CRISP #4

Magazine
October 2014

Design for well-being

Anna Pohlmeyer and Pieter Desmet discuss how to design for well-being by increasing meaningful experiences in people's lives — Page 1-4

Design me happy

Marc Hassenzahl explains why there is no choice but to design for well-being
— Page 28-31

Also in this issue

David Dunne, Jeremy Myerson, Steven Fokkinga, Sara Ferrari, Dorian Peters and Rafael Calvo, and many others

WELL,
WELL,
WELL...

Editorial note

Is well-being the same as being healthy? Is design for well-being ever only relevant in a healthcare setting? These are questions addressed in this magazine. In the lead article of this issue, guest editors Anna Pohlmeyer and Pieter Desmet set the scene for current developments in design for well-being, and subsequent articles discuss a variety of perspectives. Although diverse, all articles explore the value and the role of designers in well-being; in healthcare settings, for prevention and to stimulate human flourishing. Some even argue that careful consideration of the experiential consequences of design must become a standard—regardless of whether we consider ourselves "happiness designers" or not. Opinions differ on when and how the designer should be involved. Because we love discussion, we decided to give room to all the different arguments. Enjoy the journey!

Jeroen van Erp, Christine De Lille, Janneke Vervloed, Marte den Hollander

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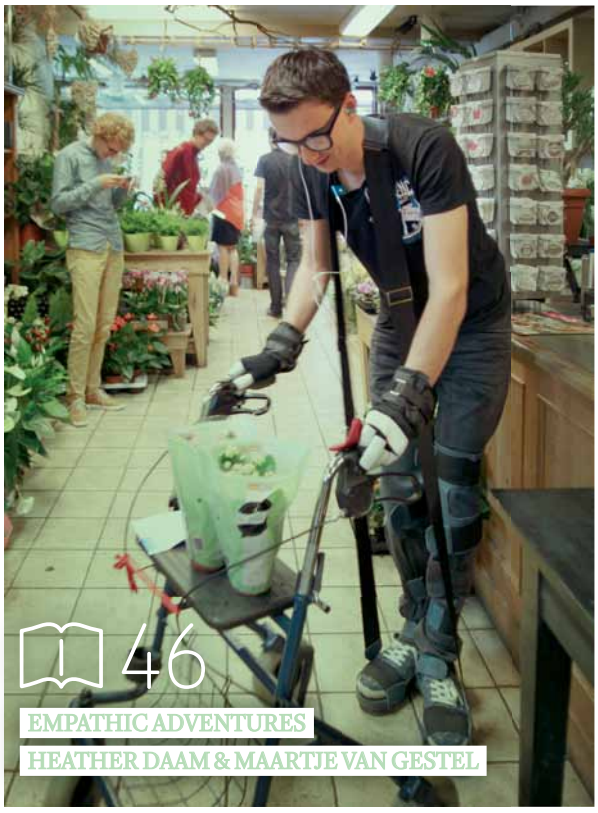
See inside back cover for the full colophon.

Upcoming issue!

The next and final issue will be published in June 2015 and wraps up CRISP. Do you want to showcase your work or have a statement you wish to make? Please feel free to send a message to c.s.h.delille@tudelft.nl



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EMPATHIC ADVENTURES
HEATHER DAAM & MAARTJE VAN GESTEL

INTRODUCTION

Bas van den Dungen

We are often told that our health is our greatest wealth. Aware that our lives are finite and our bodies fragile, we lean heavily on the healthcare sector. This sector has always been innovative and is continuously developing new diagnostic tests and devices, therapies, and healthcare instruments. However, despite the tremendous progress made in this field, the pressure on developers and manufacturers to achieve better and faster solutions is higher than ever.

The Life Sciences and Health and Healthcare sectors increasingly collaborate with the creative industries to meet these demands. Many interesting developments in healthcare originate in or are inspired by the creative industries. Consider, for instance, gaming. Surgeons now hone their skills with dedicated training games, while patients use gaming to learn to cope with their condition. Another example is 'smart textiles', garments with measuring equipment sewn into them which allow patients and doctors to monitor the wearer's health non-invasively.

In the Netherlands, the healthcare sector employs 1.2 million people and has a budget of 92 billion Euro. Yet, the demand is higher than the supply and, in recent years, healthcare costs have risen on average by 2% each year. To prevent the imminent overload of our healthcare system, we need to keep in mind that, besides appropriate healthcare, what is most important is a focus on well-being. This applies to everyone, both young and old, but attention is needed especially for those in their last stages of life, to prevent unwanted extensive healthcare and provide what is really needed.

Improving well-being opens up more opportunities for designing and developing new healthcare instruments than those currently available. Only by combining the human factor with creativity can we find the necessary answers; when scientists and artists combine their knowledge and creativity, the whole becomes greater than the sum of its parts. Consider what happens when healthcare professionals join forces with software companies to develop an app. With this app, patients could gain insights into their condition and the effect of therapy, whenever needed. They could also send this information to a healthcare professional and, if necessary, consult him or her online. This app would result in fewer visits to the hospital, the correct and timely use of therapy, as well as provide patients with the tools and responsibility to be more 'in charge'.

I invite the creative industries to work closely together with both healthcare institutes and the Life Sciences and Health sector to come up with more integrated solutions for improving well-being and, together, take on today's as well as tomorrow's challenges in health care.

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Anna Pohlmeyer and Pieter Desmet are leading researchers in the field of design for well-being and design for emotion. They co-chair the Delft Institute of Positive Design (DIOPD), a design research institute devoted to human flourishing. This lead article sets the scene for current developments in designing for well-being.

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Anna Pohlmeyer

How can products and to deliberately increa people? Instead of onl functionality and ple for well-being aims to meaningful exp

TINY TASK

Hans Ruitenberg

Social scientists have identified various activities that people can engage in to increase their happiness. However, people often lack the motivation to maintain this behaviour and have difficulties integrating these rather abstract activities into daily life. Tiny Task is a product-service system that stimulates people to engage in activities through a set of keychain tokens. These have been broken down into small, concrete tasks that are easy and fun to commit to. A subscription to new tokens ensures continuity and variety.

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& Pieter Desmet

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A MOVE FROM SHORT-TERM SATISFACTION TO LONG-TERM WELL-BEING

Design can make us feel good: we can be delighted by the efficiency of a hotel check-out service and enchanted by the feel of our new leather handbag. But do these positive experiences have a lasting effect on our subjective well-being? In other words, does the design that makes us feel good also make us happy? We believe that the answer to this question is "not necessarily." Design that feels good, can, but does not necessarily support happiness.

