backgrounds) is easy, even if they move to a different country. We can use instant messaging apps, email, social media platforms and video chat to stay in touch. And there are excellent, easily affordable transportation options like ride-sharing, Uber, bullet trains and low-cost flights if we want to catch up in person.

And finally, local specialty shops – which used to be neighbourhood meeting places – are gradually vanishing, unable to compete with larger chains selling similar goods at lower prices in shopping malls or via the internet. Therefore, the number of places where accidental, intercultural meetings might transpire is gradually decreasing. So not only have we designed an environment in which there is little need to build relationships



with our neighbours, we have also decreased the likelihood of bumping into them accidentally.

Naturally, these conditions (that designers have helped to shape) cannot be considered the cause of intercultural tensions. But they reveal the ways our physical and virtual environment affects our social interactions and society at large, and thereby contribute to or counteract certain problematic developments. As such, it reveals a paradox of contemporary design. We propagate our design thinking and methodologies to those who fight social issues on the one hand, while on the other, we keep designing our society in ways that actually sustain these exact same social issues and thus confound their resolution. Without doubt, it would be more efficient if we could better anticipate the social implications of our designs. In other words, it is time to better gear the influence of our designed environment towards improving society.

## **This book and how to read it**

This book is about designing the connection between the things we use on a daily basis and the society in which we live. Every designed product, service and system impacts society at large, which means that all these artefacts combined shape a great deal of our society. Given this, the design of the physical and virtual environment needs to be included in the equation when seeking ways to counter the social issues we face. Today's societies require design practices that prioritize societal values, rather than merely addressing economic, production or consumer demands.

This book is a call for a society-centred design practice – one that takes the conflicts that may arise between individual preferences now and the welfare of future generations into account; one that extends our capacity to understand interdependencies inherent to living in groups, and our ability to weigh concerns and values based on scientific and philosophical theories of well-being and the good life. It is a plea for argumentation and sensitivity in design, more than it is for the democratization of design. We may even say it calls for designers who have the courage to be unpopular in a world where populism seems to be gaining traction.

But the book certainly intends to move beyond a call. It offers a set of frameworks and methodological steps, illustrated through a variety of examples, to support designers who wish to turn this call to action into a

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viable and joyful practice.

The first three chapters will make sure you understand the essence of *Designing for Society – Products and Services for a Better World*. After we have positioned ourselves within the expanding territory of social design in [Chapter 1](#), we move on in [Chapter 2](#) to discuss the social design practice we envision and wish to foster with this book. Both chapters frame the remainder of the book; they help you to recognize and understand our specific take on social design. [Chapter 3](#) offers readers a sneak peek into the thinking that is needed to design the social implications of products and services. It shows how to define the design outcome based on collective concerns rather than those of the user and offers three main strategies to deal with potential conflicts between the two. Products and services are a means of making socially beneficial behaviours more meaningful to people – this is the key message here and the principal tenet of this book.

[Chapters 4](#) and [5](#) will deepen your understanding of this principle and reveal why design practitioners ought to consider societal benefit as extensively as they do user benefit. In [Chapter 4](#) we will take a closer look at the *artefact* – the ‘thing being designed’ – and reveal the complex web of consequences each artefact contributes to. Then we will turn to the complex nature of social issues in [Chapter 5](#), and reveal how to understand the subtle forces of products and services that favour the problematic behaviours core to these issues. As such, these two chapters offer readers a chance to carefully examine the relationships between the products and services we use on a daily basis and the society in which we live.

From [Chapter 6](#) onwards, the book turns into a pragmatic resource intended to help you design the relationships between artefacts and society at large. [Chapter 6](#) sets out the methodology – the step-by-step line of reasoning that moves from well-intentioned impact on society to viable products and services. In [Chapter 7](#), our line of argumentation is explained through a design project that we discuss in-depth. In [Chapter 8](#), we take the time to discuss techniques that, in themselves, are nothing revolutionary – but we think designers should employ them when assessing whether a design will actually achieve the proclaimed betterment for society. In the final chapter we interview three forerunners of designing for society, which offers readers the chance to see the kinds of design practices this approach contributes to.

# Notes

- 1 In reference to Yuval Norah Harrari's book *Homo Deus* (2016).
- 2 We have borrowed these terms from Kees Dorst, who explains the specific value of design thinking when dealing with such issues in his book *Frame Innovation* (2015).

# 1

## Building a Viable Society:

### Our Positioning within the Field of Social Design

**W**e believe that the expertise developed within the design discipline offers unique value to the process of seeking solutions for the complex challenges societies face today. And we believe there is a need to revise our practice of creating products, services and systems when we wish to create a more socially just and sustainable world. These positions are, in themselves, not new – they drive many of today’s design thinkers, scholars and practitioners. But to what extent and how these concerns affect their actual design practice can vary greatly. The design approach cultivated in this book falls into the realm of what is loosely called ‘social design’, a field to which many of these thinkers, scholars and practitioners belong – sometimes because they explicitly claim to be, and sometimes because others see them as important figures in this field.

The term ‘social design’ has been around for a while. Many refer to it as a particular branch of design. But when people say they study or practise social design, what they mean still remains unclear. This murkiness about its definition has not obstructed the rapid expansion we have seen in the field. An increasing number of design students, design schools, practitioners and

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scholars use the term to explain what they do. In fact, its conceptual ambiguity may be precisely the reason why social design has become so popular around the world: it allows for multiple interpretations and practices to develop in parallel. As a result, what social design means at the Politecnico di Milano (Polytechnic University of Milan) may have little to do with the work done at the Designing Out Crime centre in Sydney. And research in social design at Carnegie Mellon may share little theoretical ground with the social design work executed in the favelas of Brazil.

Since you have shown enough interest in this book to begin reading it, we suppose that you have come across the notion of social design before. You probably have a vague idea of what social design is, some hunch or maybe more of a hope for what it can do. It might also be the case that you have accurate knowledge of a particular view on the field, and maybe you even have professional experience in social design practice. Either way, to be able to understand our take on social design, first we have to find common ground together. This chapter is aimed at doing just that. It is intended to clarify the field of social design and bring order to the various ways in which it has manifested in designers' and design scholars' thinking, writings and actual practice. Not only will this chapter give you an overview of the field of social design, it will also serve to more clearly articulate how this book offers a unique contribution to it.

## **An historical account of social design**

There is an important turn in design history that is often noted as the start of social design: the publication of Victor Papanek's book *Design for the Real World: Human Ecology and Social Change*. The first step towards defining this evolving field is to understand how the industrial design discipline has changed in relation to this book.

All of design practice is continuously evolving. The image of a designer artfully crafting an object for somebody else single-handedly is a nostalgic view – it may have been accurate in the past, but today such practices have all but ceased to exist. The design practice of today exists within a complex web of relationships with a global outlook. Design thinkers, usability experts, trend watchers, marketers, programmers, design engineers, technicians, assemblers, distributors, suppliers and salespeople – to name just a few – all have a share in deciding what should be designed and how to get it 'out

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there’. One of the major developments that stimulated this networked and distributed design cycle was the rise of mass production in the late nineteenth century. Rapid scaling of production paved the way for a whole new paradigm in design. More products could be produced for less money, meaning more convenience and comfort could be offered to more people. After the Second World War, this form of design really took off.

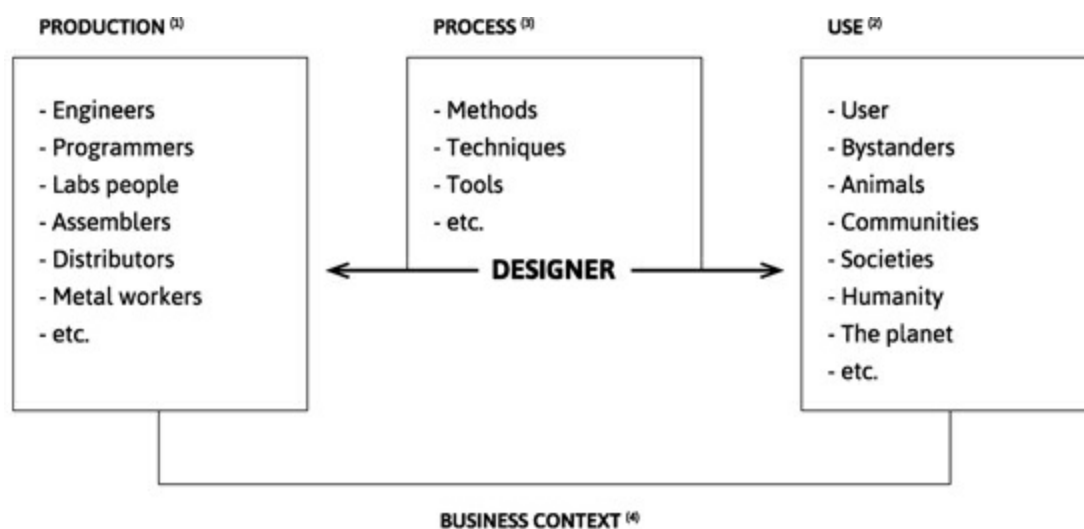
In his book (first published in 1971), Papanek warns against the consequences of commercializing design. He expresses his concerns about designers ‘confecting trivial “toys for adults”’ that people do not need, the depletion of resources their production would lead to and the piles of junk that would rise around the globe when such useless products are thrown away. Papanek saw how influential commercial design practice would become, and how much it would impact society at large as a result of the sheer magnitude of its scale and reach. As countermovement, he called upon designers to move away from commercial design, and instead be responsive to people’s ‘true needs’ (p. x). At the time, the book garnered more objection than support from Papanek’s peers, but today it has become a key reference work in the design field that has greatly inspired what we now call ‘sustainable design’, ‘humanitarian design’ and yes, ‘social design’.

What Papanek was attempting to advance was a design practice driven by ethical considerations. In this, Papanek was not the first. Design schools like Bauhaus and innovators like Buckminster Fuller had also proposed using design as a means to create a better world – a fact that served to stimulate ideological and ethical considerations in practice. But instead of optimizing commercial design in the ethical sense, or repositioning design as a local, artisanal practice, *Design for the Real World* pled for a radical new kind of design practice. Admittedly though, Papanek gave very little guidance as to what this practice could or should look like. So just how much the new forms of design practice that developed from that point onwards can really be attributed to Papanek’s thinking remains debatable. Yet it is fair to say his book continues to be an important inspiration for many. Is it possible to track the ways that design has become more socially responsible or ethically just, starting from the time of the book’s publication?

Before we can do so, it is important to recall that the design profession was primarily focused on ‘the object’ at the time. The outcomes of design activity were tangible – things you could drop on the floor. Artefacts like that – be they chairs, washing machines, cupboards, pencils or typewriters – were clear

nodes between two systems: the production system that fabricated the product and the system of use in which the thing had a meaning. At that time, these two systems existed independently from one another, and it was the designer who had to mediate between them. Design became the pumping heart of capitalism devoted to making commodities that could be sold. Capitalism worked with ‘markets’ and success was measured through sales numbers. But as soon as the product was sold, its system of use began to evolve – a system in which the product was related to by its owner, created desire in others, mediated behaviours via its use and co-shaped cultures. Many industrial products changed societies in ways we can only recognize in hindsight. Many of these changes happened the way Papanek predicted. His book was a call to take the societal impact of design seriously and to account for it within professional design practice.

Figure 1.1 is a schematic depiction of industrial design practice in the 1970s. In it, the designer – armed with tools and methods – mediates between the system of production and the system of use. When creatively and conceptually giving form to an artefact<sup>1</sup>, the designer must somehow align his knowledge of both systems. In the 1970s, the job was primarily guided by commercial principles, which meant that – to put it bluntly – designers were geared to understand the system of production in terms of efficiency and cost-reduction, and the system of use in terms of market opportunities and sales. The main focus for commercial design practice has been, and is, individual needs and desires.



**FIGURE 1.1** Schematic representation of the industrial design practice in the 1970s.



So how exactly have industrial design practices become more socially responsible, and when did this happen? In hindsight, and to the best of our knowledge, we see four pathways that have been taken by the design scholars and practitioners of the discipline. Each pathway focuses on one of the four building blocks of industrial design practice: (1) the production system, (2) the system of use, (3) the design process or (4) the business context. Each of these components of industrial design practice has undergone changes intended to improve it in ethical terms. However, some developments have been more explicitly inspired by the work of Papanek than others. In the coming sections, we will discuss the development of industrial design practice along these four lines. Since it is our aim to give an overview, we only discuss these developments in general terms and highlight those we see as essential.

## ***Responsible production***

One could say that the practice of responsible production is guided by a question: how to account for the ways that production impacts people and the planet ([Plates 3–5](#))?

What we see here is an effort to make production more sustainable and socially equitable, minimize the detrimental effects of production principles and direct product production towards improving people's lives. Emphasis has been placed on the systemic nature of production, meaning that its separate stages need to be considered as a whole to lower its carbon footprint. Nowadays, design students are taught how to carry out 'lifecycle analyses' to minimize the environmental and social impact of a product throughout its life – from production to use to disposal. This entails making conscious choices about materials, production facilities, assembly, distribution channels and disposal options (for example, see Giudice, La Rosa, & Risitano, 2006). This development has been bolstered in recent years by the arrival of the 'cradle-to-cradle' approach, introduced by Michael Braungart and William McDonough (2002), which promotes using production materials and techniques holistically, in ways that both integrate and imitate natural processes. Striving for cradle-to-cradle design prevents harmful environmental burdens and can even provide economic growth to people who need it the most, they explain. And indeed, there are an increasing number of brands producing goods in tandem with specific groups in order to transform

and empower the role they play in society. For example, Indian women from marginalized communities who take part in design production initiatives can work towards financial independence, and prison inmates who learn a trade can more easily enter the workforce after their release.<sup>2</sup>

The social and environmental impact made by the system of production is clearly being addressed in the aforementioned methods. But the practice of responsible production has asked very little from the user – or ‘consumer’ in the consumerist paradigm. At best, consumers learn how their purchases might (positively) affect communities and the planet from the explicit labelling on responsible products. This means consumers can make better, more responsible choices. However, as of now, advances in thinking about creating and sustaining a circular economy explain more dramatic changes on the consumption side. Based on new types of business models, people are encouraged to share products or repair them in case of failure instead of demanding new ones as service (Bocken et al., 2016). This shows that while responsible production practices may have started off by focusing mainly on the system of production, scholars and practitioners have gradually expanded their focus to include the system of use – not merely as a consequence of the production system where people adopt (or do not adopt) responsibly produced products, but more and more as a system that has potential to be the driver for more sustainable production principles.

## ***Anticipating the social consequences of use***

This development within industrial design practice is guided by a different question: how can a design prevent the undesired effects of its use, or how can we create ‘better’ effects for people and the planet (Plates 6–8)?

Today’s design practitioners are (mostly) well aware of the myriad, complex ways that products affect their users. The choices a designer makes about the form a particular product takes determine how people understand it and make use of it. Design considers how safely a product can be used, the kinds of emotions it can elicit and, ultimately, users’ overall experiences when interacting with it (e.g. Schifferstein & Hekkert, 2008). Anticipating users’ responses to products and services is fundamental in user-centred design, the prevailing paradigm in design today.

Although perhaps not in direct reference to Papanek, designers and especially design scholars are gradually expanding their scope by considering

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the longer-term consequences of product use. First of all, scholars no longer solely focus on the moment of use; researchers are looking at how product use may affect people's subsequent actions, the life decisions they make and sustain and, ultimately, the impact use can have on users' long-term well-being. For instance, user experience researchers are looking beyond hedonic tone to see how an artefact can foster long-term happiness for users instead (for example, see Desmet & Pohlmeier, 2013; Hassenzahl, 2010). And the field of behaviour change is especially expanding its reach in the healthcare domain to improve people's well-being in the long run. Products and services are being developed and tested that help people comply with necessary medical routines (for example, see De Oliveira, Cherubini, & Oliver, 2010), alter their lifestyles due to chronic illness (for example, see Klasjna et al., 2009), cope with bereavement (for example, see Massimi & Baecker, 2011) or recover from mental illnesses (for example, see Jongeneel et al., 2018). An important reference is the work of B.J. Fogg, who introduced the approach of using persuasive technology to design for behaviour change (Fogg, 2003).

Secondly, there are a growing variety of perspectives the designer can take to consider the consequences of use. Beyond creating user value, designers are considering how artefact use might affect others and the environment. Many will be familiar with design approaches that seek to prevent undesired consequences. However, some design scholars have begun to look at ways to anticipate desirable effects from a social and environmental perspective. For instance, Kristina Niedderer (2007) explores artefact characteristics that evoke mindful social interactions. And there are many scholars seeking ways to elicit more sustainable behaviours through design (for example, see Lockton et al., 2008). Some are looking for triggers that activate responsible waste disposal behaviour (for example, see De Kort, McCalley, & Midden, 2008), prompt people to waste less food (for example, see Lim et al., 2017) or help people make more sustainable transportation choices (for example, see Laschke et al., 2014).

Thirdly, and more recently, design scholars have begun to look for ways they can account for social consequences that arise over time. For instance, practice-oriented design – which is based on Elizabeth Shove and her colleagues' (2007) social practice theory – addresses the interconnectivity of design and cultural factors, and how this can shape behaviour over time (see also Pierce et al., 2013). Although the scope of design is gradually being widened to consider the social and longer-term consequences of artefact use,

such exploration is still at the formative stage and remains largely an academic endeavour.

## ***Democratization of the design process***

A further responsible turn within design practice is guided by another question: how can those affected by a design outcome have a say in what is being produced in the first place ([Plates 9–11](#))?

Papanek argued that everybody could design. After the Second World War, a *do-it-yourself* (DIY) mentality developed in various countries. The British government was already encouraging people to do the things that skilled labourers had been doing before the war started. Books like *Man About the House* were written to help the general public participate in finishing and building houses around the country (Hunot, 1946). At the same time, but with a different impetus, the DIY-hype in the United States took off. War had taught American men and women new technical skills and given them the confidence to build their domestic lives as they wished (Goldstein, 1998). Atkinson (2006) explains that whether one engages in DIY because of financial reasons or for self-expression, all forms act as agents of democratization by ‘giving people independence and self-reliance [and] freedom from professional help’. Democratic principles and freedom are key values that drive much of the rethinking of design practice and the role of the designer today. The origin of what is now known as *participatory design* started off in Norway in the 1970s, when workers from the Iron and Metal Union were given a say in how computers should be integrated into the workplace (Schuler & Namioka, 1993). The project became an inspiration for other Scandinavian countries at the time, and international recognition soon followed.

Participatory design is put forward as an important process in social design. In this practice, the central idea is that input from people potentially affected by a future design should be included as part of the design process. The designer is expected to facilitate this process. Some say that the focus of participatory design should be on the vibrant dialogues between groups with opposing matters of concern – what Erling Björgvinsson and his colleagues refer to as ‘agonistic struggles’ (2012, p. 129) – rather than achieving general consensus. Others, such as Ezio Manzini (2014a), argue that expert designers can scale-up and improve novel forms of collaborative social services

developed with grass-roots communities from the bottom-up. Considered at a larger scale, many forms of ‘open design’ explore the different ways technology can be used to enable diverse stakeholders to collaborate in the design process, including activities that embrace mass creativity and collective intelligence (for example, see Cruickshank, 2016).<sup>3</sup> All these forms of design activities – from DIY to open design – have fostered reflections on the exact role of the professional designer in a democratized design space. Although this role can still vary, certainly in practice, the idea of the modest designer who ‘humbly’ (Bailey, 2014, p. 2) facilitates rather than determines design activity seems to be a shared ideal.

## ***Shifting away from the commercial context***

Papanek explicitly called for designers to move away from commercial business, and this may have motivated some designers to work with NGOs rather than support commercial interests. Papanek’s notion of designing for real needs inspired designers’ efforts in developing countries to help those who struggle with basic needs like health, food and shelter. Moving away from the commercial sector implies that the design economy needs to rely on different principles. However, this appeared difficult in a world dominated by market thinking (Whiteley, 1993). Victor and Sylvia Margolin (2002) attempted to build a ‘social model’ for design, arguing that the market model and the social model were not necessarily binary opposites but rather the extremes at two ends of a continuum; within a social model of design, the interests of people who do not have enough money to consume – and therefore are not part of the market – are also considered.

In 2008, the Rockefeller Foundation asked IDEO to explore what kinds of value design could bring to the not-for-profit sector, which led to the publication of *Design for Social Impact: How-To Guide* (Brown et al., 2008). One of the central questions driving this publication was how designers could collaborate with organizations that are ‘highly resource constrained’. In an attempt to answer this, the guide discusses several essential working principles, tips and recommended activities. Beyond the non-profit sector, designers have also begun to direct their attention towards improving services in the public sector. In 2006, the ‘do tank’ called RED, part of the UK charity known as Design Council, published a concise report called *Transformation Design* (Burns et al., 2006). In it, the authors articulate the value that design

thinking and expertise can bring to the process of developing better public services. Despite operating in the public sector, where profit is not a goal and budgets may be limited, economic concerns are not central to this kind of professional practice. While the manifestation of social design in a capitalist paradigm is relevant to date (Thorpe & Gamman, 2011), design practice has managed to operate in the public sector in various ways. Today design labs exist within governments to improve policymaking (e.g. MindLab, Denmark), design research centres installed in universities collaborate with public bodies to combat contemporary social issues in practice (e.g. Designing Out Crime, Australia) and independent design consultancies are being hired to improve public services (e.g. Ideo.org, United States). There are a wide array of public sector projects and settings that can and do benefit from the skills of design professionals, including local community-building and community-shaping efforts (e.g. Project H, United States), safe spaces for research and experimentation with new and radical ideas (e.g. Kennisland, the Netherlands), real-time service improvements (e.g. Nesta, UK) and traditional engineering (e.g. Engineers without Borders, Australia) ([Plates 12–14](#)).

These four pathways in the development of design practice have resulted in multiple new fields. Contemporary designers do *political design*, *design activism*, *social innovation*, *public design*, *eco-design*, *positive design*, *community design*, *socially responsible/responsive design*, *inclusive design*, *base of the pyramid design* and *transformation design*. They can engage in *co-design*, *participatory design*, *design activism*, or *DIY design*. They also design out crime, for sustainability, for social impact, for well-being, for all, for behavioural change, for health, for policy and for happiness, to name but a few. All these fields reflect attempts to integrate ethical considerations and social values into the design discipline. They all seek to generate more than just commercial profit. And most of them genuinely use design for what Papanek referred to as real needs. One may wonder, then, just what makes social design a unique discipline?

We have shown you four ways that industrial design practice has evolved to become more socially responsible. However, not all of the newly developed forms of design we have seen can be classified as social design. So how do these four vectors of development relate to the contemporary field of social design?

## A map of contemporary social design

In the last decade or so, the term ‘social design’ has begun to receive renewed and increasing attention – possibly instigated by the 2007 financial crisis (Koskinen & Hush, 2016). Nevertheless, scholars agree that the term ‘social design’ is ‘uncomfortable’ (Julier et al., 2016) and conceptually still undefined (Chen et al., 2016). The first structured attempt to get a grip on the field of social design was work done by Leah Armstrong and her colleagues (Armstrong et al., 2014). After interviewing forty-four figures whom they considered affiliated with social design – based on secondary research in practice and academia – they developed a more specific description of the concept. They define social design as a ‘set of concepts and activities that exist across many fields of application’, but where the discriminating factor is that they are ‘enacted within participatory approaches to researching, generating and realising new ways to make change happen towards collective and social ends’ (p. 6).

In reflecting upon the publications in the 2016 *International Journal of Design* special issue on social design, Dun-Sheng Chen and his colleagues argue that the way scholars interpret the ‘social’ of social design can be traced back to various social theories, including action research, social innovation, philosophy and sociology. But they also admit that explicit borders of the field are hard to define (Chen et al., 2016). What seems to be the one and only common denominator, however, is that social design is practised *with* people rather than *for* them. The participatory process, which characterizes the democratization of design, seems a logical fit with ambitions of designers who seek to foster collective goals. But even when many see participatory processes as indisputably linked to realizing social change through design, these alone do not define it. After all, participatory approaches also take place in the design of consumer goods and within commercial contexts. And no one would label such design activities as social. Also, and as we will defend, designers can do social design without directly involving end users in the process. So how can we define what makes a design activity a social design activity?

To better determine the defining characteristic(s) of social design, we turn to the state of the field in design. Who are the key figures in the contemporary field of social design, where do they operate and what do they do? In this section, we map out the geography of social design activity across



the globe. We have limited this part of our discussion to people who are regarded as important to the field, and whose work has been explicitly associated with the term ‘social design’<sup>4</sup> – whether the individuals themselves claim to be social designers or not. We will introduce you to a variety of forms that social design can take in academia and practice, rather than provide a comprehensive picture of the field.

## ***The United Kingdom***

The UK is one of the countries that are explicitly active in the field of social design. Often-mentioned academic players here are Adam Thorpe and Lorraine Gamman (2011) who established the Design against Crime programme at Central Saint Martins and developed *socially responsive design* through case-based research. With the intention to clarify the social design field and set the agenda for future research, Guy Julier and Lucy Kimbell (Armstrong et al., 2014; Julier et al., 2016) have been part of two large-scale research projects funded by the Arts and Humanities Research Council. In the professional design field, the Design Council plays a crucial role by fostering the strategic power of design in the public sector. And, finally, design foundation Nesta develops ‘powerful new ideas’ to deal with ‘the big challenges of our time’; its work is often cited within the field. Nesta’s chief executive, Geoff Mulgan, co-authored an important report on social innovation (2007), in which he and his colleagues define it as ‘new ideas that work to meet pressing unmet needs and improve peoples’ lives’ (p. 7).

What we see here are three somewhat different manifestations of social design: one where the classic object of design – the product – is studied and explored for its potential to contribute to social goals like safety (Gamman, Thorpe, & Willcocks, 2004); one where design offers a more refreshing, powerful and strategic approach to public sector service creation (Burns et al., 2006; Mulgan et al., 2007); and one where design can be used to explore and prototype new social futures, mainly to foster discussions of where to go and how to get there, rather than realize an immediate impact (Julier et al., 2016).

## ***Australia***

When it comes to social design, research into *frame innovation* by Kees Dorst is often considered relevant. Based on decades of research into design practice, Dorst articulates how framing and reframing are key to creative practice and essential to developing novel solutions (Dorst, 2015). In a recent publication, Dorst and his colleagues from the Designing Out Crime research centre show how the frame creation model has successfully been applied in a range of design projects directed at the common good (Dorst et al., 2016). Even more recently, the centre has introduced a graduate certificate programme for public servants who wish to learn more about frame innovation and integrate this learning into the real issues they encounter, fostering public sector innovation at large.

Although approaches similar to the ones we saw in the UK exist in Australia, the frame innovation approach stands out in terms of its uniqueness. A designer's core ability to reframe a problem is transferred to the public sector context by means of a step-by-step process. The new frame finds its origin in a value or concern that multiple stakeholders share, and which appears fruitful for design.

## ***Denmark***

Practices in Denmark are often referenced as prime examples of how design is entering the realm of policymaking and transforming the way public servants work. The central actor is MindLab – a cross-governmental innovation lab. Their objective is to help decision makers and employees at three ministries and the municipality of Copenhagen ‘view their efforts from the outside-in, see them from a citizen's perspective’. One important figure is Christian Bason, who led MindLab for seven years and is now CEO of the Danish Design Center. Bason argues that the public sector should develop an innovation ecosystem in order to better align governmental efforts with motivations, resources and activities of people and business (Bason, 2010). Recently, Bason defended his PhD thesis entitled *Leading Public Design: How Managers Engage with Design to Transform Public Governance* (2017).

Although many design agencies work on improving public services and thus affect public sector thinking and operations, the Danish brand of public sector innovation plays out at a different level. It seeks to transform the governance culture and is convinced that better public services will arise

from that.

## ***Finland***

From 2009 to 2013, the Helsinki Design Lab – initiated by Helsinki’s innovation fund Sitra – performed practical research on strategic design. The notion that problems have become more networked and have increased in complexity fostered the idea to bring designers in at the strategic level of large organizations and governments. In their approach, they underscore three design capabilities as particularly valuable at the strategic level: *integration*, *visualization* and *stewardship*. Integration refers to designers’ ability to integrate multiple perspectives into a holistic view of a problem or opportunity. Visualization refers to the designer’s ability to creatively communicate complex and contradictory relationships that cannot be represented by numbers alone. And stewardship means that designers are well equipped to navigate good ideas to the stage where they can be implemented with the integrity of their innovative ideas intact. The Helsinki Design Lab has explored and showcased their way of working through various projects in the domains of education, ageing and sustainability in the built environment.

The lab no longer exists, but its website<sup>5</sup> remains accessible. It offers a range of outstanding publications on systemic design, plus case studies, step-by-step guidance on how to create and implement systemic change, and principles for successful creative collaboration between experts with different knowledge backgrounds. In one of its publications, it compares six case studies from different parts of the world, and uses the work of IDEO, MindLab and Nesta (among others) to illustrate the qualities of good stewardship.

## ***Italy***

Ezio Manzini has played an important role in the development of design for social innovation, as a scholar and active member of the DESIS (Design for Social Innovation and Sustainability) network. Much of his work focuses on cases that reveal how local communities have found ways of living that are more socially resilient and sustainable (see Meroni, 2007). Manzini

articulates how design can support global transformations towards more sustainable futures. His idea of this future world is one of resilient communities and sustainable systems. The sociotechnical systems moving in that direction are characterized by four essential qualities: they are small, local, open and connected. This so-called ‘cosmopolitan localism’ does not attempt to forecast what the future will be; it is intended to act as a motivating vision for designers (2007, 2013). Although Manzini (2014a, b) recognizes the great varieties of design activities within design for social innovation – from incremental to radical changes, and from top-down to bottom-up initiatives – his take on this is to foster collaborations between professional designers and lead users to establish collaborative services. He explains how designers can scale-up and improve novel forms of collaborative social services developed from the bottom-up by grass-roots communities (for examples of this, see Jégou & Manzini, 2008).

Although Manzini articulates clearly that designers should work towards resilient and sustainable systems that foster general long-term well-being, his ideas direct designers towards keeping things small and staying local (2007): collaborate with inventive communities and expand from there. Based on the notion that humanity needs to organize itself very differently, working with local communities provides the freedom to develop radical alternatives that would run quickly ashore within the public sector context.

## ***The United States***

Along similar lines, and in pursuit of the same ‘cosmopolitan localism’, the Carnegie Mellon School of Design established *transition design*: research and practice into design-led societal transitions (Irwin et al., 2015). They position themselves as an emergent discipline, alongside the established service design discipline and the developing discipline of social innovation. In their view, the next step for design is not to challenge current or existing socioeconomic and political paradigms but to start designing radical new ones. One of the origins of transition design is a movement called ‘Transition Towns’. In this movement, led by Hopkins (2008), communities develop self-sustaining food and energy systems, alternative currencies and new local businesses. Similar to Manzini, the tenets of transition design uphold the ideas that design should be local and change should happen in people’s everyday lives and worlds. But in contrast to Manzini, transition designers

argue that designers need to build visions of the future that are ‘motivating visions as well as visions that can serve as measures against which to evaluate design moves, but visions that are also modifiable according to the changing situation’ (citation of Tonkinwise in Irwin et al., 2015). In addition, transition designers need to build on theories of change and commit themselves to the long-term journey that may be needed to make change happen.

Transition design takes an explicit stance in terms of the role the designer plays in future vision building. Designers are directed towards modest foci points for design interference. The idea is that designers develop (or adopt) a theory or vision of change beforehand that is adaptable to a changing future course. This new design ideology appears to offer promising new design practices for the future but, so far, has only shown academic reach.

Now that we have an overview of the contemporary field of social design, is there a way to define it in a way that includes each of its manifestations?

## **Social design: Its objective and approaches**

We have seen how social design has grown historically and manifested geographically, yet we still lack the criteria to properly define it and distinguish it from other design activities. Most designers develop products that will not harm users – respecting user safety is common practice. Without a doubt, we cannot call ‘a concern for safety’ social designing. But what about developing a sugar meter with and for diabetes patients for a large pharmaceutical concern? Or designing a private jet for the prime minister? Or enabling local people in Africa to design and produce bespoke vases made from local cork? And what about if a resident starts a neighbourhood gardening club? Why would these be examples of social design, or why not? Can we somehow specify the defining characteristics of (a) social design?

To better describe and study (and, therefore, understand) design, Kees Dorst distinguishes the four elements that comprise any design activity: the *object* – the brief as well as the eventual design; the *actors* – the design team/organization; the *process* – the structure and dynamics of design activity and the *context* – anything that impacts the act of designing (Dorst, 2008). When we review contemporary social design, we see that many design efforts take place in the context of the public sector. Perhaps the context

could be the distinctive feature that characterizes social design. After all, the public sector is inherently concerned with the public and acts in its interest. Also, the sector is governed by politicians who are elected by the public – at least in democratic countries – which means jobs in this sector are the embodiment of democratic principles. Nonetheless, two arguments make it difficult to define social design as only relevant to the public sector. First of all, there are convincing manifestations of social design that happen outside the public sector. For instance, social ventures – for example NGOs, not-for-profits and socially minded start-ups – operate in the private sector while still explicitly pursuing social value. Second, the example of the design of a private jet for the prime minister paid for by tax money is, strictly speaking, ‘design within the public sector’. But we would all probably agree that designing for the benefit of a single public servant is not compatible with our notion of social design.

Could the participatory design process be the defining characteristic of social design? Is participatory design social design? Although many would say that collaboration with users and/or stakeholders is a crucial component of social design projects, co-creation is equally employed in projects we would not consider social in nature. For instance, sports giant Nike gains a competitive advantage, in part, by co-creating with its customers (Ramaswamy, 2008). So while much social design has a participatory component, not all participatory design is social. This means that a participatory process alone does not define social design.

Could the designer be the discriminating factor in social design? Can the designer be the one to define a practice as social? After all, many social design activities are driven by designers’ personal motivations. But again, this line of reasoning falls short. When a designer feels socially responsible, but does not significantly adapt the object, the process or the context accordingly, that designer is no different from others who try to do good through industrial design (a notion cultivated by the Bauhaus school of thought, for example). By that definition, *any* kind of design is – and has always been – social.

It is fair to state that the critical element for a design activity to be labelled social design is the nature of its object – or better, that it has a *beneficial social objective*. Christian Bason speaks of the ‘social good’ (2014), Kees Dorst and his colleagues of the ‘common good’ (2016) and Victor Margolin of designing for a ‘good society’ (2015). Naturally, designers should always

be careful not to cause harm to society, but that is not social design. We engage in social design *for the good of society*, to *improve society*. This is what unites all contemporary social design. Needless to say, this object, or rather objective, can be specified and approached in numerous ways.

## ***A variety of approaches***

How can designers conceptualize a ‘social improvement’, and how can they argue that the process they use facilitates it? An analysis of the contemporary field helped us to identify three characteristic approaches to social designing.

### **1 Social design improves the conditions of people who are underrepresented.**

The first approach takes the traditional user-centred design approach and applies it to issues that have social relevance. How can design improve the life of homeless people? How can design reduce illiteracy? How can people living in poverty be supported by design? The goal would be to develop products, services and systems that meet the needs of people who are disadvantaged in our societies. By focusing on the powerless in our societies, and improving their conditions and their ability to meet life’s demands, we improve society as a whole. The actual structure of this kind of design activity would not differentiate it much from a typical user-centred design practice. And it would not have to originate within a specific context per se: private and public sector contexts are equally appropriate. Of course, public sector design projects could be formulated to impart strategic impact beyond the project outcome. When working for clients like governments, non-profits and NGOs, the design project could provide a platform from which to inject design thinking into the public body’s overall mode of operation, which could lead to wider societal gains in the long run. However, this often is a pleasant side effect rather than the main objective of this type of design activity.

‘We have been successful when we have improved the lives of underserved people’.

### **2 Social design improves the performance of public sector bodies**



The second approach does explicitly direct its efforts to the strategic goal of helping organizations concerned with societal objectives to rethink their issues and work towards being more human-centred. In doing so, designers or design teams may ‘use’ a design project as a proxy to involve various stakeholders along the way, and teach them design thinking tips and tricks. In addition, designers can run workshops and training sessions to teach design thinking specifically. The goal is to transform the political heart of our societies from within, and thus instil a way of working that embodies and more effectively achieves societal goals. Logically, the assumption of this design approach is that it will ultimately lead to better policies and improved public services. Yet these projects are, strictly speaking, more stakeholder-centred than user-centred in the way they set-up, execute and measure success.

‘We have been successful when our stakeholders were able to reframe the issue and build their capacity to implement the necessary solutions’.

### **3 Social design builds social capital**

The third approach focuses on local communities’ well-being and resilience when faced with social and environmental challenges. Design efforts benefit the community as a whole, rather than specific groups of individuals (in contrast to the first approach), and are directly embedded in a community, rather than fostered and powered by government or public sector initiatives. In this approach, designers work *with* the community rather than *for* the community. The goal is not necessarily defined by measurable outcomes, but is articulated in terms of strengthening social capital and rethinking the ways people deal with each other and their (local) environment. Environmental and social issues are important drivers for this design approach, and the participatory design process is introduced as a response that empowers people to redesign better alternatives for communal life themselves.

‘We have been successful when our efforts have helped the community to thrive’.

All three approaches have the potential to contribute to societal improvement, and we have seen very interesting, solid examples of this. Nonetheless, when

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an objective is implicitly embedded in the approach, it weakens the claim that the outcome actually leads to a better society, and does not help designers to ‘remember’ this is the ultimate aim, let alone ‘ensure’ it. This means that the design objective can easily shift away from social benefit. The focal point of a project can then easily be determined by any of the stakeholders involved. It is not always correct to assume that stakeholders will look beyond their individual concerns, nor that a compromise between multiple stakeholders inherently reflects what is best for all of us in the long run. It is also possible for a project’s objective to zoom in excessively on a specific target group or area, which can easily lead to designing ‘patches’ to existing structures that may actually serve to keep a genuinely immoral societal system in place. Without a systemic approach, design interventions might solve issues locally but cause harm elsewhere. Hence, should we dare to discuss the goal to improve society more explicitly, and debate the ways it drives our methodological approaches and shapes our measurements for success, it would be extremely beneficial to the field.

## **Our positioning**

We first discussed four historical developments as the potential forerunners of social design. We then discussed the state of the field of social design, and specified that a beneficial social objective is its defining characteristic. If we now bring these perspectives together, what do we see? And how does this help to pinpoint our contribution to the field?

### ***The design outcome as the means to improve society***

Much contemporary social design revolves around the tools and methods of design. Often, ‘design thinking’ is said to offer unique value in the fight to rectify social inequalities and contend with the problems that we face collectively. But given the substantial ways that designed products and services shape societies, and the behaviour of the people in them, design outcomes may be the key to improving social dynamics and creating equitable social infrastructures. In this book, we focus specifically on this aspect of design, and raise the question: how can we anticipate the social consequences of products and services in order to drive societal progress?<sup>6</sup>

## ***A society-centred design approach***

Although it is the defining characteristic of social design, very few explicitly articulate what societal improvement actually means, let alone assess design efforts accordingly. Here, we stumble upon the Achilles heel of social design. After all, having good intentions and finding new solutions to wicked social problems does not imply societal improvement. In our view, a design whose objective is social – and thus seeks to improve society as a whole – requires designers to explicitly articulate what is of benefit to society as a whole and in the long run. It requires imagining a better future, rather than an improved today. In short, improving society by design requires a society-centred design approach.

Now we move on to examine what a society-centred practice might look like.

### **Notes**

- 1 Since design can refer to both the practice of designing and the eventual outcome of the design process, we wish to use a clearer term to refer to the latter. Hence, we often talk about artefacts. Artefacts refer to anything that needs to be given form to. In practice this often means: products, services, platforms and systems. ‘Usually understood to refer to a material object, artefact can also refer to designed spaces, images, software, systems, or environments where these act as coherent units’ (Erlhoff & Marshall, 2008, p. 28).
- 2 For example, Mata Traders – [matatraders.com](http://matatraders.com) or Stripes – [stripesclothing.com](http://stripesclothing.com)
- 3 Another development that concerns the combination of producers and users of design is that design outcomes are increasingly *intangible* artefacts that continue to evolve after they have been launched or otherwise implemented. Many artefacts nowadays require updates, and thus have the potential to adapt their features and extend potential uses and applications in response to user feedback and explicit user input.
- 4 We have excluded schools and organizations like the Stanford d.school, design agency IDEO and the Helen Hamlyn Centre from our overview, because although they may be active in the field of social design (at least to some extent), they position themselves in broader and more general design terms.
- 5 <http://www.helsinkidesignlab.org/>
- 6 This means our work can be positioned in the second development of industrial design practice as depicted in [Figure 1.1](#): anticipating the social consequences of use.

# 2

## Effect-driven Design:

### A Scientific and Moral Design Practice

**I**n this book, we focus specifically on the design itself – the product, service or product-service system – as the means through which social change can be made manifest. In our introduction we explained and illustrated the importance of recognizing the ways that the things we design affect how we live together – they shape society. This phenomenon, which manifests in people’s lifeworlds<sup>1</sup> when they interact with what we design, is the focus of this book. How can we account for the influence that products and services exert such that they contribute to a viable society now, and in the future?

The consequence of this focus is a social design methodology that helps designers target a design’s specific characteristics. The steps and techniques we offer in this book will help you develop and assess artefacts that are deliberately intended to produce societal impact. This means these techniques will not direct whom to involve in the design process or at what time; they will not indicate sources of ideation nor will they help structuring implementation. For such aspects of design, other supporting tools and techniques should be consulted.

In this chapter, we articulate the rationale of our society-centred design approach. This foundation forms the basis for the remainder of the book. It explains our views on design and the role of a designer, and shapes the contours of the practice we envision. How to go about this process in detail will be discussed later in the book.

## Effect-driven design

What we propose is a purely effect-driven approach. This means the societal improvement you wish to contribute to should define the outcome you design – not vice versa. This approach is contrary to many responsible design approaches (see, for example, constructive technology assessment, Schot, 1992; value-sensitive design, Friedman, Kahn, & Borning, 2002; an approach to ‘moralize’ technology, Verbeek, 2011; practice-based design, Shove, Watson, Hand, & Ingram, 2007) in which the means – often a technology or a predefined outcome – is taken as the starting point for exploring and redirecting consequential effects.

Social design is design that exists to improve society *above all else*. It is not about designs that exist for other reasons and do not harm or benefit society as a bonus. In other words, societal improvement is the justification for the existence – the *raison d’être* – of social designs. This view implies that design activity starts out by investigating and building that *raison d’être* (Hekkert & Van Dijk, 2011). Fundamentally questioning why a product or service has a reason to exist will not only avoid the production of redundant or meaningless designs, it also helps designers reveal the factors influencing the issue at hand and establish new frames to counteract it (Dorst, 2015; Mulgan, 2014).

A large part of our approach is taken up with exploring, understanding and ultimately deciding the social impact that you wish to achieve before devising any kind of design intervention. Searching for an intervention while the only known quantity is the value it should generate requires ‘abductive’ reasoning. Although abduction is key to any design process, we will show in the coming pages how it applies to social design. On top of that, we make the case that any design judgements you make during this process should be backed up by scientific evidence and applied ethics.

## Reasoning creatively from effect to means: Reframing

Being effect-driven means one has to reason from end to means, rather than from means to end (Hekkert & Van Dijk, 2011). It requires a shift away from thinking about *what* to design, and towards the *value* the design will achieve – and how it will achieve that. This kind of creative thinking is also described as ‘reframing’ (Dorst, 2015; Paton & Dorst, 2011).

To illustrate the value of reframing, let us consider the damage to public and private property known as vandalism. Some of the most popular targets for this kind of behaviour are the bus shelters spread around town. These shelters offer people a place to sit, hang out, smoke and even ‘own’ at night-time. Designed to protect bus passengers from wind and rain, shelters are often constructed out of glass. And when the nightly escapades of some people get out of hand, they may lead to broken windows and shattered glass around the place. The glass has to be cleared away by public servants and replaced by the company who provides the shelters.

To improve its services to municipalities, companies that design and sell these shelters logically make efforts to improve their designs in order to prevent damage. In doing so, their natural tendency is to develop sturdier shelters – as most would assume. How can we redesign the shelter so it can resist people’s attempts to ruin it? In line with this, Dutch municipality Binnenmaas publicly and proudly introduced new, so-called ‘hufferproof’ shelters in 2007, and placed several of them in its villages.<sup>2</sup> Instead of being an effective deterrent, the shelters felt like an invitation. Two weeks after the introduction of their ‘invincible’ shelters, one of them was set on fire, and eventually burned to the ground (Plate 15).