> *"I use the term 'happiness' to refer to the experience of joy, contentment or positive well-being, combined with a sense that one's life is good, meaningful and worthwhile."*
>
> (Lyubomirsky, 2007, p. 32)

In our work at the Delft Institute of Positive Design, we explore the question of how to mature the focus from designing for short-term positive experiences to designing for long-term well-being. This requires reconsidering seemingly obvious design principles, because design for well-being cannot rely solely on the same knowledge and tools used to design products and services that are desirable and satisfying to use in the short-term. In fact, we should be careful to simply assume that improving people's lives by making things faster, easier, safer, more pleasing, or even more desirable, automatically contributes to their well-being. Some have even suggested that people have become more dependent on these easy and efficient products, which in turn has effectively reduced their well-being as it has eroded social structures and personal capabilities. Consequently, design for well-being creates a need for new design principles, some of which will be outlined below and further explored in the articles in this issue.

Well-being as design purpose

The success of well-being-driven design is assessed by its respective impact on people. Yet, there are different levels of explicitness of reaching this goal. For instance, we can specifically design new products and services with the primary objective of increasing people's well-being. →

An example of this category is *Tiny Task*: a set of keychain tokens that trigger and remind users to commit to new experiences that are fun and virtuous. However, in striving for the greatest possible impact, a design for well-being approach should also be applied universally to all consumer services and products. Any (re-) design is a chance to create a mix of pleasurable and meaningful experiences. This can be achieved either by (re-) designing the key experience or by adding a meaningful component to an existing practice. Corresponding examples are *tea shell*, a mug that subtly invites its user to enjoy the moment, and *Good Night*, an alarm system composed of a timer with added social support by team members who have to reach the same early flight.

There is clearly no single design solution that will make everyone, immediately, and forever happy. This would be illusory. Instead, it is about the little things and frequent reinforcement in everyday life that, in sum, contribute to sustainable increases in happiness.

Focus on the good versus the bad

Design can take two main directions in contributing to people's happiness: removing the *bad* or increasing the *good*. Both are perfectly valid strategies, but differ in terms of approach and outcome. In the former, design targets determinants that cause *ill-being* (e.g. stress, loss, discomfort) by preventing them, reducing their impact, but also by embracing these determinants and finding a way to cope or even turn them into a valuable experience. In the latter, design targets positive determinants of *well-being* (e.g. significant relationships, engaging activities, acts of kindness) and aims to enhance, increase, or even enable them. *Warm Thoughts* is an example of an opportunity-focus design. It prompts people to express gratitude as part of a daily routine.

Ideally, both problem-oriented and possibility-oriented strategies are considered in a design project, because the one does not necessarily compensate for the other. Firstly, the absence of ill-being is no guarantee for well-being, just like the removal of a discomforting feature of a chair is no assurance that it will then be particularly comfortable. Similarly, the most pleasant event might be unenjoyable when something distressing overshadows the experience. When both strategies are applied, their positive effect can be amplified, for instance, in the case of *Good Night*, where the risk of oversleeping is reduced and the experience of kindness and team spirit is increased. ➜

WELL-BEING IS A COMBINATION OF EXPERIENCED PLEASURE AND MEANING

TEA SHELL

Lisa van de Merwe

Due to tea shell's shape, the mug must be held with both hands. This guided interaction gently forces people to focus their attention on the act of drinking tea instead of engaging in multiple tasks at once. It thereby encourages a moment of mindfulness.

GOOD NIGHT

Inge van der Lee, Amanda Lee Jakobsen, Suwen Shen and Maik de Rooij

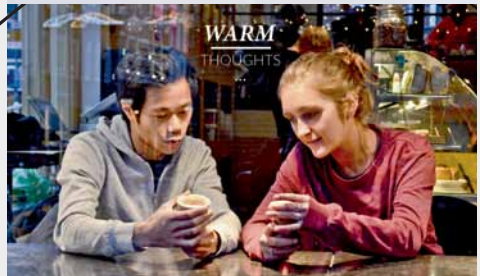
For flight attendants, an early morning flight is almost always accompanied by the fear of oversleeping and snoozing through the alarm. Good Night addresses this concern using technological features of its smartphone application, e.g. a charger check and a cognitive task to demonstrate being awake. Importantly, it also enables crew members to look after one another; colleagues can call each other if the system registers that someone is oversleeping.

WARM THOUGHTS

Iris Ploum

in collaboration with creatuals

Warm Thoughts was designed to stimulate moments of gratitude. The sleeve of a paper cup offers poetic instructions to express gratitude about—depending on which direction the sleeve is turned—something in the present, past, or future that relates to a given topic. Note that these cups, connected to the familiar habit of drinking coffee and offered at a public coffee bar, can reach an audience much greater than possibly expected from exclusive well-being designs.



While there is a long tradition of problem-orientation in design, deliberately envisioning and promoting a spectrum of positive opportunities is still a fairly unexplored territory. The openness to look for opportunities to promote happiness may seem vague. Yet, there are multiple ingredients to design with that give structure to the design process and that relate to different user-centred methods.

Well-being ingredients to design with

If short-term satisfaction is insufficient, what more is needed? Relating to three traditions of well-being research in philosophy—hedonism, desire-satisfaction theories, and objective list theories—design can contribute by focusing on:

1—Pleasure, i.e. happiness that comes from enjoying the moment,
2—Personal significance, i.e. happiness derived from having a sense of progressing towards a future (long-term or short-term) goal and from the awareness of past achievements, and/or
3—Virtues, i.e. happiness that is the result of morally valued behaviour, implying a normative distinction between what is good (e.g. altruism) and what is bad (e.g. sadistic pleasure).

"We use "positive design" as an umbrella term for all forms of design, design research and design intention in which explicit attention is paid to the effects of design on the subjective well-being of individuals and communities."

(Desmet & Pohlmeyer, 2013, p. 6)

While the three traditions tend to have separate (and excluding) views on what makes a good life, there is reason to believe that people flourish in a balanced life, i.e. in the sweet spot where the three come together, which we conclude is where the main opportunity for 'Positive Design' lies.

Well-being is a combination of experienced pleasure and meaning. Meaning can relate to the pursuit of personally meaningful goals as well as to universally accepted and morally valued strengths of character such as kindness and honesty. These might, but do not have to overlap; importantly, the three pillars of well-being should not conflict with each other.

Approaching well-being from a positive or negative-oriented angle, as discussed above, applies to all three components. We can design with the intention of increasing pleasure or decreasing displeasure. Likewise, design interventions can empower people to pursue their goals or reduce obstacles that endanger goal achievement, and design can facilitate virtues or hinder vices.