The typical engineering response for a problem like this is to implement some kind of countermeasure – a problem-solving approach characterized by a ‘repair mindset’. Although the problem might be solved, identifying effective countermeasures (as a method) does not entail the ‘why’ of the problem: why do people – especially young people – vandalize public (or private) property? What is it about street furniture that makes people want to destroy it? In this case, perhaps a shelter affords specific actions that vandals are able to perceive. Research into the ‘why’ in the hufferproof case would likely have revealed that police call this type of destruction ‘vandalism in

search of prestige’. The perpetrators feel the need to show off to others, and one of the ways to actually do this is by daring, and being tough enough, to ruin the windows of a bus shelter – or even destroy it entirely. So by introducing a bus shelter that they claim to be ‘hufferproof’, the municipality provided an even more challenging target for this kind of social behaviour. Finding answers to the ‘why’ questions is essential if we want to find effective ways to address complex issues.

To reverse that behavioural motivation, designers of public shelters have not only sought to address the need to make them sturdier – obviously – they have also experimented with giving the shelters a *vulnerable* appearance. The idea is that when the shelter’s design looks like it would be no challenge to ruin, it loses its attractiveness as a prop for an aggressive display of dominance. After all, there is no point showing off by harming something that seems to offer little resistance. Wouldn’t such a strategy not only allow for more elegant designs within the urban landscape, but also be more effective?

## ***Behaviour is key***

That example shows the importance of expanding the frame with which one aims to understand the problem. In this case, it illustrates how expanding the problem frame from a design problem to a behavioural problem opens up a range of alternative opportunities for a designer to tackle the problem *through* an artefact. This is the first piece of advice we wish to give: in order to generate social impact, start thinking in terms of behaviours and behavioural changes. In the end, it is behaviour that creates relationships, and through behaviour change relationships can change.

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**I**n this book, when we use the word ‘behaviour’, we mean anything that people do that affects others and/or the planet. This means that ‘looking away’ is behaviour to us, while ‘thinking badly about someone’ is not. It means that ‘switching energy provider’ is behaviour, while ‘becoming aware of climate change’ is not. Behaviour is not restricted to physical acts, it may include the choices we make to stop doing something or not do anything at all.

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So only when behaviours are facilitated, fostered, changed or diminished does a design contribute to social change. Only when people put things into practice in the world do they change the world – for better or worse. For instance, if I hate my neighbour, that hatred only has social implications when it leads to gossiping about her, excluding her from neighbourhood activities or even arguing with her. Even so, a design intended to help me ‘appreciate’ my neighbour only becomes socially meaningful when it indeed changes my actions – when I begin saying ‘hello’, inviting her over for tea, keeping her in the loop about any gatherings I might have or lowering the volume when she tells me it is keeping her awake. Cognition, emotion, attitudes and beliefs all play an important role in human behaviour and actions. When a design only changes these internal structures, and does not lead to real changes in external behaviour, the design hasn’t actually created social change. After all, it is our actions that connect us to others. It is in our acts that we affect the life of other human beings, and as such, behaviours are an important lever for societal transformation (Banerjee, 2014).

On top of this, focusing on behavioural change – whether in the form of clicking a button or helping out a friend – has additional benefits.

- **Behaviour (change) can be measured.**

Although it may very well be that behavioural change takes time, a focus on behaviour allows for a structured evaluation of social interventions.

We will elaborately discuss this in [Chapter 8](#).

- **Behaviour enables us to envisage different social realities.**

Social phenomena are often abstract phenomena. What does ‘cohesion’ look like? And ‘safety’ sounds nice, but what does it actually mean?

Behaviour allows us to link abstract descriptions of social phenomena to the tangibility of our everyday world. It enables designers to envision how their designs could actually contribute.

- **Behaviour can be directly facilitated or even required by a design.**

In contrast to other behaviour-advocating interventions like campaigns, schemes and subsidies, designs can actually enable, stimulate or even force behavioural changes. Products and services are, literally, ‘actionable’; they afford actions and can be perceived as such (Gibson, 1979).

## ***Systems thinking***



The classic tendency in the behavioural sciences is to interpret problem behaviour using analytic reasoning – you deduce behavioural effects from characteristics afforded by a designed artefact. This type of thinking is unmistakably of great importance to later stages of design practice. But, as we have seen, to get beyond the problem we need to think differently; we need synthetic or holistic reasoning (Ackoff, 1994; Tromp & Hekkert, 2012).

Let us reflect on the bus shelter example to see how adopting analytic and holistic reasoning creates a different understanding of the behavioural problem.

Analytic reasoning implies understanding a problem as the result of the interaction of its components. In this case, the destructive behaviour would be understood as resulting from the interaction between the young people (and their motivations) and the bus shelter (and its construction). It would also imply that the cause of the problem can be found in problematic characteristics of one or both of these components, and hence the solution; the people are the problem and should change, or the shelters are the problem and should change. The question becomes: how can we make vandals more responsible citizens? And how can we make shelters sturdier? This cause–effect thinking underlying analytic reasoning leads to interventions that may solve simple engineering problems but fall short when problems increase in complexity and involve human beings.

Instead, applying holistic reasoning means understanding that the problem is a component of a larger system, and seeking to understand the multitude of relationships between it and the other components in that system (Ackoff, 1994). When it comes to behaviour, we cannot understand what intervention will be most effective without understanding the context that co-shapes that behaviour. Behaviour does not arise from the characteristics of a design intervention and the motivation of the actors alone. There are numerous factors that shape what we do. Quick fixes, like sturdier shelters, that are developed *independently* from the context will often not work. In fact, they may even lead to larger problems in the long run (Chriss, 2015).

Systems thinking sees the relationship between the intervention and desired behavioural change as not the kind where ‘cause leads to effect’, but as a kind of nonlinear relationship among various causes and effects (Sweeney & Sterman, 2000), or as a circular cycle of cause-effect-cause (Richmond, 1994). This thinking reflects holistic reasoning. Seeing and thinking as such can help designers reframe a problem substantially: it can

help us detect the wide range of factors that contribute to an issue and, so too, a number of opportunities for intervention. For instance, in understanding why young people damage bus shelters, we might come to understand that many of them are simply bored. In that case, acts of vandalism can be framed as ways of killing time and vandals as thrill seekers. Now this alone could already lead to different designs that put an end to vandalism.

But we could even go one step further and ask ourselves *why* these kids are bored. Why do they spend so much time in the streets ‘doing nothing’? When seeking an answer to this question, we may find that in municipalities with high rates of vandalism, schools have high dropout rates too. The association of these two ideas might lead some to think that the core of the problem lies elsewhere than the sites where the vandalism is taking place. The solution to the problem, then, might not even be to design a different bus shelter, but rather to redesign the local education programmes. Systems thinking helps to see the relationship between multiple domains, and reveals that the place to intervene may not be the place where the problem appears. Of course, how this turns out in practice depends on the clients’ willingness to look beyond their personal domains and expand their circle of influence. After all, the government’s urban planning department might have little to do with its education department. But whether this restrains the range of possible interventions, and how exactly, is an important discussion to have when doing social design.

In [Chapters 6](#) and [7](#) we will explain in detail how you can use systems thinking to develop a wider perspective of the context in which a behaviour arises. We will offer a methodology to dismantle (and select!) the various influential factors that affect behaviour. The key takeaway from this very brief introduction is this: when you wish to design social impact effectively and appropriately, the act of discerning where best to intervene is a creative process, and a design process.

## **Judging the effect and the means: An academic mindset**

The social ends of social design are often implicit and rarely questioned, as [Chapter 1](#) explained. In our view, this is a weakness of social design today, and something we intend to improve. Could design teams somehow define

what ‘societal improvement’ means in their project, and support it with objectively valid arguments? It is our aim to offer a comprehensive design approach to those who wish to find an answer to this question in an as scientifically sound and ethically just manner as possible, without compromising the valuable characteristics of creative practice.

## ***Grounding decisions***

To be able to reframe a given issue – such as animal welfare, or the refugee crisis – the first thing to do is freely explore the problem space, and not just analyse it. The role of intuition is important here; sometimes you will move into territory that may not be logical at first, but could become relevant later. Any design methodology should allow for implicit processes such as these, even if they seem irrational from the outside.

That being said, many decisions in a design process require rational thought and sound argumentation since they carry much weight in terms of affecting people and planet. Our first claim is that decisions about what kind of behavioural change to pursue, and how, should be made explicitly, so they can be questioned and tested. Our second claim is that they should be substantiated by scientific arguments as far as possible. Making the right design decisions is key to good design performance.

Let us reflect upon a profession in which judgement is, without doubt, the key to proper performance. Let’s see how judges deal with making decisions.

In his recent novel, *The Children Act* (2014), English author Ian McEwan describes a legal case in which a judge has to decide whether a hospital can pursue the medical treatment of a seventeen-year-old patient against his and his parents’ wishes. The teenage boy, Adam, is suffering from acute leukaemia and needs an immediate blood transfusion to have a fair chance of recovery. The family members, however, are devoted Jehovah’s Witnesses and their religion is fiercely against blood transfusion. Blood is ‘the essence of what’s human’, and ‘mixing your own blood with the blood of an animal or another human being is pollution, contamination. It’s the rejection of the Creator’s wonderful gift’, declares the boy’s father at the trial (pp. 75–76). After listening to all the arguments, and visiting Adam in the hospital, Judge Fiona Maye comes to a decision that same evening.

This court takes no view on the afterlife, which in any event A will

discover, or fail to discover, for himself one day. Meanwhile, assuming a good recovery, his welfare is better served by his love of poetry, by his newly found passion for the violin, by the exercise of his lively intelligence and the expressions of a playful, affectionate nature, and by all of life and love that lie ahead of him. In short, I find that A, his parents and the elders of the church have made a decision which is hostile to A's welfare, which is the court's paramount consideration. He must be protected from such a decision. He must be protected from his religion and from himself. (p. 122)

In this verdict, Judge Maye uses the argument that welfare comes before religious and personal convictions. As a judge, she claims to know what conditions will more likely lead to welfare and long-term well-being. Despite the ethical complexity of this fictional case, recent discoveries in the field of positive psychology – the psychology of happiness and well-being – suggest she probably made the right decision. There is now a wealth of knowledge and insight that demonstrates what constitutes a 'good life', both one's personal life and our communal life (Clarke et al., 2018). Many studies exist that have sought to understand what makes people and communities resilient, happy and thriving. According to some, such studies offer a scientific basis for moral reasoning (Harris, 2011). In our view, science provides the best basis for deciding which societal improvements are worth striving for.

We encourage social designers to be science-driven in their work. This means we encourage design teams to ensure that their judgements about the effect the design will have are informed by relevant scientific knowledge. Depending on the domain, this might be knowledge about education, crime, health and well-being, social cohesion or animal welfare, for example. Arriving at this understanding requires a study of the literature from various disciplines and interviews with a range of experts from diverse fields such as psychology, sociology, political science, environmental studies and so on. Seeking a great variety of scientific insights allows the design team to generate a holistic view of the phenomenon at hand. Relying on their excellent integrative thinking skills, designers can integrate multiple – sometimes seemingly opposing – theories we often hold regarding worldly phenomena. This is an extremely valuable quality in the realm of social issues. How can we build on analytic expert knowledge to understand phenomena holistically? And how can this help to find new ways to affect these phenomena – and change them for the better?

The basic idea of science is that theories are solid if they have not been falsified; it is within the processes involved in the scientific method that they can be overthrown or deemed valid. As such, using the scientific method will produce a foundational reference for the good life that is well considered and validated, yet not dogmatic. It is precisely this grounding that designers need when offering products and services that impact our behaviour, explicitly or implicitly – and hence our collective well-being, now and in the future.<sup>3</sup>

Yet science is rarely conclusive. Science cannot provide a definitive answer to questions of societal improvement. On the contrary, science often shows the many perspectives one can take to a particular phenomenon. Take our meat consumption, for example. From an animal welfare point of view, we should obviously eat no meat; or, if we feel we have to, eat organic meat from animals that enjoyed a relatively acceptable life and a humane death. The perspective of sustainability may not coincide here – organic meat production is, for various reasons, related to toxic waste and scarcity of land, which are not sustainable consequences. Even though the two perspectives clash, each of them is strongly supported by scientific studies that have independently gained some understanding of what's best for the quality of human life – or the life of animals bred for human consumption. So even though science helps us defend *why* something is worth pursuing, science does not state *what* is best to pursue.

When it comes to judging which societal effects to pursue when there are conflicting arguments, there are several ways for design teams to take a moral stance. First of all, we see a role for the individual designer here. In our view, we can leave it up to designers and let their personal moral compass guide them when making this decision, as long as it is taken intentionally and explicitly. In our view, being granted such responsibility does not only lead to intrinsic responsibility for the world around the designer, it also increases his or her engagement within the process and can lead to more authentic designs (Hekkert & Van Dijk, 2011). Second, designers may rely on moral or ideological guidelines here. Many philosophers have devoted their intellect to understanding what constitutes the good life, and many contemporary philosophers are looking at the consequences of technology on the future. Such reflections and theories can function as well-thought-through bases for moral decisions in design. And finally, designers can opt for designs that explicitly leave moral choices up to people to decide. It can be a deliberate design decision not to choose, but rather allow for a range of behaviours that

all contribute to (a better) society one way or another. As we will see, this is what one of the design students did in a case study we will discuss in [Chapter 7](#).

This lengthy argument for a scientific grounding of the societal and behavioural change to aim for should not be seen as a firm dismissal of stakeholder or even everyday user involvement in the design process. In the previous chapter, we noted that this is common practice in many variants of social design. What we do argue is that such involvement should be handled with care, and foremost be seen as a helpful starting point that prompts further scientific grounding for the project. Design decisions based on experiential knowledge of various stakeholders *alone* – who may only be able to react to the current situation or out of individual concerns – minus the grounding provided by related scientific findings – can be harmful. And this is the case however democratic the process may be. Our position is that designers must shift their attention away from the ‘how’ of social designing to the ‘why’ of the design – which social change are we striving for?

Even if a targeted social improvement is backed up by science, the design may still not ‘convince’ people to change. There are plenty of reasons why people may act in ways that obstruct societal improvement, and even in ways that actually cause detrimental effects to society. All too often, what is best for all of us conflicts with what people see as beneficial to their individual lives. In fact, this conflict is key in social issues and one of the key issues a social designer should be able to deal with. We discuss how to do so in the next chapter.

## Notes

- 1 Building on the terms ‘lifeworld’ and ‘system world’ (Habermas, 1985; Thomassen, 2010), we talk about lifeworld as the day-to-day world as experienced and enacted by people, and distinguish it from the system world – our political, economic and legal systems – that facilitates it. But similar to the observation that single artefacts do not neutrally facilitate intentional user behaviours but actually promote and inhibit specific behaviours, so too does the system world *shape* our lifeworld. After all, our system world is designed. In understanding how to improve our lifeworld through design, we therefore have to understand the shaping influence of the system world and consider artefacts as the means to change it.
- 2 One translation of ‘hufter’ into English is ‘jerk’ – but there are many more colourful alternatives.
- 3 Besides establishing the scientific foundation for design decisions, the academic mindset we wish to encourage within social design also refers to the willingness and curiosity to validate one’s design assumptions. In Chapter 8, we discuss various techniques that we deem relevant here. These techniques can both help you assess designs summatively (do they achieve the anticipated effects or

not?) and formatively (What works? And what does not work? How can we generate data to improve our designs' ability to obtain the effects we anticipate?). The ability a designer has to work iteratively and test assumptions early in the process, which serves to inform future steps, is new and valuable in the social domain and public sector work. It allows us to test interventions that may affect society at large relatively safely on a small scale, and only scale-up when the product or service has proven its validity. This is where social designers can help policymakers transform the way they work and help them build the 'adapting portfolio of experiments' (Beinhocker, 2012, p. 142) that is needed to guide societal development in this rapidly changing world.

# 3

## A Clash of Concerns:

### Let's Bring Out the Best in People

**T**his chapter presents the core framework that you can use to break down social complexity into intelligible foci for design intervention. We introduce you to the concept of a social dilemma, and illustrate how pervasive such dilemmas are in our day-to-day lives. Everything we do has consequences for ourselves, and for society at large. Understanding products and services as fundamental components of the context in which behaviour arises will help you to see more clearly how products and services can favour one behavioural option over another. We illustrate three different strategies to deliberately direct this influence of design towards societal benefit and discuss their applicability.

Let us start off by reviewing some designs we consider exemplary of the type of design we envision. These you can learn from, and use to form a more complete picture of the type of contribution we believe designers should introduce to counteract the pressing issues of our time.

In Amsterdam, as in many other densely populated areas, regulating the flow of traffic is an important way to prevent disastrous accidents from happening. This can be especially challenging during rush hour, when junctions are shared by pedestrians, cyclists, scooters, cars and other forms of transportation, whose varying speeds and lanes meet and cross at the same

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time. In Amsterdam, many people cycle in the inner city. Unfortunately, our cyclists do not always take traffic rules that seriously. Many cyclists ignore red lights, causing dangerous and potentially deadly situations. The safety of the cyclists is a concern here, although perhaps not to the cyclists themselves. But of course the safety of everyone else is equally important, and so the municipality of Amsterdam is continually adopting new measures designed to ensure that people obey the rules and stop running red lights. These measures have a varying degree of success. One breakthrough was the implementation of a clever design intervention used in several countries also wishing to affect the behaviour of their drivers and riders: the countdown timer ([Plate 16](#)).

Watching the delay, in seconds, before it is their turn to move appears to lower people's inclination to ignore it. Having some insight into the traffic management process makes it seemingly more acceptable and doable for people to submit to the traffic coordination system. Generally, people find it hard to surrender to uncertainty and be put 'on hold' for an unknown period of time. Waiting may be annoying in general, but waiting for an unknown period is torture. So, especially when the road is empty, for example at night, waiting for a red light may feel incredibly 'dumb'. Yet, those seemingly quiet nights have a higher chance of (drunk) drivers suddenly appearing from around the corner at high speed. So how can cities *make* people wait, even when there may be no apparent reason? Allowing people to experience some degree of control over the situation seems to restore a sense of autonomy – enough, at least, for drivers to comply.

Another great design intervention is called *de Goedzak*, or 'the Goodbag' ([Plate 17](#)). This bag was designed to counteract the tendency people in Western countries have to throw items away that are still in perfectly good condition. Many countries have developed a throwaway culture. When prosperous households see no further purpose for the books, toys, clothing, furniture, kitchen tools or other products they own, many simply throw these things out with the garbage. Yet we know that a short cycle of goods consumption and disposal is one of the most harmful consumer behaviours for our environment (Bakker et al., 2014). Of course, there exist second-hand shops where people can drop off their stuff, but for some doing so may be regarded as too much of a hassle, especially when opening hours (almost always) overlap with the typical 9 to 5 working schedule.

The Goodbag is a semi-transparent 'garbage bag' for your old stuff. It goes out with the garbage, so you can cast off your unwanted belongings at the

same time when you put out the trash. Its material invites passers-by to peer through and see if there is anything they might like to take and use themselves. Through its design, the bag transforms ‘throwing something away’ into a completely different gesture: an act of generosity and an invitation to others. In addition, the Goodbag frames the act of ‘rummaging through other people’s garbage’ as acceptable, rather than something shameful that only desperate people do. It sets the stage for a completely different social interaction, yet it demands very little behaviour change.

The final artefact we wish to introduce here is the social platform Peerby (Plate 18). As we go on, you will see that we refer to this design quite often in the book, because Peerby illustrates many aspects of the type of social design we envision. For the moment, we wish to focus on the platform’s quality to generate a way for neighbours to ‘bump into’ each other and meet informally. In many cities, this has become an important goal for social policymakers and advocates, for reasons we discussed elaborately in our introduction. Instrumental interactions are crucial to building a cohesive neighbourhood. On Peerby, neighbours can lend out and borrow products from each other. Once logged on to the platform, a user types what product he or she wishes to borrow into the search bar – a drill, party tent, cargo bike or whatever – and Peerby will ask the neighbours (who are also Peerby members) for you. If one of the neighbours is prepared to lend what you want to you, Peerby puts you in touch with each other. Although the match is made through the platform, the borrower and lender will still have to arrange for the item to be picked up and returned directly.

Even though Peerby serves foremost an instrumental purpose, the consequence of how it does so is neighbourly interaction. Peerby does not prescribe a particular outcome, yet it fosters more than the exchange of goods. By creating opportunities to talk to one’s neighbours, it opens up the possibility that people will exchange shared interests or community matters as well. They know they share interests around the use of the product, and that they live in the same area, which lowers the threshold to discussing more than just pick-up times and return dates. However, whether the exchange turns out to become a stepping stone for more social contact is completely up to the people involved. Although Peerby’s raison d’être encompasses more than this function, fostering social cohesion in the neighbourhood is one of the reasons Peerby exists.

## The key quality of any social design

The reason we like these examples so much is because they reveal how socially beneficial behaviours can become more meaningful to people through design. Each of these artefacts stimulates behaviours that are beneficial to society: ‘waiting for a red light to turn green’ contributes to public safety, ‘not throwing stuff away’ is beneficial to our environment and ‘interacting with our neighbours’ strengthens social cohesion in our neighbourhoods. These designs clearly exist to improve society; they seek to design social structures into our collective lives via powerfully engaging designs.

Apparently, the behaviours these designs support seemed unappealing in some way – or perhaps just not appealing enough or to enough people. Apparently, the behaviours these three designs stimulate in the public must somehow have conflicted with other things – other concerns – that were somehow more important. Cyclists who ignore red lights are probably just in a hurry to get from A to B, and may see no point in waiting when an opportunity to cross the road is right in front of them. Values like efficiency, autonomy and control are all important drivers for cyclists (in the Netherlands, in any case). Throwers-away probably value the convenience of it so much that they experience little motivation to go the extra mile and bring those things to a second-hand shop.<sup>1</sup> For some, it may even strengthen their feelings of power and reinforce (to themselves) their carefree attitude. And finally, the thought of interacting with unfamiliar neighbours out-of-the-blue is frightening to many. Shame, fear of awkwardness, lack of purpose or time or just a lack of interest may all result in neighbours ignoring one another, or leaving things at a simple ‘hi’.

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We like to use the term ‘concern’ to refer to things people care about in life – ‘things that concern them’. In our view, concerns can be pragmatic, like a concern for punctuality, and/or quite fundamental, like a concern for freedom. Concerns drive behaviour and steer people’s goals in life. Things may concern us as individuals or as communities, which, in this book, we refer to as individual and collective/social/societal concerns. Although we prefer the term concern, we sometimes use ‘values’ or ‘interests’ as synonyms.

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Many factors affect what people decide to do: their habits, their beliefs, the culture they live in, the state they woke up in, how bystanders behave and how the environment is designed. Changing this environment through implementing attractive products and services can therefore make behaviours we all consider important more appealing or more natural to engage with. Good designs can help overcome individual barriers to engaging in behaviours that drive society forwards. They can help overcome the clashes in concerns central to complex social issues. The countdown traffic light resolves the conflict between social safety and individual control. The Goodbag resolves the conflict between sustainability and convenience. And Peerby bypasses the conflict between social cohesion and concerns about personal safety entirely. These designs do not tell us what to do, but rather they create conditions that bring out the best in us. They change the context in such a way that we do not have to use much willpower to do what is best for all of us – doing what’s right just becomes more natural.

## **Framework for designing society**

For the power of design to work in favour of us all, we (as designers and academics) need to conceptualize the inherent influence of design so designers better understand how to design it. Many theories already exist that seek to explain the role of technology in society, and we will elaborately discuss some of them in the next chapter. However, these theories are mostly of a descriptive nature. They have been developed by sociologists or philosophers reflecting on the character of *existing* artefacts, and highlight how use of these has changed our lives and relationships. Such studies help to recognize this influential role, but do not yet guide how to design for it. Models derived from deductive reasoning to understand what is do not automatically lead to methods that induce abductive reasoning to conceptualize what could be. We need an intermediary step here – a framework that helps to explain the influential role of artefacts by introducing elements that can be turned into logical design steps and decisions.

Besides the fact that this framework needs to support a shift in reasoning, it also has to allow for an integration of multiple theories that help to explain how behaviour is affected in a particular context (as discussed in the previous chapter). Societal issues are hardly ever mono-disciplinary problems, and it is

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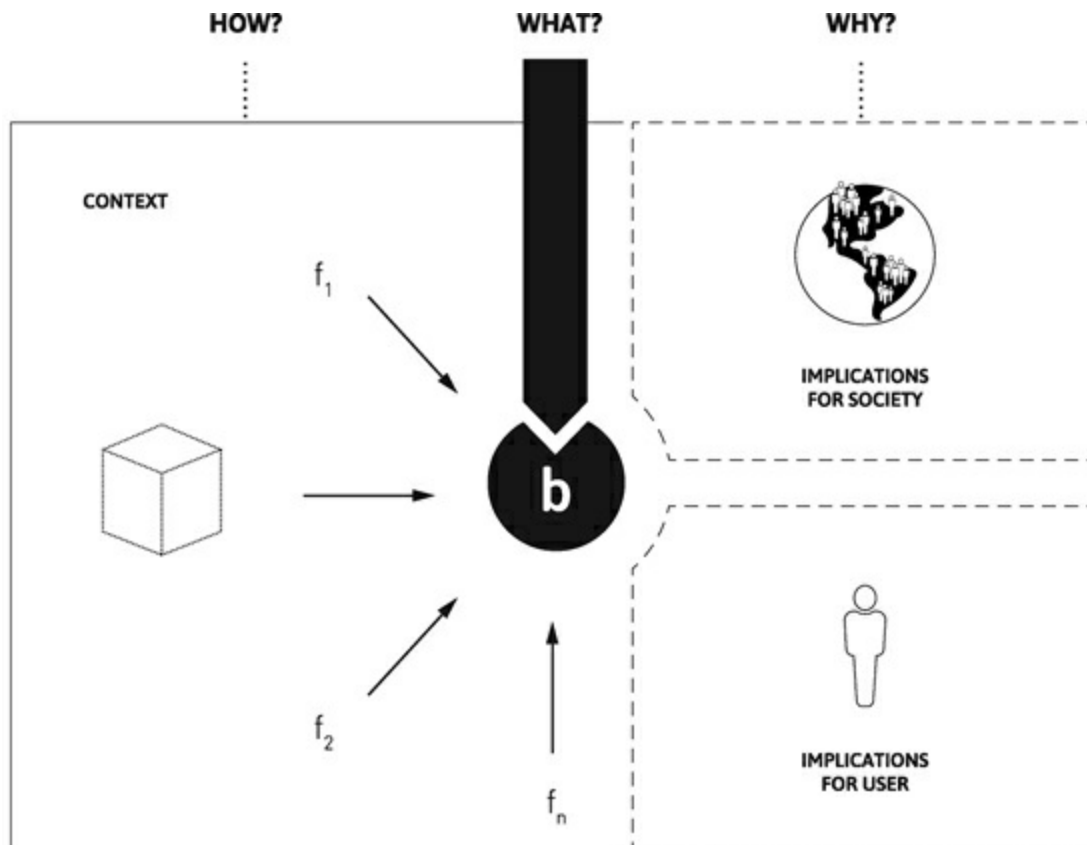
a designer's skill to adopt a variety of disciplinary perspectives to understand it holistically. So even though it is tempting for us to try and build a framework for designers based on a single theory from the social sciences, that approach would not support the kind of integrative thinking that is so valuable in design – especially when dealing with complex social issues.

With these two objectives in mind, we developed a framework to describe the influential role that artefacts play in shaping society (see [Figure 3.1](#)). It will help to model the social implications of existing artefacts – but more importantly, it will help you to reason from a desired impact to an artefact-to-be-designed. Our framework forms the basis for the methodological steps we will describe in more detail in [Chapter 6](#).

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**I**n our approach, a 'social implication' is a change to (collective) behaviour that affects the state of society. It describes the change you anticipate your artefact will effect at the social or societal level, which is the ultimate goal of social design. We may also refer to 'social change' or 'social impact' to describe the same thing.

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**FIGURE 3.1** The artefact's influence on behaviour is key when designing for society (where the artefact should be understood as one factor among many that shape what people do). Which product or service should be designed to foster a specific behavioural change? To this end, the design process starts with analysing behaviour in terms of its implications for both user and society. What is best for society is not always desirable for the user: societal and user concerns can easily collide. The ultimate goal in designing for society is to foster behaviours that drive society forwards by making these behaviours meaningful for the user at the same time.

When designing for society, behaviour change is key. As stated earlier, behaviour is what connects people's lives together, and as such, shapes society at large. To decide which improvement to pursue, we therefore have to be able to understand the value of a specific behaviour to society, now and in the future. This judgement requires a social perspective that helps to recognize what is best for us all in the long run.

For many designers, this is an unusual view. Often, designers are taught to consider the user's perspective, and therefore have the natural tendency to think about what is best for them. Naturally, user concerns can be of a social kind: users might wish to share things, stay in touch or help out friends in need. After all, people are social beings who have concerns about their relationships with others. The distinction we wish to make here, though, is

that designers are often very well equipped to address salient user concerns that exist and emerge in the current context. These are concerns people have *now* – things related to their lifeworlds – that they are able to articulate in various ways. Designers are far less equipped to understand societies' interdependencies, and contemplate overarching societal concerns in the present and the future.<sup>2</sup>

Societal or collective concerns are automatically related in some way to individual members of that society/collective, but to varying degrees, of course. In some cases, such concerns do not drive individual behaviours because they are not always experienced as being in an individual's (direct) interest. Let's discuss some examples.

For instance, it is in our interest to stay healthy both individually and collectively (public health – and the cost of maintaining it – is a societal concern). In this sense, individual and societal concerns coincide, and one could say that any intervention to support individual health also benefits society. But when deciding *how* to foster personal health, we have to decide how to distribute resources, and this is how and where individual and societal concerns may easily collide. When excellent and ongoing healthcare provision is not affordable to all, which values should drive healthcare innovation? Equality? Cost effectiveness? Utility? Efficiency?

Sometimes, collective interests are harder to relate to one's individual life. For instance, we collectively benefit from a society in which our collective human capital – knowledge, experiences and skills – shows great variety. Diversity offers societies the greatest potential to survive in times of crises and fosters innovation in stable times. However, this collective concern for diversity can negatively affect individual perceptions of safety and prosperity. To some individuals, diversity is not attractive. Humans naturally tend to conform to the group and reject those who deviate too much from the norm. So forming relationships with people with whom one apparently shares relatively few commonalities is not instinctively appealing, despite it being beneficial to all of us in the long run.

When we wish to push forward a socially sustainable world through the products and services we design, we need to learn how to adopt a societal viewpoint. What kind of world enables human flourishing in general? What does it look like, and what values underlie it? We need to have a vision of this future world to be able to ascertain which behaviours we want to promote through design. This means that in our effect-driven design approach, the

‘effect’ is the behavioural goal *plus* the anticipated social implications and the argumentation for why both are valuable. The vision describes the societal improvement the intervention is intended to contribute to, its *raison d’être*. When this is defined, you can start investigating how this behaviour is meaningful to people, or how it can be. You can start reasoning towards the means to achieve this effect. When would people engage in this behaviour? Why? Or why not? What would hinder them, and what could motivate them? As a designer, you are very well trained for this type of research. Finding out what is meaningful to people and addressing this through products and services are core qualities that designers have.

## ***Designing behaviour***

The explanation we gave just now presumes a specific sequence of events: first, you define which behaviour helps to foster a better society, and then you explore how to ‘make’ this meaningful to people. Although that sequences reflects a kind of linear logic, in reality the thinking evolves in a kind of continuous loop that looks something like this.

‘This (phenomenon) would be good if it were to happen!’ ‘Why actually?’ ‘And Why is it not happening yet?’ ‘Ah, that’s why,’ ‘Can we change (behaviour contributing to phenomenon)?’ ‘Yes ... but ‘ ‘Should we change it?’ ‘No. In fact, (behaviour) is quite a valid response from an individual point of view.’ ‘Oh ‘ ‘Should we try to foster a different behaviour then?’ ‘Yes, maybe (phenomenon) could be more about this?’ ‘Yes! That helps people to (behaviour) and (behaviour) better as well!’

When you are able to continuously shift between the social and user perspectives when making design decisions, the chances increase that you will truly design out the issue. Instead of motivating people to ‘do the right thing’, design interventions will then remove the barriers and create a win-win situation: user and societal well-being improve simultaneously. So even though judgements about which behaviours to strive for should ultimately be motivated by societal concerns, choosing behaviours that relate to both societal and user concerns will help you.

The behaviour you choose to design for may be defined in very specific terms, or left open, depending on the societal ill you wish to address. Some



behaviours are in need of correction, as in the case of the irresponsible cyclists we saw earlier. ‘Stopping at a red light or a stop sign’ is extremely specific, and very concrete, in that it is observable and happens in a specific context. The more specific you get, the easier it is to think of tangible and detailed interventions. Specificity supports imagination. However, it does have the disadvantage of reducing the designer’s perspective. Being too specific runs the risk of curtailing your ability to rethink the issue itself, and develop a completely new frame with which to approach safety. In the case of neighbourhood tool Peerby, the designers assumed cohesion would strengthen due to an increase in neighbourly contact. ‘Neighbourly contact’ does not prescribe anything in terms of how intimate or instrumental this contact should be, how long it should take or what type of contact it should be. As such, it provides the foundation for a range of behaviours to arise ‘naturally’. This more abstract and general description of the behaviour you wish to stimulate gives little direction about what artefact to design. From a purely effect-driven standpoint, it can still become anything. As we will discuss in the cases we present later in the book, the explorations that follow from this point onwards can be time consuming, yet allow for substantial reframing. It is a designer’s skill or talent to perceive which situations will create the conditions for a behaviour to then arise, or what salient concerns to rely on to make it happen.

In [Chapters 6](#) and [7](#), you will find a step-by-step approach to support this thinking, and we will offer various tips and tricks for designers on the ground. For now, we wish to elaborate a bit more on the theoretical basis of the framework.

## **Social dilemma theory**

Behaving in ways that lead to a more socially sustainable future for us all is not always easy. In contemporary societies, socially responsible behaviour often requires the restriction of personal motives, desires and aspirations. It can be difficult, exhausting or merely unappealing to do something that benefits society, and future generations, but somehow inconveniences us. This clash in concerns is at the crux of many – if not all – of society’s biggest problems. Every social problem originates from these so-called ‘social dilemmas’ – conflicts between individual and societal interests.<sup>3</sup>

Social dilemmas exist in different forms. We will briefly discuss two well-

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known examples: the ‘prisoner’s dilemma’ (Rapoport & Chammah, 1965) and the ‘tragedy of the commons’ (Hardin, 1968).

The prisoner’s dilemma describes a situation in which two people who have collaboratively committed a crime are caught by police and confined separately. The evidence is not substantial enough for a court to make them pay for their crimes, so both are subjected to an interrogation with the following consequences: if prisoner A and prisoner B both remain silent, they will both be imprisoned for one year. If one of the two betrays the other, the person who spoke will be set free, while the person who remained silent will serve three years in jail. If both speak and betray the other, they will both serve two years. The two prisoners are pitted against each other, which presents both with a dilemma: if they both act in trust and remain silent, both are better off. But the lure of individual freedom is strong and could lead either to speak, making the situation worse for all.

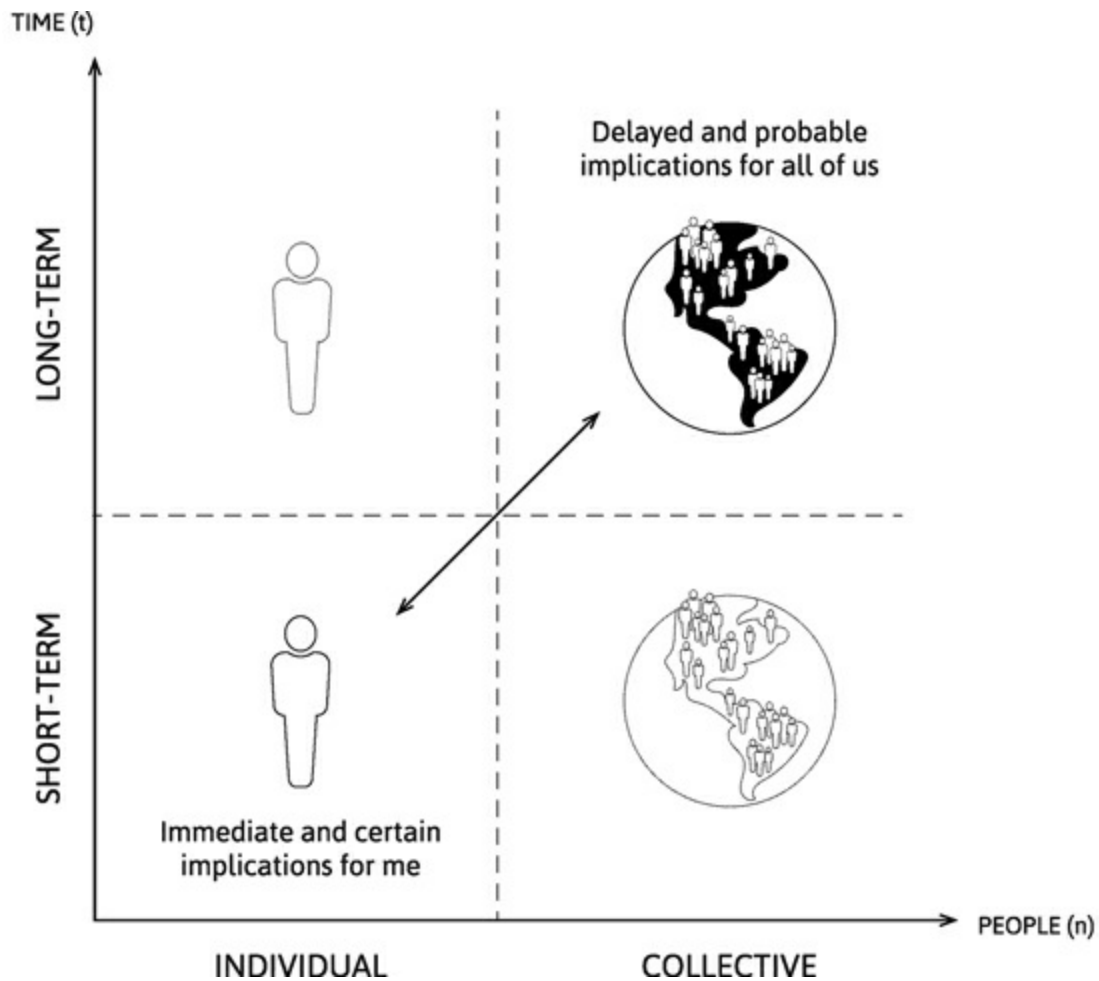
The tragedy of the commons is a dilemma involving a fictitious group of farmers. They use the same piece of land to let their cattle graze, which works fine as long as the number of cows is commensurate with the number of square metres. From the perspective of an individual farmer, adding a cow will increase milk production, and hence income. So when business is booming, that farmer is inclined to add more cows to the land. Yet, if too many farmers apply this strategy, the land would soon become overgrazed, and all the farmers would take a hit to their business. Hardin (1968) explains that the farmers are locked in a system that rewards continual expansion without restriction, as part of a context that is itself finite. He explains how ‘freedom in a commons brings ruin to all’.

Both examples illustrate that social dilemmas involve a choice between *personal* or *communal* gain – do I act in my own interest, or in favour of the collective of which I am a part? Now you may think that because you have never been in police custody, or you do not share a piece of land with others, social dilemma theory is not applicable to your experience of daily life. But social dilemmas are more common than you may think. When we label any behaviour as a decision, whether taken explicitly or implicitly, we come to recognize how pervasive social dilemmas actually are. Do I take the car or go by public transport? Do I separate my waste, or just dump it into one bag? Do I buy free-range eggs, or cage eggs? Should I offer to cook for my neighbour since he is going through a rough time, or shall I keep working to meet my deadline? Do I help that confused woman in the street, or pretend not to have

seen her? In each of these situations, our individual interests conflict with those of society. And in all these situations, the more comfortable option is so very alluring – going by car is convenient, separating waste takes effort, free-range eggs are expensive, meeting a deadline brings satisfaction and confused people can be scary. Typically, social dilemmas are situations in which the selfish option is more attractive than the option in which we put others' needs, or society's needs, before our own.

## ***Social dynamics***

Paul van Lange and Jeff Joireman (2008) explain that conflicting interests in social dilemmas can include both social and temporal dimensions. Behaviour may have consequences for others in the short and long term, but may also have consequences for the self over the long term (see [Figure 3.2](#)). To illustrate some of the possible conflicts a social dilemma might present, consider the habit of smoking. From an individual perspective, smoking is desirable in the short term because of the fleeting sense of relief and relaxation it provides, and this despite awareness of its dangerous long-term implications. The smoke and ash provoke immediate annoyance from others, and the list of life-threatening ailments caused by inhaling second-hand smoke is growing by the year. Besides, over the long term we all share the burden of healthcare costs. In other words, a single act can have implications for the individual *and* the group, over both the short and the long term, simultaneously. The issue of smoking shows that different motives and alternatives for a particular behaviour are therefore quite complicated, especially when the consequences are not experienced immediately but occur over time. People would have to consider them consciously to let them guide their actions.



**FIGURE 3.2** The type of social dilemma at the core of large contemporary social issues: clashes between short-term, individual concerns and long-term, collective concerns.

There is an obvious paradox inherent in most social dilemmas: people gain more when they act out of personal interest, but everyone is better off in the long term when common interests prevail (Dawes & Messick, 2000). Our ultimate gains and losses are thus determined by other people's choices as much as they are by our own. Only when a lot of people take their car do traffic jams occur and fuel emissions become a serious threat to our environment. Only when everyone separates their household waste are we able to reuse and recycle materials, and leave a smaller environmental footprint. Only when enough people are willing to accept refugees in their country is it possible to make the immigration process more fluid. And only when we collectively start to talk differently about people suffering from mental illnesses can we undo the stigma these people suffer from. This shows that many behaviours are not bad or good as such, but can become harmful or

beneficial to the group when many people engage in them. It reveals that a so-called ‘tipping point’ characterizes each social problem, both for it to come into existence and for it to be resolved (or reduced to such an extent that we do not feel the need to act upon it collectively). For instance, if 50 per cent of car drivers took public transport, most traffic jams would be resolved, and the environmental impact of car driving would likely fall to such an extent that the focus of governments might shift to other areas.

## **The practical value of social dilemma theory**

To design for social good, designers need to be able to consider what is best for us all. This means designers need to learn how to relate user needs, concerns and desires to those of society at large *before* they begin to design. This is where social dilemma theory comes into play. Yet, when used to explain how people will actually behave in such situations, the theory becomes less reliable.

Social dilemma theory assumes that when people are confronted with a social dilemma, they will consciously assess to what extent their actions contribute to their personal well-being and the well-being of the group – be that their family, team, colleagues or society. The theory is based on ‘rational-choice theory’, or ‘game theory’, which posits humans as conscious, rational decision makers. Believing people are rational decision makers, researchers investigating social dilemmas placed people in social situations and studied how they divided goods among themselves. Or they constructed games in which participants need to compete and collaborate to win (see Dawes, 1980; Kollock, 1998; or Liebrand, 1983; or for a more recent study, see Milinski et al., 2008). The common element to these studies is that the scientists overtly confront participants with a dilemma, and require them to consciously make choices.

Yet, as we have already seen, social dilemmas are often dealt with *unconsciously*, because people do not see them as dilemmas at all! Over the years, the role played by unconscious processing has been studied extensively, and some argue that its influence on how people make choices or how they behave is larger than it might first appear.<sup>4</sup> Behaviours guided by unconscious processes rely on a process called ‘automaticity’, which is defined as ‘the direct environmental control over internal cognitive processes involved in perception, judgment, behaviour and goal pursuits’ (Bargh, 2011,

p. 629). When people ‘decide’ to behave, they do not deliberately weigh personal concerns against those of the group – they simply act automatically, in response to the options they are presented with. This is how you acquire the habit of staring at your smartphone as soon as you have a minute to spare; it explains why you enjoy a hot shower longer than necessary and reveals why taking the car can simply grow into a daily occurrence. Social dilemma theory may not be a realistic starting point if we want to predict the way people will naturally behave, but it does help us to recognize the social implications of individual behaviours, and understand how individual actions relate to collective well-being.

Studying interests from both a personal and collective point of view helps designers to identify the clash of concerns present at the core of any social problem. It helps to explain why people exhibit behaviours or make choices that are undesirable from a societal perspective, yet desirable from a personal perspective. For example, I might love cake, and would rather stay on the couch eating it than go exercise, because that choice is in line with my short-term personal interest for comfort and enjoyment. But if I am trying to lose weight, such behaviour conflicts with my personal long-term health concerns, and – in light of the obesity epidemic – also with collective concerns about national health and economic burden.