Design as a source versus a resource

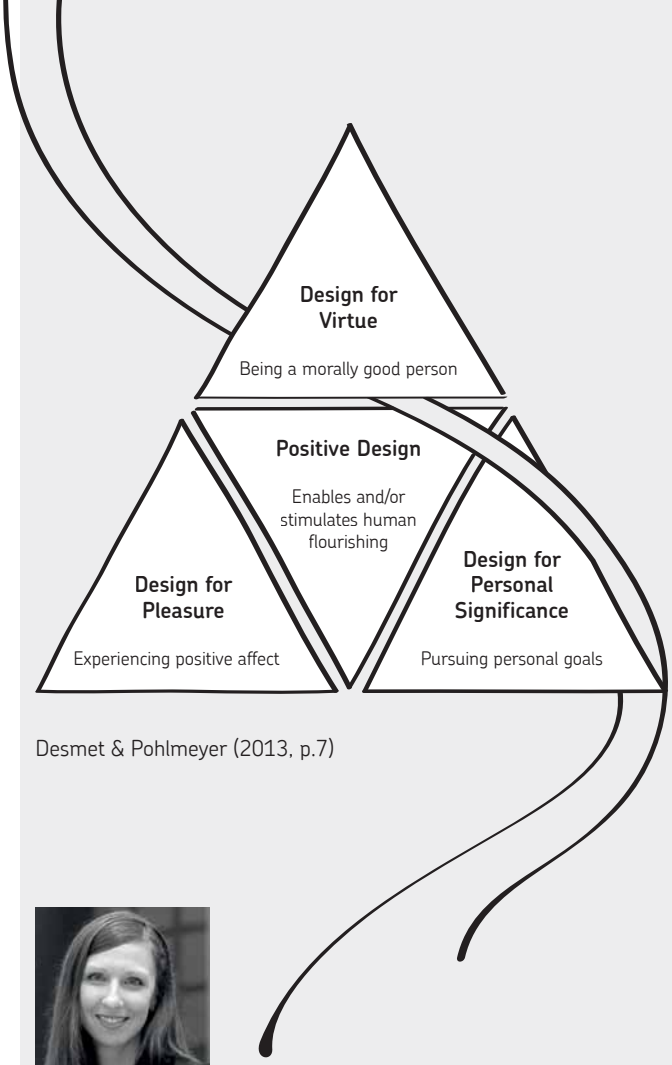
In a literal sense, our happiness is increasingly a matter of well-*doing* rather than merely well-*being*. Research has shown that how we live, i.e. our actions and experiences, has a greater impact on well-being than our circumstances, i.e. material wealth, status, residency. This emphasis on activities and experiences calls for a careful re-examination of the role played by design in this regard. ➜

It appears that in the quest of promoting well-being, design can make the greatest contribution in a supporting role, leaving the main stage to the user's experiences and actions. These, in turn, can be stimulated or even enabled by design solutions. Think of a bicycle that gives you the freedom to explore and feel connected to the environment, or of the little *Tiny Task* tokens. Here, the bicycle and tokens are less relevant than the activities that they facilitate.

Hence, design can be a powerful resource in mediating pleasurable and meaningful activities in people's lives. In contrast, its impact as a source in its own right, e.g. monetary value, is limited. The importance of intangible values when designing for well-being makes product-service systems a particularly promising approach. A material artefact can provide the tool required to enable and stage the experience to be achieved with a service.

Designing for pleasure and meaning is also a matter of give and take. While some forms of pleasure can be consumed and to a certain extent even owned, i.e. *take*, a crucial element of subjective well-being is a consequence of people's active involvement or contribution, i.e. *give*. Participating in a neighbourhood project, preparing a surprise for a friend, or committing to a hobby are examples of behaviour that can enhance happiness. Here again, design can have the role of a facilitator or enabler that provides the means for people to engage in corresponding activities, or that provides a symbolic representation of something valuable to relate to. Yet, the meaningfulness of an experience comes from the human side. In the words of Winston Churchill: "*We make a living by what we get, but we make a life by what we give.*" The notion of well-doing and the emphasis on experiences and activities are in line with an understanding of happiness as a way of living rather than an end state of 'ideal' circumstances, if there even is such a thing. This perspective offers a new rationale to products and services — a meaningful one.

In design for well-being projects, we can ask ourselves several questions: Is the main purpose of our design to support well-being, or is the well-being effect a welcome additional quality? Is our main aim to reduce ill-being, or to increase well-being? Is our focus on pleasure, personal significance, virtue, or combinations of these? And will the well-being effect be direct or indirect by enabling and stimulating well-doing? Every answer is the right answer, as all of these approaches and strategies can be fruitful. However, we do believe that an awareness of these parameters can support us in avoiding blind spots in our approach and in broadening our design repertoire when designing with the intention to contribute to people's long-term well-being.



Desmet & Pohlmeyer (2013, p.7)

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TWO LINES TO EXPLORE WELL-BEING

Introducing Influencing Behaviour

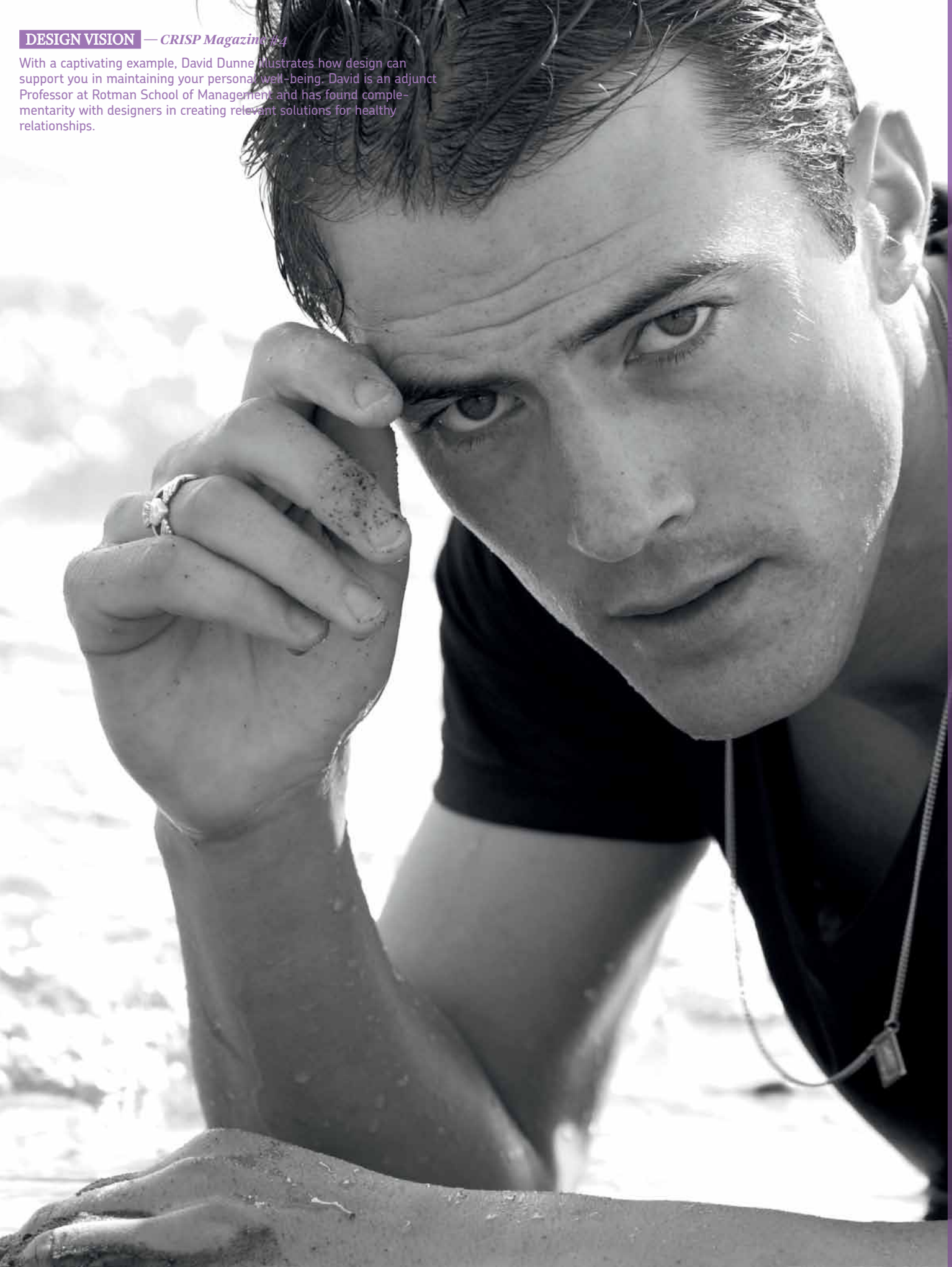
Well-being is to a large extent a matter of what we do.
The purple line highlights discussions on how people's behaviour can be the focus of design for well-being.

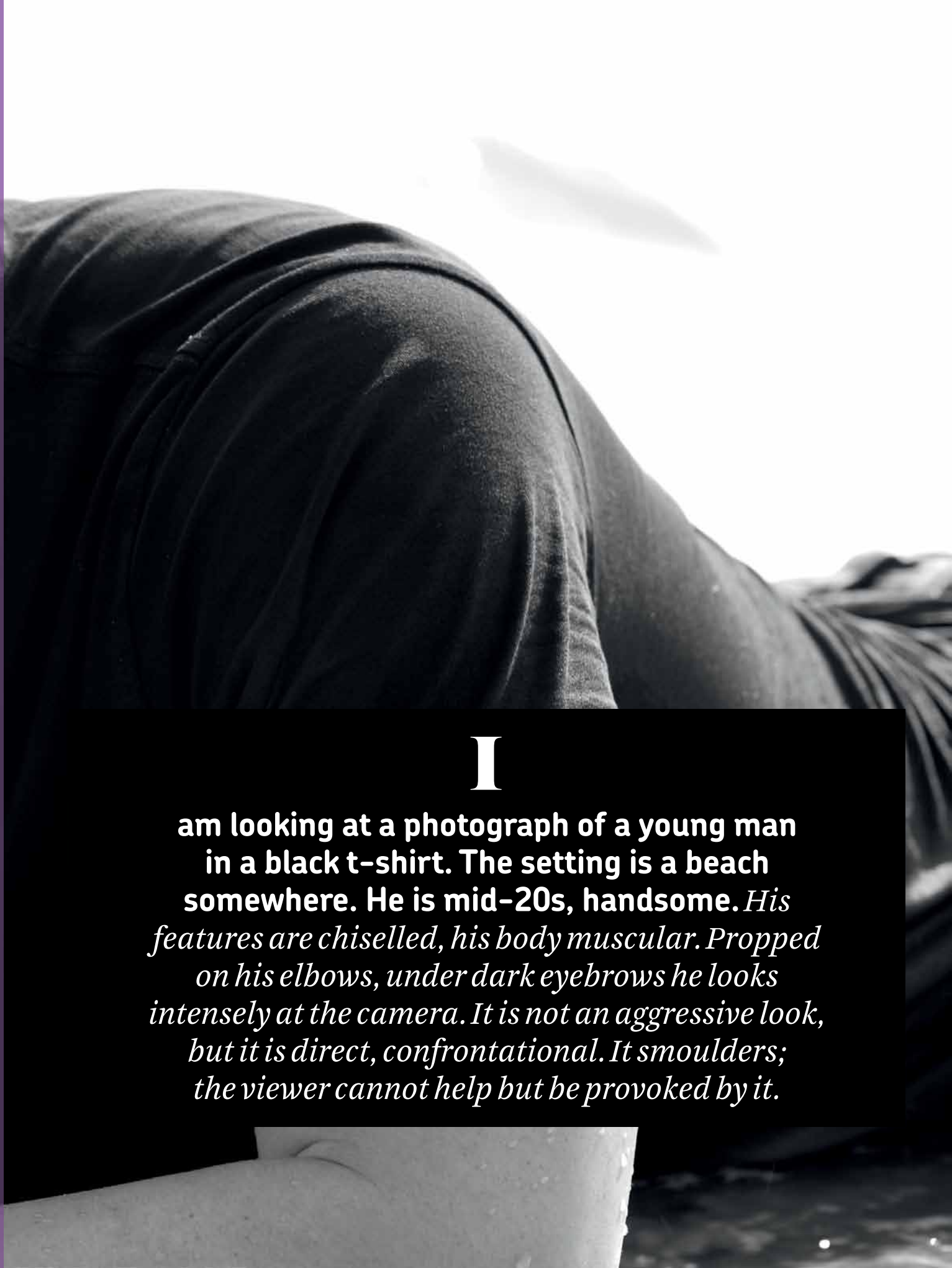
Introducing Enriching Experience

Product-service systems allow for rich experiences, which makes them particularly suitable for design for well-being.
The green line indicates articles on design for well-being with a focus on people's experience.

DESIGN VISION — *CRISP Magazine #4*

With a captivating example, David Dunne illustrates how design can support you in maintaining your personal well-being. David is an adjunct Professor at Rotman School of Management and has found complementarity with designers in creating relevant solutions for healthy relationships.





I am looking at a photograph of a young man in a black t-shirt. The setting is a beach somewhere. He is mid-20s, handsome. *His features are chiselled, his body muscular. Propped on his elbows, under dark eyebrows he looks intensely at the camera. It is not an aggressive look, but it is direct, confrontational. It smoulders; the viewer cannot help but be provoked by it.*

David Dunne

KEEPING THE DOCTOR AWAY

Undesigning healthcare

My reaction to this photograph may be different from yours. This is my son Gavin. He has Type 1 diabetes. Maintaining a balance between insulin injections and carbohydrate intake is critical to Gavin's health. If he takes too much insulin, he can go into a coma. Too little, and he puts his long-term health at risk. Crises with diabetes should not happen. The disease is serious, but in most instances manageable. But crises do occur, and when they do, the emergency department is often the first place patients land.