In a similar fashion, the intricate social issues often lumped together under the heading of ‘immigration problems’ can be traced to common, everyday attitudes and conflicting concerns. From a societal perspective, it would be desirable to greet my new, foreign neighbour and invite her for coffee once in a while. Such behaviours would be in line with long-term collective interests, including social cohesion and harmony. But these activities might conflict with my sense of personal privacy, safety or comfort. Inviting someone from a different background to your house or knocking on a stranger’s door might be quite scary, and it could take quite a lot of effort to take that first step.

Finally, we engage in much behaviour that leads to environmental pollution because the choices we make closely align with our personal needs for convenience, efficiency, comfort and enjoyment. For instance, many families love the comfort of using a tumble dryer, even though we know that these machines consume significant amounts of energy and are considered one of the least environmentally friendly appliances to be found in our homes.

The frame of conflicting interests helps us break abstract social problems

down into a series of concrete behaviours. By considering the positive and negative consequences of these behaviours on the self and society at large, the conflict between interests becomes clear. This does not automatically reveal a conflict that a social designer is required to correct or address; it enables discussion, argument and understanding of which behaviours are (un)desirable from both a social and an individual perspective. It adds a social dimension to the individual needs and concerns that designers typically address.

## **Three strategies to overcome clashes in concerns**

Before we can explore better how to work with this concept of conflicting concerns as designers, it is important to be aware of a few things. First of all, scientists who study social dilemmas often speak in terms of conflicting *interests*. As said, we use the terms ‘interests’, ‘concerns’ and even ‘values’ interchangeably to refer to what is at stake when judging what behaviours are worth encouraging. In social dilemma theory, interests often refer to consequences of (behavioural) choices that can be objectively valued: time, dollars, points, space, food quantity or any other measurable output. The word triggers a utilitarian mindset since we can simply calculate the best option. However, behaviours generate value beyond measurable consequences, and they carry ethical weight as well. For this reason, in this book we prefer to talk in terms of values and concerns. We are concerned about other people, based on the collective value of solidarity. Or we are concerned about what we eat, based on the shared value of health. Or we value our environment, and therefore are concerned about our carbon footprint. Values determine what we are concerned about, as individuals or as societies. In our view, considering social dilemmas in terms of concerns and values thus helps us to approach the issue from a humane perspective.

Our approach distinguishes three ways that artefacts can support societal improvement: design can *resolve*, *bypass* or *transform* the conflict between personal and societal concerns. These three roles of design will be now discussed in more detail.

### ***Resolve***

This is by far the best strategy; we believe that you should follow it whenever  
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possible. The key here is that the product or service changes the behavioural context so fundamentally, that preferred behaviour follows naturally. In interacting with the countdown traffic lights or the Goodbag, both examples of conflict resolution, individual behaviour changes automatically, because any hurdles are removed. The uncertainty (about how long they might have to wait) that leads cyclists to run red lights is replaced by a sense of control over the process. And the dilemma (or excuse) of being too busy to donate unwanted items for reuse is seamlessly resolved by offering the same means as they would normally use – a garbage bag – yet with a different meaning. Since these designs address the user concerns that were at stake in the conflict, people have no objection and probably are even happy to behave accordingly. This means that this strategy is only effective when people are principally in favour of a given behavioural change, yet experience some kind of barrier to engaging in it.

To reveal the significant power of design here, let us compare a design intervention in mental healthcare that facilitates peer-to-peer contact with communication strategies. Many mental healthcare patients suffer from (self-)stigma. As a consequence, many of them withdraw from society. The fear of interacting with other people can become so severe that many of those who suffer from mental illnesses end up living lonely lives. Engaging in contact with others, however, is of value from an individual and a societal perspective, for several reasons. Typically, communication strategies to motivate people to engage in specific behaviours include (1) stressing the importance of it, (2) questioning the obstacles to its performance and (3) promising other benefits. Each of these three strategies attempts to strengthen a person's willpower to overcome his or her reluctance. A design, by contrast, can actually resolve the dilemma by altering the physical and virtual environment. It can do justice to people's concerns *and* change their behaviour. Using an online platform like Miind, a peer-to-peer social network, can substantially lower interpersonal anxiety. By initially interacting with peers online, rather than face-to-face, first steps can be made without fear, and contact can be made in real life if so desired.

Although more traditional interventions, such as awareness-raising campaigns, moral urging and cognitive therapy, indeed have the power to teach, convince and guide people to behave differently in socially confronting situations, the unique power of design is to redesign the situation so it becomes less confronting.



## *Bypass*

Another unique quality an artefact has is its power to build connections between actions and previously non-related concerns. The motivation for users to use Peerby is to borrow the neighbour's drill rather than buy one, not to chat to their neighbours. In that sense, the chatting is not happening out of intrinsic interest in one's neighbour, but in order to make use of the service. Although people have always exhibited such behaviours – there are some people who are nice to their neighbours because those neighbours have a pool or a country home – Peerby was designed to align with social conventions and is surely less hypocritical given its open availability. This strategy is particularly suitable for behaviours that are very difficult for people to demonstrate – for instance because they involve complex dynamics, or because the concerned parties do not have the slightest inclination to do so.

Seeing and acknowledging both the long-term and societal consequences of our behaviour is quite hard. Why would I bother to refrain from smoking or eating hamburgers if it only *might* have a negative effect on my health in the long run? How could this one tiny piece of chewing gum that I throw on the street have an impact on global pollution? And why should I feel responsible for bees in my garden when no one else does? Even when the ultimate benefits of acting right are obvious, people are – and this is an understatement – simply not always motivated to change, despite the bombardment they may receive from countless campaigns and health warnings.

The bypass strategy is similar to the reasoning behind many governmental subsidies: offer benefits that are artificially connected to socially responsible behaviour. However, in contrast to the way a subsidy literally sells pro-social behaviour, a design can change the meanings people attach to a behaviour. A famous example is the *Piano Stairs* experiment in Stockholm (2009), developed to illustrate the 'Fun Theory', a branding initiative by Volkswagen that sought to demonstrate how easily people change their behaviour when fun is involved.<sup>5</sup> In *Piano Stairs*, the steps at a public transport station were turned into huge piano keys that, when trod upon, produced the corresponding note. By taking the stairs, people literally played the piano with their feet. The design not only enticed more people to take the stairs instead of the escalator, it even made them jump up and down in order to play a song. Making people physically active during the course of their daily

routines is a way to combat the growing obesity epidemic around the world. When there are escalators available, people usually see little to no value in taking the stairs, let alone to taking them twice. Although we could question the longevity or durability of this particular solution, the project clearly illustrates how design can bypass a conflict in concerns by addressing a completely different concern – in this case, the concern for play. As such, the design changes the meaning of the behaviour.

## ***Transform***

When transforming the conflict, the artefact turns long-term, collective concerns into short-term, personal concerns. The artefact manages to bring a distant societal concern into the lifeworlds of the users, showing relevance in the day-to-day interactions they engage in.

This approach is nicely applied in the design of the *Energy Plant*, a lamp developed by the Interactive Institute in Sweden. The lamp depicts a virtual tree that slowly dies if the household consumes too much energy. A shared concern to protect the environment is transformed into a personal concern, and ‘saving energy’ is transformed to ‘caring for a tree’. Similarly, social media can help people renew their relationship with society. For instance, when a horrible incident took place in the Netherlands, municipal videotape was made public in order to locate the offenders. The video showed eight kids heading home after a night out, wrecking bicycles on their way. When a student calls them out on their terrible behaviour, he gets severely beaten by the group, and eventually ends up in hospital. After the video was posted online, there was a massive public outcry against the brutality shown by the perpetrators. In fact, thanks to an overwhelming expression of condemnation on the internet, and several public threats, the perpetrators voluntarily turned themselves in. This illustrates how social media effectively forced the youngsters to *experience* society’s disapproval of their behaviour – and led them to surrender – rather than the judicial or moral condemnation of a police officer and a court. Social media clearly has the potential to strengthen collective concerns and group processes, as the world witnessed during the 2011 ‘Arab Spring’. Of course, it is equally important to consider short-term, personal interests when designing social media. Receiving threats related to a video posted online is also in conflict with rules and regulations intended to protect personal privacy. In design, basic human rights should also be seen as

collective concerns.

Designs can connect people with the complexity of the systems we have created over the years and as such reveal the consequences of people's behaviour. The strength of design is that products and services not only explain or present such consequences, but they can also make them experiential. In regard to the food industry, our lost connection with the back end of the system is becoming increasingly apparent, even contentious. For instance, many people literally have no clue how food is produced, since they have grown up in societies where the connection between 'animal' and 'food' has been lost. Many initiatives are currently being undertaken to re-connect us to the back end of the food production system, so we can experience once again how our food choices affect our health, the well-being of the animals we eat and the resources of our planet. For nine months, Amsterdam was home to the *Tostifabriek* (croque-monsieur factory), which some would call a form of provocative design. Every single ingredient that goes into a 'tosti' – a grilled ham and cheese sandwich – was produced in-house. The factory was open to the public to show the process behind this simple sandwich. The tragic lowing of the cow torn apart from her calf, the slaughter of two pigs the neighbourhood had become attached to and the fact that a sandwich at the factory cost more than a pair of jeans at H&M attracted quite a bit of attention, and provoked discussion and debate in ways that an awareness-raising campaign or documentary could not. People *experienced* what eating a toasted sandwich actually entails, rather than having it explained. The project opened the eyes of many as to how we have alienated the processes from our current modes of production and consumption.

It is possible that, by now, you are ready to immediately apply this thinking in your design practice. If this is the case, you can skip the next two chapters and go directly to [Chapter 6](#), where we explain the design method that supports it. In the next two chapters, we will deepen our insights further. First, in [Chapter 4](#), we will discuss the profound impact of design more theoretically and reveal how designs actually sustain the exact same issues we are seeking to resolve. And in [Chapter 5](#), we will discuss the role individuals play in the issues we face and show why they struggle to deal with contemporary social dilemmas.

## Notes

- 1 Admittedly, some items are not appropriate for a second-hand shop, such as magazines, though they are potentially still valuable to others.
- 2 To get a feel for the level at which collective concerns play out, the Sustainability Goals set by the UN offer good examples. <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>
- 3 See Dawes (1975, 1980) and Liebrand, Messick, & Wilke (1992) for more on social dilemmas.
- 4 For example, see Bargh & Chartrand (1999), Dijksterhuis (2005) and Kahneman (2011).
- 5 <http://www.thefuntheory.com/> and <https://www.youtube.com/watch?v=SByymar3bds>

# 4

## The Far-reaching Influence of the Artefact:

### Models for Reflection

**N**ow we will take a closer look at the phenomenon this book revolves around: the influence of the artefact. We introduce you to the concept of *mediation* to describe how products and services create new relationships – actions and experiences – between people and their worlds. Once you have seen the ways artefacts mediate human relationships of all kinds, we believe you will understand why we think designers need to better anticipate the social consequences of products and services. This anticipation begins by recognizing those consequences. To that end, we will provide you with a simple structure we use to map out the diversity of mediations an existing design fosters. The structure reveals how one single product can invite a great variety of behaviours, each of which has particular social implications. We will also show how a network of products can actually sustain social problems. We conclude the chapter by discussing the extent to which it is actually possible and ethical to design this hidden influence of design deliberately.

## **An artefact's influence**

In many ways, the things around us affect what we do and how we do it. Our coffee machines, toasters and meditation apps affect how we start our days, with whom, and how long it takes us to get through our morning rituals. Similarly, yet in the grander scheme of things, the transportation means available in our geographical area affects our job options, how we interact in the public domain and perhaps how intensely we physically exercise. Design affects all of our actions, from the seemingly insignificant choices we make on a daily basis to less frequent yet substantial life decisions.

That design interferes in every aspect of life is not news. Yet the significance of this is not always apparent to everyone. Not everyone is aware that this interference goes way beyond the mere function of a design and penetrates many social spheres. Let us quickly review a few examples.

Did you know that, for example, thanks to Google Maps 'street view', some elderly people have found the courage to travel long distances again? The uncertainty of not being able to recognize their holiday accommodation appeared to prevent many from going abroad. But being able to virtually stand in front of their hotels has given some elderly travellers enough confidence to book and go.

Or are you aware how the GPS on people's mobile phones has made them even more reluctant to talk to strangers? Surely, responsive maps are extremely handy when one is in an unfamiliar city – it has become nearly impossible to get lost nowadays. A side effect of this convenience is that it is no longer necessary to talk to strangers. Before navigation applications, we used to ask people who just happened to be there for directions. And although this often felt quite scary, it also created opportunities for surprising interactions in which we often experienced people's general kindness.

And finally, have you ever thought about how the ubiquitous disposable coffee cup impacts human stress levels? However convenient drinking coffee on-the-go may be, and however more pleasurable it may make your morning commute, it is a prime example of an 'efficiency-optimizing' intervention. That cup takes away the necessity of scheduling – and actually taking – a needed coffee break. Considering how rushed everything feels these days, we might question how desirable that convenience really is. Amazingly, we have literally started to walk faster over the years (Wiseman, 2008), and not surprisingly we suffer more from stress and burnout than ever. That little

coffee cup is providing one benefit at the expense of another.

These are just three examples of changing behavioural patterns in which design has played a crucially influential role. All three reveal how complex this role can be. Not only can behavioural change happen through direct product use, it also happens in related events or manifests in non-users. This small sample reveals how much behavioural changes driven by product use can affect important issues in our societies, including ageing, general openness and public health.

These so-called ‘unintended’ (social) consequences of design have piqued the interest of many. And there is some excellent research examining the complex relationships between particular and often mundane artefacts and their social consequences, for example the television (McLuhan, 1964), the door (Latour, 1992), the bicycle (Bijker, 1995), walking boots (Michael, 2000), the microwave (Verbeek, 2005), Tupperware (Clarke, 1999), overpasses (Winner, 1980; Joerges, 1999; Woolger & Cooper, 1999) and even Nordic walking sticks (Shove & Pantzar, 2005). In many of these scholars’ philosophical, sociological and anthropological treatments, agency and morality are the key topics of debate. To what extent can we assign agency to products, services and systems? To what extent are people themselves accountable for their actions and to what extent is the designer? And what does this imply about ethics in design?

## ***Mediation theory***

The observation that design influences people’s behaviour without them realizing it, and often without any intention on the designer’s part, compels us to examine to what extent we can assign agency to products and services.

‘Guns kill people!’

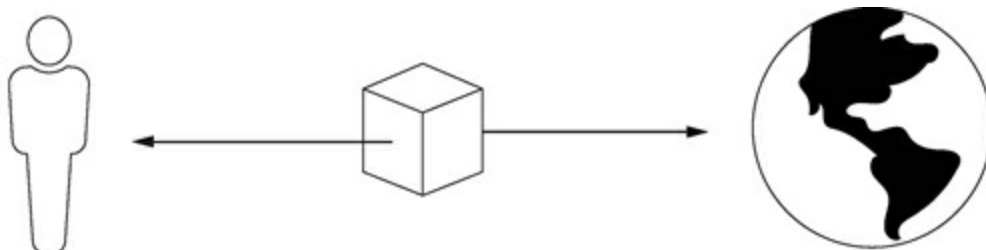
‘Yeah right, and pencils misspell words.’

We sometimes ask our second-year students whether they would ever like to design a gun. Everybody immediately senses the gravity of the question and, for a moment, silence sets in. It soon ends with some brave student – often a male – responding quite firmly that he ‘definitely would’. When we ask him why, he usually responds by saying that the project ‘would be extremely interesting from a technical standpoint’. Immediately, there are other students

who raise their hands and claim that they ‘would never design a gun’! When explaining why, they say they would never want to ‘support killing’. Clearly, the discussion is not very nuanced, but it effectively illustrates the variety of viewpoints that designers may adopt while designing and the grey areas of responsibility that tend to emerge. As the designer of a gun, are you actually supporting the act of killing?

To try and understand who or what should be held accountable for the killing, Bruno Latour (1999, p. 178) argues that it is the ‘gun+man’ who is responsible. In his view, it is the assembly of the two parts that performs the act of killing, and therefore both gun and human share responsibility. Analysing the situation as a ‘program of action’, Latour shows how the gun is able to transform the goals of the user. A gun has the ability to translate an aggressive intention into the act of killing. To this, Katinka Waelbers (2011, p. 29) adds that translation can even happen at ‘a deeper level’. With a gun in one’s pocket, one may feel more in control and therefore decide to confront a burglar instead of running away. Accepting the assembly of human and product as the entity that undertakes action, Peter-Paul Verbeek (2011) argues for the development of a new concept of moral agency. Because moral agency is distributed between humans and non-humans, he argues, so too is moral responsibility. However, as products can never be held responsible, designers share an important part of the moral responsibility for establishing what he calls *mediations* of behaviour.

Verbeek explains that we can neither see products as neutral means to an end nor say that it is products that determine the way we live our lives. He argues that products *mediate* how we experience and exist in the world (see [Figure 4.1](#)). Both our perception of and our actions in the world would be different without the products and services we use. In other words, products and services help us to perceive and give meaning to the world around us, but they also help us act in and engage with this world; in doing so, they create specific possibilities and inhibit others. As such, they co-shape behaviour and experiences.





**FIGURE 4.1** Products and services mediate people's relationship with the world. Through products and services, people experience and enact the world around them.

Like Latour,<sup>1</sup> when describing the nature of these roles, Verbeek is keen to establish a vocabulary that helps move away from the object–subject dichotomy that often prevails in analysing human–product relationships. Instead of seeing humans and products as two static entities that together define a relationship, both argue that the nature of each should be seen as emerging from their relationship. For example, imagine a person who uses his bicycle to ride through the countryside every now and then. Through this relationship, the person becomes a cyclist and the bicycle becomes a means to explore and/or experience the countryside. Without this relationship, the person is ‘just’ a person and the bike is ‘just’ a bike. The word mediation is an umbrella term covering the range of different roles that tools and technology play in this human–product–world relationship, beyond their ‘mere functioning’; it is used to convey the sense that products are intermediaries which co-shape human existence and behaviour. Let us now have a look in more detail at how this concept of mediation helps us articulate the part that design plays in shaping society.

## Mapping mediations

In our view, the concept of mediation appropriately captures the phenomenon we are interested in: the influence an artefact may have on human behaviour.

Verbeek (2005) explicitly states that he does not intend to ‘formulate a theory to “explain” empirical reality’, but rather ‘to find concepts with which to make visible and understand as many aspects of reality as possible’ (p. 162). This position is important, because it is one of the reasons the concept of mediation fits with the act of designing so well. After all, designers should be able to design for any relationship between people and their world. In addition, Verbeek’s position means that mediation theory does not discard other theories that *do* try to explain (some variations of) the same phenomenon. As we discussed in the previous chapter and will see later, the integration of multiple (theoretical) perspectives is valuable when deliberately designing for behaviour change.

When we map out mediations, we try to uncover as many possible relationships between artefacts and actions as possible, either with respect to a single product, or with respect to a single social issue. Let us start with a

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product: we will map the multitude of mediations – and, thus, consequences – the microwave has contributed to.

## ***The microwave and its social implications***

The microwave oven was originally designed as a high-tech ‘toy for boys’. Its character was reflected in its appearance: arrays of buttons were supposed to enable inexperienced chefs to easily conceptualize and manipulate variables like cooking time and temperature. The ovens were sold alongside cameras and stereo equipment, in an effort to attract male buyers. In no time, the market flattened, and only when the machine was specifically targeted to women, and sold alongside refrigerators and other kitchen appliances, did sales increase once more.<sup>2</sup>

Since microwaves work at the touch of a button, meal preparation times were reduced to only a few minutes. However, over time, the microwave began to entice users to change their diets, rituals and schedules. First of all, people tried to find out what could and could not be placed in a microwave. Every household probably has a plastic bowl that got melted, or has witnessed the fireworks a CD can produce. Sadly, cats have died too – some people thought placing the family cat in the microwave might be a suitable way to dry it after bathing. One might say that the direct consequences that arise from the use of new designs (especially when new technology is involved) are ‘start-up’ problems. We collectively need to learn from them to be able to adjust either the design itself or our actions.

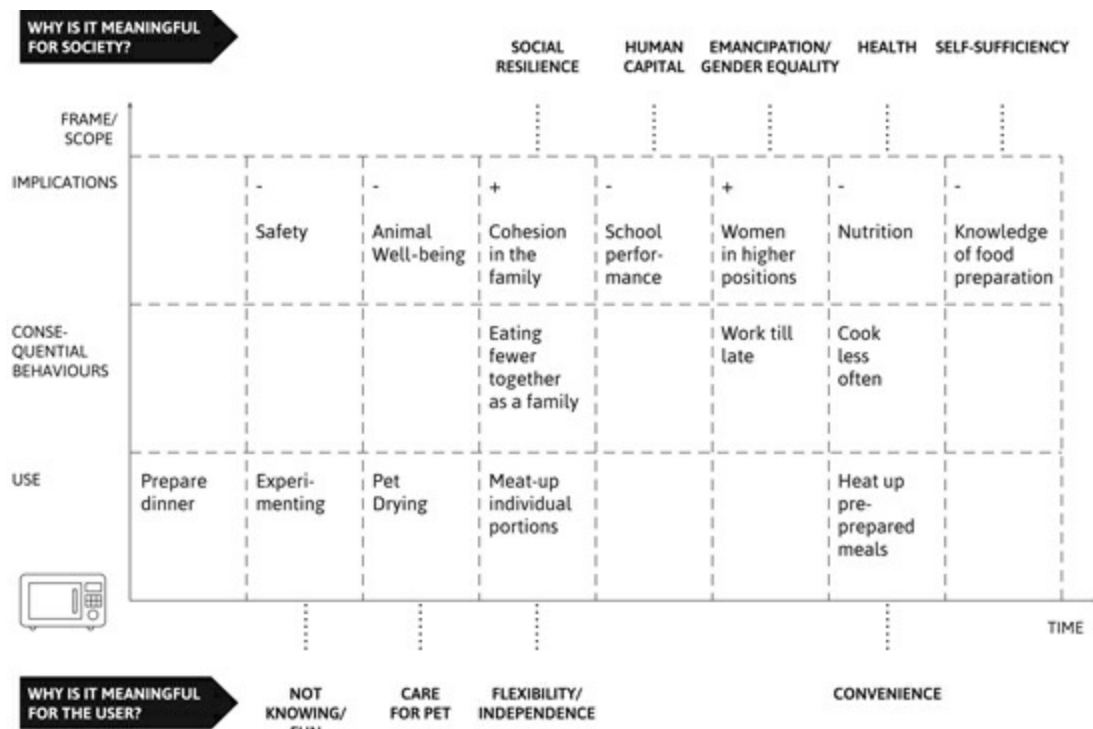
Yet artefact use produces more substantial and longer-term consequences as well. Because the microwave allowed people to easily heat individual portions, it was no longer necessary for busy families to wait to eat meals together. Parents could comfortably work overtime and kids could eat after sports practice instead of before it. The flexibility that the microwave provided to every member of the family must have felt like two extra hours had been added to each day. Moreover, it was again a step towards the emancipation of women, since they no longer needed to be physically at home around dinnertime. The microwave allowed them to do overtime occasionally, or spend time (away from the kitchen!) enjoying personal hobbies or meeting friends.

Unfortunately, there are also some downsides to the microwave. Having regular family meals is an important way for families to connect and share

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the events of their day. It's the perfect time to gauge how everybody is feeling, discuss potential problems and (perhaps) enjoy each other's company. Not only do these moments contribute to the closeness of the family, such moments are instrumental to children's overall healthy development. Children whose families get together for dinner less than three times a week are more prone to problems at school (Forthun, 2013). Although we should never try to understand this influence as a cause-effect relationship, the implications are far reaching. Who would ever consider the microwave as a factor contributing to educational problems?

Figure 4.2 shows a schematic map of the potential consequences of using a microwave. It follows two axes. The horizontal axis tracks development over time, which allows us to distinguish short-term from long-term consequences. On the vertical axis we indicate the widening scope or frame as we shift from microwave use to the consequences of that use, which can be roughly categorized as immediate use (referring to actions in use), consequential behaviours (referring to observable, adjacent behaviours) and social implications (referring to the potential impact these behaviours will have on society). Below the matrix, we indicate why the behaviour is meaningful to the user, and above the matrix, why the implications are of collective concern.



**FIGURE 4.2** Mapping the mediations of the microwave.

The figure provides an example of how to map the many, multiple consequences that product use can entail. This kind of schematic map can be used to deconstruct artefacts' existing roles in social structures. As such, it is a tool that will help you begin to understand the variations these relationships can demonstrate. It is not a tool that can help you design them, however. Nevertheless, being able to identify the consequences implied by existing artefacts will help you assess the consequences of your preliminary design ideas. Now we will examine a pressing contemporary issue, obesity, and try to map out the products that actually sustain this problem.

## ***Obesity and how design sustains it***

The fact that by nature human beings love fat and sugar and avoid needlessly wasting energy (Pollan, 2006) is – in our 'human-made' (designed) world – causing detrimental consequences to our health. Many architects, (service) designers, retail designers and urban planners have been incredibly successful at understanding these human desires and mediating their satisfaction.

For instance, in many countries, fast-food restaurants can be found on every city block and at regular intervals along every highway. And with the invention of the drive-through, there is no need for us to get out of the car to order our French fries. We invented the 'all-you-can-eat' dining concept, and can usually get free refills of our soda cups. And when we buy our coffee-to-go, we are seduced by freshly baked brownies and croissants sold right alongside.

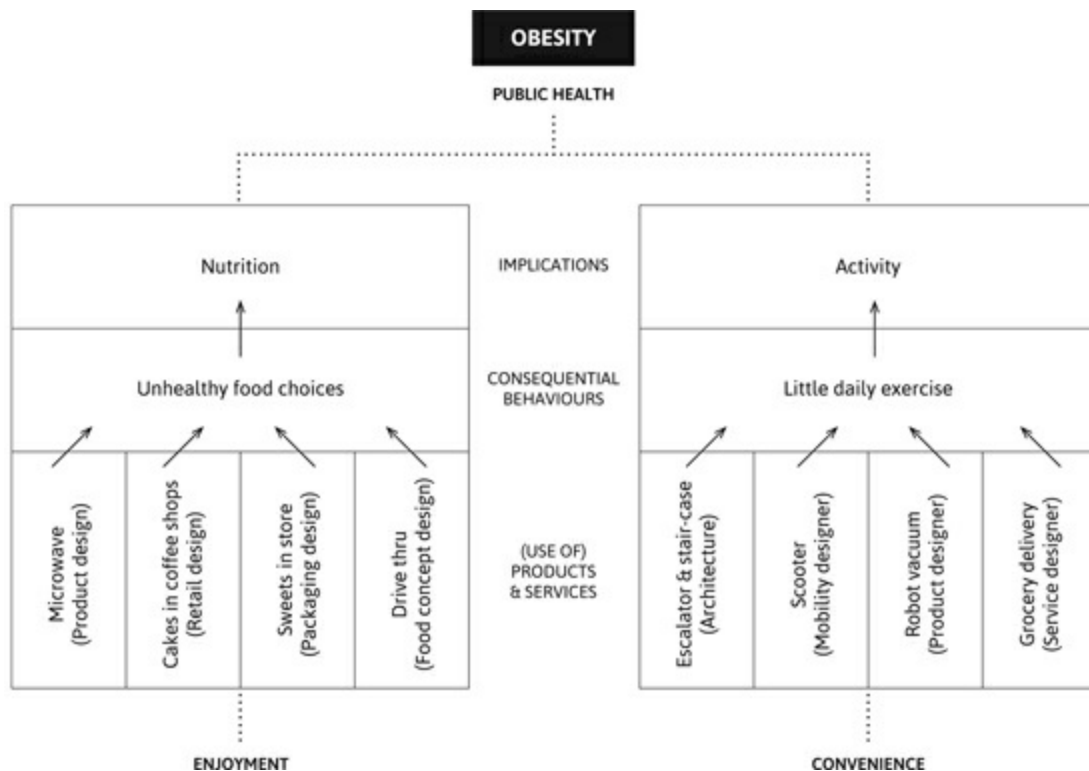
When we want to cook for ourselves and buy our groceries at the store, we are continuously tempted by foods that are sweet and fat. Brands use colourful, shiny packaging, or hypnotic advertising that enthralls our children, to entice us into buying sugary cereals, cookies and crisps. And when we are too tired to cook, there are pre-prepared pizzas and pastas that are even cheaper than any healthy self-made meal would cost.

All of this would not be such a big problem if we exercised enough. However, we have designed the world we live in to serve our need for comfort so well that we do not have to exert much physical effort anymore. The development of machines and computers has automated many laborious and physical tasks – they do our washing, work our land and build our

houses. And with the advent of household robots, gone are the hours of household chores we used to do.

We have also developed a system of buses, trams, trains, cars and scooters to transport us to even the remotest areas of our countries. When we go into large office buildings and shopping malls, there are conveniently located elevators and escalators to bring us to higher levels. Stairs are often hidden in dodgy stairwells that we are only allowed to use in case of fire. And when we really do not want to go out to satisfy our basic needs, we can do our shopping online and have everything delivered to our doorstep.

Of course, these objects and services have value, but the fact that we have designed such a comfortable existence for ourselves means that we no longer exert the healthy physical effort that was once unavoidable. We have designed what is called an ‘obesogene environment’ – an environment that promotes weight gain and is not conducive to weight loss (Swinburn, Eggar, & Raza, 1999).



**FIGURE 4.3** This matrix shows how a range of products and services together stimulate behaviours that contribute to obesity.

Obesity has become a global problem. Too many people are eating too much fat and sugar, while not physically exercising enough to compensate for it.

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The World Health Organization explains that worldwide more deaths are linked to overweight and obesity than to underweight (WHO, 2016). As [Figure 4.3](#) demonstrates, by mapping a variety of products and services (we have only selected a small number) and the ways they support unhealthy behaviours, we reveal the omnipresent and substantial power design has to sustain the problems we face.

## **Designing the hidden influence – Is it even possible?**

Up to this point, we have only spoken about the inherent ways that products and services shape human behaviour based on ad-hoc (scholarly) reflection. But this is recognition in hindsight – it is relatively easy to detect consequences once they appear. We have provided examples to help you recognize the phenomenon we are interested in, and proposed the concept of mediation to help you find the words to describe it. Here, we will briefly discuss whether the possibility of designing this influence even exists. Are designers able to predict, or even control, the (often) implicit influence that products and services have on people's behaviours?

### ***Help from the social sciences***

As academics, we naturally wish to foster an academically rigorous design practice. As you may recall, in [Chapter 2](#) we discussed how multiple, domain-specific theories should be consulted when deciding on the 'effect' – the behaviour – you want your design to obtain. For instance, you might consider theories on didactics when designing for education, or theories about stigma when you design for mental health. As we shift our focus from the 'end' to the 'means' – the artefact or intervention – we also intend for our method to rely on science. But rather than utilizing a single behavioural theory, we believe it is our job as scholars to develop a social design model and methodology that allows – again – for multiple theories. After all, designing to obtain healthy habits requires a different kind of knowledge about human behaviour and experience than designing to defuse intercultural tension caused by unconscious attitudes.

There are many useful theories that explain the ways behaviour changes. How these theories explain behaviour change depends heavily on the discipline and the scientific paradigm of the scholars. In the next section, we

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will highlight two scholarly viewpoints that describe, understand and deliberately design the inherent and often implicit influence of products and services: nudging and practice-oriented design. Although each accounts for specific forms of mediation, they are grounded in fundamentally opposing paradigms of research.

## ***Nudging***

Richard Thaler and Cass Sunstein (2008) introduced the notion that the environment often gives us a subtle push – a ‘nudge’ – towards choosing one option over others. They argue that people make most choices by using what is called the ‘automatic system’, which is rapid, intuitive and instinctive. When making automatic choices, people are literally not thinking rationally – they are being led by unconscious tendencies rather than self-conscious deliberation. Those unconscious tendencies, these two scholars say, are stimulated by latently existing or intentionally orchestrated subtle cues – nudges.

Nudges are ‘aspects of the choice architecture that alter people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives’ (Thaler & Sunstein, 2008, p. 6). This means that designers – ‘choice architects’ – exert considerable influence over those choices through product presentation, or by extension through design of the choice environment. Consider the act of voting. Not only does the way a candidate is promoted influence the vote – in other words, the typography of the candidates’ names, or the photos used in campaign advertisements – the environment in which the vote is recorded also has an impact. Studies have shown that when votes were recorded in a school, for example, people were more inclined to vote for educational renewal plans (Berger, Meredith, & Wheeler, 2008).

The notion of nudging goes a long way towards explaining how products and environments can activate particular human tendencies. Behaviour is explained as the outcome resulting from an offer of choice and the automatic behavioural responses it triggers. By recognizing the choice(s) offered by products, and by developing the ability to predict behavioural responses based on fundamental research, a designer can deliberately design influence.



## ***Practice-oriented design***

Practice theory sees human behaviours as essentially social, and considers a 'practice' the smallest unit of analysis, of which behaviour is a part/component. A practice is 'a routinized type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, "things" and their use, and background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge' (Reckwitz, 2002, p. 249). In sum, the dynamics of what makes up a practice can be represented as the interplay between conventions, skills and artefacts (Kuijer & De Jong, 2009).

To clarify this, we review the practice of cycling in the Netherlands. The act of a cyclist giving way to a pedestrian is part of a practice that contains several elements. At the moment of giving way, the ability of the cyclist to notice pedestrians, the bicycle brakes that actually enable the cyclist to give way, the infrastructure of separate lanes for cyclists and pedestrians and the relevant traffic rules are all elements that interact and together shape the practice. Although Shove et al. (2007) sympathize with Latour when he stresses the interrelatedness of people with products and the influential role of products in shaping behaviour, they highlight the importance of understanding the nature of this relationship as continuing to evolve. In practice theory, emphasis is placed on the historical development of practices and on the interplay between practice elements that explains this development.

Practice theory stresses the influential role of products in shaping behaviour, yet also stresses products' dependence on the context in a historical and cultural sense. The value of this for designing product influence is that it helps designers to better recognize the contributions of history and culture to the social significance of products. It may help our efforts to design social practices if we better understand the continuous interaction between various influential factors in behaviour over time and geographically, as our explorations may reveal an entry point to redesign existing practices (e.g. bathing, Kuijer, 2017).

Both nudging and a practice-oriented approach are the result of research, in behavioural economics and sociology respectively. And many more theoretical models exist that explain the (potential) relationship between



people's behaviour and the products and services they use (see Tromp & Hekkert, 2012, for an overview). From a designer's point of view, all can have value. In line with Verbeek's concept of mediation, we wish to offer a methodology that allows you to design for the variety of relationships that exist and the various ways you might study and perceive these relationships. With a little help from the sciences, we can – as we will show elaborately in [Chapters 6 and 7](#).

## **Designing the hidden influence – Should we be allowed to?**

Designing the influence of products and services, especially considering that the influence is mostly hidden to people, oftentimes raises objections. It may seem highly immoral to 'deceive' people in this way. Yet, our stance is that designers should be granted the responsibility to design this hidden influence when they intend their efforts to push society forwards, and the efforts are embedded in a scientific and moral design practice. In fact, we consider it immoral *not* to take this responsibility.

Later, we will discuss where others stand in this debate, and touch upon some of the alternate routes that exist when dealing with the implicit influence of design. We reveal how some critics clearly seek ways to avoid granting the designer this responsibility, thereby shifting responsibility to other people. Others work their way around the issue but do not provide conclusive answers as such.

### ***Is it ethical to shift more responsibility to people?***

Fogg (2003) deliberately tried to exclude the unintended behavioural consequences of design from the field of persuasive technology. In this field, persuasion principles are applied to technological products to elicit specific behaviours. There are apps that help people quit smoking, avatars that troubleshoot computer-based work and games that force gamers to get physical. Although particular aspects of these products may implicitly affect behaviour, everybody generally understands that they have been designed to do that very thing – change user behaviour. Their aim is explicit, and should be. When choosing to interact with these products, people are therefore aware

of the fact that they will or may change their behaviour, and consciously comply with this. Although some scholars – including us – have argued that all design is inherently persuasive (Redström, 2006), many scholars within the field of persuasive technology have refrained from a moral discussion (Torning & Oinas-Kukkonen, 2009).

But explicit interventions to promote behaviours have several downsides. The first is the annoyance it may cause people, which may have possible counter-effects on behaviour.

Oh yes, we know all too well what is right for us – for our health and the environment, for our society and our fellow earthlings. We are told by campaigns, billboards and the media on a daily basis not to play with fireworks, to keep the streets clean and to be welcoming to immigrants. If we listen to our doctors, teachers and civil servants, we know exactly what we should do to stay fit and be decent citizens. And many of us try to do those things. But, at times, those messages can strike us as overly repetitive and patronizing. We get tired of ‘doing good’, and allow the rebellious voice within us to protest. Sometimes, the call to goodness can even elicit ‘reactance’ (Brehm, 1966) – a kind of oppositional motivation where forbidden behaviours actually seem more appealing. As such, warnings that ask us to limit our freedom by forbidding specific behaviours have actually been shown to be counter-effective (Reich & Robertson, 1979).

Secondly, it can be extremely hard to behave ‘correctly’ when our environment continuously advocates for other behaviours. In case of our obesogene environment, is it ethical to ask people to change their behaviours without changing the environment? Are interventions that help people to keep to their diet or do sports regularly the most appropriate answer to this problem? We think not. We cannot hold people accountable for undesired behaviours we have co-created. Paradoxically though, all those support tools – despite having been designed with the best intentions – do serve to strengthen this accountability. Imagine: can we raise insurance rates for people who live an unhealthy lifestyle, since there are smart technologies that measure their calorie intake, yet fast food is sold 24/7 and healthy alternatives are more expensive? Can we fine someone for littering – even when his or her infraction is caught on a surveillance camera – when we do not place garbage bins in the immediate environment? Is it ok that people with foreign names have less chance of getting a job (Bursell, 2007) because of the way we have designed application procedures (and given that we *know* people are

driven by their unconscious prejudices)? We firmly question the moral justification of putting people in situations where they need to fight seduction in order to act responsibly.

## ***Why not try and learn from all this?***

The first way out of these paradoxes is not by stimulating desired behaviour, but by attempting to avoid undesired behavioural consequences before they arise. We should set the boundaries of behavioural options. Although this sounds great, this is a perspective that only allows for ethical considerations to come into play after the technology or design has already appeared. If we create a potential design or technology, what implications can we foresee, and do any of these urge us to redesign? Various methods exist that help designers to assess potential undesirable consequences, and turn them into desired ones (see, for example, Constructive Technology Assessment, Schot, 1992; Value-Sensitive Design approach, Friedman, Kahn, & Borning, 2002; an approach to ‘moralize’ technology, Verbeek, 2011). As argued in [Chapter 2](#), however, we argue for an effect-driven approach wherein moral reasoning plays a role in defining the effect. Instead of value-sensitive design, we make a plea for *value-driven design*.

The second way out is to leave *people* an escape route. The introduction of nudge theory has provoked a serious debate on paternalism versus liberalism (Mitchell, 2005; Sunstein & Thaler, 2003). Thaler and Sunstein ask policymakers to understand how the environment ‘gently pushes’ people into particular choices and behaviours, and they ask our leaders to use this hidden power for the greater good. The debate as to what extent policymakers can interfere in human behaviour is a loaded issue in most democracies. The mayor of New York, Michael Bloomberg, eventually lost a court case for trying – he attempted to counteract obesity by banning the promotion of XL-sized cups for sugary soda drinks. This illustrates the precarious position policymakers have when prescribing behaviour – even when they do so explicitly. Thaler and Sunstein (2008) went to great lengths to justify nudging as morally acceptable. They invented a novel perspective that they termed ‘libertarian paternalism’, in which they explicitly leave a ‘way out’ of the choice built into their designed interventions.

But is there even a point to talking about choice when the experience we have is one of seduction? And, do we mind being seduced?

It is fair to question whether we really need the guarantee of endless choices. Asking people to consider yet another choice in a world full of options is not always what they desire. Choosing what is right for us is extremely hard, and we are never sure we have chosen ‘correctly’. In his classic book, *The Paradox of Choice* (2004), Barry Schwartz convincingly argued and proved that, in fact, we suffer from choice overload. We don’t like all these choices, and eliminating them would greatly reduce the stress and anxiety of our everyday lives.

The third way out is to educate people to become more deliberate and empowered regarding the ways products and services affect their lives. To some philosophers, the complex relationship between people and things implies the need for a kind of ‘media-literacy’ in human beings (Oosterling, 2013). Similar to learning how to read a book, philosopher Henk Oosterling believes that people need to learn how to ‘read’ the things that surround them and support their daily lives. His notion of reflexivity can also be found in the work of John Ehrenfeld (2008) and Thomas Markussen (2013) who, respectively, discuss the role of design in sustainable living and citizens’ political engagement. They too acknowledge the often-unnoticed influence of design and seek to define – each in their own unique way – language and models for designers to use to create designs that allow for more agency with people in those relationships. Although this sounds desirable, also to us, it logically implies educating people over the long term. And it may not be possible to get everyone to the level where they can employ products and services to support their personal agency as a rule.

Why not try, and learn from it? Why not design these subtle pushes so they help us to move gradually into a more socially sustainable future? Why not design the products and services that bring out the best in humans?

Humans have a more complex motivational structure and more capability to solve social dilemmas than posited in earlier rational-choice theory. Designing institutions to force (or nudge) entirely self-interested individuals to achieve better outcomes has been the major goal posited by policy analysts for governments to accomplish for much of the past half century. Extensive empirical research leads me to argue that instead, a core goal of public policy should be to facilitate the development of institutions that bring out the best in humans. (Elinor Östrom, 2010, pp. 25–26)

# Notes

- 1 Regarding product mediation *of behaviour* (the type of mediation that concerns us the most), Verbeek builds on the work of Latour. Latour (1992) elaborates on the term 'script' as introduced by Akrich (1992) to describe the 'implicit manuals' that products embody. Latour expands on the concept to specify the relation between designer, product and user. He distinguishes 'inscriptions', which refer to the effects on user's actions intended by the designer, from 'prescriptions,' which concern the actions a product *allows* the user (resembling Gibson's concept of affordance, 1979), and 'subscriptions', which explain how users interpret these prescriptions. One of Latour's examples of designs that deliberately aim to alter behaviour is the speed bump. Designers inscribe such objects with a message to 'drive slowly and responsibly'. This inscription potentially leads to a prescription, such as 'slow down', and can lead to a subscription, like 'slow down to avoid damaging the car'.
- 2 For a detailed analysis of the microwave in its shaping of gender, see Cockburn and Ormrod (1993).

# 5

## An Imperfect World:

### Why It's so Hard to Do the Right Thing

**I**n this chapter, we look at the role of design in the bigger picture and the ways we have designed a world that does not suit human nature very well. We start off with a reflection on human nature and the innate mechanisms we deploy when dealing with social dilemmas. This reveals how we are evolutionarily wired to act both selfishly and selflessly. In the context of contemporary societies, though, the tendency to act selflessly is not easily triggered. Not only has the world grown incredibly complex and demanding, commercial design also played an important role in discouraging selfless acts. Essentially, design has made it difficult for human beings to do the right thing. Based on this observation, we argue that there is a need to reinstate the social through design by making use of what we know about human nature.

#### **Human nature**

We introduced you to social dilemma theory in [Chapter 3](#) and explained how products and services have the ability to promote specific behavioural

choices when people are faced with these dilemmas. We pointed out how social dilemma theory fails to predict how people choose to act. Social dilemma theory is based on the assumption that people engage in rational decision making – in other words, an objective assessment of situational outcomes guides our choices. Such assessment requires conscious deliberation. Recently, however, many scientists have revealed the dominant role that unconscious processes play in how we act, claiming that the majority of our behavioural choices are made without any deliberation. This means social dilemma theory may be of help when judging behavioural options from an objective point of view – like in design – yet fails to describe how dilemmas are experienced and contended with in real life.

So how, then, can we better understand what drives people's choices and behaviours when they are confronted by these dilemmas?

To answer this question, let us turn to evolutionary theory. Taking an evolutionary approach to understanding why people act in ways that benefit others – even when there may be no benefit to the self – implies understanding that behaviour in relation to its ultimate cause: the benefits to individuals or their kin, and therefore the reason it was favoured by natural selection (De Waal, 2008). Simply put, how did the behaviour contribute to the survival of the species? The evolutionary focus is on the long-term effects produced by a behaviour, rather than proximate causes – such as an actor's individual motivations, what supposedly triggered the action or what mechanisms enabled it (all of which are more of interest to social psychologists). Hence, Frans De Waal (2008) explains the importance of distinguishing 'the function of behaviour' from 'the motivation for behaviour' when wishing to understand why people act the way they do.