U

(Un)designing emergency care

In 2010, there were approximately 12.1 million visits to emergency by adults with diabetes in the US — many of which would have been unnecessary with proper medication and control at home. In the UK, pressures on other parts of the health care system mean that the emergency department is often the only place to go. Going to an emergency department for a chronic problem is like calling in a Formula 1 pit-stop crew when your car doesn't start. It works, but it's a solution designed for a different problem. Avoidable visits to emergency are traumatic for the patient and costly for the system. It's a widely-recognized problem in healthcare: because we are not very good at caring for people outside hospitals, they end up in hospital. The health system is designed for repair, not for well-being. It needs help, and designers are the people to provide it.

What if we were to design to avoid delivering a service? In a sense, to 'undesign' healthcare? Can we, as designers, work to prevent emergencies arising to begin with? Yes, we can. But to do it, we need to think of designers less as makers of physical objects, and more as midwives who bring a new set of human relationships into being. To design for well-being, we need to re-design the relationship between doctors and patients.

Like all photographs, this one of Gavin tells one story and masks many others. As a model, he is sought after around the world. Make no mistake, he enjoys modelling. But the life of a model is about as unglamorous as you can imagine. In Gavin's case, it involves long periods of travel, often with little control over the food he eats; in many places insulin is hard to keep refrigerated, and jet lag plays havoc with meal and sleep schedules. A couple of years ago, he travelled from Toronto to Buenos Aires to shoot a commercial for a chocolate mint patty. Over a two-day studio shoot, he consumed countless sweets on-camera, spitting them out to avoid sugar overload. Youtube: http://bit.ly/1lh8bFK. A few hours after the shoot, he was on the plane home. He saw little of Buenos Aires. The doctors and nurses who treat Gavin, well-meaning to a fault, have no idea how to deal with this kind of situation. They look at Gavin as a "case" of diabetes, not as a person who happens to be negotiating diabetes as one of many priorities within a complex, busy life.

F

Flipping to a patient perspective

In my healthcare work, I try to help health professionals look at well-being from the perspective of the patient, not from that of a doctor or nurse. Schooled in the science of disease, healthcare workers often have difficulty relating to the day-to-day issues patients face, or understanding why they don't "comply" with their instructions. The term "compliance" has become controversial in medicine because of its overtones of paternalism in the doctor-patient relationship. The modern word is "adherence". The word has changed, but the paternalism remains. For those on the front line, diseases and the technology used to treat them are so challenging that their primary concern is working with their colleagues to

GOING TO AN EMERGENCY DEPARTMENT FOR A CHRONIC PROBLEM IS LIKE CALLING IN A FORMULA 1 PIT-STOP CREW WHEN YOUR CAR DOESN'T START

solve the problem at hand. What counts is the therapeutic result. That the patient is also a person — not just a problem to be solved — can be a secondary issue. Some are even offended by the idea of focusing on the patient's experience, seeing it as a form of "customer service", incompatible with their professional self-image.

Many of the clinical teams I have worked with, when asked to innovate in the patient experience, instinctively respond by thinking of providers first, and patients second. In one case, an emergency team was frustrated with overcrowding and the resulting lack of private space for consultation with colleagues. The obvious answers — partitions, white noise — had been considered and found ineffective, too costly, or both. Then a clever team member asked, "Why is the department overcrowded to begin with?" The team began to consider the fact that overcrowding was not something patients wanted, but that the team itself was imposing. With this realisation, they began to explore ways that patients could be encouraged to get a cup of coffee or go shopping while awaiting their appointment. The reframing led to ideas like buzzers, apps and text messages: ideas that solved a problem for patients and, incidentally, made life easier for staff. It was a revelatory moment, a flip in perspective from provider to patient.

A different kind of empathy

Writing in the New York Times, Dr Danielle Ofri recounted how she came to a realisation of a communication gap with a middle-aged patient with diabetes (Ofri, 2014). Shocked to find his blood sugar dangerously high, she was even more shocked to find that he was quite aware of his diabetes and the need to control blood sugar. But it wasn't his priority at that time. She wrote:

For my patient, his wide-angle lens took in the whole of his life, of which diabetes was one small part. For me, in the 20 minutes allotted, my lens was narrowly focused on the disease that posed the gravest and most immediate risk to his health.

For Dr Ofri, the problem was to get his blood sugar down — as soon as possible. But her patient saw the problem within a broader context of a life as a taxi driver who lived on fast food and had little opportunity to exercise. To Dr Ofri's credit, she came to this realisation and took the time to work out a plan in consultation with her patient.

Dr Ofri's tale points to a disconnect in healthcare. Empathy is the foundation of medicine, and medical professionals rightly consider themselves empathetic with their patients. But doctor-empathy — understanding the effect of a disease — is different from designer-empathy — understanding the experience of a disease.

Diabetes is a routine disease, and with some variation, its symptoms and treatments are standard. Patients are not. Because successful diabetes management depends on the individual patient, we need to design individual solutions, not standardised ones. These solutions need to be founded on a deep understanding of the whole of a patient's life, not just his or her diabetes. ➜

One example of how this way of thinking can provide the foundation for change comes from the UK Design Council's work in Bolton (Burns and Windhall), where the health authority felt it was not doing enough to support patients in managing diabetes. The team first took a "shallow dive" by doing exploratory research with patients. Using cue cards as a research tool, they developed a rich understanding of the issues and challenges patients faced, in their own words. They classified patients into segments based on their level of knowledge about their diabetes and their ability to manage it. From this they planned to go into a "deep dive" in which they worked closely with patients to develop, test and modify prototypes. As they moved into this second phase, the team focused on the nature of the clinical dialogue. Patients and professionals seemed to talk different languages in a rushed encounter that was unsatisfactory to everyone. However, after two days of intensive brainstorming, they had gotten no further. *... we were using lengths of adhesive tape on the studio wall to connect dozens of different diabetes needs and problems scribbled out on Post-it notes. The resulting mess of criss-crossing lines marked the low point of the project.*

After sleeping on the problem, the team returned the next morning with a fresh insight. What if a communication tool could be built around patients' own words?

Revisiting the cue card approach used in their initial research, the team developed a deck of colour-coded cards that could be used by patients to express what was on their minds. While the cards were helpful in bringing out a person's internal monologue, they could also frame a dialogue with others. The team built a coaching programme around the cards that connected diabetes patients with non-medical coaches who could help them manage from day to day.

C

Can we redesign the doctor-patient relationship?

'Undesigning' healthcare means supporting patients. I have focused on diabetes, but of course diabetes is just an example of the many manageable, chronic health problems we live with, for which high-tech acute treatment at advanced healthcare facilities is costly and often ineffective. The change we need is not to technology, but to the relationship between patients and providers. By expanding the definition of empathy from doctor-empathy to something more like designer-empathy, we can both improve lives and save resources in strapped healthcare systems.

In my ideal world, medical students would take design courses. They would learn the importance of deeply understanding lives and experiences. They would learn to use this understanding to develop creative, individualised programs to help patients help themselves. Of course, in my ideal world, Gavin would not have diabetes. I am happy to report that he has not shown up at an emergency ward. With the right kind of support, the right kind of empathy from his medical team, he never will.