## ***We are moral, social beings***

Human beings are social beings who developed morality. In tracing its origins, Michael Tomasello and Amrisha Vaish (2013) explain that morality in its most basic sense implies actions in which one's self-interest is either suppressed in favour of or equated with that of others. Helping others and cooperating are necessary for human survival. Even though our evolutionary ancestors lived in societal structures largely driven by competition, and (physical) dominance ruled, they too showed the capacity to care and collaborate. Research into these capacities reveals that we have developed

sophisticated mechanisms to deal with social dilemmas – situations where self-interest and the interests of others are at stake. Let us review the evolutionary basis for acting in the interest of others.

Helping somebody or sharing something with someone even at a risk or cost to oneself is, by definition, an altruistic deed. Such acts require the suppression of one's self-interest. But how does that work? What mechanism have we developed over the years that helps us to do so? Reviewing research with primates, De Waal (2008) explains how altruistic behaviours are driven by empathy. He distinguishes three levels of empathy and explains that all of them have the perception-action mechanism (PAM) at their core. This explanation means that when empathy is triggered, there is no cognitive deliberation involved in pro-social actions. The most basic level of empathy is 'emotional contagion'. This refers to the ability to personally, physically experience distress when perceiving it in someone else. Subsequent acts are then driven by the desire to alleviate one's personal distress (Batson, 2014). The second level of empathy is sympathy, which is a real concern for the distressed other. Sympathy therefore relies on a separation between internally and externally generated emotions. A good example of sympathy is when one ape comforts another that just lost a battle by wrapping its arms around the loser's shoulders (see [Figure 5.1](#)). The third level of empathy is empathic perspective-taking. Perspective-taking means adopting another's point of view, which requires imagination and mental state attribution – in other words, a highly cognitive affair. Perspective-taking in combination with emotional engagement drives targeted helping – not only when needs are recognized in the other, but even based on the anticipation of those needs, for instance when orangutan mothers bridge trees for their offspring.

Empathy is a main driver for altruistic acts. It is triggered, and as such mediates behaviour in the interest of others. But when, then, is empathy triggered? What are the necessary conditions for empathy to arise and play a role in subsequent actions? Logically, kinship is an important factor here. Empathic responses to the distress of genetically related individuals naturally serve survival, like a mother who instantly cares for her baby. But empathy can also be part of more evolved social relationships that are based on reciprocity. A reciprocal relationship means the favour of helping is returned sooner or later, so both will ultimately benefit from the relationship. Reciprocity with great apes does not work by calculation – they don't keep score, so to speak – it happens because one individual develops a positive



affect for the other that helped him (De Waal, 2008). This ‘attitudinal reciprocity’ is said to be a key process in altruistic behaviours. Although the core mechanisms for acting altruistically and pro-socially can be traced back to our primal ancestors, human beings have made important evolutionary steps beyond them.

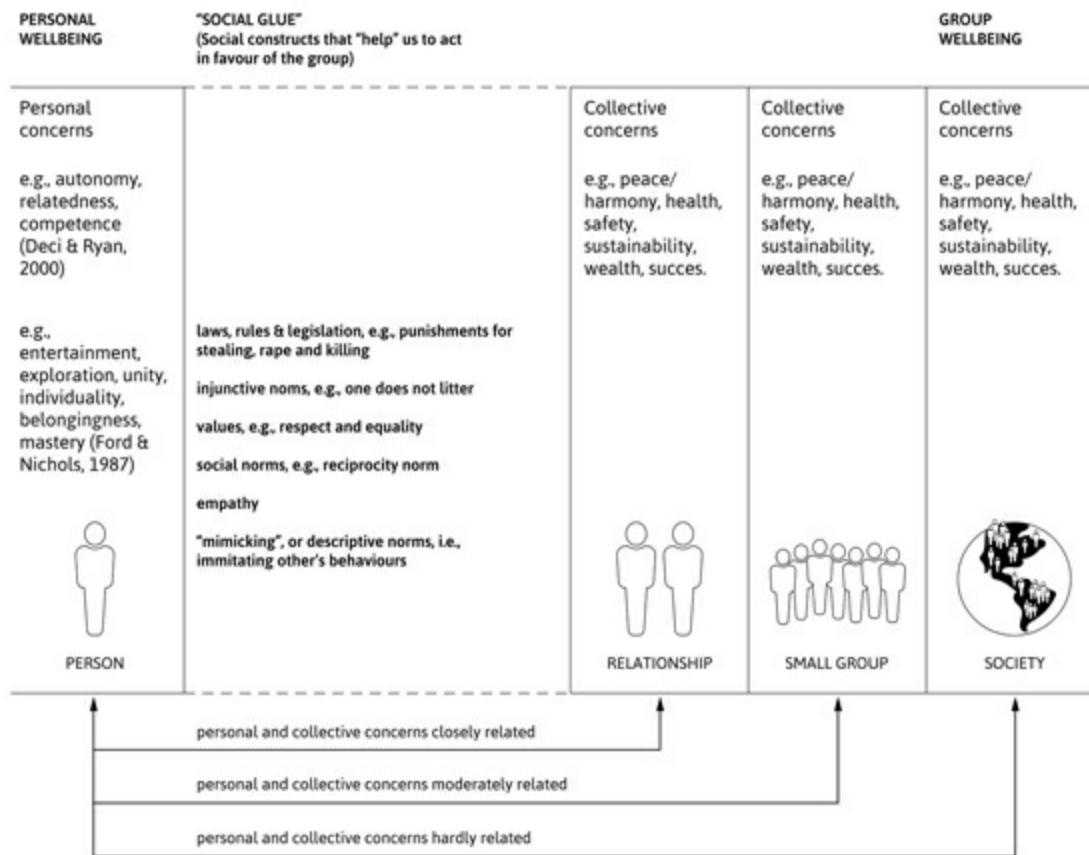
Tomasello and Vaish (2013) argue for and show evidence of what they call the ‘interdependence-hypothesis’. This hypothesis explains how human beings have evolved into ‘ultracooperative’ beings in a process that had two phases. The first was the urge to cooperate in ways that favoured survival – individuals needed to get good at collaborating or else they would starve. Such mutually beneficial collaboration implied that individuals began to care about the well-being of their collaborators because another’s performance could determine everyone’s success (and thus personal well-being). The second phase was the development of ‘group-mindedness’. When groups grew larger, humans needed to play the part in the group they were given, and more generally conform to ‘how the group does things’. Survival was associated with group membership more than individual relationships to immediate relatives, and the adoption of ‘agent-neutral objective norms’ – impersonal norms that were also impersonally enforced on every group member. According to the theory, such norms led to approving or disapproving behaviours and to behavioural self-governance (mediated by emotions like guilt and shame). These evolutionary steps explain how we became the socially aware and sensitive creatures we are today.

## ***Social glue***

Conflicts between personal and collective concerns have been inherent in human existence since our very beginnings – do I act in favour of myself, or in favour of the group? A brief review of humankind’s evolution shows that, over time, we have developed refined ways of dealing with such conflicts. Even among primates, a concern for belonging and a fear of rejection are strong incentives to act in favour of the group (for example, see Williams, 2007). Nevertheless, such conflicts can be sharp. For example, the need to distinguish ourselves from others has proven to be a powerful driver of human behaviour – and one that has equally served human survival! Human beings are also competitive, sometimes in ways that destroy others. And some people feel a natural drive to be in charge and may use their power to

suppress others. We may want to be more beautiful, more attractive or own more than others – so much so that we may not care about those who are less successful or fortunate in life. In other words, all universal drivers for behaviour can equally lead to undesired implications for the group.<sup>1</sup>

To smooth out the process of dealing with these omnipresent conflicts between personal interests and group interests, various social constructs have evolved over time. For instance, our tendency to imitate the behaviour of others ('mimicking') or 'descriptive norms' that describe what most people do in specific situations ensure that our behaviour does not deviate from that of the group. And, as we saw earlier, empathy motivates us to help others in need. Then there is the 'reciprocity norm' – the expectation that kindness, or harm, will or ought to be returned – which ensures equality in our social relationships. 'Injunctive norms' – descriptions of socially acceptable behaviours – also motivate us to behave in line with what groups approve of. Upholding social values – such as respect – ensures that our behaviour does not harm others. And our rules, laws and legislation set the limits of our behavioural options. In the continuous flow of decisions we have to make on a daily basis, all these drivers may therefore 'help' us to act in favour of the group rather than solely in favour of ourselves. One might say that we have developed a kind of 'social glue' through the years that helps to ensure group well-being (see [Figure. 5.1](#)). So why are we still being confronted with so many social problems?



**FIGURE 5.1** People have established various mechanisms that help individuals navigate the dilemmas inherent in collective existence and act pro-social every once in a while. Altogether, we might call these 'social glue': it ensures we do not fall apart as a group. In general, the larger the group, the less natural pro-social behaviour becomes.

## Contemporary societies

The complexity of the world today is truly mindboggling. We have evolved from creatures primarily concerned with survival and security to individuals who need to remember at least twelve passwords (on average) or choose leaders in a complex constellation called 'democracy'. In earlier days, people lived in small communities, travelled on foot and used simple tools like spears and baskets. Nowadays, our tools and technologies allow us to establish and maintain social ties to over 500 others, fly around the globe for work and play and buy products produced worlds away. As the scale of the modern world has expanded, so has its complexity. This is not to say that people experience their lives as more complicated, nor does it imply that

former times were better. But it is safe to say that the number of interconnections between any number (and variety) of people and things has grown exponentially over time.

## ***Complex systems and our limited rationality***

One of the reasons that people do not always make choices that benefit the greater good is that sometimes that benefit is beyond the horizon of their perceptions. Our systems, both social and technical, have grown so large and complex that there is no single individual on earth that understands them all, nor is there a single system understood by all of us. They have outgrown us. And so most people do not realize that their actions cause impact elsewhere. We are often unaware of the role our own actions play in the crises we face. Do we actually know how buying a t-shirt made in Bangladesh affects the well-being of the community where it was made? Can we really feel the impact we would make on collective environmental burden if we divided our household's energy consumption by two? Do we see how our choice of health insurer also affects the well-being of other humans? The fact that we are so out of touch with the effects that our actions have on society (and its well-being) explains a great deal why we do not change our habits even if they are harmful – we are not conscious that they are harmful! Or rather, we do not *feel* they are harmful.

For so long, governments thought that explaining the harm that particular behaviours would cause could convince people to change their behaviour. But asking people to *evaluate* the consequences of their actions – when they cannot experience them – is actually beyond logic. For instance, when asking consumers to select an energy provider or insurance company, short-term interests must be leveraged against future interests, which is a choice that contains a temporal dimension. Economists have studied these so-called 'inter-temporal choices' (for example, see Loewenstein & Prelec, 1991; or Loewenstein & Thaler, 1989) and found that when making such choices, people have to balance and estimate the current and delayed costs and benefits of a decision they make in the present, a process called 'discounting'. In this process, one would expect that people would apply deductive logic to arrive at the best option or choice. However, people have difficulty discounting due to an inability to calculate probability and account for delays in decisional outcomes over time (Green & Myerson, 2004).

Logic states that people would prefer to receive €110 over €100. It's an obvious choice, since their options only differ across a single dimension – value – while other dimensions such as time and probability remain equal for both options. Things get tricky when options differ across more than one dimension. For example, most people would likely prefer to receive €100 immediately, rather than wait to receive €110 in a week, because the value difference is minimal when compared to the amount of time they would have to wait for the cash. By contrast, people would rather get €110 after a year and a week, instead of only €100 after a year, because the amount of time they would have to wait is inconsequential. When the outcome of a choice appears uncertain due to the added factor of time, people adopt (rationally) illogical behaviours. It is not hard to imagine that when selecting an energy or insurance provider, this kind of discounting leads to sub-optimal choices.

When long-term rewards are even less clear-cut, like when deciding what to eat, inefficient discounting may therefore play a role. How the sum total of your dietary intake relates to the amount of weight you gain or lose over time is hard to assess. Not only is it a rationally challenging task, the temporal dimension (when the weight gain will actually take place) is uncertain as well. Consistently making decisions that do not lead to substantial weight gain is therefore not easy. In that sense, preferring the real enjoyment that a piece of pie will bring now over the possibility of avoiding potential weight gain at some later time is quite understandable. After all, have we not learned all our lives through direct reinforcement (Skinner, 1953)? Wouldn't that partly explain the human preference for instant gratification over delayed gratification?

Since our rationality is limited – too limited to accurately calculate the consequences of our actions – human beings have developed 'heuristics', or learning systems, to guide their choices. And although we would not survive without heuristics, Amos Tversky and Daniel Kahneman (1974) beautifully demonstrate the fallacies they may lure us into. The 'representative heuristic' describes our human tendency to assess the probability of a relationship between two phenomena on the basis of their similarity. But this may falsely overrule factual relatedness. For instance, people associate the colour green with environmental friendliness and sustainability. An energy provider advertising a promotional offer with trees and green letters might easily make people think the provider is selling green energy, while that may factually not be the case. The 'availability heuristic' explains our human tendency to

assess the probability of relationships between phenomena or events based on our ability to recall such a relationship. If you have recently read news reports about car theft, your overestimation of the chances that this could occur might then lure you into buying expensive insurance for your second-hand car. The ‘adjustment and anchoring heuristic’ refers to the human tendency to assess the probability of an outcome in reference to an initial value or frame. When people were asked to estimate whether they think the chance of them becoming seriously ill in five years is greater or less than 50 per cent, or greater or less than 10 per cent, the phrasing of the question influences their general estimation of the chances that they will become ill in the future. People who were confronted with the 50 per cent figure considered their general chances substantially higher than people confronted with the 10 per cent figure. It is easy to surmise how such anchors might be misleading when we are given them in conjunction with advice on energy suppliers, health insurance or mortgages.

As many social dilemmas contain a temporal dimension and have outcomes that are relatively uncertain, our limited rationality clearly plays a part in our decision-making processes. Because of the complexity of communal life – a complexity reinforced by the massive social infrastructures we have created – we simply cannot foresee the consequences of our actions anymore. Even the most intelligent person in the world cannot logically determine the cuts of meat that will positively influence future societal concerns related to public health, animal welfare and sustainability. So we rely on heuristics when we have to make such choices. But now we know that these cognitive shortcuts can easily lead to consequences that are not beneficial from either a personal or a social perspective.

## ***The intrusiveness of the commercial world***

Beyond societal structures and public policies, the physical environment we live in and move through can also stimulate the dominance of personal interests in our behaviour. A way to explain part of this influence of the environment is the idea that people can be ‘primed’. Priming happens after people are exposed to a particular stimulus – for example, a name or a product or a procedure – and that (subliminal) exposure then influences their response to a stimulus introduced later on. When discussing my work with you, I may describe the set-up of my workspace at home and the appliances I

use; when I mention a ‘tablet’, you would most probably interpret this as a ‘tablet PC’ rather than a ‘medical pill’. In this case, you have been primed by the earlier part of conversation about working from home and have therefore associated the word ‘tablet’ with work tools.

This faculty of association is typically very convenient in conversation. However, the process may be present in various forms. For instance, Henk Aarts and Ap Dijksterhuis (2003) studied the effect that pictures of various environments had on participants’ behaviour, and demonstrated that a visual representation of a fancy restaurant or a library was sufficient to trigger ‘normative behaviours’ like being well mannered or using a lower voice – most of us would lower our voice when entering a church, or when visiting a graveyard or war monument, because these spaces have behavioural norms related to their functions. Studying, worshipping and remembering lost loved ones are serious activities for which silence is the code of honour. Such stereotypical environments can thus trigger us to act with social sensitivity. We might not always be aware of the effects these environments have on our behaviour, but often we do agree and consciously comply with these norms.

A series of experiments done by Kathleen Vohs and her colleagues (2006) shows more worrying results. Through a series of nine experiments, they show that when people have been primed with money (via posters and screen savers), a kind of pro-self attitude is activated, leading to preferences for playing and working alone, and maintaining more physical distance from strangers. In a similar fashion, Aaron Kay and his colleagues (2004) show that being around mundane objects related to business – such as a briefcase, or an executive-style pen – makes people act more selfishly and competitively. So even though we should be careful not to assign too much power to priming, the phenomenon does aid our understanding of how environments may automatically decrease (or increase) our willingness to act in favour of the group. If taken to the level of public policy, we could therefore ask for more stringent policies that better regulate commercial marketing messages directed at short-term individual gain, since that is what contemporary commercial business models commonly present as ‘value propositions’ – instant fulfilment of powerful personal desires. In an environment that promotes selfish attitudes, it may be harder to act in ways that protect the common good.

## ***Limited willpower***

Sometimes, social initiatives and awareness campaigns can convince us to change – to exercise more, or be more compassionate with new neighbours who do not speak our native language. Yet, such persuasive tactics may not directly lead to behaviour changes, as conscious behaviour change requires willpower. When we apply willpower, or self-discipline, conscious cognition overrules behavioural tendencies suggested by the unconscious. To get out and exercise, or invite the new neighbour over for coffee, we have to resist the impetus to do easier things, like watch television or play with our children. And resisting more comfortable alternatives becomes even harder when we have been engaged in cognitively demanding tasks all day, which can deplete our resources of self-control.

Roy Baumeister and his colleagues (1998) showed that our self-control indeed requires conscious effort, and its exercise can therefore interact problematically with other cognitive processes. In a study, participants thought their taste perception was being tested. A bowl with freshly baked chocolate cookies was placed together on a table with a bowl of radishes in the room where the experiment took place. Participants were asked not to eat in the three hours prior to the experiment and were assigned to eat either cookies or radishes. The participants assigned to the radish condition were expected to resist the temptation presented by the cookies. Afterwards, participants were given a puzzle and told they could take as long as needed to solve it. The puzzle was unsolvable; instead of being interested in taste perception, Baumeister and his colleagues were interested in observing how suppressing an impulse would affect the effort the participants put into solving the puzzle. Participants assigned to the radish condition spent significantly less time trying to solve the puzzle than those who were asked to eat the cookies, or those in the baseline condition (which did not include a taste perception task). Apparently, self-control *can* deplete the same resource needed to consciously tackle demanding tasks, a phenomenon referred to as ‘ego-depletion’ (Baumeister, 2002; Muraven & Baumeister, 2000).

Recent studies even show that self-control – willpower – is like a muscle. Its exertion is fuelled by glucose and can be trained (Gaillot et al., 2007). This research tells us it is physically demanding to consciously control our behaviour when our innate tendencies or impulses are different. When life’s demands require us to use our willpower for so many other things – studying,



working, raising our children and so on – behaving consciously in favour of society piles another massive demand on our plate. If taken to the extreme – and assuming that willpower is, in fact, a physiological process – when a society or government places too much importance on economic productivity, without equally promoting the utility and necessity of leisure time, citizens cannot effectively recharge their batteries enough to adopt more responsible behaviours.<sup>2</sup> So besides shaping people's willingness to change, how society is designed also affects people's *ability* to change.

## Reinstalling the social

While human beings have successfully developed social glue to organize social life and overcome conflicts between personal and common interests, the very existence of many social problems indicates that we have created a living environment in which this does not suffice. We have built metropolitan areas where millions of people live side-by-side, for whom we cannot possibly experience empathy all at once. We have planned cities in which we are repeatedly primed with pro-self-constructs through ubiquitous advertising, endless rows of shops and massive office buildings. And while awareness of the dilemmas of our time may eventually drive people to consciously consider societal interests, they simply do not have the capacity to comprehend the consequences of their actions in our global and connected world, nor enough willpower to change old habits in the cognitively demanding culture of many contemporary societies.

It seems that technological evolution runs on its own. It has been separated from sociocultural evolution. We have failed to match technological intelligence with an advancement in sociocultural intelligence and wisdom. ... The key proposition here is that societal systems are purposeful systems in which design can guide evolution. (Bela H. Banathy, 1996, p. 173, p. 329)

While efforts that help us develop the micro-resilience we need to cope with the demanding and complex context of today are welcome, design's share in closing the gap between human nature and environment is of equal importance. We argue for design practices that acknowledge what makes us human and pursue artefacts that serve the betterment of society at large. In

that sense, we seek to enact what Banathy (1996) explains as a ‘guided evolution of society’, albeit in small steps. As Dawkins (1989) suggests, knowing what ‘our selfish genes are up to’ may offer the key to producing a society in which people selflessly work towards a common goal.

In this book, we are seeking to establish design practices that do justice to what makes us human – practices that challenge humanity and push our evolution towards becoming more ethical creatures.

## Notes

- 1 Universal drivers for behaviour, whether individually or socially oriented, can have undesirable implications. Although these drivers may have supported survival of the species over the years, they may be counter-productive to group survival or considered immoral in contemporary contexts. This chapter is therefore an argument to understand, account for and make use of these drivers more than a plea in favour of them.
- 2 This may be a good argument for providing citizens with a (universal) basic income.

# 6

## Social Implication Design:

### The Method

**A**fter our in-depth look at the myriad ways that design (and designers) affects society, we now turn to the chapters dedicated to the practice of social design. We begin here with an explanation of the Social Implication Design (SID) method. SID is a variant of the established Vision in Product (ViP) design approach developed at Delft University of Technology (Hekkert & Van Dijk, 2011). SID was developed in an academic setting,<sup>1</sup> in close alliance with design work carried out by Reframing Studio, Amsterdam. The stages in the SID process are *debriefing*, *anticipating the future*, *goal setting* and *developing the intervention*, and each of the stages contains a set of steps.

Anyone acquainted with the ViP approach will instantly recognize the steps in SID. But the SID approach asks designers to take them in a very particular way. After all, designing for society means something different than designing for individual users. Not only do we need to consider people as part of communities rather than just as individuals, we also need to understand the relationship between human lifeworlds – the day-to-day worlds in which we act and interact – and the (designed) systems that support them, since both people and systems define society. SID makes sure to explicitly account for this when designing.

We will present three case studies – two professional and one academic –  
\*\*\*\*\*ebook converter DEMO Watermarks\*\*\*\*\*

to illustrate how SID plays out in practice.

## **The social designer**

In all the chapters so far, we have argued for a type of social design that we believe the world needs. We have discussed the inherent and powerful influence that products, services and systems have on society extensively, and called for designers who are capable of gearing this influence towards a better future for all. In [Chapter 2](#), we discussed the fundamentals of the social design practice we envision. And in [Chapter 3](#), we introduced the core elements the designer should focus on: human behaviours and conflicting concerns. Taken together, these conclusions draw the contours of the kind of social designer we seek to inspire, namely

- 1 someone able to translate abstract social implications into concrete means,
- 2 someone motivated to explore concepts and principles from the social sciences,
- 3 a systems thinker able to examine the problems of today with the understanding that building a better future requires system-as-cause thinking and
- 4 someone who dares to take a stand for what they believe in, and is ready to defend their ideas.

We do not expect for all of this to come naturally though. This chapter is intended to support your reasoning and practical application of the SID method. Remember, using this approach and the accompanying techniques is no guarantee that you will achieve a high-quality outcome, but you will begin to ask the right questions and find avenues that lead to appropriate answers. In short, you do not need to have the skills mentioned earlier right now. But without doubt, you need to feel a certain affinity with all of them before you spend time learning to work with SID.

Before we discuss the SID approach in more detail, let's look at an example of what SID can produce in practice.

## Case 1: Loop

For his thesis project, Joep Serrarens (2015) wanted to design a service that would support *truly* sustainable consumption. In his view, it had to be possible to design something that would intrinsically elicit sustainable buying practices, rather than seduce people into buying sustainable products through an overt marketing ploy. Joep wanted to see if he could develop an answer to the conflict between the societal concern for sustainability and the individual concerns related to consumption, including price, convenience and status.

Tomtoy wanted to grow their online store. They were a good match for Joep because the concept of ‘sustainable consumption’ suited their brand image. They also agreed to Joep’s request to focus on the distant future, as a more conceptual and speculative design would help them refine their mid- to long-term strategy. He ended up designing a service for consumers in 2025.

Joep began by delving deeply into the literature. He interviewed experts and visited relevant events. He collected insights from various sources and built a coherent view of how the world might look in 2025 – or at least the part that would be relevant to consumers. Joep discovered that people’s future consumption behaviour would likely be determined across three dimensions: attitude towards sustainability, arousal during purchase and individual level of engagement with shaping the future. He concluded that self-development was a key value for people – one that would drive their purchase behaviour – and encapsulated this by an imaginary quote: ‘What I buy will help me to become a better me (in some way).’ This frame led to a better understanding of people’s drives when it comes to consumption in a world faced with a limited amount of natural resources.

For his design, Joep decided to focus on giving people the opportunity to shape a sustainable future. He stated his goal as: ‘We want people to consciously consume within a reciprocal relationship, by helping them feel the synergy created with their behavioural counterpart when consuming with responsible change in mind.’ A behavioural counterpart could be the person, system or environment that buyers are connected to via the implications of their shopping behaviour. He deliberately decided to focus on people with proactive attitudes to sustainability and a change to the system, and thus find a radical new form of consumption.

Joep assumed that if a consumer entered into a reciprocal relationship with a counterpart – which would directly involve all parties in the production

process – that reciprocity could create an opportunity to inspire and induce sustainable behaviours. By envisioning a relationship in which consumers can experience the consequences of their buying behaviour and, on that basis, actively engage with practices that protect the future of the environment, Joep expected sustainability would become an intrinsic motivation for consuming (differently). As such, he decided to *transform* the conflict<sup>2</sup> between the personal concern for self-development (that consumption addresses so successfully) and collective concerns about people and planet – leading to real sustainable practices.

It was immediately clear that, for this transformation to happen, the user–product interaction needed to contain elements of friction – some kind of pushback. To design this, Joep worked with two analogies: ‘improvisational dance’, where dancers respond on the spot to the spontaneous movements of their dance partner; and ‘pottery on a wheel’, where wet clay on a potter’s wheel responds to the potter’s hands. Both metaphors offered Joep insight into the character of his design before he even knew the kind of artefact he would design. Through this, he understood that interacting with his design would be provocative, confronting and intriguing, and its format malleable enough to invite exploration and contribution (Plate 20).

*Loop* is a platform that connects designers, resource producers and consumers. The platform resembles an online shop – only consumers do not buy products, they invest in resources. As such, they immediately take a different role in the supply chain. If a person wants a salad bowl made of oak, he or she needs to either have oak on hand or invest in it and wait until it is mature enough to be used for the salad bowl. This forces buyers to experience the value of the materials they consume, and it could lead them to use more sustainable alternatives (like bamboo, which grows more quickly). Users select the farm they wish to employ, after considering local weather conditions and the farm’s reputation, and can collaborate with designers to experiment with alternative materials for products: a process he anticipated would lead to ‘resource-driven design’ and production. On top of this, the resources users would have access to are limited (by definition) – the total amount of an available resource would be divided by the number of people on the planet, and the quotient becomes a single user’s limit. In this way, *Loop* challenges buyers to commit to living within environmentally responsible limits.

*Loop* is an exemplary case for the deliberate handling of the conflicting

concerns that underlie many of the social issues we face. The case shows how design can deal with this conflict and gives a glimpse of what society may look like in the distant future. We now turn to the specific steps in the SID approach.

## **The method**

SID is most suited to settings and situations where the key question is how to foster the common good over the short, medium and long term. Hence, social design clients typically come from the government or public sectors, since their primary concern is the public cause. That being said, many start-ups nowadays are also making societal value the centrepiece of their offering, and some multinationals and large corporations are really taking their social responsibility seriously (CSR) and radically shifting their innovation strategies as a result. All are possible settings for SID.

Now let us turn to the method itself. SID distinguishes four stages in the process of moving from a design brief to a solid design proposal (see [Figure 6.1](#)).<sup>3</sup> In the coming sections, we will explain the goal of each stage and describe the steps to be taken to progress through it.

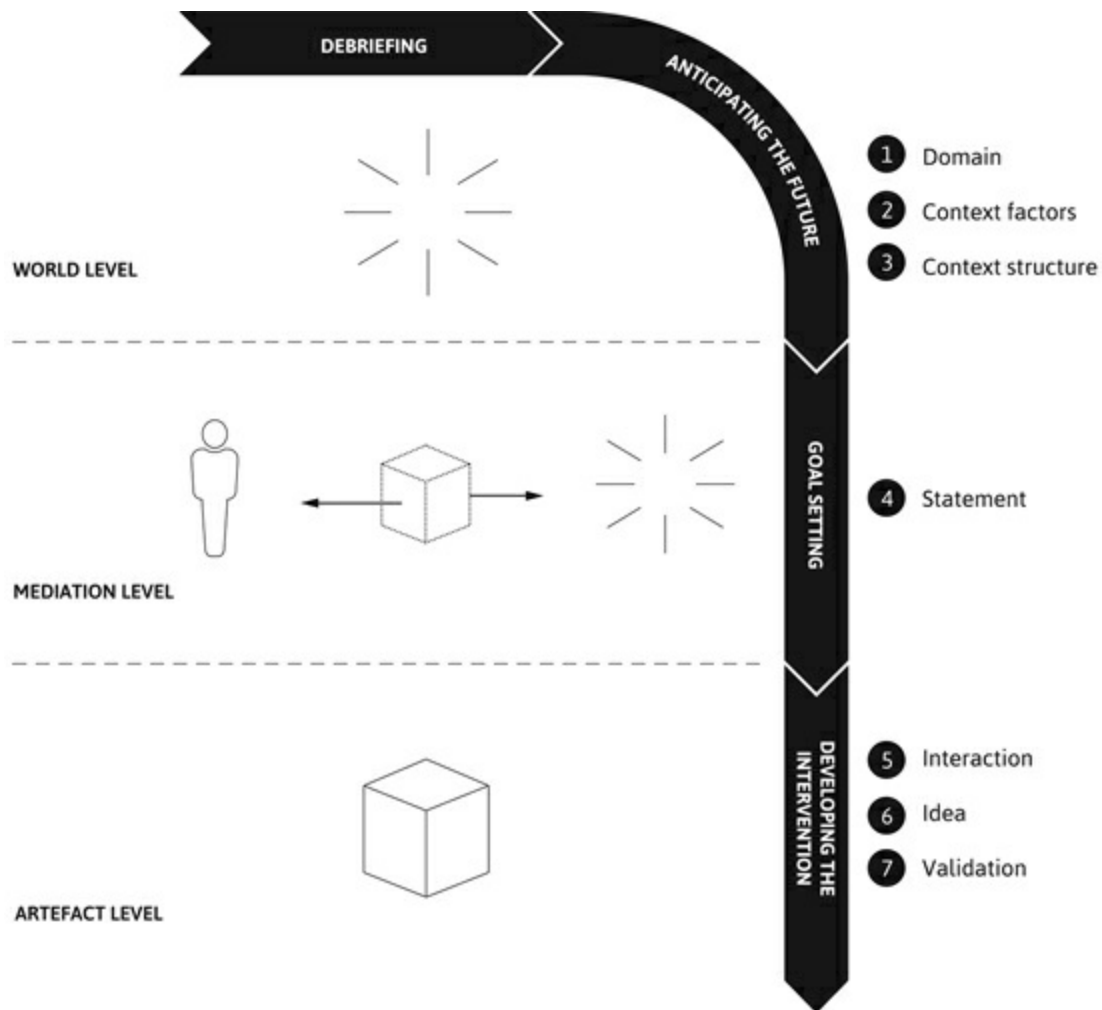


FIGURE 6.1 SID – the stages and steps of the method.<sup>4</sup>

## ***Preparation stage: Debriefing – A matter of days***

A SID project should start with ‘debriefing’ the client’s request or question, or for that matter, the designer’s own. Debriefing is all about understanding the political and organizational reality in which the project will be embedded. The goal of debriefing is to understand the points of reference underpinning the origin of the brief and get a clearer picture of the values driving it.

During debriefing, ask yourself these questions:

- Why is the client interested in solving this issue, or developing this idea?
- Is the objective of the project defined in terms of social impact or framed around individual user benefit or neither?

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- Where is the budget coming from?
- Under what circumstances would the outcome of the project be considered a success?
- What type of client are you working for, what is their organizational model and mission, and how far does their power reach?

Debriefing gives you the chance to ascertain your client organization's concerns, figure out their stake in the matter and explore – and often contest – any restrictions to the outcome of the design process. Note that the last question is of utmost importance. Since you are aiming to approach the issue or brief systemically, it is important to ensure the organization (or department) you are dealing with has the mandate to implement potential cross-silo or paradigm-shifting solutions.

Echoing Kees Dorst (2015), it might be wise to consider what attempts have already been undertaken to improve the situation that ultimately failed, and learn why.

Your debriefing process might be finished in an hour, or it might take days. In practice, debriefing usually starts when you first get wind of a project and continues until you meet with the client to make a project proposal.

Although the outcomes from the debriefing process are integral to the project proposal, we frequently see that designers do not dedicate enough time to it. This stage is key when it comes to setting expectations and maintaining fruitful communication with the client during development, as well as for an effective start to the next stage.

## ***Stage 1: Anticipating the future – A matter of weeks, or even months***

We start with considering the 'world level'. Here it is all about looking at the world around you and recognizing how it is developing at different scales and in different ways. But since the world is quite a massive place to analyse, observe and study, you need to restrict yourself to those aspects of the world that are relevant to your project. To this end, you need to set the *domain* of your project.

### **1. Domain**

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The domain delimits *an area of collective life* or *an aspect of society* that you are going to examine during the design process. The eventual design will need to generate impact within this domain one way or another, but it is important to not issue directives at this stage. For example, ‘neighbourhood dynamics’ correctly describes a domain, because it is neutral. But ‘getting neighbours in contact with each other’ does not, since it prescribes a specific behaviour. Although a SID project may start off with specific ideas for improvement, expressing the domain neutrally helps to create space for new ways to look at the phenomenon at hand, and critically examine the values to be embedded in the design.

Your reflections related to setting the domain should include consideration of the lifeworld(s) associated with the domain – in what ways do people come in contact with each other, act and experience life together in the domain? In tandem, reflect on the system world(s) that are inextricably shaping the lifeworld(s) at the same time – who and what are the public and commercial forces that serve to structure the domain?

When the domain is defined, you can start to anticipate the future world as it relates to that domain, and look at where your eventual design intervention will motivate behaviour and impact society. It implies looking at society directly – at communities, populations and nations, for example – rather than looking at products or services, or user behaviours.

For SID to open up the possibility of creating a different future rather than an improved today, you need a point of reference that is not the present day. Therefore, you are basically trying to anticipate the near or distant future of your domain. However, it is next to impossible to be comprehensive when doing so. Hence, you need to build a specific view on this future world – what is known as the ‘context’. The future context is meant to function as the point of reference for the design decisions that follow. As such, it is more a design tool than a prediction of the future. It is a worldview that needs to be built as reliably as possible, but one that is inextricably linked to the mind that creates it. Nonetheless, its validity is important. Anticipation of changes you witness today and your assumptions about what will remain the same tomorrow need to be grounded in knowledge and research.

There are two steps to get to this context: establishing a list of *context factors* and creating the *context structure*.

## **2. Context factors**

Context factors are the bits and pieces of your future world. A single context factor describes an individual aspect of the future, just like a single ingredient is only one part of a recipe. We classify four types of factors: trends, developments, states and principles.

Trends and developments describe changes to the character or human experience of the current world and/or anticipated future changes. States and principles describe aspects of the world that remain stable over time. Here are some examples:

**Trend:** *People are increasingly concerned about terrorist attacks.*

> A trend refers to shared experiences, beliefs and behaviours that are in flux; there is more or less of the phenomenon, it is becoming stronger or weaker etc.

**Development:** *Providing home delivery is increasingly a part of business strategy.*

> A development is also a change in the world around us – a biological, political, technological or demographic development for instance. But in contrast to trends, developments do not describe human behaviours. They may concern human development though. For instance, *average human life expectancy is increasing.*

Developments may also trigger trends. In the life expectancy example, the fact that people are living longer (development) may (partially) explain why some populations are now struggling to find purpose in their lives after retirement (trend).

**State:** *The world is divided into countries.*

> A state is a static description of the context as it is now, and for which the designer does not expect change in the near future. In this case, it might be that our planet will eventually become one big borderless world, but since that possibility lies so far in the future – if it even happens at all – the designer can reliably assume that notions such as ‘country’ and ‘nation’ will persist.

**Principle:** *People often ascribe negative events to external factors, and positive events to the self.*

> Principles describe laws that govern human life in the world – the fundamental principles that help us to understand phenomena. Laws of

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physics, mathematical principles, human tendencies – these are the principles from science that explain our existence, now and also in the future.

For SID to be successfully applied, you must look at the domain from a social *and* a user perspective when you are on the hunt for interesting and relevant context factors. A social perspective could lead to questions like ‘what do we collectively value about our lives in this domain?’, ‘what developments affect community life?’ and ‘what kinds of human bonds exist in this domain?’ An individual user perspective would yield answers to questions like ‘what motivates or underpins people’s behaviours in this domain?’ and ‘what guides individual decision making?’

Do not forget that because using SID involves system-as-cause thinking, the domain should also be considered from a systems perspective. Look for information that answers questions like ‘what are the economic and infrastructural drivers in the domain?’, ‘how is ownership over space legally defined?’ and ‘what systems exist that take responsibility for the public sphere?’

Factors can be drawn from articles in newspapers, scientific journals, trend reports, photographs, interview transcriptions, field research and data reports from generative sessions. Finding factors might be difficult for a beginner. For some, it will be easier to just jot down insights on sticky notes, which is perfectly fine too. There are just two aspects to keep in mind when doing so.

First, it is important to remain as value-free as possible while collecting information, and to not make any judgements on what is good or bad yet. As a designer, this is not easy, but translating information into factors will help you keep things objective.

Second, it is important to dig a level deeper than mere descriptions of the world around you. Simple descriptions like ‘people brush their teeth every evening’ or ‘at night, lanterns will offer light’ will not provide you much understanding about what concerns people in the future. So if you find such descriptive facts interesting, ask yourself why, and question their existence. *Why* do people brush their teeth every morning, and why is it interesting to *you*?

### **3. Context structure**

Finding structure among all the factors is probably the most difficult step in

the process. This is the time to create order from the (perhaps) chaotic jumble of information you have collected, and observe how the factors interact with one another. By systematically and creatively bringing pieces of information together in a variety of meaningful ways, a relevant, coherent and original perspective on the domain should emerge. We will discuss this step in detail in the next chapter.

Bear in mind that the goal of this step is to creatively yet logically determine where and how a desired social impact is best achieved. You want to enable your own systems-as-cause thinking and avoid homing in on a quick fix. The ordered picture you create from the research you have conducted and the insights this has garnered should reveal opportunities for interventions that are outside the present context. A clear, systematic, sound presentation of this information will also go a long way towards positive client engagement. In the end, the context – as a deliverable – becomes the main point of reference when deciding for subsequent design decisions. Ideally, it is therefore also presented in an engaging, coherent and inspiring manner (e.g. as an infographic, a framework, a collage with quotes).

Anticipating the future is an important stage in the process, and, on average, it takes the most time. How long the client organization will allow you to take for this stage should be negotiated in terms of the scale of the project and the budget available. But since the outcome of this stage forms the foundation for the design, the longer you have to uncover your findings and build the context, the better. It is important to take time to consult sources that have different and conflicting perspectives to ensure an integrative view on the matter. The value of your attempt to address a complex social issue lies precisely in the way you masterfully integrate many viewpoints into one solution. Don't rush.

It may happen that the domain you defined earlier does not actually fit the project anymore, and a new and better objective has revealed itself during your research. The domain may therefore need to be redefined and discussed with the client. It is perfectly okay to go back to refine the brief at this point if it helps both the design and your communication of and around the design process.

## ***Stage 2: Goal setting – 2–3 days***

Once the context has been defined, you need to identify the behaviour you

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wish to support, explain why and specify how you will fulfil your objective. Here, you are working at the ‘mediation level’.<sup>5</sup> Mediations describe the variety in human behaviours that arise through the different relationships people have with a specific product or service.

Whereas designers should be as non-judgemental and open as possible when anticipating and building the future context, now they need to take a stance. You are establishing the *aim* of your yet-to-be-designed intervention – what do ‘we’ (design team, client, society) wish to attain for society in the future? After such thorough investigation, how exactly do ‘we’ wish to affect society and why?

Now is when individual and societal concerns come into play. They are explicitly named, reflected upon and openly discussed with stakeholders.

This stage has only one step: defining a *statement*.

#### **4. Statement**

In an effect-driven design practice,<sup>6</sup> the statement is your explicit definition of that effect. After you have established a future context for the domain you are working in, you now need to explain clearly how you intend to create change through your design. Since SID seeks ways to positively contribute to societal structure and harmony – rather than merely seeking to enhance the lives of individuals – your statement should be crafted in a way that prioritizes collective concerns over individual ones. However, you should not sacrifice individual interests for the sake of the greater good. Our method seeks to achieve a balance between the needs of individuals and those of society – and the planet – by resolving, bypassing or transforming conflicts that arise when concerns clash in a given domain.<sup>7</sup>

The statement describes

- 1 the behaviour you wish to support through design;
- 2 what the social implications of this behaviour are, and how those implications address or contend with collective concerns; and
- 3 what meaning this behaviour has (or will have) for people, and why this is the case, in light of any individual concerns.

When structuring the context, you often intuitively feel what needs to be

changed, or what the design should enable. By going through the factors over and over, looking for coherence, you develop a predisposition for what is desirable and what is not. If this is the case, it may be wise to articulate that predisposition, literally word-for-word, and then examine that statement.

For instance, it may indeed be that after studying neighbourhood dynamics thoroughly, you already know what change in behaviour is needed. At this point, you should state this openly and literally – ‘I want to encourage people to spend more time in public space.’ The next step is to question that statement – *why*? At this point, you need to look at things not only from an individual perspective, but equally from the perspective of a society – why would this be valuable to an individual (and how could it be harmful) and why would this be valuable to society at large (and how could it be harmful)?

It may also be that after establishing the context, you do not yet have a clue about what kind of behaviour to elicit. In that case, study the context and question what social concerns arise from it. If that future world were to exist, what would concern all of us? Or, what opportunities are there to enhance collective life? It might then become very clear that cohesion in the neighbourhood seems to be under threat in the future, leading to the explicit statement – ‘I want to strengthen neighbourhood cohesion.’ Now the next step is to figure out how. After critical examination of multiple perspectives and conflicting concerns, it should then be possible to define a behavioural goal.

An example of a statement could then be:

To strengthen *cohesion* in the neighbourhood, I wish to encourage people to spend time in public spaces by enabling them to do as they please.

Essentially, your goal is to encourage or discourage behaviour. The more specific you can be in terms of why and how, the better. It helps to think of your future intervention as a domino tile that should, when implemented, cause a deliberate chain of consequences. As such, it is important to reason backwards and understand where to place the piece to eventually impact another domino somewhere else in the landscape. But it is equally important to ensure that the piece you choose does not accidentally tip over any other pieces, which would lead to unintended (negative) consequences. Understanding feedback loops and thinking ahead to design for desired implications may help to also prevent undesired ones, but one can never be

completely certain and should always try to test assumptions.

Crafting the statement may only require a day for some projects, while for others, weeks may be needed – and even involve a philosopher or two. For instance, setting a goal to inspire people to recycle garbage requires less moral deliberation than one that will redesign an entire mental healthcare system.

### ***Stage 3: Developing the intervention – A matter of months***

After having set the goal, you move to the ‘artefact level’.

At this point, nothing is clear but the effect the design is supposed to engender – what it should mean for users, how it will elicit specific behaviour and why this behaviour is valuable to society.

You now need to transform this abstract goal into a concrete intervention – a product, service or platform. This step is a highly creative one, again. The playfulness needed to find the design’s direction may be hard to dive into after the thorough and serious thought in the previous stage. You might need to remind yourself here that the eventual intervention alone will never entirely resolve a complex social issue. In the end, it will be just one of the forces that move society in the desirable direction, rather than THE solution. Recalling this fact may relieve you of any burdensome sense of duty, and allow the light-heartedness that lets creativity flow.

We distinguish three steps here, which the designer ideally moves through in an iterative fashion. These are *interaction*, *concept* and *validation*.

#### **5. Interaction**

Whereas the statement defines the relationship *through* the artefact (and with the world), the interaction describes the relationship *with* the artefact itself. This step is an important step in finding a pattern that will lead to the desired effect (as defined in the statement) without knowing what the design will be. In the statement, you defined what the product should mean to users, so they are expected to act in a certain way. To continue with the example from the previous section, if people are given the freedom to do as they please in public space, they will be more motivated to gather there. The question then becomes, how to instil this sense of freedom through design? How to ensure

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that people will feel they are allowed to do as they please, together?