THE CHANGE WE NEED IS NOT TO TECHNOLOGY, BUT TO THE RELATIONSHIP BETWEEN PATIENTS AND PROVIDERS

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In 2012, Jeremy Myerson was named one of Britain's 100 most influential people in digital technology by Wired Magazine. He has consistently encouraged 'design that improves quality of life' throughout his career as an academic, author and activist in design. In his role of director of the Helen Hamlyn Centre for Design at the Royal College of Art in London, he has initiated numerous design initiatives that demonstrate how design can have a positive impact on the well-being of people.

WHY DESIGN FOR WELL-BEING

DEMANDS NEW ALLIANCES

Jeremy Myerson

While all of our design education and training points us in the direction of the physical fix, design for well-being demands something different and more oriented to behaviour and the mind.

The rapid rise of well-being up the global design research agenda and the increasingly intense debates about how to define and measure it will have come as little surprise to anyone active in design for healthcare or design for ageing. Designers have followed the medical profession in starting to think much more about prevention rather than cure, and about psychological comfort as opposed to absence of physical pain. In particular, design attitudes to an ageing population have shifted from a medical model of ageing (decrepitude, dependency, death) to a social and even a cultural model of ageing (third age, ageing in place), in which understanding social interactions and human aspirations are as important as compensating for physical deficits. ➜

Being, becoming, belonging

The World Health Organisation defines healthy ageing as having three vital components — 'being', 'becoming' and 'belonging' — and it is against this background that we can see why well-being is now so firmly on the designer's radar. While 'being' relates to physical and physiological well-being, 'becoming' and 'belonging' speak of a bigger and broader set of interdependencies.

A dictionary definition of well-being — *'a good or satisfactory condition of existence; a state characterised by health, happiness, and prosperity…'* — is reassuringly much bigger and broader than the simple compensations in performance of everyday tasks targeted by most assistive technologies. But this definition of well-being also makes things more complex for designers.

Beyond the physical fix

I've observed at first hand through my participation in various healthcare design projects how the physical support of patients can be addressed more swiftly, more easily and more efficiently than their psychological sense of well-being, their happiness and absence of unease. All our design education and training points us in the direction of the physical fix. But design for well-being demands something different — something oriented more to behaviour and the mind.

The London emergency ambulance

Recently, the design research unit I lead at the Royal College of Art, the Helen Hamlyn Centre for Design, was involved in a flagship redesign of the emergency ambulance for London. There's a lot wrong with the current ambulance in terms of re-stocking and cleaning the treatment space, and gaining-all-round access to the patient, that our interior concept seeks to alleviate. Cramped and often poorly lit, the ambulance is not a good workplace for paramedic teams labouring on long shifts.

But beyond the hygiene and ergonomic factors that our design research pinpointed for improvement, there was a further set of criteria related to relieving the sense of intimidation and fear that people feel when they ride in an ambulance, even when making a routine trip to hospital. We wanted to make the experience lighter, brighter, more professional, less scary, and that required thinking about ambulance design in a new way. The results of our work included more natural light inside the vehicle, modular treatment packs that add to a professional ambience, the addition of a jump seat for friends and family to accompany the patient, and 360-degree access to the patient.

Similarly, when we worked on a project with the Design Council to redesign the place at which the ambulance arrives — the Accident & Emergency (A&E) department of the hospital — in order to reduce the frequent incidents of violence and aggression, we were required to think not just in terms of processing sick and injured people through a space but in terms of understanding why people get so worked up, so angry and aggressive, in the first place.

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We collaborated with social scientists to develop 'perpetrator profiles' — the confused, the intoxicated, the distressed, the socially isolated and so on — to really get under the skin of what was going on. As a result, we were able to create a suite of relevant design solutions to address broader issues of well-being in a place of acute medical treatment. The positive results of a recent evaluation study have validated our approach in which a series of environmental graphic and online elements combine to show people where they are in the A&E process.

From feasibility to well-being

If the rise of well-being puts additional focus on what designers do well, it also points a spotlight on the company designers keep. Twenty-five years ago, there was a broad pressure for designers to collaborate more effectively with engineers. New courses sprang up that brought the design and engineering disciplines together; medical and assistive technologies were often a focus for creative work. Feasibility was king.
Ten years ago, the collaborative impulse extended to designers and business people coming together more productively, as business schools around the world switched onto the potential of design, and B-schools became D-schools. Designers were required to get hip to strategy and service delivery, often in the context of rising healthcare costs. Viability was the newly crowned king.

Today, the smart money in industry is on designers getting closer to anthropologists, ethnographers and other social scientists in pursuit of multi-disciplinary innovation (the research world got there faster). The research-intensive 'front end' of the design process has never received so much attention in terms of methods and techniques, in order to better understand human need and aspiration. Desirability is now king. What, after all, is the point of developing smart robot technologies to care for the elderly if such solutions are viewed as socially unacceptable? One of the biggest drivers of this latest set of alliances is design for well-being. The requirement to design for *'a good or satisfactory condition of existence'* means design thinking that is more than just technically robust or cost effective: those are now a given. It requires thinking deeply and often subjectively about the human condition, about our deepest fears and motivations, and mixing with the professional folk who can help mine such insights. This, readers of CRISP, is where design starts to get really interesting... because it creates more opportunities for business, more depth for designers, and more hope for users.

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Nynke Tromp is an assistant professor at Delft University of Technology and a renowned researcher in the field of social design. The fact that she's also an award-winning designer (The Rotterdam Design Price 2014) makes her pretty unique. David van den Berg is a clinical psychologist and researcher at Parnassia Psychiatric Institute. As a therapist he is specialized in Cognitive Behavioural Therapy for psychosis, PTSD and anxiety disorders. David is project leader of the Recovery from psychosis by Design project.

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Nynke Tromp & Da
Interviewed by Ma

Mental health care is often far-removed from day-to-day life. Designers, who are accustomed to working with the context of daily life, can make a valuable contribution to care, by taking a personal, holistic perspective and connecting care to the situations in which it is needed.

"Innovation is a much debated topic in the field of mental health care: we have been doing roughly the same thing for the last 150 years. In care, innovation now often means creating a digital version of an existing principle. The Parnassia Groep, a care organisation, aims to be frontrunner in the field of innovative care, and is currently investing in research in the field of mental health." Clinical psychologist David van den Berg explains how and why he became involved with the project 'Recovery from psychosis through design.' Designer Marte den Hollander spoke with him and researcher and designer Nynke Tromp, who kick-started the project.

As funding is an issue in the field of care, there are very few exploratory projects. The project 'Recovery from psychosis through design' was initially an elective at Delft University of Technology, enabling a broad exploration phase. Tutor Nynke Tromp explains: "The project started in the 'Vision in Product Design' elective. Each year, students work on urgent societal issues with a client, in 2012 this was the Parnassia Groep. The students spent a day with a service user, resulting in twenty projects with a trove of information about what a day looks like for service users — and where a designer could intervene."