Our experience has shown that in this step, the use of an analogy can really help you to envision the interaction between the artefact-to-be-designed and its future users. So in the case of the example, you might ask ‘in what other situations do people feel they can do as they please? Maybe on their birthday? Or maybe being in a swimming pool at an exotic resort is a better analogy?’ You should select analogies that account in some way for contact with others, since that would be part of the real context as well. That would mean the birthday example might be the better analogy. After all, people who have their birthday are often *allowed* to decide – for the group – what is done and eaten that day.

It is important to be critical about the analogy – is that *really* the type of freedom people are looking for, or is it too rare, too subtle, too superficial or too obvious? Developing the analogy may go hand in hand with sharpening the statement. Also, working on the analogy can lead to ideas for your intervention. Once you find an analogy that works well, the next step is to infer certain qualities about it that can be applied to the future design. The fact that a birthday is only once a year may be the core reason why people allow themselves to do anything they please. This rareness or uniqueness is something that you can apply to your interventions as well. A swimming pool might have areas dedicated to particular kinds of play – actions are not prescribed, but the features are inspiring, which may help designing in this case. Analysis of the analogy can inspire many ideas.

## **6. Idea**

## **7. Validation**

Developing an idea means discussing preliminary ideas with others over coffee, doodling and sketching or building small mock-ups until you have arrived at an idea for an intervention that you are convinced will evoke the desired behavioural effect. Remember, however, that your conviction always needs to be tested before implementing the intervention for real, which is the final step of SID. Testing can be done using a number of different methods. In [Chapter 7](#) we discuss ways to use narratives, pilot studies and controlled experiments.

The four stages and seven steps we just discussed form the backbone of SID. If you want to switch back and forth through the stages, fine! We have

chosen to present them in this order because there *is* a certain hierarchy – the effect comes first, then the means. We are not saying you should never use ideas for products and services that pop up before you have defined the desired effect. We mean that the desired effect should determine whether any of those ideas is worth pursuing.

Now that we have explained SID in more detail, let us have a look at another case that has applied it. After this, we will elaborate further on the method by discussing some tools and techniques you can use when applying the method.

## **Case 2: Temstem**

*Temstem*, a smartphone application offered by Parnassia Psychiatric Institute, was designed to help sufferers of schizophrenia and psychosis cope with the voices they hear. Temstem is the outcome of a collaboration between Delft University of Technology, Reframing Studio and Parnassia Psychiatric Institute. Nishant Bhaskar, a student in our social design elective course, planted the first seeds for the design in 2012. Reframing Studio, where the first author worked at the time, developed the eventual design in collaboration with clients and therapists from The Parnassia Group ([Plate 21](#)). The brief for the students in the elective was to design something that would help people to manage the symptoms of psychosis. Parnassia Psychiatric Institute felt that they had not exhausted every avenue of treatment and invited us to use a design approach to get to new ideas. As such, ‘recovery from psychosis’ was defined as the domain – with no further restrictions. Over the first few weeks of the course, students were assigned a patient to interview, received an introductory class on psychosis and its treatment and received additional literature on the matter. Throughout the course they were invited to collect additional information that they considered inspiring. Two things fascinated Nishant – the fact that people attach meaning to events, and people who suffer from psychosis have more vivid imaginations. In his view, it would increase psychosis sufferers’ feelings of safety if they could somehow regain some control over these processes. His goal, verbatim, was ‘I want users to have a calmer “going out” experience, by enabling them to subdue the pseudo-meanings that pop up in their minds as they continue pursuit of their destination’. To achieve this, Nishant developed a music player that could sense a user’s finger taps. Non-rhythmic yet easy to follow

soundscapes challenged users to tap along. His idea was that by receiving auditory input passively, and translating that into active motor movements, the user could subdue the voices.

Parnassia Psychiatric Institute was inspired by the idea, and tied it together with the functionality of a proven trauma treatment technique called Eye Movement Desensitization and Reprocessing (EMDR). In this technique, memories of a trauma are recalled – which brings them to the visual sub-system of the working memory – while patients simultaneously follow a pattern with their eyes. Because it is a challenging task, and the working memory has a problem to solve, maintaining eye movement appears to ‘break down’ the memory. As a result, the emotional vividness of the trauma decreases, and patients’ emotional responses are softened. Building on the same principle, perhaps a design could activate the *auditory* sub-system instead, offer a competition or challenge, and thereby lower the intensity of the voices. This was the starting point for Reframing Studio.

After looking at this behaviour through the lens of societal implications, Reframing Studio refined the statement to ‘we want to offer people a trustworthy escape from their voices, which should enable them to reconnect to the outside world again’. The individual concern for control is placed centre stage here, yet fear of the voices can easily lead to withdrawal and thus isolation from society. From a societal perspective, encouraging patients to reconnect with society is driven by collective concerns for participation, inclusion and solidarity. After additional user study, and research into the functioning of the auditory sub-system, preliminary ideas were developed and presented. Most of them invited users to play with language, as this activity could activate the language-production system that is believed to play a role in hearing voices. A preliminary prototype was developed and tested with users. For some, the app indeed led to the behavioural consequences intended. One participant said, ‘When I was at a party and I was hearing voices, I just started to use the app and it calmed me down. Other people did not even notice.’ This participant indicated that he normally would have left the party at that point, but Temstem helped him stay.

So Temstem is, above all, a tool people can use to distract themselves from the voices they hear. It is also a tool that actively structures, exercises and strengthens these users’ responses to the voices. Temstem offers two word games, called *taaltikker* and *woordlink*. Playing these games activates the language-producing area of the brain, which effectively competes with any

voices they might be hearing. The games needed to be simple enough for people to engage with in case of panic, yet still be challenging. Taaltikker presents a set of words whose syllables the user has to identify and tap out. The aim is to correctly ‘tap through’ as many words as possible before a certain amount of time elapses, and get higher and higher scores. Woordlink offers two sets of words for the user to form compound words from. Each level contains a predefined set of combinations, and the aim is to find all of these in the least amount of time possible. Similar to EMDR therapy, during gameplay at higher levels, users are invited to recall other times when the voices were imposingly present. The vividness of these often-traumatic experiences is diluted, as the user’s working memory is occupied playing the game. In addition, Temstem generates personal feedback in response to whatever feelings are expressed, like worthlessness or a sense of danger. When judging game performance, Temstem then elicits contrasting feelings of worthiness or security, for example.

During development, a sketch prototype was used to test assumptions and evaluate user responses. This pilot revealed that the concept had potential – enough to develop the app further. Temstem won the Rotterdam Design Prize in 2013, and a national clinical trial is currently underway to assess and validate its effectiveness (Jongeneel et al., 2018). Temstem can be downloaded for free for Android and Apple smartphones.

## **Tools and techniques**

Since SID asks you to take specific steps in a particular way, now we will offer you some tools to make taking them easier. We focus particularly on the context factor identification process, statement crafting and ways to validate your choice of intervention (although we deal with the topic of validation/assessment in great detail in [Chapter 7](#)).

### ***Context factors: Lenses***

The goal of the ‘context factors’ step is to collect factors that will help you understand how phenomena within the domain will evolve in the future, and also help you develop a new, relevant frame for impacting the domain positively. To support systems thinking, and better ground your ideas in scientific research, it may help you to look at your ideas through different

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lenses. We have identified three: a *disciplinary*, *stakeholder* or *anticipatory lens*.

Using a disciplinary lens means looking at the ways a phenomenon is described across a range of disciplines (different from one's own). How would a biologist, sociologist, philosopher or mathematician describe or understand neighbourhood dynamics – to use our earlier example? Sociological theory may be logically valuable here, but biological research on social structures can equally offer profound or inspiring insights. You must aim to ground your ideas in the scientific literature as much as possible, which means such factors mostly originate from scientific papers or interviews with experts.

Seeing things through a stakeholder lens means adopting the viewpoint of various actors in the matter. Since not everyone can adopt a societal perspective with ease, it may help to look at the domain from the viewpoint of a key figure while you consider the perspectives of various future users. What does neighbourhood dynamics mean to a mayor, a citizen, a tourist or an employee who travels to work in the area every day? Stakeholder lenses – psychology literature reviews, generative techniques, interviews, observations, anthropological studies – will trigger your empathy, and help you appreciate the variety of concerns and interests at play, and thus the range of values related to the phenomenon. This lens helps to broaden your view and morality, and ensures you do not only design for some generic future user.

Seeing the domain through an anticipatory lens means looking at the factors in the domain that are likely to change it over time. What factors – technological evolutions, political developments, public concerns, demographics – might affect neighbourhood dynamics in the future? What factors will enable creative new links within the domain? For instance, demographic forecasts are logically relevant, since fluctuations will certainly have an impact on neighbourhood dynamics. The relevance of trends in robotics or theatre performance techniques may be less obvious, yet these are potentially inspiring factors that could contribute to a neighbourhood intervention.

### ***Statement: Two lines of logic***

The line of reasoning that your statement must follow can take two forms.

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Either you move from a societal value that will be cultivated to what makes it meaningful to users to the – a ‘what-through-what’ statement – or, you move from an individual value to what its cultivation will mean to society as a whole – a ‘what-so-what’ statement.<sup>8</sup>

‘What-through-what’ means you know what to achieve, but you need to creatively think of ways to bring that goal to life. Say you know the social implication you wish to contribute to – you still need to conceptualize this as the result of some behavioural cause. This is the most complex form of defining the statement, yet the most sincere one, since societal concerns will truly lead the development of the intervention.

For example:

Social Implication: ‘I want to strengthen *cohesion* in the neighbourhood.’

*Through what?*

Behaviour: ‘By encouraging people to spend time in public spaces.’

*Through what?*

‘By ... ?’

At this point, both the social implication and the behaviour that is expected to cause it are defined. Now what is needed is to identify the individual concerns this goal might conflict with – like privacy – and whether transforming, resolving or bypassing that conflict is the most appropriate response to it. When bypassing is the most appropriate response, one has to consider what other – seemingly unrelated – individual concerns are salient in this context that match the defined behaviour.<sup>9</sup> Why or on what occasion would people be willing to spend time in public space? How could spending time in public space become meaningful?

The alternative route is to try and understand what kind of value you want to afford individuals, and then deduce the societal/collective implications of the behaviours that would emerge from it – this line of reasoning we call ‘what-so-what’. Remember, though, that the objective is to create something that benefits society or humanity. For many designers it may be easier to understand what is of value to an individual, but the question for a SID practitioner is wider – will what you propose indeed lead to a benefit for society at large and one that is so important it justifies intervention?

For example:

‘I want people to experience the *freedom* to do as they please in public spaces.’ So?

Behaviour: ‘People will make more use of public spaces.’ So?

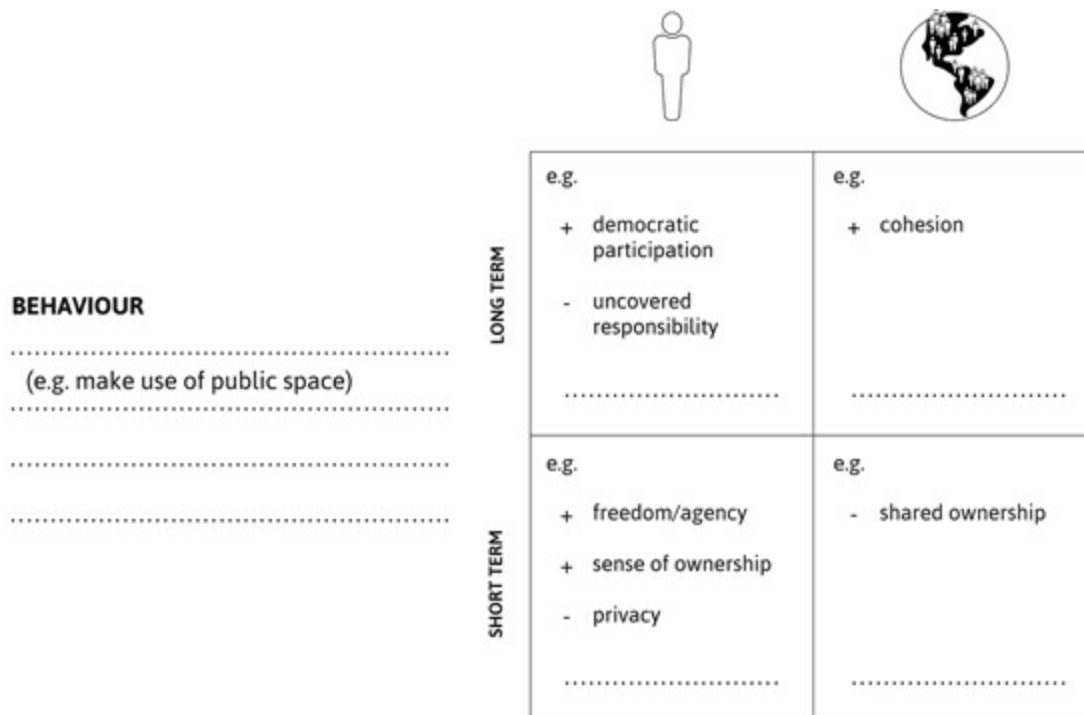
Social Implication: ‘The increased presence of people in public spaces will strengthen *cohesion* the neighbourhood.’

At this point, it is again important to map out potential conflicts in concerns. In this case, concerns for ‘freedom’ and ‘cohesion’ work in favour of each other. But privacy is at stake with increased cohesion. This means that by offering freedom, the conflict between public and private concerns is bypassed – but is that ok? And how does personal freedom relate to shared ownership over public space? A continuous search for the relationships and conflicts between individual and collective concerns is needed to create value for both *at the same time*, and prevent undesired consequences as much as possible.

This reasoning makes social design both an academic *and* a moral endeavour (see [Chapter 2](#)). Being able to clearly anticipate and outline relationships between events, and morally defend that position, is essential to the social design practice that our world needs so urgently. In addition, a clear view of the behavioural and social effects that you anticipate from your intervention will be essential to project validation. Nevertheless, this stage is not intended to hinder the intuitive way that many designers often work. For a designer who has trouble steering the design process rationally, this step should simply entail deeper reflection upon some of the conclusions that intuition has led to and the articulation of a rational argument for them.

## ***Statement: Underlay***

As we have seen, a statement is quite an elaborate sentence that describes a sequence of events. In the previous section, we explained the ‘what-through-what’ and the ‘what-so-what’ lines of reasoning. But it may be a huge jump for you to move from the context to such a detailed and demonstrative statement. Therefore, we developed an underlay to structure one’s thinking ([Figure 6.2](#)).



**FIGURE 6.2** The schematic underlay used to flesh out a statement.

In this schema, you should write down the behaviour you wish to evoke through your design (see the next section for help phrasing this), and then brainstorm and note down what value this behaviour will offer to individual users and society in the short and long term. The main question you have to ask yourself after having noted down the behaviour is this – why do I want to encourage this? Instantly, you will be able to identify the positive consequences for either the user or society in one of the fields, and the concerns it addresses.

From that point onwards, you need to assess the value of the behaviour from the other three perspectives. Here the questions should be ‘why or how could it be valuable for ... ?’, or ‘how could it be harmful to ... ?’, and ‘which concerns might this behaviour satisfy, and which might it produce conflict with?’ Your reflections may lead you to the conclusion that there are too many downsides, and may make you reject this behaviour as a goal, or refine your description of it.

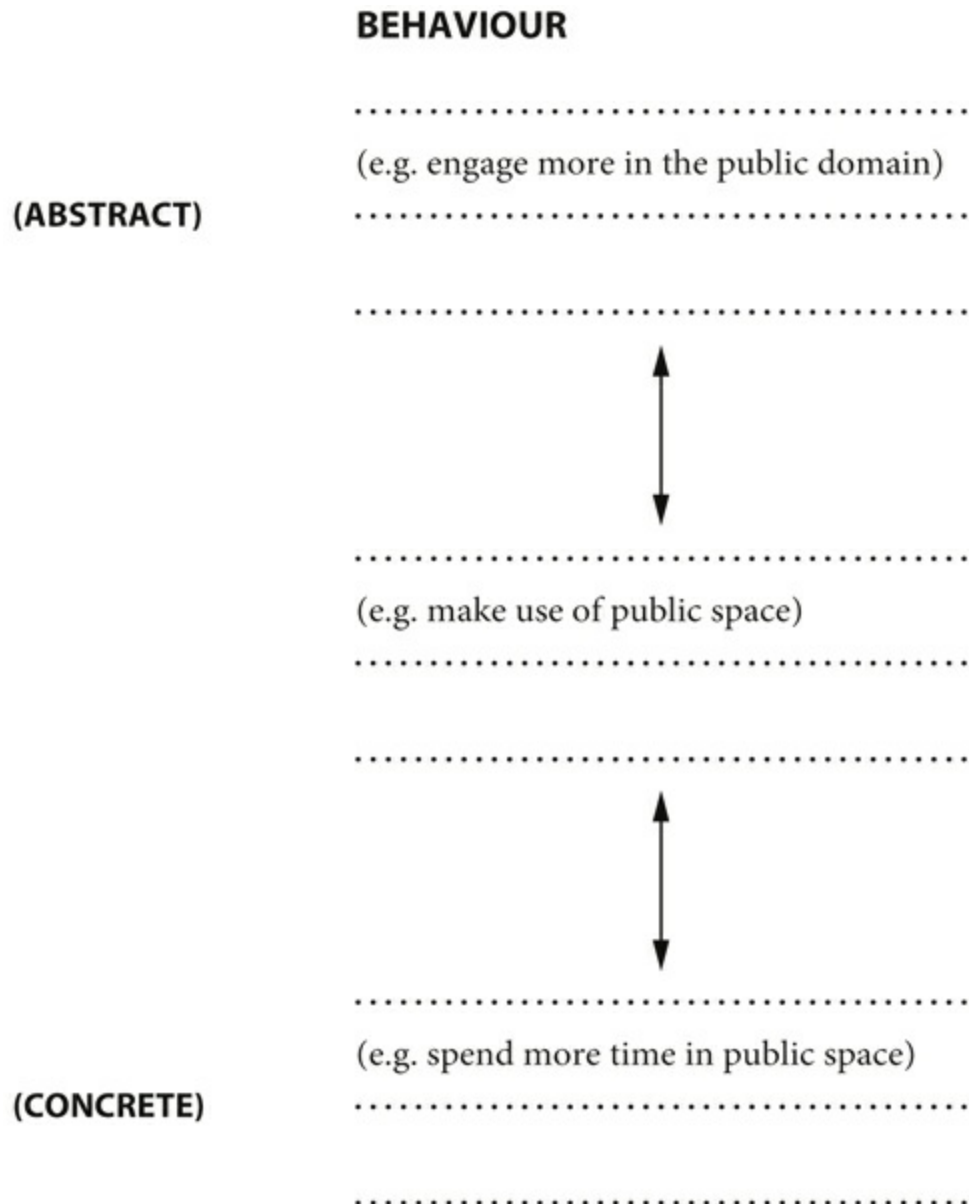
## ***Statement: Laddering***

When defining the behaviour you wish to motivate through your design, you



will face a challenge. On the one hand, it helps to be as specific as possible and define behaviour at the level of what is observable – outward behaviour. The more concrete your behavioural goal – ‘throw garbage in the bin’, for example – the more targeted your intervention can become. On the other hand, the more abstract or general your description of the behaviour, the more space you leave for creativity when you move to the stage when you develop ideas for interventions. The more abstract – ‘responsibly dealing with waste’ – the more ways to intervene to make this happen.

Naturally, the level of specificity depends on your personal preference (see [Figure 6.3](#)). So, either stay general, and once a design is decided upon, define more specifically what concrete behaviour it will change; or, be as specific as possible, and try to reason out why this detailed behaviour would be the best aspect to target. The behaviour you target should be articulated in terms of its intended impact, and also what we call its ‘designability’. Not all behaviours are equally easy to change through design, and designers are of course well equipped to assess this, given their background and skills.



**FIGURE 6.3** Behaviour can often be represented as a relationship *between* behaviours, rather than one specific action. This relationship can be presented as a ladder.

Depending on what level you start to define behaviour, the result reflects an operationalization of (abstract) behaviours with wider implications. This relationship between behaviour and wider implications is the backbone for your justification that your idea will foster social change, as well as the backbone for its validation.

For instance, ‘eating properly’ is still generally stated. Only when you operationalize the behaviour – ‘eating two pieces of fruit a day’ – can you

start to measure it. Equally so, ‘engaging with the community or the neighbourhood’ is still quite general, and even ‘making use of public space’ would be too loosely related to the goal of strengthening social cohesion and thus difficult to validate. When you are able to show that the intervention encourages people to *spend more time* in public space, you can more confidently anticipate that cohesion will be strengthened (simply because it leads to an increase in contact among neighbours – although the type of contact is probably important as well). Understanding how specific behaviours are stepping stones to more abstract implications is key when designing for behaviour change, and that is why we call it ‘laddering’.

### **Case 3: SOS-key**

SOS-key contains a code that gives emergency personnel (fire brigade, police and ambulance personnel) access to a personal profile created by the holder. In case of an emergency when serious injury occurs to the key holder, the profile indicates the first person to contact: the ‘SOS-partner’ – a parent, another family member or a loved one.

SOS-key is the outcome of a project by Reframing Studio for the Dutch Kidney Foundation.

Since the project was to be built on an earlier project Reframing Studio had executed for the government donor registration system, insights gathered through that study could be used. Those insights were translated into ten relevant principles for the phenomenon, including ‘social context’ – family members’ opinions about becoming a donor are influential, since they may eventually veto a transplant – and ‘value of physical objects’ – objects may help to remind people of important aspects in life.

One of the ideas that emerged was called SOS-key. Although many people carry a phone on their person – and thus have the contact details of loved ones to hand – phones are often locked. This complicates the task of immediately alerting loved ones when an individual is involved in a serious accident. SOS-key is a physical object that hangs on the owner’s key ring. It contains a code that only emergency personnel can send via text message to a service centre. The service centre sends back personal information like name, address, medical history and organ donor registration status, as well as contact details for the patient’s SOS-partner. The idea is that when a relationship becomes so serious that house keys are exchanged, or when

children are old enough to carry a door key, this is also the moment to consider becoming SOS-partners. Couples or parents and children can order a set of keys that are linked together. This means their profiles are linked too – one can see the details of the other(s), and therefore, whether he or she is registered as a donor. The idea was that deciding whether or not to use the SOS-key would lead SOS-partners to a conversation about becoming a donor or not, ensuring that each is aware of the other's disposition towards the matter. Earlier research had revealed that the low number of volunteer donors was not the only critical issue facing emergency medical teams; since partners or family members are not always aware that the person they lost was a registered donor, they often veto organ donation for transplantation. By making organ donor registration information – yea or nay – one of the items to complete in the SOS-profile, and by requiring key holders to check and update this information every six months, key partners are regularly reminded of each other's wishes ([Plate 22](#)).

Many people will have thought about becoming a donor at some point, or may actively want to register as one, but have not yet found the right moment to do so. Getting an SOS-key provides them with this opportunity, by linking that decision with a need to have someone they love on the scene as soon as possible should they be seriously injured. In addition, regularly updating personal profile information gives people the chance to better understand the wishes of their key partners, and should trigger conversations about being an organ donor or not. As such, SOS-key bypasses internal conflicts.

The Kidney Foundation considered the idea interesting and hired independent research institute Ferro to examine its effectiveness. Ferro executed a 'disaster check' with the prototype using 35 respondents, a pilot study with 20 respondents and their key partners (10 partners, and 10 parent-child relationships) who were eventually involved in a co-creation session. They found that the key successfully triggered conversations about donor registration, and that people appreciated the natural way that the donor registration conversation arose – as opposed to the sense of grave formality that the regular registration system might evoke. Despite this success, the Kidney Foundation considered the system too resource-intensive, especially its close collaboration with emergency services, when there was no guarantee that users would change their behaviours.

This chapter dealt with the overall SID process – the steps to take, how to

take them and why. However, two aspects are especially important to social design: understanding the context and obtaining validation of your assumptions. The next chapter deals with the mapping of the context in more depth, and discusses how to include a systems perspective and identify behavioural levers for change. [Chapter 7](#) then continues with several techniques to validate the assumptions underlying the change you are anticipating.

## Notes

- 1 SID is grounded in social design theory (Tromp, 2013; Tromp & Hekkert, 2014), has been tested in multiple academic research projects (Tromp & Hekkert, 2009, 2010; Vermaas, Hekkert, Manders-Huits, & Tromp, 2014) and assessed through a multiple case study (Tromp & Hekkert, 2016).
- 2 See Chapter 3.
- 3 This means SID does not support the design implementation phase.
- 4 Informed readers who are familiar with ViP (Hekkert & Van Dijk, 2011) may have noticed that the stages presented here slightly differ from the ones presented in ViP. The main difference is that the intermediary stage in ViP – the interaction – is replaced here by *mediation*, where the design goal or statement is specified. The reason is that a statement in SID is much broader; it covers the interaction between people and society at large and therefore addresses both societal implications and individual behaviours. The (human–product) interaction vision that fits this statement is shifted to the next artefact level where the intervention is designed. In sum, although the order and nature of each step are the same as those in ViP, the stages have been slightly altered to accommodate the differences in emphasis.
- 5 See Chapter 4.
- 6 See Chapter 2.
- 7 See Chapter 3.
- 8 We are aware that ‘so what?’ has different connotations in daily communication. In fact, the reasoning form we wish to illustrate here may be better shortened to ‘what-so (then)-what (would happen)’. However, we prefer simplicity here and are confident it will not hinder the design process.
- 9 See Chapter 3.

# 7

## Mapping the Social Context:

### On Building a Proper Worldview and Deciding Where to Intervene

The industrial animal factory offers a nightmarish glimpse of what capitalism is capable of in the absence of any moral or regulatory constraint whatsoever. Here in these wretched places life itself is redefined – as ‘protein production’ – and with it ‘suffering’. That venerable word becomes ‘stress’, an economic problem in search of a cost-effective solution such as clipping the beaks of chickens or docking the tails of pigs or, in the industry’s latest initiative, simply engineering the ‘stress gene’ out of pigs and chickens. It all sounds very much like our worst nightmares of confinement and torture, and it is that, but it is also real life for the billions of animals unlucky enough to have been born beneath those grim sheet-metal roofs into the brief, pitiless life of a production unit in the days before the suffering gene was found.

**T**his picture of animal suffering that Michael Pollan (2006, pp. 318–319) vividly paints for us lies at the root of a dilemma that many will recognize: feeling bad about eating meat, yet enjoying the taste so much! Those who have enough willpower may decide to become a vegetarian, but

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for many this is too big a sacrifice. These days, many of us are seeking compromises to ease our conscience. We may try to eat less meat overall – maybe once or twice a week – and when we do, we try to find meat that is produced in a way that is free from cruelty.<sup>1</sup> Unfortunately, that intention is not always easy to fulfil when the supermarket meat section only stocks cuts produced using the industrial process described by Pollan. It is easy to temporarily suffer from amnesia and purchase that kilo of chicken breast because the price is unbeatable.

In 2014, our student Anna Peeters took this dilemma as the starting point for her graduation project. Her product-service system, *Tomorrow's Menu* (see [Plate 23](#)), was designed to resolve this dilemma. The system invites consumers to choose a particular type of animal farming upfront. By becoming a 'subscriber' to a particular farming practice, consumers financially support the practices that meet specific meat production criteria they wish to support. These criteria differ in terms of animal friendliness, public health and environmental sustainability, but all of them are more responsible than processes used in intensive farming. Users subscribe from home, without any rush, when they have time to truly consider what they value when it comes to the meat industry. Once in the supermarket, they no longer have to worry about their values being compromised, or avoid the lure of cheap prices, because the meat products belonging to their subscription category are available as cheaply as the mass-produced variety of the same weight. The subscription fee compensates for the price difference.

In this chapter, we take a look at how Anna found her solution to the 'omnivore's dilemma' by describing in detail her process when anticipating the future and setting her goal. As we document her practices, we will highlight their defining characteristics, which may help you when you use the method on your own.

## Anticipating the future

In the previous chapter, we briefly explained how the domain could be viewed as a lifeworld phenomenon (how do people consume meat?) and from system world perspective (what systems enable meat consumption?). Both are relevant, and the latter is especially important to support system-as-cause thinking, and consider changing the system through design.

Anna's context was developed for the near future, and as such it wasn't

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very ‘futuristic’. Nevertheless, she used an anticipatory lens. Anticipating the future rather than focusing on the present enabled her to rethink the system rather than optimize how it functions in its present form. Using the stakeholder lens helped her to detect feedback loops she needed to deal with when aiming for change.

Anna’s point of intervention was not yet defined, but she did state beforehand that her project needed to focus on changing consumers’ perceptions, beliefs or behaviour. Wageningen University – her client, so to speak – was already focusing heavily on industrial partners in the food chain, but researchers there had realized they needed to include the consumer to develop a more sustainable meat production industry. This meant that Anna knew upfront that her goal was to change consumer behaviour.

Nevertheless, she debriefed her goal, and reflected on the implications this focus point would lead to and what values were steering her decision (Plate 24). She made sure that her argumentation for the behavioural goal was sound, that she had envisioned the intended social implications and made salient the values that drive the goal. As such, she reflected on the brief, argued for and against the goal set in the brief, and eventually found a way to take responsibility for designing it.

Anna understood that in order to change consumption behaviour she did not necessarily need to intervene in the act of consuming. She could equally interfere elsewhere in the production chain (depicted in Plate 25). So she mapped out the industry behind the phenomenon to understand where she could intervene to achieve systemic effects.<sup>2</sup>

## ***Context factors***

Let us now look at how Anna collected her factors from a variety of resources: studying the literature, visiting end-users and consulting experts.

### **Examining the literature**

Anna started off by studying relevant sources concerning meat production, food culture, the ethics of eating meat and consumer behaviour. The sources consisted largely of scientific papers, but she also read books such as Michael Pollan’s *Omnivore Dilemma* and Peter Singer’s *Animal Liberation*, and documentaries like *Food Inc.* (2008) and *Our Daily Bread* (2005). These



sources were logical choices given that Anna had set out to design for ‘the consumption of animal products’ domain. One of the main insights she got from this exploration was that meat production involves a number of trade-offs between effects the industry has on animal welfare (including animal health), public health, the environment and the economy. The extensive system of mutual dependencies involved in meat production is typical of complex, sociotechnical systems (Norman & Stappers, 2016).

The sources afforded her with a large number of factors she could use as building blocks for her future context. Here is a brief list:

- The industrialization of the farming process has broken the link between consumers and food production, creating the modern era of disconnectedness.
- There is a growing distrust in the agents of consumerism (retailers, regulators, labelling).
- Consumers may find it difficult to have confidence in products based on so-called ‘credence attributes’ – including declarations of quality associated with provenance or the label ‘organic’ – as such claims cannot be verified by consuming the product.
- A person’s attitude towards an object is a function of his or her beliefs about the object and the implicit evaluative responses associated with those beliefs.
- Changing what we eat can create a deep sense of cultural loss.
- People have a tendency to prefer more immediate payoffs relative to later payoffs (‘hyperbolic discounting’).
- Information has an important influence on consumer beliefs.
- There is long-standing consumer interest in the origin of meat.
- People do not wish to miss out on a good offer that others are taking advantage of (‘aversion to anticipated regret’).
- Distinctions between human and animal are similar to other distinctions such as male/female and civilized/primitive.

- For a person to change his or her behaviour, he or she needs the capacity, motivation and opportunity to do so.

This is a great list of factors for various reasons. First of all, many of these factors involve insights about what drives people within this domain. They give us clues about why people engage in specific behaviours from various (disciplinary) perspectives. For instance, the notion that ‘changing what we eat can create a deep sense of cultural loss’ provides a cultural–historical perspective on the matter and explains how traditions are important drivers for behaviours in this domain. The beauty of this list of factors is also that it marries different domains of knowledge together – the cultural–historical is taken into account alongside more fundamental human tendencies such as ‘hyperbolic discounting’ or ‘aversion of anticipated regret’. In addition, many of Anna’s factors provide levers for change – they have what we call ‘designability’. For instance, the observation that ‘there is a long-standing consumer interest in the origin of meat’ is a factor ripe with possibilities for creative intervention.

One thing to note is that although the list reflects a wide range of developments and principles from various disciplines of science – including biology, psychology, behavioural economics, sociology, food studies and marketing – all are the result of what we call ‘inside-out’ thinking. Inside-out thinking looks at the domain as we know it, and examines it from various perspectives. This is a perfectly logical way to start collecting factors, but if it is the only way you approach factor gathering, you may not come up with less obvious factors – ones metaphorically distant from the domain – that could also shed a very interesting new light on it. Therefore, we often recommend that designers also think from the ‘outside-in’. Thinking outside-in entails consulting all kinds of sources that, at first glance, appear to have nothing to do with the domain under review. Any factors from these sources that the designer deems relevant can be included. Consider for example the following factors that Anna also added to her list:

- Every being on the globe constitutes but a miniscule part of a shared whole.
- We act in ways that make us feel better about ourselves.
- Reciprocity can be encouraged with small gifts, the act of ‘returning the

favour’.

## Visiting end-users

In order to be able to empathize with end-users, deepen your understanding of current behaviours and tap into people’s underlying attitudes and values, it is recommended to qualitatively study people in the context of their lives (for example, see Sanders & Stappers, 2013). In Anna’s project, field research she conducted in supermarkets (observing people in the act of choosing and buying meat) revealed that most people studied the labels of meat products before adding them to their shopping cart. In addition, Anna chose to perform a qualitative study with ‘sensitizing booklets’ (Sleeswijk Visser et al., 2005). These booklets, containing several open-ended questions about eating, meat consumption patterns and more general attitudes towards food, were sent out to seven of Anna’s acquaintances. These seven people were selected to represent various relationships with meat products, ranging from fanatic carnivores to firm vegetarians. The insights gathered from these booklets mostly confirmed the factors Anna had drawn from the literature:

- Most participants found it difficult to remember the animal once it was on their plates.
- Most participants buy their daily food, including meat products, in nearby supermarkets.
- All participants demonstrated knowledge about the relationship between meat products and sustainability, and recognized the necessity of addressing it, but few of them act accordingly.

Although her – admittedly very limited – qualitative study did not reveal surprising new insights, it was still a very helpful exercise for a few reasons. First, designers generally love to do things beyond reading stacks of papers. They like to go outside, meet people and generate materials that make people talk and express their views and values. ‘Context mapping’ of this kind is a very *designerly* way of conducting user research, because it activates the intuitive power of observation. Second, these kinds of studies bring to light the variety of viewpoints and behaviour patterns that can underlie more general observations that exist in the literature. Variety is important to keep in mind when designing something that needs to be meaningful to a

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potentially wide range of people. Finally, qualitative research helps to contextualize theoretical findings – you see and feel them. Increased empathy with end-users strengthens your internal compass when judging the effectiveness of a designed intervention – is it really feasible? Bear in mind here, though, that findings from the current context may be irrelevant for the future, especially when not backed up by scientific evidence. So always be critical towards the insights you generate, and especially how they drive your design decisions.

## Consulting experts

Another way to validate your initial observations – and explore an important source of further context factors – is to consult expert stakeholders in the domain. For her project, Anna consulted three different kinds of experts: specialists from the Wageningen University of Agriculture, livestock farmers and employees at a slaughterhouse. These visits and conversations delivered a wealth of facts and figures about the intensity and impact of the meat industry today, and what changes are expected for the future, confirming many of the factors from the literature study. Above all, her exchanges revealed that farmers really struggle with the trade-offs listed earlier – between animal welfare and economic viability, and environmental impact and public health. There is clearly no single solution that would resolve every conflicting concern.

So when is the factor gathering step complete? The quantity of factors you have amassed needs to be extensive enough to build or compose a *social* context. That context explicitly describes the lifeworlds – human experiences, acts and relationships combined – that you associate with the domain in the future. It also includes systemic aspects to some extent. Your goal is not to be as exhaustive as possible when gathering factors, however. Factors that contribute to a context are endless, and any other designer working in the same domain would probably come up with some factors that are different from yours. The clients or problem owners may explicitly request that you put together an exhaustive list, but in general, the number of factors you have should be enough to enable you to perceive the sociotechnical system underlying the social context – and see it in a new, rich and versatile way. You need to be able to see the system – in other words, get a ‘systems view’ – to understand where and how to intervene to realize systemic change.

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Perfect completeness is as impossible as perfect objectivity. The social context you build describes *a* perspective on the domain under study, how it is changing and what may potentially change it – it is a *context for change*. You picture where you believe the world will be heading, and build a frame of reference for your strategy for change.

## ***Context structure***

How can you make sense out of tens (and sometimes hundreds) of individual factors? We suggest you try a technique called ‘clustering’. Clustering means grouping factors in *meaningful* ways. Assembling factors that all deal with a similar subject – ‘meat production’, or ‘shopping behaviour’, for example – is just categorization, which is not meaningful. As you put different factors into clusters, you should be looking for patterns that emerge through their association. As a whole, a cluster of factors illustrates one of the forces that drives people’s behaviour in context.

Consider these three factors from a different student project by another of our students, Pauline Wout (2015), which dealt with fashion consumption:

- People tend to set high expectations for themselves.
- Smartphones quantify everything we do.
- Anticipation for a new item sparks more joy than its acquisition.

Taken together, these factors tell a story.

People in today’s society strive for a level of perfection they often cannot reach. They broadcast their success and quality of life through their appearance. The fast fashion industry responds by projecting perfection through advertising.

Pauline labelled this cluster of factors ‘The Perfect Self’.

One way of starting the sorting and grouping process is by sticking the factors (written on sticky notes) one-by-one on the wall, and asking yourself with each new factor whether it can be meaningfully combined with another that is already there. Slowly, you will build clusters of factors that share a

common course or direction. You may repeatedly go back and forth between groups, shifting factors and changing directions – and thus reshaping the meanings the clusters produce.

In this way, and after much iteration, Anna brought her 100+ factors together into eight clusters. These eight clusters are summarized as follows:

#### Cluster 1: *Eating one another*

When taking a helicopter view, we notice something humbling: humans are just one of the many animals on our planet. In this light, we are challenged to reconsider our perspective on our position in the world. It evokes a sense of humility, cultivating respect for the food we consume.

#### Cluster 2: *Constructing boundaries*

We share some characteristics with animals, and others we don't. There is a boundary between 'us' and 'them'. However, the more you identify with the animal, the more you will care about the animal's fate. By enabling consumers to relate more to the animal a meat product once was, concern about that animal is fuelled.

#### Cluster 3: *Telling stories*

Every product has a history and a story, and the story of meat products is complex. They go through a journey that is impossible to infer from a piece of meat wrapped in plastic. Their stories can communicate valuable intangible characteristics of the product, enriching the experience of consuming it.

#### Cluster 4: *Convincing experiences*

Attitudes are negative or positive predispositions to act towards people or objects. The stronger the attitude, the more powerful its influence on behaviour. Such attitudes are shaped by personal experiences. Reading a compelling book or visiting a slaughterhouse can have a life-long effect on one's attitude towards meat.

#### Cluster 5: *Facing dilemmas*

We often experience conflicting concerns in the context of meat consumption when choosing health over indulgence, quality over quantity, novelty over familiarity and responsibility over price. In our struggle to make decisions, we seek to be consistent in our promises towards others and ourselves; we

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want to practice what we preach.

#### Cluster 6: *We are voting*

Every time we purchase a product – be it a book, a house, a carrot or a piece of meat – we are actually casting a vote in favour of that thing. Although individuals may doubt whether their vote has any impact, together we have ‘the power of the masses’. Our collective wish is the industries demand and can change their way of producing value.

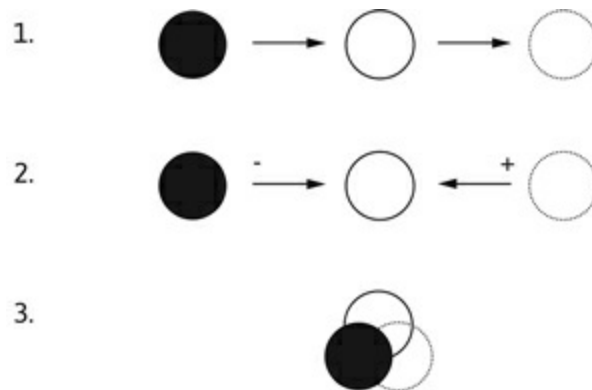
#### Cluster 7: *Well, if everybody else does it ...*

Two of the most influential factors on our behaviour are the behaviour of others and the context where the behaviour is demonstrated. Every consumer is susceptible to the norms expressed around them. Our social and cultural context has a major impact on what we consider normal and acceptable.

#### Cluster 8: *Caress your ego*

We all enjoy acting in ways that make us feel better about our identity and ourselves. Attaining self-imposed goals can therefore contribute to satisfaction and well-being. This effect is enhanced when that behaviour is compared to, and outperforms, the behaviour of (average) others.

These eight clusters each tell a story – one based on a combination of various factors that may have appeared unrelated when first identified. Each story describes a particular synergy that drives our attitudes towards meat consumption. And each story offers a preliminary direction for where and how a design might intervene. Obviously, Anna could have come up with fewer or more clusters; she could have combined factors in alternative ways or discovered other driving forces that were ‘hidden’ in her set of factors. She however felt, after numerous attempts, that these eight clusters captured the most important forces emerging from her building blocks, and her conviction is what she followed.



**FIGURE 7.1** Examples of structuring: 1. Cause-and-effect chain, 2. Force field analysis, 3. Venn diagram Credit: Krogerus & Tschappeler, 2013.

Having a set of clusters still does not provide you with a coherent view of the social context. As a final step to such context structure, you need to integrate the clusters. If the clusters are short stories, the structure is the main storyline. Creating a structure therefore is a kind of pattern recognition – you look for the relationships between the clusters. How do they connect? Do they strengthen each other, or do they conflict?

In *The Change Book*, Mikael Krogerus and Roman Tschappeler (2012) visualize twenty distinct ways to connect what they call ‘parameters’, and we call clusters. Take for example the ‘cause-and-effect chain’, represented in Figure 7.1.1. It visualizes that C results from B, and B from A. The second example (Figure 7.1.2) depicts what is called a ‘force field analysis’, where A contradicts with B, but C agrees with B. The third example (Figure 7.1.3) is a Venn diagram, which emphasizes the overlap between clusters. There are similarities between A and B, B and C, C and A, and even between A, B and C.

Anna used the third type of clustering, the Venn diagram, when she began to organize her eight clusters. Her visualization is represented in [Plate 26](#). Although this clustering revealed some interesting relationships between various clusters, it mainly clarified what they have in common and what these commonalities represent. But it did not really help her decide where to intervene.

It may help to look at potential tensions or conflicts *between* the clusters from a designer’s point of view, since they offer great opportunities to intervene. This is why the most popular type of clustering is to order them across a set of dimensions. In other words, do you see a set (preferably two; if needed three) of dimensions that explain opposing forces in the social



context, and help you understand people's diverging mindsets or behavioural responses? This is what Anna tried next, and it led to her final structure, a two-dimensional space (shown in [Plate 27](#)).

Two-dimensional clustering creates four quadrants that each represents a particular future mindset or potential behaviour. Because the drivers underlying the dimensional space – the clusters – are forces that manifest as particular beliefs and behaviours, the quadrants generally do *not* represent different people. It is much more likely that most people would recognize themselves in (any) one of the four quadrants depending on the situation, their mood, the moment and other contextual factors. This is also the case for Anna's social context structure. The two dimensions are *receptiveness*, ranging from 'passive consumption' to 'being very open to new information', and *perception*, covering the degree to which one is 'self-' or 'world-oriented'. As is shown in [Plate 27](#), seven of the eight clusters can be positioned somewhere in this two-dimensional space, often at the extreme edge of a dimension. Each quadrant thus represents a combination of clusters that jointly lead to a particular predicted mindset. Consider the 'sense of purpose' quadrant. It refers to the situation where one perceives oneself as just another member of society, and someone open to new information. People with this mindset have a desire to contribute to society and proactively aim to follow their intentions with appropriate behaviour.

When the four quadrants in your framework represent four different mindsets that drive behaviours – as they do in Anna's – you can interpret this in various ways. If there is one quadrant that clearly emerges as the desirable future mindset or behaviour, you could strive to move people as much as possible into that quadrant. But Anna decided to follow an alternative approach. Instead of trying to change people's minds, she opted to accept that all four mindsets exist and are resistant to change. Her wish was to come up with a design goal that would do justice to the various states of mind people can be in.

## Goal setting

Anna had already reflected on the values underlying the brief during the debriefing stage. In the goal setting stage, she had to extend those reflections, identify her personal stance towards them and articulate the value she would seek to create.