A large group of Parnassia employees and service users attended the students' final presentation in June 2012. David van den Berg, the dedicated clinician, noted: "The students presented strong stories and sharp visions about the interaction between the service provider

IGNING NTAL HCARE

avid van den Berg
arte den Hollander

and service user and how we might design behavioural change. As clinicians, we influence behaviour and I think we are pretty good at that. The student projects clearly showed us that we can design human-product interactions, and by extension, design behaviour. That is both exciting and promising." David explains that, for instance, he can never actually be present when people hear voices. "Online therapies do exist, but what can you do when someone hears voices on the bus on their way back home? We need tools that are not based on the 'old' medical models, in which the service user is put in a passive position; we need tools that trigger new or adaptive behaviour, tools that enable service users to cope with their mental health problems in their day-to-day lives: tools that empower people." The Parnassia Groep chose three projects to further develop, which resulted in the apps Temstem and Net-werk and the service De Aanpakker.

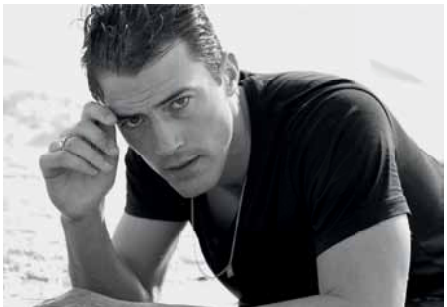
Designing behavioural change

"Designers search for opportunities instead of problems." Nynke explains the collaboration with the care organisation: "Designers can bring humanity into it by designing the relation someone has with his or her environment. Design can embed therapy in everyday life and facilitate behavioural change. At its core, design is human-centred. To adopt this human-centred approach is semi-revolutionary in care." David adds, "Therapy is normally far-removed from everyday life; designers can better reach the context of everyday life. In mental care, we are only now beginning to realise that our clients' functioning in society is more important than disorders and symptoms: they want a job and good friends." ➔

6

KEEPING THE DOCTOR AWAY

According to Nynke Tromp and David van den Berg, designers can 'save' mental healthcare by bringing in the user perspective. Similarly, David Dunne argues that hospitals can be made partly redundant by shifting the perspective from the problem to the patient.



TEMSTEM

People who seriously suffer from hearing voices often withdraw out of fear or confusion. Reframing Studio received the Rotterdam Designprijs 2013 for the Temstem, a freely downloadable smartphone-application developed to counteract this vicious cycle. Temstem offers exercises that encourage users to build resilience and become more powerful in their interactions with the voices.

David—"We initially tested Temstem with a group of 12 people, without a control group. Parnassia granted us an internal subsidy to thoroughly investigate Temstem."

DE AANPAKKER

(meaning both a 'receiver' and someone who is 'very proactive' in Dutch) is a service for people who suffer from chronic mental illness and as a result find it difficult to participate in society. It denotes a role for everyone who is often at home during the daytime: when packages are delivered for close neighbours who are not home, these packages will be delivered to the Aanpakker.

Although this service was designed to reduce the stigma associated with people with a psychological disorder, David and Nynke concluded that, were Parnassia to introduce the service, it wouldn't have the desired neutralising effect and might instead merely confirm the stigma. Instead, 'De Aanpakker' needs a neutral partner, such as the local municipality, for its introduction.

NET-WERK

(Net-Work) is a smartphone application for people recovering from a first psychosis episode. Net-Werk asks the user to upload photos of their network and then positions these photos in relation to the user's own picture. Over time, the other photos gradually fade and only when the user gets in touch do the other photos become visible.

Nynke—"Net-werk was the last result of the collaboration. We knew how to collaborate, which is why we both measured it according to psychological standards—qualitative and quantitative testing—and conducted user research. We looked at which mechanisms we wanted to trigger, and after the testing phase we could see which factors we had addressed successfully."

What designers can achieve

According to Nynke, in the end, every social project revolves around behaviour and that is where a designer can intervene. Designers shouldn't become therapists, but instead try to discover where their skills are most useful. David: "Reframing Studio quickly internalised the subject and they have the ability to distance themselves from the subject and approach it from a different angle. Clinicians are often stuck in old thinking models. Design can change mental health care in a beautifully optimistic way: I believe it can be saved by designers. In mental health care, we don't have a set structure for a development process. And, more importantly, mental health care — both the institutions and its clinicians — currently lacks a long-term vision. There is no fundamental understanding about what we want to achieve with vulnerable people with psychological problems who turn to us for help. When there is this basic understanding, it does not translate to the practice of care. How, then, are we to receive people or treat them? Designers can help us make that step; they can tease out a vision and translate it to practice. This is why I have been such an advocate for collaborating with designers in mental health care." The project inspired the designers and the Parnassia clinicians and service users. Nynke adds: "I think that, as a project, it has been successful. Jet Bussemaker (Minister of Education, Culture and Science) uses Temstem in her presentations. We have helped the industry by showing that designers can work on any kind of problem!"

Redesigning Psychiatry

The context of care is changing rapidly. Clients are currently not allowed to look into their own file. "But," notes David, "in a few years, patients will own their own data!" To make a head start on the imminent changes in the field of mental health care, Nynke and David are now working on a new project: 'Redesigning Psychiatry'. "We want to work on a model for humanity in health care. We want to help people function and prepare them for a job. How we deal with people who are stranded has become engrained in society; a neurosurgeon is unlikely to work with you on your debts, nor will he redirect you. Think about the reduction in the number of beds in care-organisations; we talked about it for years. Clients certainly did not want to be there. Then the government cut funding and the reduction happened almost overnight. As a society, we lack a long-term vision of how we deal with mental health care, nor do we have a value-system that supports it." Nynke explains where she sees a

WE BELIEVE MENTAL HEALTH CARE CAN BE SAVED BY DESIGNERS

role for designers in this grand project: “The ability to look beyond contemporary society is a good quality of designers. People find it hard to think outside of known structures, especially when it comes down to cross-connections. Can we develop a roadmap which we can use to test individual projects, so that we all work to one plan?” Such projects do not materialise quickly, which is why David and Nynke are currently developing an initial vision, and have begun talks with people and institutions they will need to have on board.

David—“As partners, we need to work with service users, organisations of families, insurance companies, institutions and politicians. We will also involve experience experts. They are great to work with and embody an important aspect of the transition of the current mental health care system: they ensure that we steer away from a certain ‘us versus them’ attitude.” Nynke, “There are many obstacles in terms of infrastructure. We should have the opportunity to create collaborations and design models that transcend silos such as well-being and mental health care so that care can be more holistic.”

David continues, “It is important that we involve designers in this grand project. When designers begin to understand they already shape everything around us, they will also understand how they can shape our society as well, and naturally take on that role.”