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Anna decided she wanted to prioritize concerns about animal welfare over environmental concerns. In her view, setting standards high with respect to animal welfare would automatically be better for public health, given the cleaner air and lack of antibiotics. However, she knew that animal-friendly meat production might cause a heavier environmental burden.

## **Statement**

Anna stated that it would be best for everyone to consume a lot less meat, and when meat is consumed, to choose meat that is produced responsibly (predominantly with respect to animal welfare). She decided to gear her project towards interventions that would change meat consumption rather than discourage it – although both are in line with her vision. Conscious meat consumption would empower farmers in the food industry to offer beneficial living conditions to their animals. It would also constrain farming practices, leading to less environmental burden and a decrease in negative impacts on the public health system. In the end, she wished to transform the industry more than scale it down.

The earlier line of reasoning explains what behaviour Anna wished to encourage, and why, argued from a social perspective. However, it does not yet reveal the concerns of the people at stake. How could her design become meaningful to the people who interact with it?

Her contextual enquiry had revealed that people are generally quite willing to eat more responsibly – they value things like sustainability, public health and animal welfare – but often fail to do so when they are in the supermarket. The context of the supermarket actually appears to trigger people to act in a self-centred way, and also to shift into ‘autopilot’ mode (upper-left quadrant in [Plate 27](#)). So even if they may find themselves in other quadrants at times, most people have the desire to ‘be free’ in the context of the supermarket – free to buy the cheapest option and not have to think about it.

In Anna’s view, that was the key behaviour to focus on – the moment of purchase. It may be possible to convince people to act more responsibly, but in the end it is very hard for people to fight their concerns for price and convenience when grocery shopping. In her view, any other design would fail if the conflict that arises right before the meat is put in the grocery basket were not overcome. At this point in her design process, she decided to bypass the conflict entirely, by focusing on another concern – consistency. Her

specific statement became:

To improve circumstances for animals in the food industry, alleviate environmental burden and decrease the public health risks associated with industrial farming, I want to help consumers behave in line with their beliefs, by highlighting the connection between meat products and sustainability issues.

A typical SID goal statement has three components: the social implication, the intended behaviour and the mechanism that you expect will trigger that (desirable) behaviour. The mechanism is *not* the product or service you are going to design – it describes how the future design will instigate the kind of behaviour you aim for – in other words, how it will motivate people.

In Anna's project, responsible consumption was defined as an increase in purchases of sustainable meat (or decrease in purchases of meat produced by intensive farming). She believed that if people were *able* to act in line with their attitudes, this is what they would *choose* to do. Her mechanism was to 'strengthen the association between meat and the consequences of its production' so that people would feel a greater need to be consistent with their sustainability values than they would feel without such an association.

In [Figure 7.2](#), you can see how Anna's statement emerged out of her reflection on personal and societal concerns and the laddering of abstract behaviours that she expected to contribute to operationalizing positive social change.

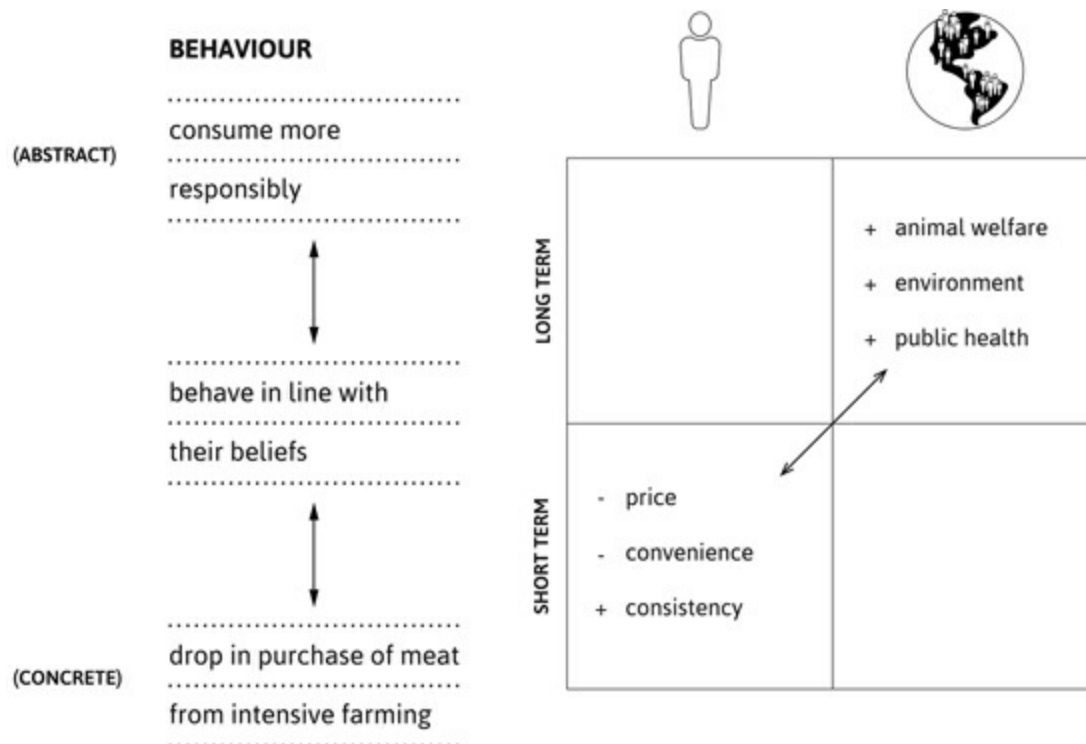
When you have defined your behavioural goal, you have a very clear idea of what you are aiming for. A goal should be specific enough to make you feel the urge to start designing the intervention and confident that you know what properties it needs to have. For Anna, the main question became 'how can I strengthen the connection between people's attitudes and their behaviour?'

There are a number of strategies that she could potentially have employed to produce this effect. She executed a typical idea-generation process with the statement at the forefront of her mind and came up with a few ideas. One was to make the animals' ear tags 'smart' so consumers could digitally track the animals' journey from farm to grocery store, and reflect on the process with real data. A different idea was to use augmented reality inside the supermarket to reveal the conditions that the animals had lived in during their

lives. Both ideas represented her attempt to strengthen the relationship between meat, production and consumption, but whether this would lead to consistent buying practices was doubtful. In fact, these ideas actually sought to transform the conflict (rather than bypass it entirely) by literally bringing the production process closer to the moment of meat purchase. This would perhaps make concerns about animal well-being more salient, but there would be no motivation for buyers to consistently adhere to their beliefs through their purchases.

By focusing more on concerns around price and convenience – the desire to pay a little and not have to think much when doing the shopping – she developed the first version of *Tomorrow's Menu*. The key quality of *Tomorrow's Menu* is that it literally bridges the gap between attitudes and behaviours by inviting people subscribe to the platform at home, when they have the time to think things over. Users are relieved of the burden of weighing several options that may clash with a variety of their concerns. The meat is cheap and buying it is convenient.

In retrospect, Anna employed the strategy of *making a pre-commitment* (Cialdini et al., 1999; Thaler & Benartzi, 2004). In doing so, she bypassed the price issue during subscription by addressing consistency, and actually resolved the conflict that normally rises at the supermarket. The intervention could have a huge effect and transform the system. ‘Could’ because at this point, the causal chain Anna envisioned is one that currently only works in theory. To see if it really works the way she predicted, the design would have to be put into practice and then, over the years, we could measure the impact. Effects in social design do not always emerge instantly; it may take months or years for them to unfold.



**FIGURE 7.2** Anna's behavioural goal and its relationship to personal and societal concerns.

Given the pressing social issues we face as societies today, designers and client organizations cannot afford to wait this long to validate the effects of a social design, and, in fact, we prefer to test our ideas as early as possible. In the next chapter we will introduce three ways to assess design interventions at a very early stage.

## Notes

- 1 For the design case in this chapter, we performed a questionnaire study with a small sample of 100 Dutch people (mainly young urban adults). 90 per cent of the participants indicated their willingness to lower their meat consumption and only 28 per cent believed meat to be an indispensable part of a meal.
- 2 An analogy that is sometimes used here is the one of the acupuncture needle – the acupuncturist sharply and locally intervenes, but aims for effects elsewhere.

# 8

## Assessing Impact:

### Or, How to Evaluate the Behavioural and Social Consequences of a Design

**I**t is important to evaluate any design proposal before implementing it. Assessment is particularly appropriate when designing for social impact, to validate the likelihood that intended behavioural change and any social implications would indeed follow the design's introduction. Assessing impact at an early stage helps to decide whether further development of the design is worth pursuing, and generates valuable insight into how the design could – or should – be improved. In this chapter, we discuss three ways to assess the social impact of design proposals, each with a different focus: the narrative-based study, the user-pilot and the experiment. We elaborate on how to apply each of these methods in the context of social design and offer advice on when to use which method. We build on practical examples for illustration.

#### **The basics**

Social design is about creating intentional social impact. In using SID, the social designer has an explicit idea of the effect a design will have. It is our

conviction that social designs should be assessed before they are implemented.<sup>1</sup> But this is easier said than done. It may not always be possible to assess a design exhaustively – the proposal may still be a rough concept, there might not be enough money in the budget or the anticipated consequences may lie too far in the future. Before we explain the three methods that we consider useful to assess a design's impact in detail, let's look at how to go about validating 'social designs' initially.

Following SID, the designer has developed a design proposal in the belief that it will stimulate particular behaviour that is beneficial to society. In this next stage, the designer will validate that belief. Validation during the design process has two goals: to determine whether effects are likely to occur the way they have been anticipated and to obtain valuable insights into how the design can be made more effective or more appropriate.

The assessment study asks two very important questions:

- 1 *Is the design – as it is now – effective and appropriate? To what extent?*
- 2 *What crucial aspects of the design do we need to change to improve its effectiveness and appropriateness?*

Although they seem similar and logically related, they are fundamentally different questions that represent different aspects of assessment studies. Similar to how someone would evaluate a cake differently when asked whether it tastes good, or whether it could be improved. A response to the first question would judge the cake holistically – 'It's marvellous!' or 'Ehm, I've had better'. A response to the second would lead that person to taste more critically, and compare the taste of the cake to a list of ingredients they thought could enhance certain aspects of the flavour – 'It could use a little bit more salt' or 'More cinnamon would probably be good'. Notice how the latter responses can still mean the person likes the cake, at least in theory. The assertion that the cake would be improved with the addition of cinnamon is not a condemnation of the cake itself; it merely suggests how the flavour could be made *better*. Similarly, a design – however exceptional – is hardly ever 'marvellous' and can always be improved. Data for judgement should therefore be clearly distinguished from data for improvement.

Before assessment, the designer, the design team and the client should discuss what they consider to be the minimal indication that a design is

effective enough (based on the data for validation) to continue the process. Once this first hurdle has been cleared, the next step is to understand how different aspects of the design contribute to the overall quality of the design, and ascertain whether any of these can be improved upon.

In this chapter, we introduce three different techniques to assess social designs – the *narrative-based study*, the *user-pilot* and the *experiment*. Each method has its own advantages and disadvantages, and some projects may benefit from the use of all three. However, in the interest of practicality, there is usually only time to use one.

To this end, we suggest the following rule of thumb:

- A narrative-based study is most suitable when the anticipated social impact will take several years to manifest, or when the budget is limited.
- A pilot study is most suitable when the need for data for improvement is as important as the need for validation.
- An experiment is most suitable when the aim is foremost to validate a design's effectiveness.

Of course, these methods can be combined fairly easily. And naturally, there are other techniques out there that may be equally suitable for impact assessment. But these three have proven their value time and again in our work, and we think that they – as a set – provide a wide array of possibilities to the social designer. In the next section, we will take a look at each method in more detail and illustrate their use through a number of practical examples.

## **Narrative-based study**

Narratives are stories accompanied by images in which one or more characters with goals and intentions perform actions, and experience events. To assess the design, the story should explain how the main character or characters use the product or service, and describe any consequences. The narrative should be as short as possible, yet include enough detail for readers to be able to carry out a balanced assessment. Readers – the narrative study participants – can be (potential) users and/or domain experts, depending on the exact purpose of the assessment.

Narrative-based product and service assessment has several advantages



when compared to prototyping and user testing with prototypes. First of all, writing a narrative requires far less budget than prototyping. Although physical prototypes naturally have certain advantages – they enable physical engagement, for one – research shows that narratives are in fact a reliable means of evaluating concept designs (Van den Hende & Schoormans, 2012). Second, narratives allow designers and other stakeholders to assess the design proposal at a very early stage in the development process. As a result, the study can clarify the need for further development, or even a redirection of resources elsewhere. Third, narratives allow for the assessment of design proposals that afford completely new meanings, for instance because they incorporate technologies that do not yet exist. Narratives induce *transportation* – they absorb the reader in an imaginary world to such an extent that the experiences and actions of the main character feel as if they were the reader's own (Green & Brock, 2000). Transportation lowers the chances that readers will get distracted by overly technical features of a design or concerns about its feasibility and allows them to pay full attention to the use and meaning of it, and the implications of its existence in the real world.

Narrative-based studies are typically carried out to identify the market potential of novel design concepts, because they reveal whether people would be interested in buying a design based on how it can be used and experienced. However, for the purposes of social design development, the main goal of a narrative study is to assess the proposal's ability to elicit socially responsible behaviour. This distinctive goal necessarily changes the way the study is organized. First of all, the narrative should spell out the behavioural and social implications of product use, not just paint a picture of the product/user relationship. Second, narrative study participants should be asked how probable they consider any social consequences it describes. So instead of asking, 'When you accept the narrative world as real, how would you assess the design?' the reader would be asked 'When you accept the design as real (and deployed), how would you assess the probability of the events explained in the narrative?' In other words, the narrative's realism is determined according to the consistency between the narrative's logic, its motivations and the events it instigates (Busselle & Bilandzic, 2008). Clearly, narrative readers need to have a substantial amount of expertise to be able to judge this reliably – ideally they are either stakeholders working in the domain of the narrative or professionals who have a thorough understanding of the

intervention's format, the behaviour the designer anticipates or the phenomenon that is being targeted. For instance, to assess an intervention intended to strengthen neighbourhood cohesion, readers may be citizens, social workers or government employees, as well as sociologists, ecological psychologists or even experts in social media, depending on the type of intervention.

Thus, in social design, narrative-based studies show how appropriately and effectively the design realizes the intended consequences. As noted, narrative studies are relatively cheap, and can be performed early on, when the design is still in the concept phase. We therefore consider this an effective method to gauge whether the design proposal should be developed further or not – do the readers attribute (enough) social power to the design?

Of course, narrative-based assessments are also used to gather insights into how the design can be improved – how to *increase* its social power, or how to make it less conflicting with other concerns that might be equally important to people (and hence make it more appropriate). Both stakeholders and experts can provide meaningful input that can contribute to the next iteration, or more generally serve as food for thought for the social designer during the ongoing process.

## ***How to set up a narrative-based assessment?***

To illustrate the use of narratives in assessing social designs, the following section outlines a project we undertook for the Rotterdam-based real estate developer Estrade. At the time, Estrade was developing urban plans for the Afrikaanderwijk, a neighbourhood in Rotterdam confronted with a number of social problems including high unemployment, crime and intercultural tension. Since it owns a large percentage of the housing in the Afrikaanderwijk, Estrade was interested in learning how the (physical) environment could positively affect social life within the area. During the concepting stage, three of our students applied an early version of the SID as part of their master's degree final project. Before explaining the design of the assessment study, we will briefly explain the interventions that the students designed and how they anticipated their social impact.

## ***Welding Works***

One of the students designed a welding course in which participants would be taught to design, construct and eventually weld safety fences for construction areas. The course is aimed at young people who did not finish secondary school and who live in deprived neighbourhoods. The fences could also be used as football goalposts, basketball hoops, benches, bicycle sheds or gym equipment. The idea is that the maker signs each of his fences with a so-called 'tag' or signature before it gets placed in his neighbourhood ([Plate 28](#)).

The fences have a range of secondary functions intended to entice local residents into exploring and occupying uninhabited areas of their neighbourhood, while 'ownership' of the fences is intended to motivate the young designers' relatives to go out and admire the family member's work. Both intentions seduce people to visit places they normally would not visit – this is the behaviour the design intended to elicit.

The exploration of new parts of the neighbourhood is expected to lead to increased investment in and attachment to the area. By inviting people to spend time near the construction area, and allowing them to be part of it, the intention is that resistance to environmental and social changes will decrease.

## ***SolidShare***

Amine Rhord (2011) designed a tool-lending service for a housing company. High-quality tools – from power drills to sewing machines – are loaned to residents by the management company, with the proviso that residents themselves store and maintain the tools, and exchange them freely. A web platform facilitates the logistics of these exchanges – bookings, scheduling and current 'residence' of the tool ([Plate 29](#)).

The tool exchanges are seen as opportunities for residents to meet people from their neighbourhood that they had not yet crossed paths with. The service encourages residents to acknowledge each another as neighbours, rather than regarding each other as complete strangers.

Meeting unknown neighbours and recognizing each other as members of the same neighbourhood is expected to create feelings and acts of solidarity. Solidarity is considered to be an important part of the social fabric of a neighbourhood, and more specifically its collective efficacy.

## ***Birthdayslide***

Maarten Heijltjes (2011) designed a slide for primary schools that serves as part of a ritual when children leave kindergarten and move to higher grades. Children who are in their final year of kindergarten use the slide to celebrate their birthdays, and the entire class is invited to join in, which is a way to repeatedly mark their collective transition to primary school. At the end of a birthday at school, the slide is moved against the school building, and the children are invited to slide down by stepping out of a window on the first floor. Parents are asked to help with this activity during the year (Plate 30).

The fact that the slide can only be moved if the parents cooperate offers a moment of contact between parents. Eliciting a shared concern for the children's enjoyment is intended to break through cultural barriers. By stimulating contact between people with various cultural backgrounds, the slide aims to strengthen ties between different communities in the neighbourhood.

Each of the three narratives we describe here began with a brief explanation of the story's context, in this case the situation of an immigrant person or family living in a deprived neighbourhood in the Netherlands. Subsequently, the use of the product is described, after which the story goes on to show how the use leads to specific, socially relevant behaviour. The stories follow a narrative arc and are accompanied by illustrations.

One caveat when selecting reader participants for a narrative-based assessment is to make sure their everyday lives do not too closely resemble the main character in the narrative. When they do, the reader tends to interpret the negative events portrayed as caused by external factors, rather than resulting from the actions of the main character, which undermines the narrative's ability to convey a coherent message. Evaluators who closely resemble the main character also tend to interpret stories in which positive events occur thanks to the main character's actions as more realistic (Shapiro et al., 2010). In other words, these narrative readers would be biased.

For our study, we approached 40 Dutch experts, and in the end, 21 experts participated. The experts received the three narrative texts by email, in separate files. A follow-up email was sent that contained a link to an online survey asking the experts to decide whether each product could conceivably stimulate the intended behaviour and hence induce social change. The first question referred to the relationship between the product and the behaviour ('The suggestion that [X product] stimulates [Y behaviour] is realistic'), and

asked participants to agree or disagree with the proposal. The second question referred to the relationship between the product and the social implication ('It is believable that [X product] contributes to [Y social implication]') and again asked participants to agree or disagree. It is important to explicitly ask participants to evaluate specific relationships between events in the story, rather than ask for their opinions, because their total immersion in the story may cause them to focus on their existing beliefs about the topic (Green & Brock, 2000). In addition, each expert was asked to provide a short explanation for his or her (dis)agreement with each statement. These explanations were expected to generate further insight into the strengths and weaknesses of the design, and thereby indicate avenues for improvement.<sup>2</sup>

While 81 per cent of the experts recognized *SolidShare* and 76 per cent recognized *Birthdayslide* as credible vectors for the behavioural effect for which they were designed, only 38 per cent of the experts considered this to be true for *Welding Works*. About 76, 71, and 62 per cent of the experts believed the designs would contribute to the desired social implication, respectively. This means that for two out of the three designs, the experts judged the effectiveness of the design favourably. For instance, the fact that 'sharing is more common in other cultures than it is in Dutch culture' made *SolidShare* a strong concept, according to one expert. And in explaining the assumed effectiveness of *Birthdayslide*, another expert mentioned that the slide functions through 'a shared concern that supersedes individual interests or cultural customs – the pleasure of one's child'. Many experts gave detailed explanations about how the products would mediate certain social processes, and many saw drawbacks – some even proposed feasible alterations. For instance, the likelihood that the fences could attract people to new places was criticized, given that 'fencing off' and 'forcing pedestrians to take an alternate route' are measures that residents often experience negatively. And another expert from an educational organization reflected that the slide was a 'great PR asset for a school'.

Such results can really flesh out the design concept. For instance, one expert in our study suggested that the expressiveness elicited during interaction with the slide might not be appropriate for young girls who are expected to embody certain religious beliefs. Such insights can be extensively researched before continuing with design development. Another expert reflected that the slide would be made even more effective if parents were

asked to help in a set order, which would prevent parents who were already friends from automatically helping each other out. So for instance, if your child was the last to celebrate his or her birthday, then you would need to help out during the next two birthday celebrations. Such tips can be immediately incorporated into the concept.

At the time, Estrade decided to implement all three designs. Unfortunately however, housing corporation Vestia was hit by an economic crisis, after which Estrade had to put many of their projects on hold. Nonetheless, the fact that they responded positively to the results strengthens our idea that social designers can create value in the domain of neighbourhood development.

## The pilot study

Pilot studies resemble what is more commonly known as ‘user prototype/concept testing’ within the design profession. In academia, however, a pilot is a preliminary study that systematically tests an assumption, so we prefer to use the term to stress this goal.<sup>3</sup> And even though the level of rigour can vary greatly among pilot studies, the aim is always to further your knowledge and validate your conclusions. So while designers might also conduct user testing to determine preferences for product features and options for instance, a social designer’s pilot study is primarily aimed at gaining understanding about processes that might be triggered by the design. In SID, pilot studies are small-scale and study the *mechanisms* of a design. They are designed to gather information using minimal resources, and seek to obtain feedback about the value of the design proposal from the user’s perspective. One could say that pilots are used to assess the core concept of the design and afford the designer with detailed information about how to manifest this.

A design *mechanism* describes the relationship between the intervention and the user behaviour, and consists of two variables – strategy and style (Tromp & Hekkert, 2017). The strategy describes which characteristics of the design are expected to affect which characteristics of the user in order to induce a particular behaviour, while the style describes how the strategy is applied within the design. Depending on its complexity, a design can contain multiple mechanisms to stimulate behaviour. In pilot studies, the effectiveness of a mechanism is assessed by measuring indicators of the experiential, behavioural and/or social effects before and after the pilot, and

by comparing these. Depending on the number of participants as well as the available capacity to analyse the data, the comparison can be statistically or qualitatively tested. Mechanisms may be tested in an integrative manner, which means all at once, or separately.

For instance, a strategy could be to deliberately make parcels containing breakable goods appear vulnerable in order to induce a sense of responsibility in whoever touches them and thereby stimulate careful handling by shippers – a desired behaviour. In terms of style, the designer might decide to try puffy, transparent plastic or perhaps simply remove parts of the package to reveal its breakable content.

In social design, products and services are designed to lead to specific behavioural and social outcomes. However, they invariably produce so-called *covariates* – factors that explain or interfere with the intended effects. For instance, perhaps omitting parts of the packaging would indeed cause shippers to take greater care when handling the parcels. However, a pilot study conducted to observe the packaging in situ might reveal that it was the precision required to stack these newly packaged items efficiently that eventually led to more careful handling, not the fact that the contents appeared more vulnerable.

To gather such insights, it is therefore important to observe which features of the design are considered crucial to its intended impact, and why.

We suggest that designers first assess these mechanisms qualitatively, by interviewing participants during and/or after the pilot, and then back this up with actual use data collected from experience sampling, observations or activity monitoring services like Google Analytics. In reflecting upon such data together with participants, clear relationships between the design features, product use and consequential effects can be understood. Qualitative studies allow for more detail in data analysis and can therefore contribute substantially to design improvement. Ideally, an iterative process is employed, to repeatedly confirm the mechanism and optimize the design. Mechanism ideas can easily be tested through quick mock-ups in short studies and simulated situations. Eventually however, pilot studies typically run for a longer period of time, and are deployed in real-world contexts.

In comparison to narrative-based studies and experiments, pilot studies for social designs focus largely on the improvement of the design. This often means that in practice, pilot studies are executed with the intention to develop a design further. Developing a study to gather insights for design

development may not necessarily be the best way to validate a design, however. Still, it may of course be that the design is so disappointing in yielding behavioural change that further development of the design is cancelled.

## ***How to design a pilot study?***

We will illustrate the development of a pilot study in reference to the development of *Project Network*, a smartphone application that prompts users to establish and maintain a sense of connection with their support network. The app is the result of another collaboration between design agency Reframing Studio and mental healthcare institute The Parnassia Group. The project was inspired by an idea from Viki Pavlic, a student in our elective course on social design. His idea was to develop a smartphone widget that slowly disintegrates when family members or friends have not been in contact with a loved one suffering from psychosis for a while (see [Plate 31](#)). This idea became the stepping stone for further research and design. The central question was, ‘How can we use design to attenuate the social withdrawal of a person recovering from psychosis?’

At Reframing Studio, the project started off with a contextual enquiry. One key insight was that family members and friends are often quite willing to stay in touch, but that it is mostly the patient who withdraws from contact over time. Based on this, the goal was defined thus: ‘We want to motivate people who are going through or have been going through rough times to actively maintain and strengthen their social relationships.’ Through various design iterations and a variety of user feedback, the app *Project Network* was developed. Although the overall development process would be insightful for social designers, we will focus on the use of the experiential prototype in a pilot study for the purposes of this chapter (see [Plate 32](#)).

At the start of the pilot, the design was at a conceptual stage, so we wanted to assess whether its core functionality would indeed lead to behaviour change and social impact. The basic idea of *Project Network* is for the user to first map out his or her social support network, and evaluate the quality of each relationship. Next, the app helps users to manage, maintain and strengthen these relationships. To this end, the app (at this stage) had three main functions: *report*, *invite* and *poke*. ‘Report’ offered users a way to keep track of their interpersonal contact events on a daily basis, including who



initiated the contact, what type of contact it was (text message, phone call, face-to-face meeting) and which, if any, core issues were discussed – information that may prove to be crucial to future events. ‘Invite’ suggested ideas for activities that users could do with friends (catch a movie, hang out together or take a stroll along the beach) and allowed them to directly send an invitation for one of these activities to a specific friend. ‘Poke’ offered several pre-written text messages (or message prompts) to help users communicate about difficult topics and inspire them to do so. For instance, how does a person text a friend whose phone calls went unanswered because of personal circumstances?

To motivate the user to actually use the app, three types of prompts were designed. First, photos of people included in the ‘socio-gram’ graphic – a visualized representation of the support network – would slowly fade away if no contact was made and reported. As soon as the photo reached 30 per cent opacity, the user would receive a text message saying, ‘Bob is fading away. Perhaps send a message?’ Second, every day at 8.00 pm the user would receive a message asking him or her to report on any contact made that day. And finally, messages suggesting that the user invite someone to do an activity would be sent randomly, on a weekly basis.

Ten Parnassia clients between the ages of 16 and 35, who had experienced at least one psychotic episode in the last year and had at least three people in their social network, used the prototype for a month. Before and after, we tested their social functioning by means of validated scales. Afterwards, we evaluated the design both quantitatively and qualitatively with respect to the effect and general user value. Each participant received individual instruction on how to use the app before the pilot began. After the first week, we saw each participant again, to resolve any technical issues and to get their first impressions of the app. After three weeks, we called each participant to ask similar questions, and afterwards we invited them back to evaluate the app, and rate their experience with it.

Overall, the app was frequently used, and participants experienced the app positively – it seemed to be an appropriate tool during a process of recovery. We can also conclude that the app was effective – the average frequency of contact events increased to eleven events during the month. Participants indicated that they appreciated the role they played in their support network more, since they had taken more initiative – appreciation ratings increased on average from 5.2 to 7.6. Other than that, contentment with their social life

increased significantly – average ratings increased from 4.8 to 7.0 – while feelings of loneliness fell, and feelings of happiness rose. This result gave us the ‘go-ahead’ to continue developing the design. We utilized the users’ feedback on the design, supported by the use data we had gathered, to guide that development. The data revealed that (a) the ‘report’ function was used frequently and was appreciated, as it provides insight into the quality of their social network and their role in it; (b) the ‘invite’ and ‘poke’ functions were rarely used, but appeared to lend users a degree of inspiration and basic insight into how to maintain social relationships; (c) the fact that the image of a contact fades away over time when no communication had taken place appeared ambiguous to some, and led to opposite effects for others, while other participants indicated it would be desirable to decide on the speed of fading per person; and (d) prompts were considered annoying at times – participants expressed the desire to disable or schedule such reminders. Based on these insights, a redesign was made in which ‘report’ became the main function of the app. We also developed a feature called ‘FHIC’ – First Help In Contact – that illustrated the dos and don’ts of social relationships. Instead of fading away, we applied a green-to-red colour scheme to contact photos, and prompts could be more easily controlled (see [Plate 33](#)). Currently, *Project Network* is freely available to the Dutch market. It was nominated for the Dutch Design Awards in the category Design Research in 2015.

## Experiment

For many design practitioners, performing an experiment may not sound like something that belongs in their repertoire of skills. When we refer to this method for social design practice, we are not necessarily talking about (nor excluding) scientific experiments like large-scale randomized controlled trials or extensive, controlled lab studies. Although we – academics that we are – would encourage such types of studies to assess impact, and are convinced they would support our ideal of evidence-based design, we understand that this may not be feasible in most projects. Hence, the basic principle that distinguishes this type of technique from the other two is a systematic approach and the introduction of a control condition. In an experiment, effectiveness is assessed by comparing the use of the intervention to a situation in which no such intervention is used – the control.

The recommendation to include a control condition seems logical for any

assessment, since it is the most valid way to ascertain the impact of an intervention. Yet controls are rarely used, since they require many extra resources. In order to compare two conditions, using a control often means double the amount of work – double the number of participants, double the scope and the amount of time needed to execute the study, and two separate sites might even be needed. What's more, an experiment does not focus on garnering insights about the design's mechanisms but merely assesses overall effectiveness, which makes it less appealing to design practitioners. Nonetheless, experiments provide a solid assessment of social designs, potentially already at the early stage of development. Such assessments may be required or desirable when dealing with designs that will be implemented worldwide, or at national level, like for instance introducing a new tax form or filing system, or a national voting system, or when the design needs to meet (ethical) standards, like interventions to prevent sexual assault or promote health. On top of this, experiment results – when successful – can convince clients to implement a design intervention.

Many of today's internet start-ups use experiments during the ongoing process of optimizing their products and services. According to Eric Ries in his 2011 book *The Lean Startup*, many entrepreneurs (should) adopt a 'learning attitude' during the product development cycle. The benefit of designs that are powered by the internet is that user habits can be monitored in detail. Data indicating how users have discovered a product or service, how they explore it and which functions they actually make use of (and when) are clearly valuable for many reasons – they may reveal how product use corresponds to user behaviours. And once internet companies have a large enough user base, they can easily introduce and test 'beta' or alternate versions of their products and services. Clearly, the experiment as a product development technique is becoming more popular in practice, especially for web-based designs.

For designers, the internet can do more than facilitate novel design cycles. Crowdsourcing platforms harness the power of millions of users and connect them with individual professionals, companies and researchers who need to complete computer-based tasks. Amazon's marketplace Mechanical Turk, for example, has a massive database of workers who select and perform basic Human Intelligence Tasks (HITs) – including surveys – that employers and researchers might have trouble assigning, or may need quickly. HITs can take seconds or days to complete, and participants can earn anywhere from a few

cents to hundreds of dollars. MTurk is currently being used to conduct many online experiments. It enables researchers to gather data quickly, at very little cost, from a massive pool of participants.<sup>4</sup> There also exist apps that enable anyone to rapidly design and implement an experimental study. For instance, *Paco* – developed by Google software engineer Bob Evans – allows researchers to quickly implement behavioural studies, and enables users to track data and use it to meet personal goals for behavioural change. Crowdsourcing tools clearly support experiment performance and lower costs.

All in all, we consider experiments to be the strongest way to assess the impact of an intervention, despite their cost and their somewhat narrow focus. New tools and technologies that support design experimentation in practice will likely continue to emerge, and these show promise for the future of social design.

## ***How to set up an experiment?***

To best illustrate how to set up and run an experiment, let us take another look at Anna Peeters's project, which we extensively discussed in [Chapter 7](#).

To discourage the purchase of meat produced by intensive farming, Anna developed *Tomorrow's Menu*, a platform that connects consumers with farmers. Consumers can subscribe to a collective of farms whose production philosophy, principles and procedures align with their personal concerns with respect to animal welfare, the environment and public health. By becoming a 'member' of a particular collective of farms, meat from these farms can be bought at the supermarket for the lowest price – as cheap as the cheapest piece of meat in that particular meat category. The actual price difference is then compensated for by membership costs. In this way, people can adhere to their personal concerns and act in line with their ideals, and are not seduced into buying cheap options once they are in the supermarket ([Plate 23](#)).

To assess this social design, we designed an online experiment in collaboration with a social psychologist from the University of Groningen. The main aim of *Tomorrow's Menu* is to decrease inconsistency between people's values and their actual behaviour and as a consequence increase sustainable meat consumption. We tested these assumptions as separate hypotheses. In addition, we tested the influence of two different advertisements for the platform, to see whether implicit or explicit ads were

more effective in persuading people to subscribe. Before the experiment, participants were asked to fill in a survey to measure their values (Van der Werff, Steg, & Keizer, 2013). A week and a half later, participants in the design condition – who would be presented with *Tomorrow's Menu* – received one of the two advertisements (in video format) via email. Later that same week, they were introduced to *Tomorrow's Menu*. The online service environment – still clearly a prototype – was explained. By filling in an insightful value meter, they received advice on which farm type would suit best their ideals (see [Plate 35](#)).

After this, they were asked whether they would want to join the service should the service actually exist. A week after that, people in both conditions were invited to an online shopping environment. They had to imagine a situation in which they had guests coming over for dinner. With a fixed budget, they needed to buy 250 grams of pork chops, a bottle of red wine and chocolates for after dinner. Everyone who had become a member a week earlier received a discount for the meat from the farm type they supported ([Plate 36](#)).

This little scenario, in which it was impossible to buy the most expensive product in each category with the available budget, triggered participants' budgetary concerns. This was intended; such quandaries exist in real life as well ([Plate 37](#)). Of the people who completed the experiment, 142 in total, 83 were in the design condition. In this condition, only one person bought the meat produced from intensive farming, while eight people did in the control condition. The important finding here is that this single person indeed indicated that he did not value animal welfare and the environment that much. So in his case, the behaviour was expected. While of those eight people who bought meat from intensive farming in the control condition, six had indicated that they seriously valued animal welfare and the environment. *Tomorrow's Menu* clearly helped people to act in a way that was consistent with their values!<sup>5</sup>

Still, practical issues would need to be considered in order to be confident that developing and releasing such a platform in reality would yield similar effects (besides all the hurdles that need to be overcome to actually realize the platform and service as such). For instance, how can we ensure that users interact with the platform long enough for them to consciously decide to become a member? In our experiment, this prolonged contact was a component of the instruction session. Logically however, this is also a

behavioural challenge in real life, since people are overwhelmed with information and need to make a great variety of choices on a daily basis. Nonetheless, the fact that people would be confronted with this choice for membership every time they bought a piece of meat makes us confident that a service platform like *Tomorrow's Menu* would encourage more socially responsible meat production and consumption.

What these three techniques and their application reveal is that there is a great variety in the ways a social designer can assess social impact. With these three techniques at their disposal, we consider the social designer entirely capable of assessing the social impact of their designs. It is our hope that social designers will be either talented enough to mould these techniques to suit their purposes or clever enough to involve other experts to help them do so. In case of the latter, we are confident that this chapter will at least help the social designer to communicate on the same level and collaborate with experts on the assessment of their designs. After all, the social designer is the expert on how to integrate the findings into any future iterations of the design.

## Notes

- 1 We all know that a single design can evoke a variety of behavioural consequences and have countless implications. So is it possible to design and thus foresee them all? Probably not. But there are good reasons to believe that we can account for – and design – the most probable ones. And although this is not easy, this is simply no argument not to, given the massive impact design has. Moreover, the more we try, the more we learn and the better we will become at anticipating the behavioural effects of our interventions.
- 2 Full details of this study can be found in Tromp and Hekkert (2016).
- 3 Many contemporary products can be revised, upgraded and improved remotely. As such, their design never really ends; user data contributes to ongoing product improvements. Ongoing data generation and product development is, of course, valuable for social design, especially given the fact that some consequences of use are unexpected. Nevertheless, in this chapter, we focus on the minimal level of assessment *before* implementation and future upgrades.
- 4 For a discussion on the reliability of the use of Mechanical Turk for conducting research, see for instance Buhrmester, Kwang, & Gosling (2011); Mason & Suri (2011).
- 5 By running statistical analyses, we showed that both people's values and *Tomorrow's Menu* significantly affected the purchase of sustainable meat.



# 9

## Social Design in Practice:

### On Momentum and Trojan Horses

**N**ow that we know the theory and methodology of social implication design, let's ask ourselves how a designer can actually make a living with it. What does social design look like in practice? In this chapter, we explore the landscape in which contemporary social design practices take place. We witness a new range of collaborations and alliances between the public and private sectors around the globe. By employing novel strategies to resolve social issues, associations like these must balance a variety of working modes and methods, mindsets and cultures – all of which may be extremely different, or even opposing. Such dynamics confront social designers with one of the main challenges of their profession – bridging the culture gap. Another massive challenge for the contemporary social designer is dealing with economic reality. Even though social gain is the driver for innovation in social design, economic feasibility and sustainability concerns should not be seen as unimportant, secondary motivators – project implementation often still depends on gauging, cultivating and safeguarding such levers of change. On top of this, social gain is difficult to measure most of the time. So, how can designers build an economically viable social design practice?

To answer these questions, this chapter introduces readers to three  
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prototypical contemporary social designers: Marco Steinberg, director at Snowcone; Thomas Prehn, director at MindLab and Anna Noyons, CPO at Peerby. Through our conversations with them, as well as interviews conducted with some of their clients, this chapter offers a sneak preview of what being a social designer looks like. Our conversations will both shed light on the challenges this new discipline is facing and demonstrate its incredible potential. These interviews reveal that social designers can play an influential role in a world where economic principles and gain are the key driving forces behind many innovations. These social designers have the courage to question old models and ways of thinking, offer radically new ways of doing things and shape new social realities. They are pioneers – a benefit at times, but often at a price. By showing you how they remain upright, although the ground beneath them is rough and unstable, and by sharing with you their solid optimism, we hope to inspire you to equal their persistence, and use design to shape a better world.

Snowcone & Haystack is Marco Steinberg ([Plate 38](#)) and his network. Steinberg works for different stakeholders in the public sector, helping them to shift away from trying to improve the efficiency of what was to redesigning what could be. Steinberg is based in Helsinki, Finland and shares an office with Esko Aho, Finland's former prime minister.

Steinberg's keywords: architecture of the problem, transformation, strategic thinking, theory of change.

MindLab, of which Thomas Prehn ([Plate 39](#)) is director, is a cultural R&D unit in Denmark, involving citizens and businesses in creating new solutions for society. MindLab is cross-governmental and part of three ministries and one municipality: the Ministry of Business and Growth, the Ministry of Education, the Ministry of Employment and Odense Municipality, and collaborates with the Ministry for Economic Affairs and the Interior.

Prehn's keywords: scalable behaviour and mindset, continuous development, beta, different for less, culture gap.

Anna Noyons ([Plate 40](#)) is CPO at Peerby, an Amsterdam-based local sharing platform. By facilitating the lending and borrowing of useful items among neighbours, Peerby aims to offer everyone access to everything for free, support social connections and relieve the environment of the burden of

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overconsumption. The start-up recently raised \$2.2 million over the course of a weekend from 1,051 crowd funders, making the crowd their largest shareholder. Peerby is currently listed at No. 34 in the top 100 of exponential organizations (above Facebook and Twitter).

Noyons's keywords: scalability, B corp, product-market fit, crowdfunding.

The clients we interviewed are Eddo Velders, innovation manager at psychiatric institute Parnassia; Odette de Riet, head of the Behavioural Insights Team (BIT) at the Ministry of Infrastructure and Environment in the Netherlands and Katja van Geffen, Manager of Care and Innovation at the Kidney Foundation.

## **The time is right**

When we started working in the domain of social design ten years ago, the actual term 'social design' had not been coined or used whatsoever. Nonetheless, several initiatives took off at about the same time. For instance, in the UK, the Design Council published a position paper on 'Transformation Design' in 2006, the same year Carnegie Mellon established their Institute for Social Innovation (ISI). Several international events led to the initiation of the 'Design for Social Innovation towards Sustainability' international network (DESIS) in 2008. Although the foci and approaches are slightly different among these initiatives, in retrospect, they illustrate the rise of a new discipline, a new branch in design – design for social change. Nowadays, courses and research efforts covering 'Design for Social Impact' or 'Social Innovation' are common at design schools and universities around the globe. Yet job vacancies for 'social designers' or 'public innovators' are hard to find.

Nevertheless, humankind's pressing social issues continue to expand in urgency and scope, and governments are becoming increasingly aware that their regular way of coping does not suffice anymore. 'The pain and urgency for a different way of working is huge', explains Thomas Prehn, director of MindLab. And indeed, many governments are currently experiencing a process of transformation. Stephen Goldsmith says we are entering a 'fourth stage' in terms of how we deal with our societal issues (Goldsmith, 2010). In the first stage, at the start of the twentieth century, taking care of each other

was embedded in family relationships or carried out by charities. The second stage covers the build-up to the welfare state, in which governments took responsibility for the welfare of their people. During the third stage, more and more parts of the welfare state were outsourced to the market, in the hope of fostering competition and thereby improving quality. But the introduction of market thinking into the social domain has led largely to cost-reduction measures, and thus poorer levels of service, rather than to meaningful innovation and improvement in quality of care. The fourth stage, of which we are said to be at the beginning, is when governments and the public sector seek alliances with the private sector and harness their power to innovate and transform societal infrastructures. Eddo Velders, who is responsible for innovation at psychiatric institute Parnassia Group, recognizes this shift and argues that the contributions of designers are crucial for organizations to ensure their relevance in the future. Like any other large mental healthcare institute in the Netherlands, Parnassia Group is struggling to continue offering quality care to a greater number of people with a smaller and smaller budget. ‘Without designers, our organization would not have a future. Thanks to them, we still stand a chance. We need designers to rethink our value proposition.’ Nevertheless, formal structures that organize and oversee such partnerships between the social and private sector are lacking in the Netherlands. It is therefore not easy to engage creative thinkers to work for public organizations or social foundations, since they are part of different taxation schemes. Hiring a designer is basically too expensive for a public organization. On top of this, the public sector often has only a limited awareness of how expensive and far-reaching innovation actually is.

In contrast to the Netherlands, the United States and the UK are actively seeking workarounds to get these partnerships up and running. For instance, led by President Barack Obama, the United States established the Social Innovation Fund (SIF), a programme to detect and scale up innovative, evidence-based solutions to challenges in three main areas: economic opportunity, health and youth development.<sup>1</sup> The idea was (and is) to ‘find out what works and make it work for more people’. The SIF funds projects that have already begun the implementation stage and enjoyed some success and are scalable. In doing so, the SIF avoids risk and can argue that taxpayers’ money is well spent.

And yes, there has been an immense rise in the number of social entrepreneurs and public interest companies – entities that target social

change and social impact, yet must still conduct business like any other company. Balancing social and economic gain is not easy in general, but that goal becomes even trickier when the goal is to prioritize social gain over economic gain in a capitalist economy. It requires rethinking business models so that optimization does not come before beneficial social and environmental impacts. To let social impact be the driver of your business means rethinking the business itself, while conforming to the principles that govern business operations. And that is exactly what Southwest Yonkers, New York's Greyston Bakery did. 'We don't hire people to bake brownies, we bake brownies to hire people.' Its initiators started the bakery not to earn a profit, but to improve the community and the lives of its members. They developed the now trademarked 'Open Hiring Model' – anyone can apply for a job, no résumé required and the first on the list is hired. So even though a person may have been in jail before, or may have never received any formal training or education, that person can join the training program and get to work. Greyston is one of the most successful social enterprises in the United States, and a shining beacon in the field of social innovation.

Of course, this short list is far from an exhaustive overview of the global context that is relevant for future social designers. It touches upon some of the wider movements happening at the moment – those that challenge the divide between the public and private sectors, and those that challenge the dominant principles and models for running a successful business. Now let us move closer to the actual practice of social design.

## **A designer's key assets**

One of the differences between artists and designers is the fact that many designers use a method that – to a greater or lesser extent – prescribes a stage-based approach composed of planned activities. In practice, such methods are valued since they allow for project planning and support, and facilitate communication within the design team and with a client. In academia however, emphasis has been mostly on the role methodology plays in fostering creativity and supporting the process of getting from design problem to creative and multiple solutions. In trying to better understand why designers – or design agencies at large – apply methods at all, Jaap Daalhuizen (2014) extensively studied the function of methods and their uptake in practice. He defines the key role of design methods as the essential

means designers use to contend with uncertainty. Projects with a relatively high degree of uncertainty are those in which the designer or design team is still inexperienced because they are beginners, or in which the design brief is not prototypical. The latter is logically the case in the domain of social innovation. Even though social design projects may be considered widespread from an international point of view, very few designers have executed many projects in real practice. On top of this, the clients that social designers typically work for are expected to experience equal uncertainty in the process – first because they may not be used to hiring designers to help them innovate and transform; secondly, because innovation processes are inherently uncertain in nature.

Marco Steinberg highlights the importance to distinguish uncertainty from risk. ‘Unfortunately, designers are little aware that their expertise in dealing with uncertainty is actually one of their key assets in the public domain. And very little attention is paid to this in education.’ He continues, ‘Governments know well how to deal with risk, but they are terrible at dealing with uncertainty. And this is logical, since they have a huge responsibility and need to manage this through reasonable risk-taking.’ Steinberg explains that ‘risk’ refers to an unknown outcome, but for which we know the distribution of outcomes. ‘We talk about risk when we have enough data to assess our chance of failure. For example, we know the risk to our survival that we accept everyday by driving in traffic: we can calculate our chances of getting involved in a fatal accident. On the contrary, uncertainty refers to an unknown outcome and an unknown distribution of outcomes. Our first trip to the moon’, he explains, ‘was a highly uncertain process’. In Steinberg’s view, this is the key value of designers: to transform uncertainty to risk for governments. By prototyping solutions and experiment on a small scale through engagement with citizens, data can be gathered to, on the one hand, test effectiveness and guide design development, and on the other hand, allow for scaling with reasonable risk-taking. Having the tools to prototype and the empathy to engage with the real context, designers have the perfect combination of expertise needed to innovate for the public sector.

Thomas Prehn also emphasizes the importance of methods and tools for public sector innovation efforts. ‘The fact that designers have processes, tools and methods is very important. It is what people within the government are familiar with and can relate to. To them, methods and tools explain you are not some lunatic doing creative crazy stuff. Instead, you engage them in the

process of new thinking.’ As a designer, attuning the people you work for with your way of thinking – and working – is highly important, regardless of how successful you are in developing high-quality services. In fact, to realize impact, Prehn considers disseminating innovation as a culture of practice and leadership within the public sector to be of equal importance to any proposal made. ‘I even tried to use the term “beta-policy” here to illustrate a different approach to new policy development, but I am not sure whether this is the right term’, explains Prehn with laughter. Clients indeed found this new thinking to be of exceptional value when bringing designers in, and considered it a weakness when designers were not able to articulate their way of thinking nor to engage them in it. ‘Designers place our problems in a broader context, that helps to look at the situation differently’, says innovation manager van Geffen.

Social entrepreneur Anna Noyons is naturally quite closely acquainted with beta-testing new products and scaling solutions that work, since these are common practices for start-ups in the digital era. In her view, human-centred thinking is the key asset that the designer brings to table here. ‘The ability to create something that people truly value and enjoy engaging with is really the distinctive value of the designer. Luckily, we are gradually seeing others taking on the same approach.’ Being able to anticipate the value a design intervention will have for its users is, in Noyons’s view, essential for successful social innovation. Along these lines, Velders explains how designers opened his eyes to the need for including a human perspective to innovation. ‘We were focusing a lot on technology in our innovation efforts. We were surprised that change did not occur as anticipated during implementation. For four years, we have been working with designers, and they have shown us that we need to focus on the interaction between people and technology, rather than on technology as such.’

‘Additionally’, Noyons continues, ‘designers tend to see opportunities rather than obstacles. The very fact that they are not risk-averse is a key quality and truly needed for social innovation.’ As both Steinberg and Prehn mentioned earlier, the social designer sees opportunities rather than obstacles, yet knows how to translate the uncertainty such an opportunistic attitude brings to the innovation process into reasonable risk through the use of methodology.

## Challenges to overcome

Although the kind of thinking designers bring to this new domain is valuable, engaging a client with this kind of thinking is not necessarily a smooth process, nor are the resulting plans and designs so easily implemented. Even when civil servants or other clients may be willing, inventive ways need to be developed to deal with the often excessively bureaucratic structure and procedures that characterize governments and public organizations alike. The organization of governance and execution of public policy is logically formal, detailed and sophisticated, and therefore also inflexible. ‘A lot of our time is spent dealing with the conditions, which saps a lot of our creativity’, explains Prehn. ‘We have to continuously fight and argue why X is the right approach.’ In a governmental context, the ‘perfect’ design process is usually not accepted due to legal constraints or political concerns. Prehn continues to explain how such obstacles are not impossible to overcome, but require resilience from designers, especially those who are in favour of agile – flexible, adaptable, reactive – processes that allow for exploration and customization. At MindLab, a recurring theme in their discussions is whether they ought to act more like civil servants. ‘Currently’, says Prehn, ‘I see it like this: designers need to have enough knowledge of the public sector to challenge it, but the fact that they are different and work differently is of singular value ... which doesn’t mean I don’t think designers could try to develop a bit more like mediators, so they have their arguments ready, but can show more empathy towards someone working in a different reality’. In general, the challenge of dealing with the political aspect of their work is common to all social designers. Social design is naturally entangled with politics, which means that a country’s political climate may have substantial influence on project funding, development and outcomes. The course of plans can quickly change once a new minister or president is elected, or a national crisis occurs. So, also in this respect, the social designer needs to adapt their way of working to that new context and become more resilient.

Marco Steinberg reflects on the pioneering character of his work, and explains how this is both a curse and a blessing. ‘Designers have a preferred position to deal with political issues – at least in the eyes of the people that is – since they don’t belong to the establishment.’ Economic crises<sup>2</sup> and the inadequacy with which they are handled by governments have triggered a growing sentiment of anti-establishmentarianism. People are showing a

growing resistance to lawyers, economists and bankers, and, according to Steinberg, this works in favour of the designer. In his view, the fact that in many Western countries populism is gaining political traction – illustrated by the successful campaign of Donald Trump – is actually creating opportunities for designers. Designers are, on the one hand, professional enough to advise governments, yet they are still free enough floating bodies to honestly engage with citizens and voice their concerns. ‘However’, Steinberg notes, ‘we are also the angels they don’t know.’<sup>3</sup> Our discipline is so young, that we have yet to establish a track record. We have no durable evidence that our approach will bring better results. On top of this, we lack the capacity to effectively contribute to solving the many large-scale and complex issues governments face. We are simply too few.’

On a personal level, designers who are eager to improve society through design may need to become autodidacts in new areas of expertise, like complexity theory, politics and ethics. In relation to the latter, Noyons expresses the need for designers to become personally engaged in a project and take responsibility for its implications. ‘What I feel is necessary for social designers is an ability to argue and communicate their personal vision on the social issue at hand, even more than an attempt to articulate an objective truth.’ For such leadership, not only knowledge is needed, but also a moral compass and the rhetoric to argue for it. Similarly, both Prehn and Steinberg explain the importance of the leadership role the social designer needs to take on. Steinberg and his colleagues Bryan Boyer and Justin Cook have coined this role ‘stewardship’, which they explain as ‘the art of getting things done amidst a complex and dynamic context. Stewardship is a core ability for agents of change when many minds are involved in conceiving a course of action, and many hands in accomplishing it’ (2013, p. 7). This notion reveals that doing social design is far from a linear execution or implementation of a design (process). Being a leader amid such dynamics requires skills that are typically not taught in design schools.

## **Doing business**

While we were questioning these three prototypical social designers about doing business as a social designer, one piece of advice clearly stood out: envision the bigger picture! This bigger picture refers to both the impact you are aiming for, as well as the strategic future you secure through its

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implementation. Prehn, Steinberg and Noyons independently explained the importance of not regarding your design project as ‘just a project’ – with a classic project lifecycle – but as a stepping stone towards systemic change and perhaps even a lengthier collaboration. ‘To realize impact, you need to generate growth. You need to envision this continuum of growth before you start’, explains Noyons. She explains how this applies to Peerby, but equally to any intervention aiming at social change. Your design – the end-result of the project – is actually only the beginning of the transformation. ‘This requires a theory of change’, explains Steinberg. A social designer should be strategic enough to recognize the role of the project and take the lead in the process of transformation that follows. Although clients may not directly hire you over extended periods, both Prehn and Steinberg stress the importance of building agreements that safeguard the continuation of a project. Prehn explains how MindLab developed so-called ‘papers of ambition’ with the different ministries it works for. An explication of the exchange of value between two parties lowers the threshold to commitment. Because even though MindLab is part of the government, just like any other private sector entity, it is required to develop formal agreements for every single project it undertakes and guarantee any added value in terms of budget. Along similar lines, Steinberg explains his preference for working with what he calls ‘framework agreements’. Such agreements are generally for two years, with the option to extend by one year, and partners are offered an ‘opt-out’ at specific stages in the project. Such agreements explicitly state that all parties share a long-term intention to collaborate, but still allows for any change of plans should the project not deliver. ‘I got tired of repeatedly going back to the table to ensure money for the next stage. So instead of an opt-in framework, I reversed it to an opt-out framework.’ Also, for clients, this way of budgeting may be more convenient since they only have to allocate the money once, and argue for it once, in their budget. In addition, such long-term agreements do justice to the wisdom that social change does not happen overnight.

But, how can you help ‘clients’ get to know you and ensure that an initial project will be built upon? Especially if the public sector probably does not turn to designers when struggling with policy implementation or when it seeks solutions for persistent social issues? ‘To me, the profile of this new designer is not so clear. I tend to think of a designer when we really need something tangible to be designed’, explains Van Geffen. Getting a project

started may therefore require quite some intensive talking and take quite some time.

Steinberg explains, ‘There are no clients; we have to create clients. In practice, this means you are often selling what clients want, and giving them what they actually need.’<sup>4</sup> This may require designers to adopt a different vocabulary. ‘In my view, we should not fight the vase,<sup>5</sup> but use new words like “transformation” to explain what we’re doing.’ He admits that he hardly ever uses the word ‘design’ in his work. For clients to be willing to engage with designers whose values they are not familiar with, the urgency of the issue should be extremely high. So it may be smart to focus on the most pressing issues. ‘By focusing on where the pain is, and by questioning their logic, people open up to new thinking and approaches.’ In addition, Steinberg seeks ways to let clients experience the power of design. ‘I often let clients gain experience with designers on small-scale issues that are so disastrous, that they cannot get worse.’ Such an approach offers no risk for clients, and can easily become stepping stones to more substantial reforms.

Working from within the public sector while operating as a private entity has benefits and drawbacks. Being part of the government, like MindLab is, surely has the benefit of being close to power. This means that the levers for change are within reach. Nonetheless, as Prehn indicated, the organizational structure of governments – their procedures and ways of working – may be overpowering at times. Operating as an outsider clearly has the downside that one may suffer from a lack of credibility. Hiring a design or innovation consultant to improve governmental efficacy is hardly an automatic reflex, and for a social designer, getting hired is no mean feat. On the upside, freedom from the constraints of standard procedures gives designers the leeway to approach the issue from a radically different perspective. ‘It helps to be ambitious here, but set expectations low’, explains Steinberg. He goes on to explain that if you do set your ambitions high, others involved will recognize that a standard approach will not suffice. Also, aiming for radical improvement rather than incremental change will help people feel motivated to change the way things are normally done. In the world of start-ups, engaging with private investors rather than public funding bodies also offers benefits. ‘Having private investors will allow way more experimentation than when you have to explain all your expenses in detail’, Anna explains. She explains further how Peerby became a B corp to ensure that investors do respect Peerby as a social enterprise rather than merely a commercial start-up.

‘Every single social and global issue of our day is a business opportunity in disguise’.

The Drucker Institute

## **The o-so-needed linking pin**

Our conversations with these – in our view – prototypical social designers reveal how social designers are needed as the linking pin holding together the complexity and dynamics of social change. Social designers are not merely facilitators; they are visionaries, stewards, leaders and strategic advisors. The social designer is a fusion of a service/experience designer who can empathize with what people value and consider meaningful, and a strategic designer who understands social dynamics and political structures, and who is thus able to develop a theory of change to foster systemic impact and shape new culture. The social designer is a thinker and doer at the same time, by being able to build visions and develop the first tangible outputs to make those visions a reality. This is not to say that we need hundreds of teams full of social designers to fight all the complex issues society is facing, but it does explain how a team of strategic, service and product designers needs to be complemented with at least one social designer. In addition, establishing public/private sector relationships seems an integral part of creating desired social change. Nevertheless, these sectors are still speaking different languages and employing different modes of thinking and doing. In social design, they can find common ground: the desire to deliver value for people. Whereas the forte of the public sector lies in considering the welfare of all, adhering to concerns of society in the long term and developing services from this perspective, the private sector knows how to offer value to (individual) people in the short term, and make products and services people find meaningful. It is the challenge for social designers to unite these perspectives, and chart a path that does justice to both. This book is intended as a tool to do help you do just that.

## **Notes**

- 1 <http://www.nationalservice.gov/programs/social-innovation-fund>
- 2 And other crises alike, for instance the global issues around immigration and terrorism.
- 3 In reference to the saying ‘*better the devil you know than the angel you don’t*’.

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- 4 Steinberg is referring to the Trojan horse approach here.
- 5 Referring to how designers are often seen as stylists or designers of vases.

# References

- Aarts, H., & Dijksterhuis, A. (2003). The Silence of the Library: Environment, Situational Norm, and Social Behavior. *Journal of Personality and Social Psychology*, 84(1), 18–28.
- Ackoff, R. L. (1994). Systems Thinking and Thinking Systems. *System Dynamics Review*, 10(2–3), 175–188.
- Akrich, M. (1992). The De-scription of Technical Objects. In W. E. Bijker & J. Law (Eds), *Shaping Technology/Building Society: Studies in Sociotechnical Change* (pp. 205–24). Cambridge, MA: MIT Press.
- Armstrong, L., Bailey, J., Julier, G., & Kimbell, L. (2014). *Social Design Futures: HEI Research and the AHRC*. Brighton: University of Brighton.
- Atkinson, P. (2006). Do It Yourself: Democracy and Design. *Journal of Design History*, 19(1), 1–10.
- Bailey, J. (2014). Social Design. *Design Paper #4*. British Council.
- Bakker, C., Wang, F., Huisman, J., & Den Hollander, M. (2014). Products That Go Round: Exploring Product Life Extension through Design. *Journal of Cleaner Production*, 69, 10–16.
- Banathy, B. H. (1996). *Designing Social Systems in a Changing World*. New York: Plenum Press.
- Banerjee, B. (2014). Innovating Large-scale Transformations. In C. Bason (Ed.), *Design for Policy*. London: Routledge.
- Bargh, J. A. (2011). Unconscious Thought Theory and Its Discontents: A Critique of the Critiques. *Social Cognition*, 29(6), 629–647.
- Bargh, J. A., & Chartrand, T. L. (1999). The Unbearable Automaticity of Being. *American Psychologist*, 54(7), 462–479.
- Bason, C. (2010). *Leading Public Sector Innovation: Co-creating for a Better Society*. Bristol: Policy Press.
- Bason, C. (2014). *Design for Policy*. London: Routledge.
- Bason, C. (2017). *Leading Public Design: How Managers Engage with Design to Transform Public Governance* (PhD Thesis), Copenhagen Business School, Copenhagen.
- Batson, C. D. (2014). *The Altruism Question: Toward a Social-Psychological Answer*. New York: Psychology Press.
- Baumeister, R. F. (2002). Ego Depletion and Self-control Failure: An Energy Model of the Self's Executive Function. *Self and Identity*, 1(2), 129–136.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego Depletion: Is the Active Self a Limited Resource? *Personality Processes and Individual Differences*, 74(5), 1252–1265.
- Beinhocker, E. (2012). New Economics, Policy and Politics. In T. Dolphin & D. Nash (Eds), *Complex New World: Translating New Economic Thinking into Public Policy* (pp. 134–146). London: Institute for Public Policy Research.
- Berger, J., Meredith, M., & Wheeler, C. S. (2008). Contextual Priming: Where People Vote Affects How They Vote. *Proceedings of the National Academy of Sciences*, 105, 8846–8849.
- Bijker, W. E. (1995). *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change*. Cambridge, MA: MIT press.
- Björgvinsson, E., Ehn, P., & Hillgren, P.-A. (2012). Agonistic Participatory Design: Working with

- Marginalised Social Movements. *CoDesign*, 8(2–3), 127–144.
- Bocken, N. M., De Pauw, I., Bakker, C., & Van Der Grinten, B. (2016). Product Design and Business Model Strategies for a Circular Economy. *Journal of Industrial and Production Engineering*, 33(5), 308–320.
- Boyer, B., Cook, J. W., & Steinberg, M. (2013). *Legible Practises: Six Stories about the Craft of Stewardship*. Helsinki: Sitra.
- Brehm, J. W. (1966). A Theory of Psychological Reactance. In W. W. Burke, D. G. Lake, & J. Waymire Paine (Eds), *Organization Change – A Comprehensive Reader* (2009). San Francisco: John Wiley & Sons, Inc.
- Brown, T., Sklar, A., Speicher, S., Solomon, D., & Wyatt, J. (2008). *Design for Social Impact* (pp. 80–81). New York: The Rockefeller Foundation.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon’s Mechanical Turk a New Source of Inexpensive, Yet High-Quality, Data? *Perspectives on Psychological Science*, 6(1), 3–5.
- Burns, C., Cottam, H., Vanstone, C., & Winhall, J. (2006). *Transformation Design*. London: Design Council.
- Bursell, M. (2007). *What’s in a Name? A Field Experiment Test for the Existence of Ethnic Discrimination in the Hiring Process*. Stockholm: The Stockholm University Linnaeus Center for Integration Studies (SULCIS).
- Busselle, R., & Bilandzic, H. (2008). Fictionality and Perceived Realism in Experiencing Stories: A Model of Narrative Comprehension and Engagement. *Communication Theory*, 18(2), 255–280.
- Chen, D.-S., Lu-Lin, C., Hummels, C., & Koskinen, I. (2016). Social Design: An Introduction. *International Journal of Design*, 10(1), 1–5.
- Chriss, J. J. (2015). Nudging and Social Marketing. *Society*, 52(1), 54–61.
- Cialdini, R. B., Wosinska, W., Barrett, D. W., Butner, J., & Gornik-Durose, M. (1999). Compliance with a Request in Two Cultures: The Differential Influence of Social Proof and Commitment/Consistency on Collectivists and Individualists. *Personality and Social Psychology Bulletin*, 25(10), 1242–1253.
- Clark, A.E., Flèche, S., Layard, R., Powdthavee, N., & Ward, G. (2018) *The Origins of Happiness: The Science of Well-Being over the Life Course*, Princeton & Oxford: Princeton University Press.
- Clarke, A. J. (1999). *Tupperware: The Promise of Plastic in 1950s America*. Washington, DC: Smithsonian Institution.
- Cockburn, C., & Ormrod, S. (1993). *Gender and Technology in the Making*. London: SAGE Publications Ltd.
- Cruikshank, M. L. (2016). *Open Design and Innovation: Facilitating Creativity in Everyone*. Abingdon: Routledge.
- Daalhuizen, J. (2014). *Method Usage in Design: How Methods Function as Mental Tools for Designers*. (PhD Thesis), Delft University of Technology, Delft.
- Dawes, R. M. (1975). Formal Models of Dilemmas in Social Decision Making. In M. F. Kaplan & S. Schwartz (Eds), *Human Judgment and Decision Processes: Formal and Mathematical Approaches*. New York: Academic Press.
- Dawes, R. M. (1980). Social Dilemmas. *Annual Review Psychology*, 31, 169–193.
- Dawes, R. M., & Messick, D. M. (2000). Social Dilemmas. *International Journal of Psychology*, 35(2), 111–116.
- Dawkins, R. (1989). *The Selfish Gene*. Oxford: Oxford University Press.
- De Kort, Y. A. W., McCalley, L. T., & Midden, C. J. H. (2008). Persuasive Trash Cans: Activation of Littering Norms by Design. *Environment and Behavior*, 40(6), 870–891.
- De Oliveira, R., Cherubini, M., & Oliver, N. (2010). MoviPill: Improving Medication Compliance for Elders Using a Mobile Persuasive Social Game. *Proceedings of the 12th ACM International Conference on Ubiquitous Computing* (pp. 251–260): ACM.
- De Waal, F. B. M. (2008). Putting the Altruism Back into Altruism: The Evolution of Empathy. *Annual*

- Review of Psychology*, 59, 279–300.
- Desmet, P. M., & Pohlmeier, A. E. (2013). Positive Design: An Introduction to Design for Subjective Well-being. *International Journal of Design*, 7(3), 2013.
- Dijksterhuis, A., Smith, P. K., Van Baaren, R. B., & Wigboldus, D. H. J. (2005). The Unconscious Consumer: Effects of Environment on Consumer Behavior. *Journal of Consumer Psychology*, 15(3), 193–202.
- Dorst, K. (2008). Design Research: A Revolution-Waiting-to-happen. *Design Studies*, 29(1), 4–11.
- Dorst, K. (2015). *Frame Innovation: Create New Thinking by Design*. Cambridge, MA: MIT Press.
- Dorst, K., Kaldor, L., Klippan, L., & Watson, R. (2016). *Designing for the Common Good: A Handbook for Innovators, Designers, and Other People*. Amsterdam: BIS Publishers.
- Ehrenfeld, J. R. (2008). *Sustainability by Design: A Subversive Strategy for Transforming Our Consumer Culture*. New Haven, CT: Yale University Press.
- Erlhoff, M., & Marshall, T. (2008). *Design Dictionary: Perspectives on Design Terminology*. Basel: Walter de Gruyter.
- Fogg, B. (2003). *Persuasive Technology: Using Computers to Change What We Think and Do*. San Francisco: Morgan Kaufman Publishers.
- Forthun, L. (2013). *Family Nutrition: The Truth about Family Meals*. Gainesville, FL: University of Florida, IFAS Extension.
- Friedman, B., Kahn, P. H., & Borning, A. (2002). Value Sensitive Design: Theory and Methods. *Technical Report 02-12-01*.
- Gailliot, M. T., Baumeister, R. F., DeWall, C. N., Maner, J. K., Plant, E. A., Tice, D. M., Brewer, L. E., & Schmeichel, B. J. (2007). Self-Control Relies on Glucose as a Limited Energy Source: Willpower Is More than a Metaphor. *Journal of Personality and Social Psychology*, 92(2), 325–336.
- Gamman, L., Thorpe, A., & Willcocks, M. (2004). Bike Off! Tracking the Design Terrains of Cycle Parking: Reviewing Use, Misuse and Abuse. *Crime Prevention and Community Safety*, 6, 19–36.
- Gerritsen, M., & Van Der Noort, W. D. (2004). The Effectiveness of Governmental Campaigns: The Results of 5 Years of Systematic Research [De effectiviteit van overheids campagnes: de resultaten van 5 jaar systematisch onderzoek]. Retrieved from <http://www.moaweb.nl/bibliotheek/jaarboeken/2005/jaarboek-2005-04.pdf>
- Gibson, J. J. (1979). *The Ecological Approach to Visual Perception*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Giudice, F., La Rosa, G., & Risitano, A. (2006). *Product Design for the Environment: A Life Cycle Approach*. Boca Raton, FL: CRC press.
- Goldsmith, S. (2010). *The Power of Social Innovation: How Civic Entrepreneurs Ignite Community Networks for Good*. San Francisco: John Wiley.
- Goldstein, C. M. (1998). *Do It Yourself: Home Improvement in 20th-Century America*. New York: Princeton Architectural Press.
- Green, L., & Myerson, J. (2004). A Discounting Framework for Choice with Delayed and Probabilistic Rewards. *Psychological Bulletin*, 130, 769–792.
- Green, M. C., & Brock, T. C. (2000). The Role of Transportation in the Persuasiveness of Public Narratives. *Journal of Personality and Social Psychology*, 79(5), 701–721.
- Habermas, J. (1985). *The Theory of Communicative Action, Volume 2: Lifeworld and System: A Critique of Functionalist Reason*. Boston, MA: Beacon Press.
- Harari, Y. N. (2016). *Homo Deus: A Brief History of Tomorrow*. London: Random House.
- Hardin, G. (1968). The Tragedy of the Commons. *Science*, 162, 1243–1248.
- Harris, S. (2011). *The Moral Landscape: How Science Can Determine Human Values*. London: Bantam Press.
- Hassenzahl, M. (2010). *Experience Design: Technology for All the Right Reasons*. San Rafael, CA: Morgan & Claypool Publishers.
- Heijltjes, M. (2011). *Product Design for Social Impact*. (MSc Thesis), Delft University of Technology.



- Hekkert, P., & Van Dijk, M. (2011). *Vision in Design: A Guidebook for Innovators*. Amsterdam: BIS Publishers.
- Hopkins, R. (2008). *The Transition Handbook*. Totnes, UK: Green Books.
- Hunot, P. (1946). *Man about the House*. Pilot Press.
- Irwin, T., Kossoff, G., & Tonkinwise, C. (2015). Transition Design Provocation. *Design Philosophy Papers*, 13(1), 3–11.
- Jégou, F., & Manzini, E. (2008). *Collaborative Services: Social Innovation and Design for Sustainability*. Milano: Polidesign.
- Joerges, B. (1999). Do Politics Have Artefacts? *Social Studies of Science*, 29(3), 411–431.
- Jongeneel, A., Scheffers, D., Tromp, N., Nuij, C., Delespaul, P., Riper, H., ... & van den Berg, D. (2018). Reducing Distress and Improving Social Functioning in Daily Life in People with Auditory Verbal Hallucinations: Study Protocol for the ‘Temstem’ Randomised Controlled Trial. *BMJ Open*, 8(3), e020537.
- Julier, G., Kimbell, L., Briggs, J., Duggan, J., Jungnickel, K., Taylor, D., & Tsekleves, E. (2016). *Co-producing Social Futures through Design Research*. Brighton: University of Brighton.
- Kahneman, D. (2011). *Thinking, Fast and Slow*. New York: Farrar, Strays and Giroux.
- Kay, A. C., Wheeler, S. C., Bargh, J. A., & Ross, L. (2004). Material Priming: The Influence of Mundane Physical Objects on Situational Construal and Competitive Behavioral Choice. *Organizational Behavior and Human Decision Processes*, 95, 83–96.
- Klasnja, P., Consolvo, S., McDonald, D. W., Landay, J. A., & Pratt, W. (2009). Using Mobile & Personal Sensing Technologies to Support Health Behavior Change in Everyday Life: Lessons Learned. *AMIA Annual Symposium Proceedings*, 338.
- Kollock, P. (1998). Social Dilemmas: The Anatomy of Cooperation. *Annual Review of Sociology*, 24, 183–214.
- Koskinen, I., & Hush, G. (2016). Utopian, Molecular and Sociological Social Design. *International Journal of Design*, 10(1), 65–71.
- Krogerus, M., & Tschäppeler, R. (2012). *The Change Book: Fifty Models to Explain How Things Happen*. London: Profile Books Ltd.
- Kuijer, L. (2017). Splashing: The Iterative Development of a Novel Type of Personal Washing. In *Living Labs* (pp. 63–74). Cham: Springer.
- Kuijer, L., & De Jong, A. (2009). A Practice Oriented Approach to User Centered Sustainable Design Proceedings of the 6th International Symposium on Environmentally Conscious Design and Inverse Manufacturing. Sapporo, Japan: The Japan Society of Mechanical Engineers.
- Kullberg, J. (2016). *Between Green and Grey: An Exploration of Gardens and Gardening in The Netherlands [Tussen groen en grijs: Een verkenning van tuinen en tuinieren in Nederland]*. (978 90 377 0796 0). Den Haag: Sociaal en Cultureel Planbureau. Retrieved from [https://www.scp.nl/Publicaties/Alle\\_publicaties/Publicaties\\_2016/Tussen\\_groen\\_en\\_grijs](https://www.scp.nl/Publicaties/Alle_publicaties/Publicaties_2016/Tussen_groen_en_grijs)
- Laschke, M., Diefenbach, S., Schneider, T., & Hassenzahl, M. (2014). Keymoment: Initiating Behavior Change through Friendly Friction. *Proceedings of the 8th Nordic Conference on Human-Computer Interaction: Fun, Fast, Foundational*, 853–858.
- Latour, B. (1992). Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts. In W. E. Bijker & J. Law (Eds), *Shaping Technology/Building Society: Studies in Sociotechnical Change* (pp. 225–258). Cambridge, MA: MIT Press.
- Latour, B. (1999). *Pandora’s Hope: Essays on the Reality of Science Studies*. Cambridge, MA: Harvard Univeristy Press.
- Liebrand, W. B. G. (1983). A Classification of Social Dilemma Games. *Simulation Gaming*, 14(2), 123–138.
- Liebrand, W. B. G., Messick, D. M., & Wilke, H. A. M. (1992). *Social Dilemmas: Theoretical Issues and Research Findings*. Oxford, UK: Pergamon Press.
- Lim, V., Funk, M., Marcenaro, L., Regazzoni, C., & Rauterberg, M. (2017). Designing for Action: An



- Evaluation of Social Recipes in Reducing Food Waste. *International Journal of Human-Computer Studies*, 100, 18–32.
- Lockton, D., Harrison, D., & Stanton, N. A. (2008). Making the User More Efficient: Design for Sustainable Behaviour. *International Journal of Sustainable Engineering*, 1(1), 3–8.
- Loewenstein, G., & Prelec, D. (1991). Negative Time Preference. *The American Economic Review*, 81(2), 347–352.
- Loewenstein, G., & Thaler, R. H. (1989). Anomalies: Intertemporal Choice. *The Journal of Economic Perspectives*, 3(4), 181–193.
- Manzini, E. (2007). Design Research for Sustainable Social Innovation. In R. Michel (Ed.), *Design Research Now* (pp. 233–245). Basel: Birkhäuser.
- Manzini, E. (2013). Resilient Systems and Cosmopolitan Localism—The Emerging Scenario of the Small, Local, Open and Connected Space. *Economy of Sufficiency. Wuppertal Special*, 48. <http://www.ecologiapolitica.org/wordpress/wp-content/uploads/2014/03/Resilient-systems-and-cosmopolitan-localism.pdf>
- Manzini, E. (2014a). Design and Policies for Collaborative Services. In C. Bason (Ed.), *Design for Policy*. London: Routledge.
- Manzini, E. (2014b). Making Things Happen: Social Innovation and Design. *Design Issues*, 30(1), 57–66.
- Margolin, V. (2015). Social Design: From Utopia to the Good Society. In M. Bruinsma & I. Van Zijl (Eds), *Design for the Good Society*. Rotterdam: NAi010.
- Margolin, V., & Margolin, S. (2002). A “Social Model” of Design: Issues of Practice and Research. *Design Issues*, 18(4), 24–30.
- Markussen, T. (2013). The Disruptive Aesthetics of Design Activism: Enacting Design between Art and Politics. *Design Issues*, 29(1), 38–50.
- Mason, W., & Suri, S. (2012). Conducting Behavioral Research on Amazon’s Mechanical Turk. *Behavior Research Methods*, 44(1), 1–23.
- Massimi, M., & Baecker, R. M. (2011). Dealing with Death in Design: Developing Systems for the Bereaved. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 1001–1010.
- McDonough, W., & Braungart, M. (2002). *Cradle to Cradle: Remaking the Way We Make Things*. New York: North Point Press.
- McEwan, I. (2014). *The Children Act*. London: Random House.
- McLuhan, M. (1964). *Understanding Media: The Extensions of Man*. New York: McGraw-Hill.
- Meroni, A. (2007). *Creative Communities: People Inventing Sustainable Ways of Living*. Milan: Polidesign.
- Michael, M. (2000). These Boots Are Made for Walking ... : Mundane Technology, the Body and Human-Environment Relations. *Body & Society*, 6(3–4), 107–126.
- Milinski, M., Sommerfeld, R. D., Krambeck, H.-J., Reed, F. A., & Marotzke, J. (2008). The Collective-Risk Social Dilemma and the Prevention of Simulated Dangerous Climate Change. *Proceedings of the National Academy of Sciences*, 105, 2291–2294.
- Mitchell, G. (2005). Libertarian Paternalism Is an Oxymoron. *Northwestern University Law Review*, 99(3), 1–42.
- Mulgan, G. (Producer). (2014). Design in Public and Social Innovation: What Works and What Could Work Better. <http://www.nesta.org.uk/>
- Mulgan, G., Tucker, S., Ali, R., & Sanders, B. (2007). *Social Innovation: What It Is, Why It Matters and How It Can Be Accelerated* Skoll Centre for Social Entrepreneurship. London: The Basingstoke Press.
- Muraven, M., & Baumeister, R. F. (2000). Self-Regulation and Depletion of Limited Resources: Does Self-control Resemble a Muscle? *Psychological Bulletin*, 126(2), 247–259.
- Niedderer, K. (2007). Designing Mindful Interaction: The Category of Performative Object. *Design*

- Issues*, 23(1), 3–17.
- Norman, D. A., & Stappers, P. J. (2016). DesignX: Complex Sociotechnical Systems. *She Ji: The Journal of Design, Economics, and Innovation*, 1(2), 83–106.
- Oosterling, H. (2013). *Eco 3. Do thinking [Eco3. Doen denken]*. Heijningen: Jap Sam Books.
- Östrom, E. (2010). Beyond Markets and States: Polycentric Governance of Complex Economic Systems. *Transnational Corporations Review*, 2(2), 1–12.
- Papanek, V. (1971). *Design for the Real World: Human Ecology and Social Change* (2nd edn.). Chicago: Academy Chicago Publishers.
- Paton, B., & Dorst, K. (2011). Briefing and Reframing: A Situated Practice. *Design Studies*, 32(6), 573–587.
- Pierce, J., Strengers, Y., Sengers, P., & Bødker, S. (2013). Introduction to the Special Issue on Practice-Oriented Approaches to Sustainable HCI. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 20(4), 20.
- Pilloton, E. (2010). *Teaching Design for Change*. TED.
- Pollan, M. (2006). *The Omnivore's Dilemma: A Natural History of Four Meals*. London: Penguin Group.
- Ramaswamy, V. (2008). Co-creating Value through Customers' Experiences: The Nike Case. *Strategy & Leadership*, 36(5), 9–14.
- Rapoport, A., & Chammah, A. M. (1965). *Prisoner's Dilemma: A Study in Conflict and Cooperation* (Vol. 165). Ann Arbor, MI: University of Michigan Press.
- Reckwitz, A. (2002). Toward a Theory of Social Practices: A Development in Culturalist Theorizing. *European Journal of Social Theory*, 5(2), 243–263.
- Redström, J. (2006). Persuasive Design: Fringes and Foundations. In W. A. IJsselsteijn, Y. A. W. De Kort, C. Midden, J. H. Eggen, & E. Van Den Hoven (Eds), *Persuasive Technology: First International Conference, Persuasive 2006* (Vol. 3962, pp. 112–122). Berlin: Springer.
- Reich, J. W., & Robertson, J. L. (1979). Reactance and Norm Appeal in Anti-Littering Messages. *Journal of Applied Social Psychology*, 9(1), 91–101.
- Rhord, A. (2011). *Designing for Selfregulation of a Neighborhood*. (MSc Thesis), Delft University of Technology.
- Richmond, B. (1994). Systems Thinking/System Dynamics: Let's Just Get on with It. *System Dynamics Review*, 10(2–3), 135–157.
- Ries, E. (2011). *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. New York, US: Crown Books.
- Rijnja, G., Seydel, E., & Zuure, J. (2009). Communicating from Context: Towards More Effective Governmental Campaigns [Communiceren vanuit de Context: Naar Effectievere Overheidscampagnes]. In W. L. Tiemeijer, C. A. Thomas, & H. M. Prast (Eds), *People Making Decisions: About the Psychology behind Choices and Behaviour [De Menselijke Beslisser: Over De Psychologie van Keuze en Gedrag]*. Amsterdam: Amsterdam University Press.
- Sanders, E. B.-N., & Stappers, P. (2013). *Convivial Toolbox: Generative Design Research for the Fuzzy Front End*. Amsterdam: BIS Publishers.
- Sanders, E. B.-N., & Stappers, P. J. (2008). Co-creation and the New Landscapes of Design. *CoDesign: International Journal of CoCreation in Design and the Arts*, 4(1), 5–18.
- Schifferstein, H. N., & Hekkert, P. (2008). *Product Experience*. San Diego, CA: Elsevier.
- Schot, J. W. (1992). Constructive Technology Assessment and Technology Dynamics: The Case of Clean Technologies. *Science, Technology & Human Values*, 17(1), 36–56.
- Schuler, D., & Namioka, A. (1993). *Participatory Design: Principles and Practices*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Schwartz, B. (2004). *The Paradox of Choice: Why More Is Less*. New York: Harper Collins.
- Serrarens, J. (2015). *Loop, a Vision on Consumption: Stimulating Sustainable Consumption Behavior through Design*. (MSc Thesis), Delft University of Technology.

- Shapiro, M. A., Barriga, C. A., & Beren, J. (2010). Causal Attribution and Perceived Realism of Stories. *Media Psychology*, 13(3), 273–300.
- Shove, E., & Pantzar, M. (2005). Consumers, Producers and Practices: Understanding the Invention and Reinvention of Nordic Walking. *Journal of Consumer Culture*, 5(1), 43–64.
- Shove, E., Watson, M., Hand, M., & Ingram, J. (2007). *The Design of Everyday Life*. Oxford: Berg.
- Skinner, B. F. (1953). *Science and Human Behavior*. New York: The Free Press.
- Sleeswijk-Visser, F., Stappers, P. J., Van Der Lugt, R., & Sanders, E. B. (2005). Contextmapping: Experiences from Practice. *CoDesign*, 1(2), 119–149.
- Sunstein, Cass R., & Thaler, Richard H. (2003). Libertarian Paternalism Is Not an Oxymoron. *The University of Chicago Law Review*, 70(4), 1159–1202.
- Sweeney, L. B., & Sterman, J. D. (2000). Bathtub Dynamics: Initial Results of Systems Thinking Inventory. *System Dynamics Review*, 16(4), 249–286.
- Swinburn, B., Egger, G., & Raza, F. (1999). Dissecting Obesogenic Environments: The Development and Application of a Framework for Identifying and Prioritizing Environmental Interventions for Obesity. *Preventive Medicine*, 29(6), 563–570.
- Thaler, R. H., & Benartzi, S. (2004). Save More Tomorrow™: Using Behavioral Economics to Increase Employee Saving. *Journal of Political Economy*, 112(S1), S164–S187.
- Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving Decisions about Health, Wealth and Happiness*. New Haven, CT & London: Yale University Press.
- Thomassen, L. (2010). *Habermas: A Guide for the Perplexed*. London: Continuum.
- Thorpe, A., & Gamman, L. (2011). Design with Society: Why Socially Responsive Design Is Good Enough. *CoDesign: International Journal of CoCreation in Design and the Arts*, 7(3–4), 217–230.
- Tomasello, M., & Vaish, A. (2013). Origins of Human Cooperation and Morality. *Annual Review of Psychology*, 64, 231–255.
- Torning, K., & Oinas-Kukkonen, H. (2009). Persuasive System Design: State of the Art and Future Directions, *Persuasive 2009* (Vol. 350). Claremont, CA: ACM International Conference Proceeding Series.
- Tromp, N. (2013). *Social Design: How Products and Services Can Help Us Act in Ways That Benefit Society*. (PhD Thesis), Delft University of Technology, Delft.
- Tromp, N., & Hekkert, P. (2009). Design for Society – Bridging User Concerns with Societal Ones through Implication Design, *Proceedings of IASDR 2009* (pp. 4291–4294). Seoul, Korea.
- Tromp, N., & Hekkert, P. (2010). A Clash of Concerns: Applying Design Thinking to Social Dilemmas. In K. Dorst, S. Stewart, I. Staudinger, B. Paton, & A. Dong (Eds), *DTRS8* (pp. 393–403). Sydney: DAB Documents.
- Tromp, N., & Hekkert, P. (2012). Designing Behaviour. In J. Donovan & W. Gunn (Eds), *Design Anthropology*. Farnham, Burlington, USA: Ashgate.
- Tromp, N., & Hekkert, P. (2014). Social Implication Design (SID): A Design Method to Exploit the Unique Value of the Artefact to Counteract Social Problems *DRS2014*. Umea.
- Tromp, N., & Hekkert, P. (2016). Assessing Methods for Effect-driven Design: Evaluation of a Social Design Method. *Design Studies*, 43, 24–47.
- Tromp, N., & Hekkert, P. (2017). The Hidden Influence of Design. In K. Niedderer, S. Clune, & G. Ludden (Eds), *Design for Behaviour Change – Theories and Practices of Designing for Change* (pp. 138–149). Abingdon: Routledge.
- Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science*, 185, 1124–1131.
- Van Den Hende, E. A., & Schoormans, J. P. L. (2012). The Story Is as Good as the Real Thing: Early Customer Input on Product Applications of Radically New Technologies. *Journal of Product Innovation Management*, 29(4), 655–666.
- Van Der Werff, E., Steg, L., & Keizer, K. (2013). The Value of Environmental Self-Identity: The Relationship between Biospheric Values, Environmental Self-Identity and Environmental

- Preferences, Intentions and Behaviour. *Journal of Environmental Psychology*, 34, 55–63.
- Van Lange, P. A. M., & Joireman, J. A. (2008). How We Can Promote Behavior That Serves All of Us in the Future. *Social Issues and Policy Review*, 2(1), 127–157.
- Van Ulden, E., Heussen, D., Van der Ham, S., Brinkman, E. (2015). De stoep. Ontmoetingen tussen huis en straat. [The Sidewalk. Encounters between home and street.] Rotterdam: nai010 uitgevers.
- Verbeek, P.-P. (2005). *What Things Do: Philosophical Reflections on Technology, Agency, and Design*. University Park, PA: The Pennsylvania State University Press.
- Verbeek, P.-P. (2011). *Moralizing Technology: Understanding and Designing the Morality of Things*. Chicago: University of Chicago Press.
- Vermaas, P. E., Hekkert, P., Manders-Huits, N. and Tromp, N. (2015) Methods for Design for Moral Values. *Handbook of Ethics, Values, and Technological Design: Sources, Theory, Values and Application Domains*, 179–201.
- Villerius, I. (2010). *Design for Social Impact in the Afrikaanderwijk – Welding Your Way into Neighbourhood Attachment*. (MSc Thesis), Delft University of Technology.
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The Psychological Consequences of Money. *Science*, 314, 1154–1156.
- Waelbers, K. (2011). *Doing Good with Technologies: Taking Responsibility for the Social Role of Emerging Technologies* (Vol. 4). Dordrecht: Springer.
- Whiteley, N. (1993). *Design for Society*. London: Reaktion Books.
- Williams, K. D. (2007). Ostracism. *Annual Review of Psychology*, 58, 425–452.
- Winner, L. (1980). Do Artifacts Have Politics? *Daedalus*, 109(1), 121–136.
- Wiseman, R. (2008). *Quirkology: The Curious Science of Everyday Lives*: Pan Macmillan.
- Woolgar, S., & Cooper, G. (1999). Do Artefacts Have Ambivalence? Moses' Bridges, Winner's Bridges and Other Urban Legends in S&TS. *Social Studies of Science*, 29(3), 433–449.
- World Health Organization (2016). Retrieved September 2017, from <http://www.who.int/mediacentre/factsheets/fs311/en/>
- Wout, P. A. W. (2015). *Hooked: A Design Intervention Establishing Reflective Fashion Consumption*. (MSc Thesis), Delft University of Technology.

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**PLATE 1** UN Women's campaign convincingly reveals the suppression of women around the globe. Credit: Mamac Ogilvy & Mather Dubai, developed for UN Women (2013).



**PLATE 2** A call to the international design community to combat the refugee crisis. *Credit: WDCD © UNHCR / Achilleas Zavallis.*



**PLATE 3** Fairphone is a modular phone produced from minerals that originate from conflict-free  
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mines and fair-trade gold. *Credit: Fairphone.*



**PLATE 4** The *Mirra2* chair is produced using renewable energy. Its parts are made with recycled and chemically safe materials; it has been designed to be disassembled, its parts recycled and its materials reused. *Credit: © Herman Miller.*

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**PLATE 5** The *Stripes* clothing line is produced by prison inmates in the Netherlands, Belgium and the United States. Inmates learn valuable skills, maintain a healthy work rhythm and connect to the outside world by telling their story. *Credit: Stripes Clothing.*



**PLATE 6** The *Puzzle Switch* that catches attention when the light is on, and triggers people's need for symmetry, reminding them to turn it off. *Credit: Interactive Institute.*



**PLATE 7** The *Burqini* is designed to offer Muslim women freedom to participate in water activities and beach sports. Credit: Aheda Zanetti / Ahiida® / Burkini® / Swimwear Pty Ltd - Australia.





**PLATE 8** *Nextdoor* is a free online platform where users can create a private social network for their neighbourhoods, which strengthens neighbourly ties. *Credit: nextdoor.com.*



**PLATE 9** UN-Habitat and researchers from Cambridge University made the participatory design process central to their collaborative efforts to build a community centre in one of Kenya's biggest and oldest slums. *Credit: Centre for Natural Material Innovation, University of Cambridge. Participatory design process in collaboration with UN-habitat, Mathare 3A, Nairobi.*





**PLATE 10** Design agency Project H employed design activities to address weaknesses in the public education system in Bertie County. Together with secondary school students, they renovated school facilities, redesigned the county's educational offering, and in the process, strengthened the community (Pilloton, 2010). *Credit: Project H Design.*





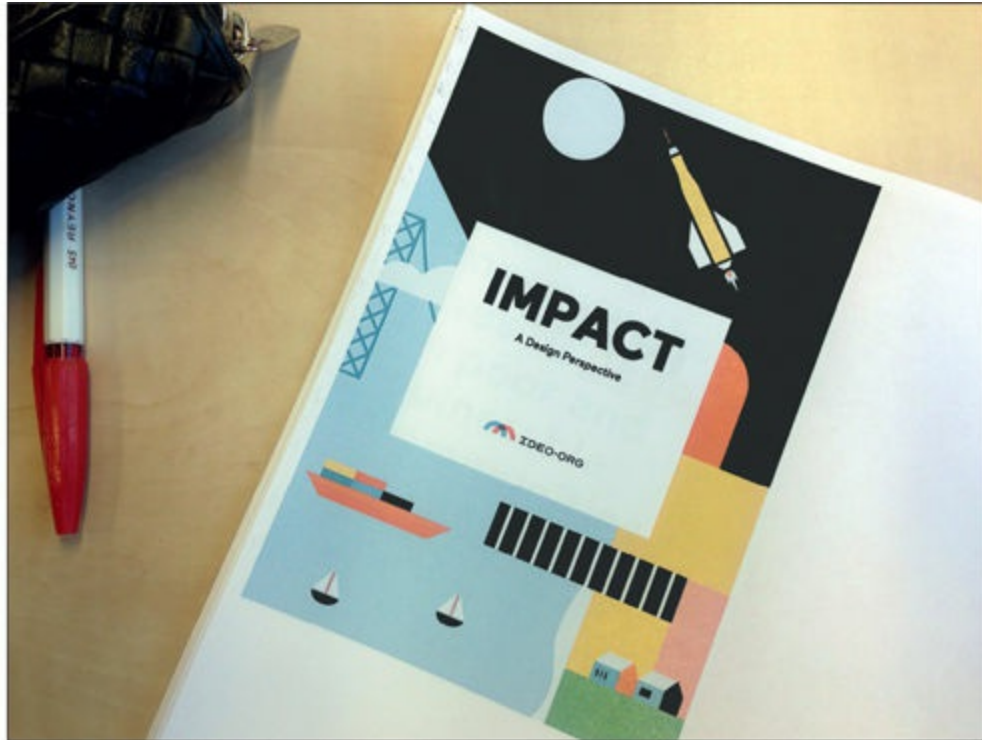
**PLATE 11** *Neighborland* is an online publishing platform that was developed based on insights from a participatory public art project exploring new ways to engage communities in city planning. Organizations share their ideas for specific community projects via an app (earlier versions used lo-fi stickers) or on sites hosted by the online platform. Residents and other community stakeholders can respond with collaborative ideas and proposals. *Credit: Neighborland.*



**PLATE 12** MindLab, the in-house design unit of the Danish government, contributes to policy development and the design of societal solutions. *Credit: Mindlab / Anette Væring.*

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**PLATE 13** Design and innovation company IDEO has extensive expertise connecting design agencies to NGOs in economically viable ways, so they can collaboratively develop solutions to pressing social problems more effectively. *Credit: Ideo.org.*



**PLATE 14** Designing Out Crime, a design research centre funded by University of Technology Sydney and the New South Wales Department of Justice offers reframing skills and design solutions that address crime and social problems. *Credit: DOC. UTS.*

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**PLATE 15** The ‘hufterproof’ bus shelter before and after it was destroyed. *Credit: RTV Rijnmond.*



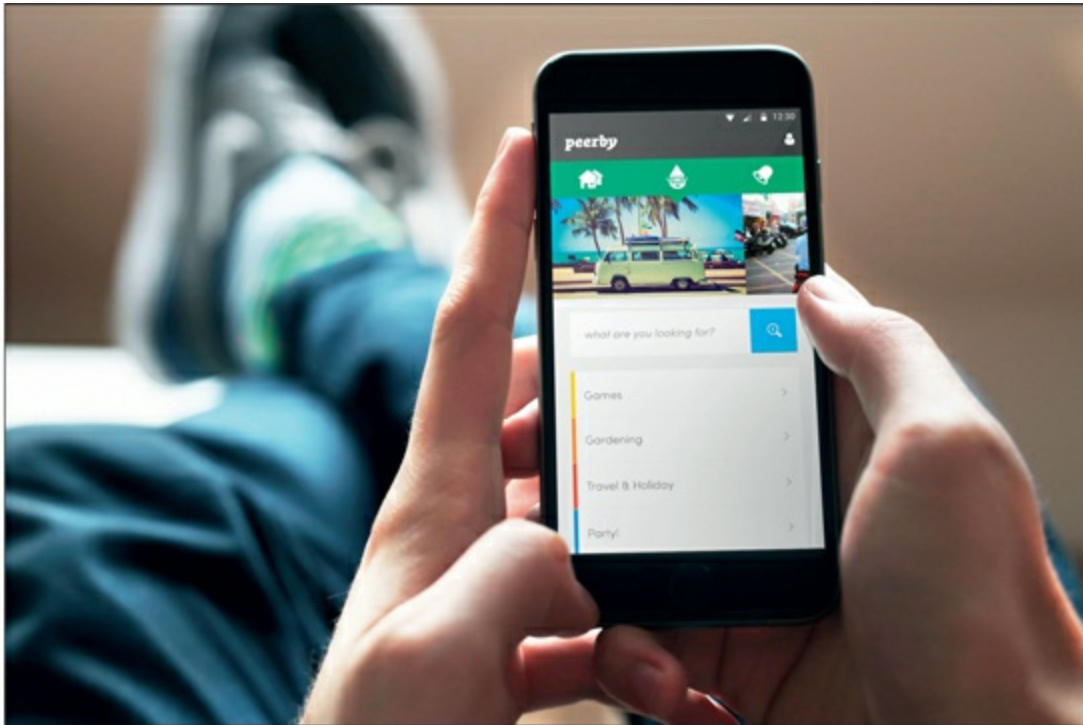


**PLATE 16** Because the countdown timer displays the delay, in seconds, before the light will turn green, it appears to lower drivers' inclination to ignore the light when it is red. *Credit: authors' own image.*



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**PLATE 17** Thanks to the design of the *Goodbag*, ‘throwing something away’ is transformed into an act of generosity and an invitation to others. *Credit: Waarmakers.*



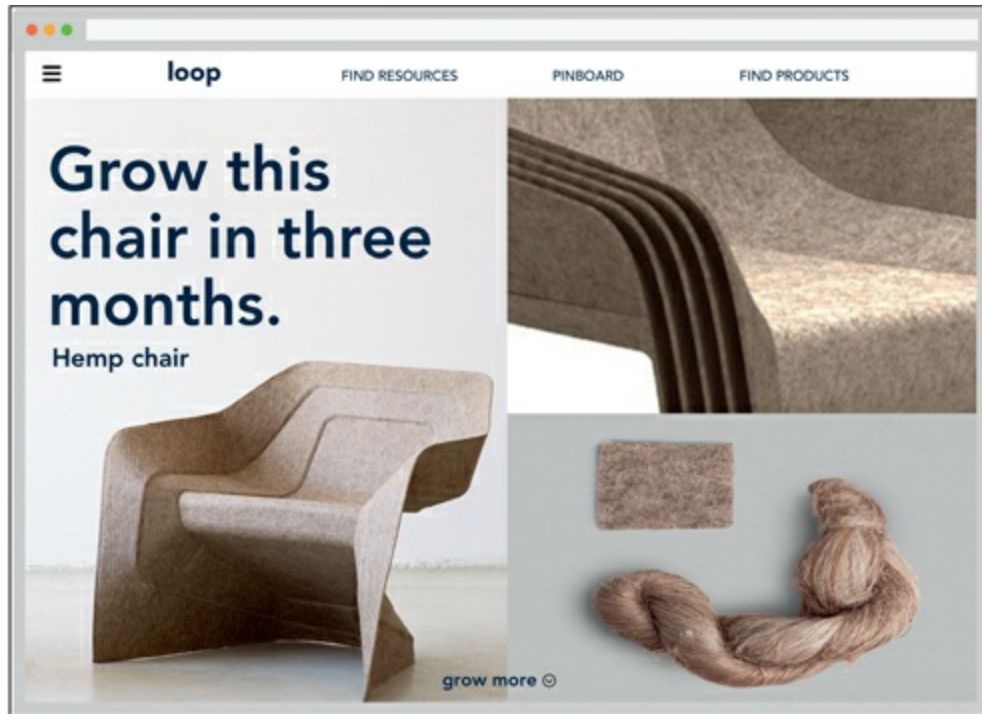
**PLATE 18** *Peerby* is a platform where neighbours can lend out and borrow products from each other. *Credit: Peerby.*



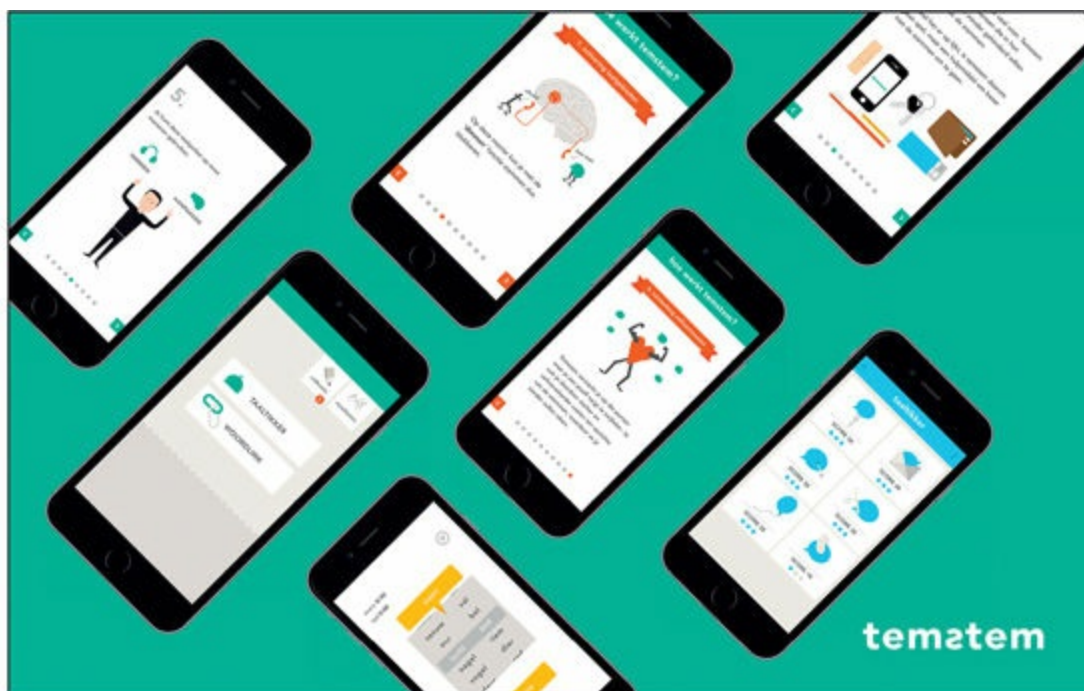
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**PLATE 19** One ape comforts another. A growing body of research reveals that empathy is felt by animals. *Credit: Zanna Clay.*



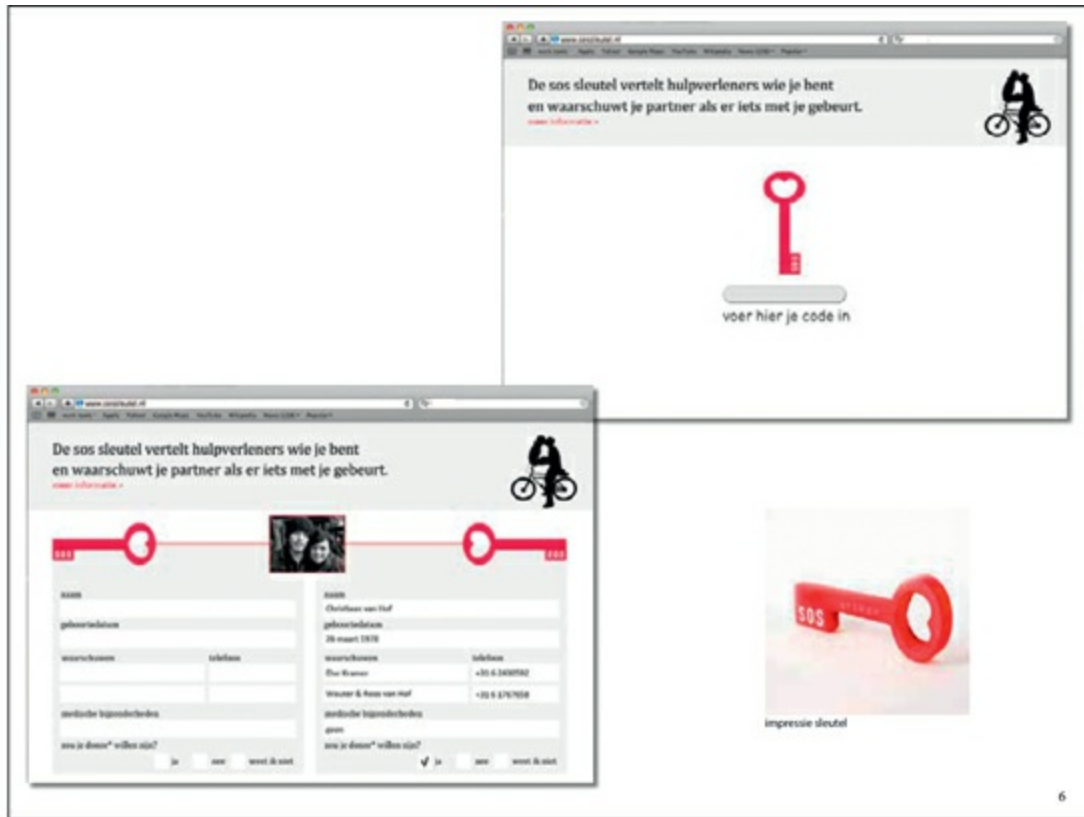
**PLATE 20** Loop, a consumption platform where designers, farmers and consumers are more reciprocally connected. Using Loop gives consumers the chance to be more than passive buyers – they become engaged investors. *Credits for Loop: Joep Serrarens.*



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**PLATE 21** An artist's impression of the Temstem app. Reframing Studio. *Credit: Reframing Studio.*

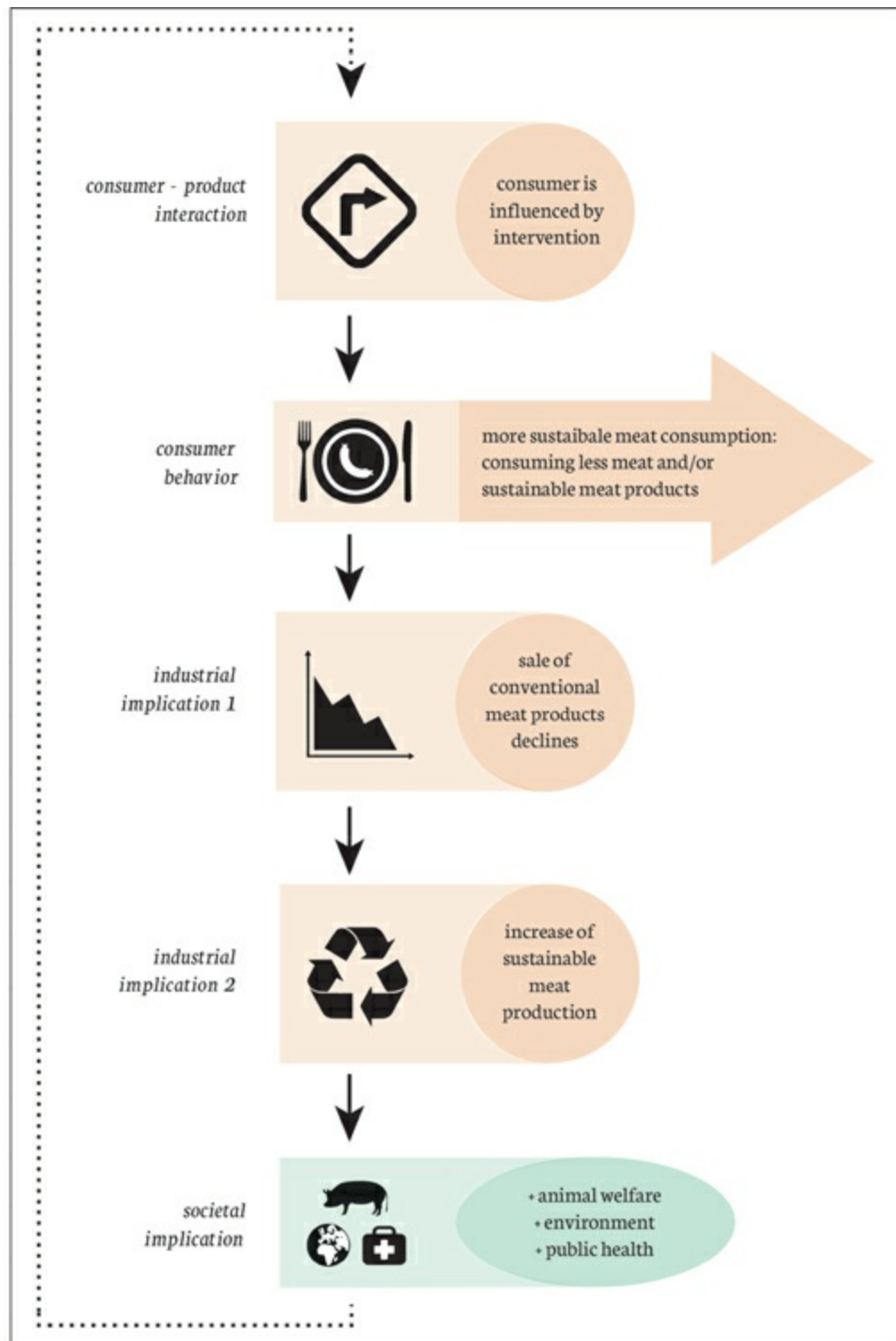


**PLATE 22** SOS-key. *Credit: Reframing Studio.*



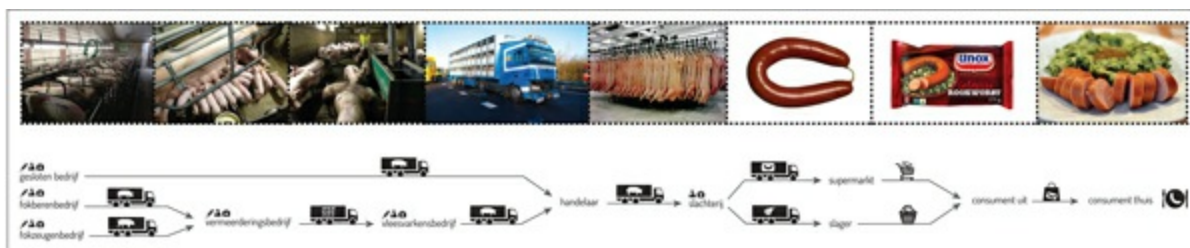
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**PLATE 23** *Tomorrow's Menu* – a platform to support sustainable consumption of meat and transform the food production system. Credit: Anna Peeters.

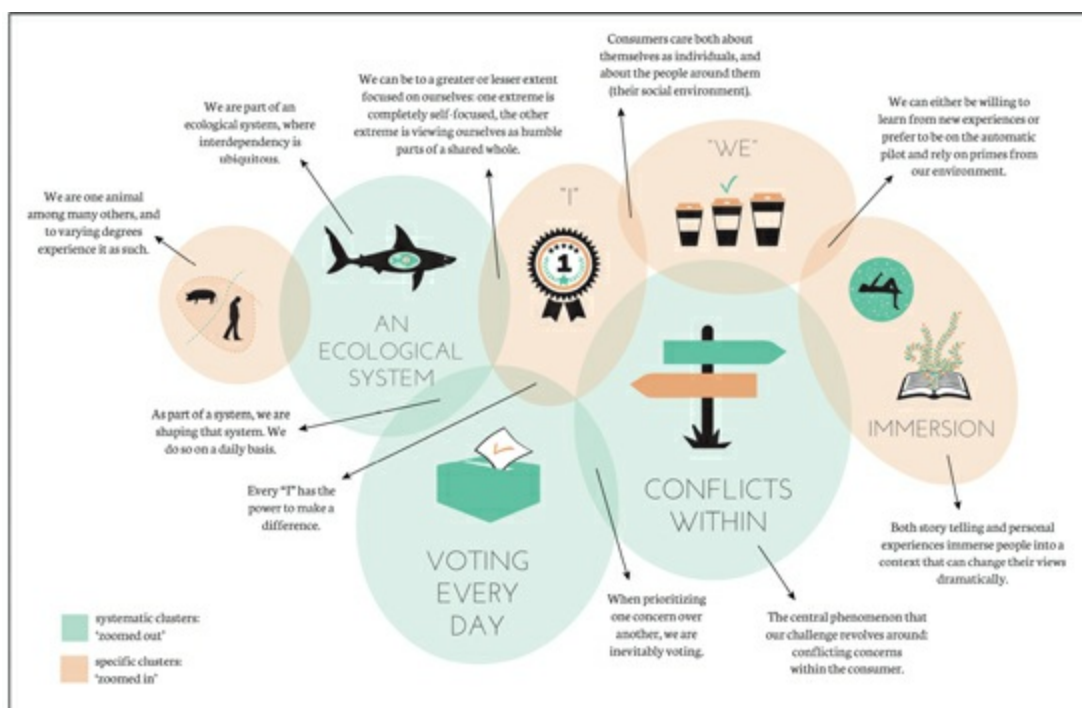


**PLATE 24** How Anna debriefed her assignment and defined the intended implications of consumer behaviour change. Credit: Anna Peeters.

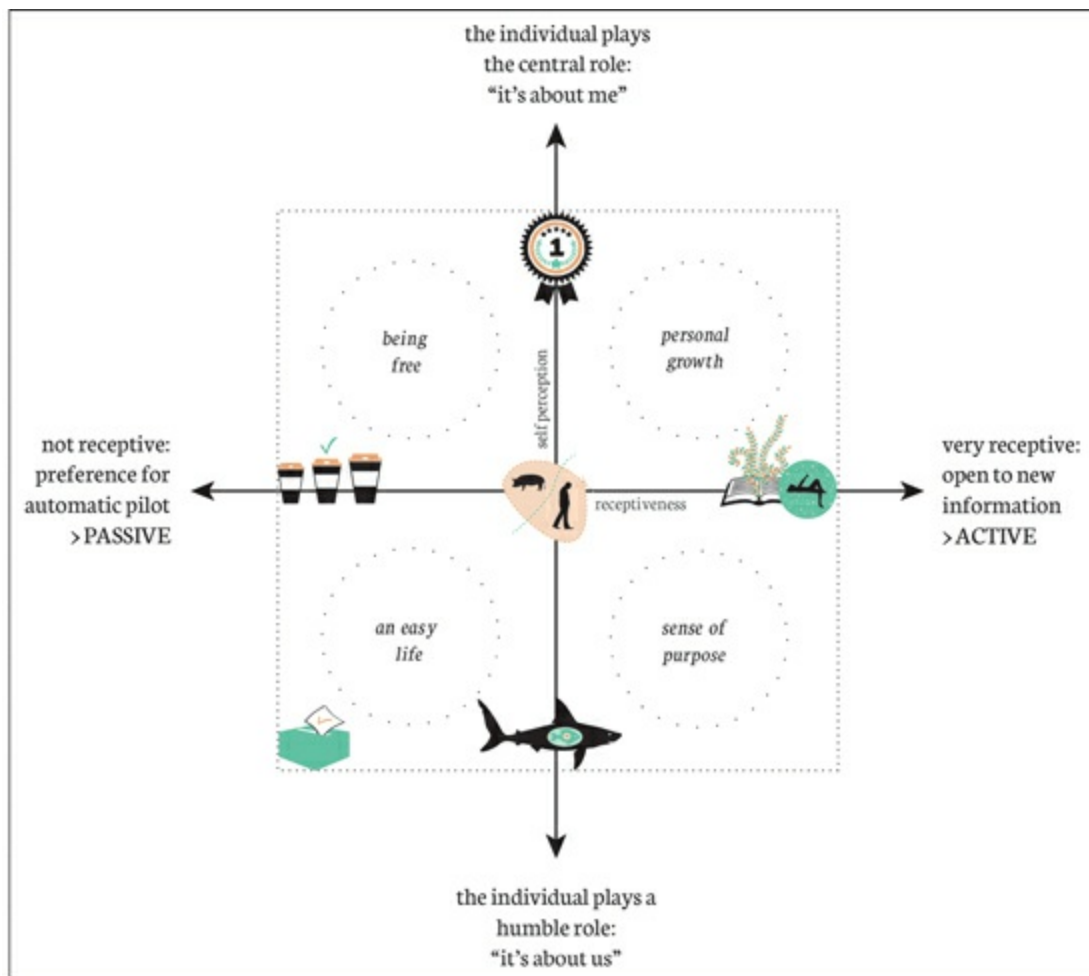
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**PLATE 25** By depicting the production chain, Anna opened various possibilities for intervening in ways that would change consumer behaviour. *Credit: Anna Peeters.*



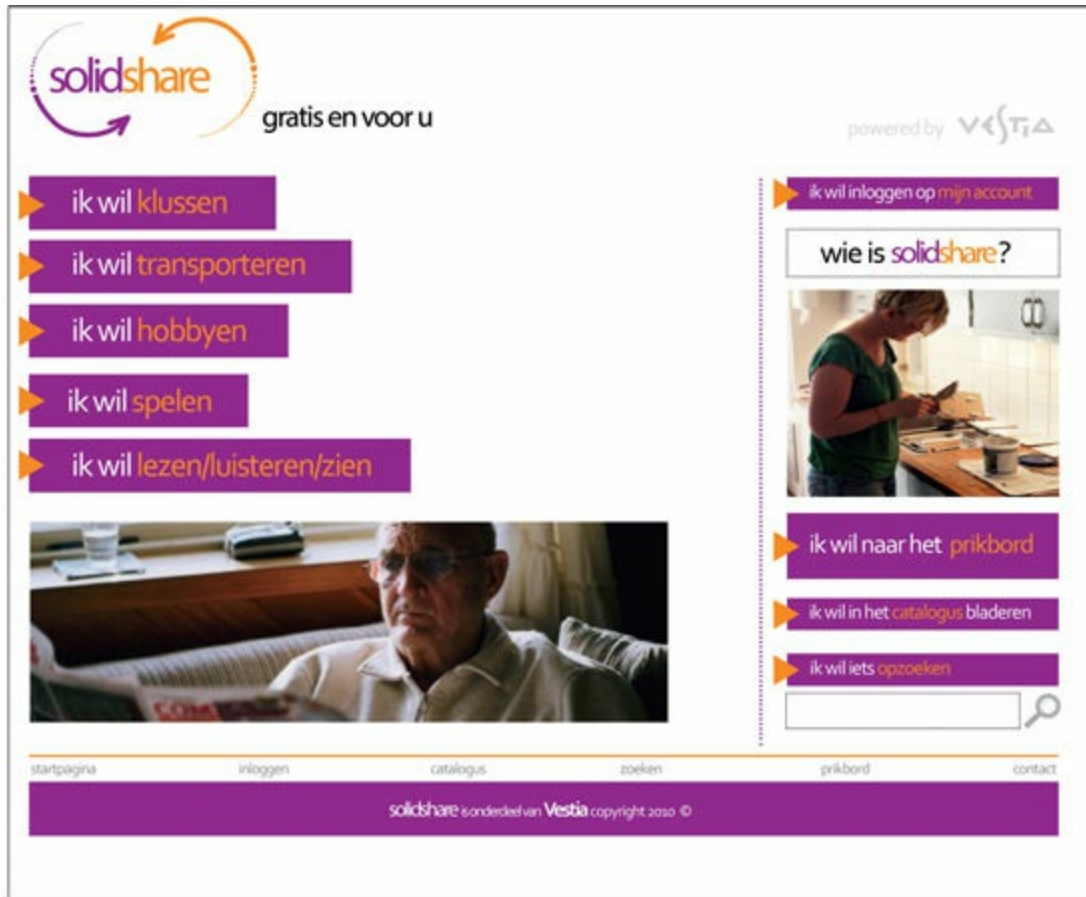
**PLATE 26** Anna's first attempt to structure her eight clusters into a coherent view. *Credit: Anna Peeters.*



**PLATE 27** The final structure of the social context in Anna's project. *Credit: Anna Peeters.*



**PLATE 28** *Welding Works* a welding course for young people in which they design and produce temporary construction fences that each has a secondary function. The fences were to be placed around the demolition sites in the designers' own neighbourhoods. *Credit: authors' student.*



**PLATE 29** SolidShare a web-based platform that allows citizens to exchange high-quality tools made available by their housing management company, but whose exchange is organized by the residents themselves. *Credit: Amine Rhord.*

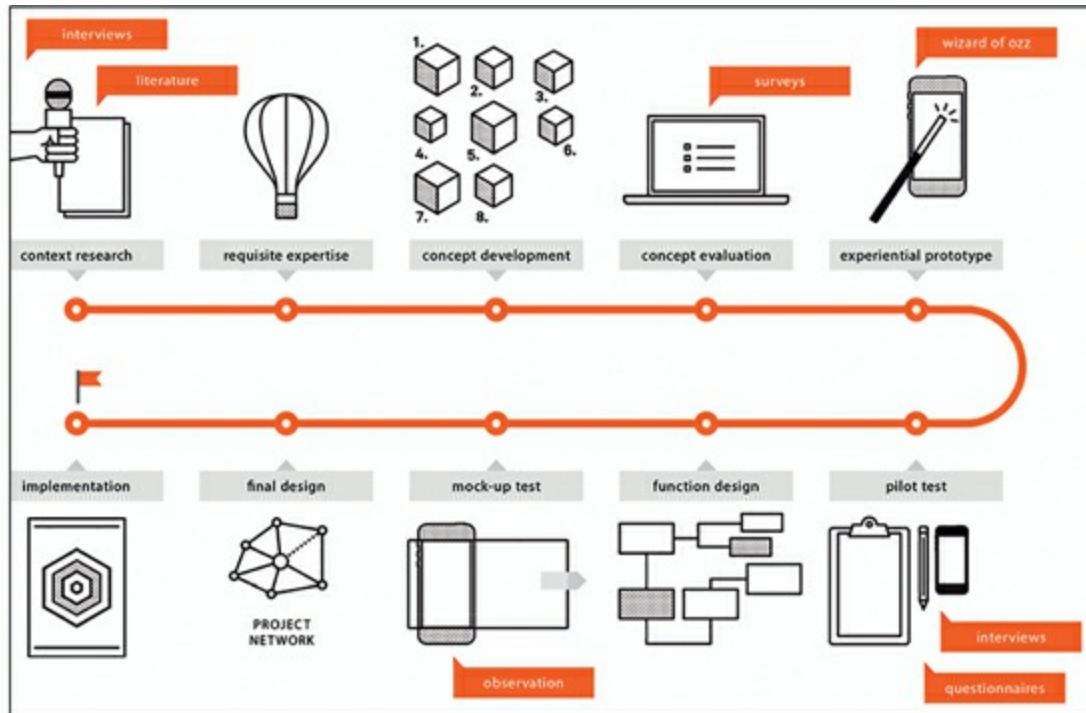




**PLATE 30** *Birthdayslide* a slide to be used during the transitional year to primary school. It allows children to slide through the window on the first floor down to the schoolyard. *Credit: Maarten Heijltjes.*



**PLATE 31** The disintegrating clock. *Credit: Viki Pavlic.*



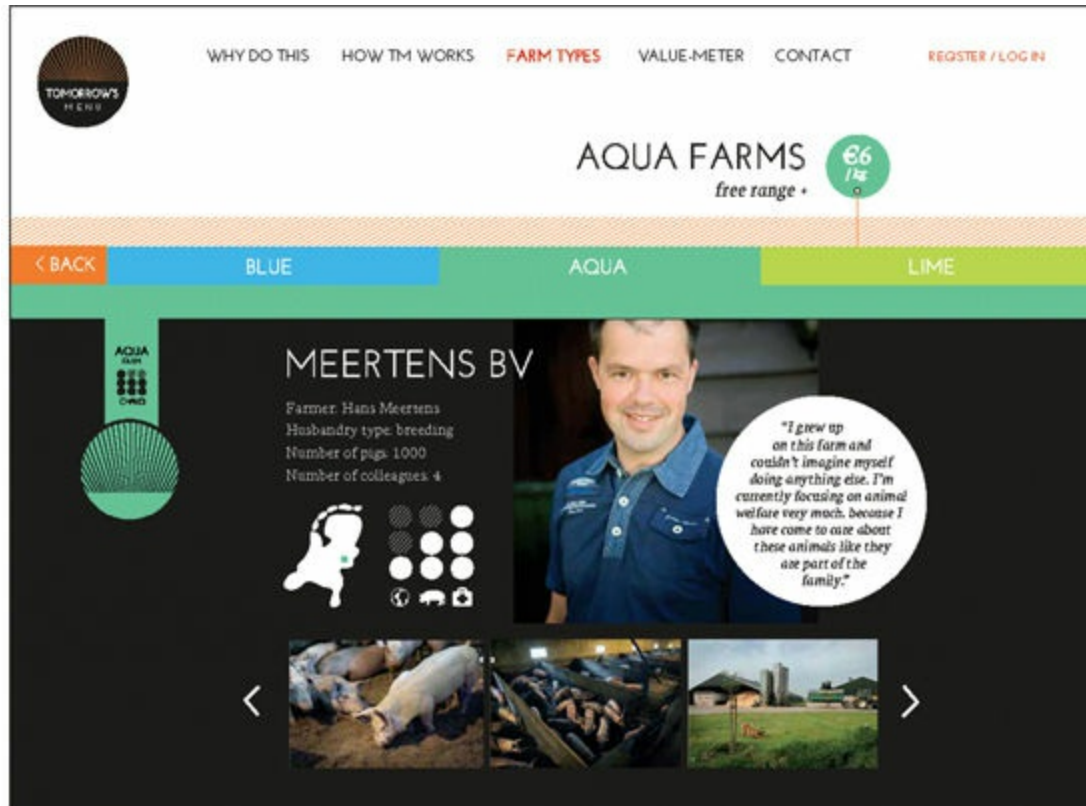
**PLATE 32** The research and design process of *Project Network*. *Credit: Reframing Studio.*

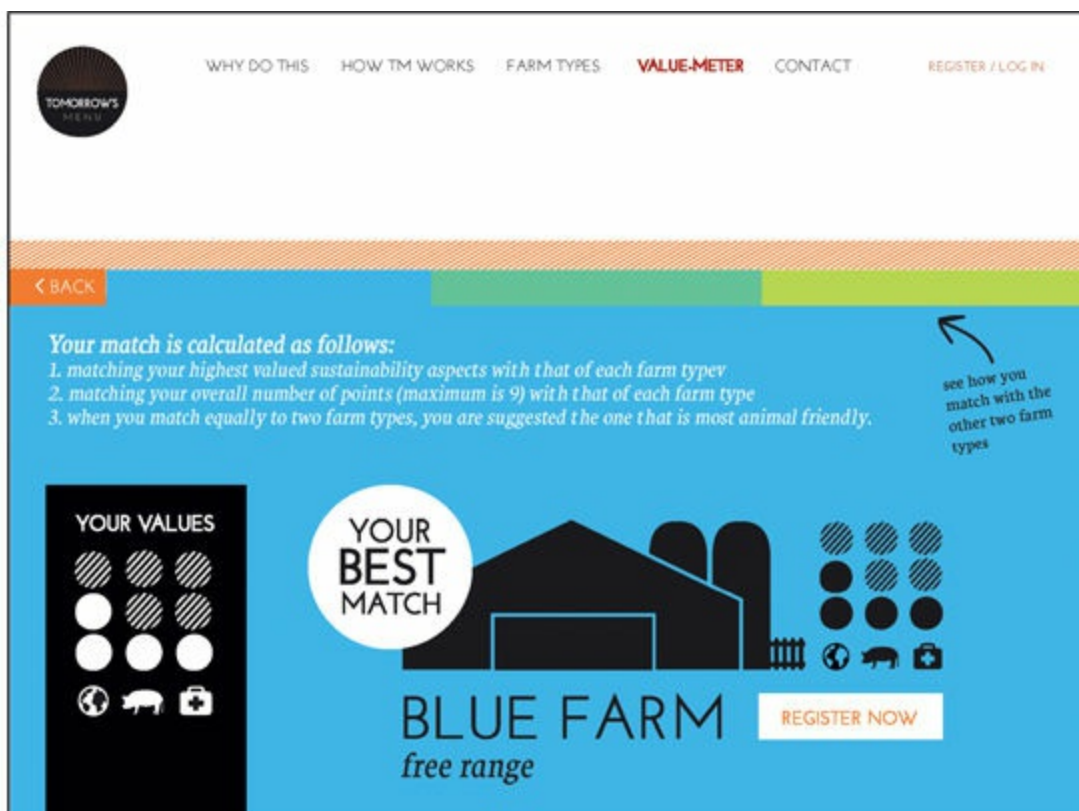
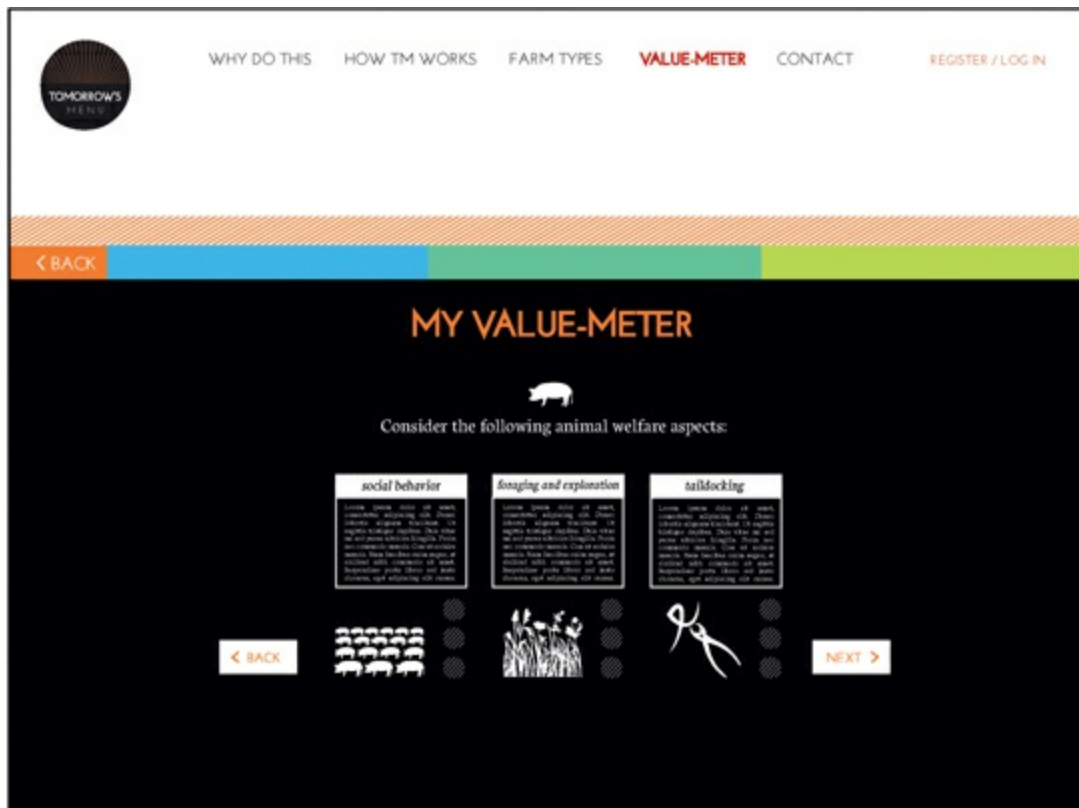


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**PLATE 33** *Project Network*, an app to maintain and strengthen your social relationships. *Credit: Reframing Studio.*



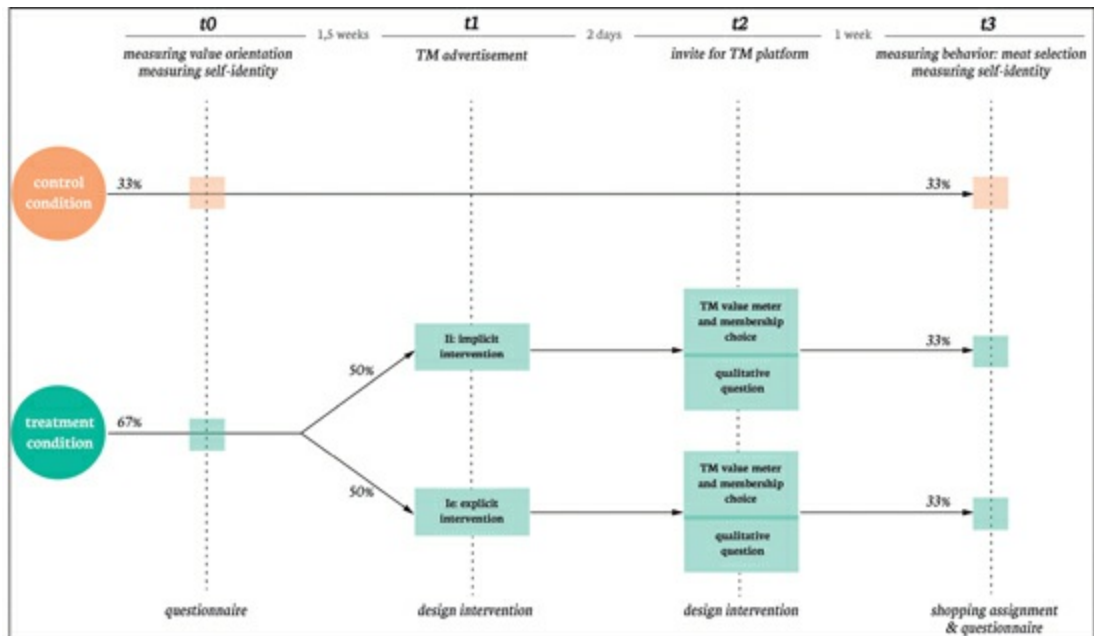




**PLATE 34** Screens from the Tomorrow's Menu platform. *Credit: Anna Peeters.*



**PLATE 35** In the supermarket, labels would indicate which type of farm produced the meat. *Credit: Anna Peeters.*



**PLATE 36** Design for the *Tomorrow's Menu* experiment. Credit: Anna Peeters.



**PLATE 37** Marco Steinberg, trained architect, former associate professor at Harvard and now founder of Snowcone & Haystack. Credit: Marco Steinberg.





**PLATE 38** Thomas Prehn, trained media scientist, former strategy and innovation consultant at Asunto, and now director of MindLab. *Credit: Thomas Prehn.*



**PLATE 39** Anna Noyons, trained product designer, former innovation consultant at Studio Noyons, now CPO at Peerby. *Credit: Anna Noyons.*

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First published in Great Britain 2019

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A catalogue record for this book is available from the British Library.

A catalog record for this book is available from the Library of Congress.

ISBN: HB: 978-1-4725-6868-7  
PB: 978-1-4725-6798-7  
ePDF: 978-1-4725-6975-2  
eBook: 978-1-4725-6976-9

Typeset by Integra Software Services Pvt. Ltd.

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