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WHY INN SHOULDN'T VALI

Katinka van der Kooij in collabo

As it economises on health-care budgets, the Dutch government is searching for innovation and evidence of treatment-efficacy. Researchers and designers are working together to address these wishes but how can they do this, optimally?

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REDESIGNING MENTAL HEALTHCARE

Katinka van der Kooij stresses the need for validation in mental health care, while observing that that need can at the same time restrict the innovation process. She proposes to build on existing knowledge in order for designers and mental healthcare professionals to optimally benefit from each other's complementary knowledge and skills, an approach that has also shown valuable in the projects of Nynke Tromp and David van den Berg.

WHY?

We propose that when working in parallel, their desire for both certainty and innovation impede each other. Instead, design should connect to existing scientific knowledge, using products as means to bring scientific discovery to the user. How do you feel today? Think about it objectively and please rate your well-being with a number. Many people are able to answer this question. Yet, you could ask yourself whether a complex experience such as well-being can be summarised in a single number. More importantly, would we want to use this number to determine which products are to be used in health care? Faced with, for example, the rising costs of mental health care, the government is searching for ways to cut costs. The decision to fund a treatment increasingly relies on clinical evidence, and we are continually searching for innovation in treatment efficacy.

The evidence that we need to base decision-making on is preferably quantitative and derives from well-controlled experimental research. Innovation is often looked for in the application of new product service systems (PSS) such as 'serious games'. To sate this hunger for innovation and efficacy-evidence, projects are often funded based on an explicit aim to develop innovations and subsequently test their efficacy. In the CRISP project G-Motiv, for instance, I worked as a psychologist and quantitative researcher

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ration with Evert Hoogendoorn

at the TU Delft together with the IJsfontein designers on the development and validation of a serious game that would support therapy for cannabis addiction. I shared both project and desk with Evert Hoogendoorn, designer and strategist at IJsfontein. We developed a vision on how research and innovation can be best combined. In this article, we reflect on whether a societal problem such as addiction among young teens is best dealt with by letting researcher and designer work in parallel, or whether other forms of collaboration are more effective. Because we address the limitations of quantitative research, I as a quantitative researcher have written this article on my account.

Working in parallel—the development of Changamoto

In the G-motiv project, researcher and designer jointly sought a game concept that would support therapy for cannabis addiction. In the Netherlands, thousands of young teens (age 12-14) are treated for cannabis addiction annually. Their treatment usually consists of cognitive behavioural therapy (CBT), the primary aim of which is to gain insights into the chain of events and cognitive reactions that serve as a trigger for drug use. In this way, patients can learn suitable self-control strategies for these triggers. A few highly motivated patients suffering from severe psychological problems are treated in a clinic in The Hague, where they stay overnight for a number of months. Most patients, however, are treated in outpatient care: they see their therapist once a week and receive additional homework assignments, such as keeping a CBT diary in which they note down triggers for cannabis use.
In the G-motiv project, my task was to ensure that the effect of the game that was developed for these young teens was testable, i.e. its validation potential. Evert's task was to ensure that the game would invoke an optimal experience in the user, i.e. its impact potential. Before long we saw how the perspectives of researcher and designer differ. Research is by nature conservative, rational, and focused; by introducing interventions in well-controlled situations, we can achieve relative certainty on the interventions' causal effect. By replicating the effect among many users, we can demonstrate that the effect in not based on coincidence. Design, in contrast, is based on individual user experiences and by nature innovative, intuitive, and holistic.

Many of the design ideas we considered were rejected from a research perspective: patients who control their brains with innovative neuro-feedback methods, patients who play together, patients who part virtually from their addicted personalities. These ideas were either too new, too unpredictable, or too difficult to measure. Eventually, researcher and designer found each other in the concept of Changamoto: a single-player game that stimulates adherence to the CBT diary by rewarding its use. What proved crucial for Changamoto's future was the decision to design a game for patients in outpatient care. From a research perspective, this was a safe choice: we could perform research among the hundreds of patients in outpatient care. Moreover, use of a CBT diary can be measured easily, and reward for diary use establishes a well-defined relation between game and therapy. From a design perspective, though, this was a risky choice: we lost access to a small but well-defined target group in the The Hague clinic and could no longer make a game that includes social interaction, one of the great motivational aspects of games.

We were a few months into the validation study testing whether Changamoto really stimulates adherence to the CBT diary, when practice turned out to be much 'noisier', as is often the case in validation studies. Although hundreds of young teens are treated each year, it is difficult to get a grip on the real number of patients that a therapist sees, because patients tend to interrupt their treatment. And although therapy for addiction is evidence-based, the personal contact →

between therapist and patient leaves a lot of room for personal interpretation, even regarding the use of a standard assignment such as diary registration. As we waited for the slow validation process of Changamoto, we wondered whether we had missed the main aim in optimising Changamoto for validation potential.

If we could not achieve our validation study, for instance, because too few patients used the Changamoto game, would it not have been better to give the designer more freedom? Had we, in our desire for certainty, perhaps withheld a game with, potentially, a much larger impact from the addicted teens? A game that, for instance, would allow for social play. Perhaps the target group would have been better off with a game that hadn't been validated but which they could use according to their own insights.

It may sound odd to question the value of validation when you assume that, with the right validation methods, you would always be able to reveal the quality of an effective game. Yet it is utopian to believe that quantitative methods can already provide insights into all aspects of such a complex human experience as well-being. It is the basic belief of quantitative science that it will be possible one day, but this day is in a future far beyond the future of the teens we are trying to help today. Waiting for validation results may withhold products from the market until they're no longer relevant. Yet, delivering completely unfounded products will also withhold them from the market, because health care is becoming increasingly evidence-based.

Research is by nature conservative, rational, and focused

The Future

We suggest that research and innovation can optimally profit from each other by connecting to existing scientific knowledge. The scientific literature lists several principles of behavioural change which have often been demonstrated in a laboratory situation, far from a users' reality, and are only valuable upon repeated exposure. The designer, though, can use these principles in the design of a user experience. Moreover, the motivational aspects of game design can be used to invite a user to return repeatedly and thereby be exposed to the same principle many times over.

IJsfontein is now working on a project that uses this form of collaboration with researchers from the VU University Amsterdam. Their findings suggest that patients can influence the storage of trauma in long-term memory by engaging in a working memory task, while memories of the trauma are repeatedly recalled. It is difficult for patients to focus on the working memory task at the right moment while keeping the trauma in mind. The immersive and motivating properties of games may be exactly what is needed in offering this form of therapy. In this way, the game isn't used as treatment but rather as the means by which treatment is offered to the user.

Conclusion

We advocate a more serial form of collaboration in which researchers provide knowledge that designers use in their designs. These products still need to be validated, but validation will be much easier as researchers can build on earlier work on the active principle.

What we would like to keep from our experience during the close, parallel collaboration in the CRISP project is the physical proximity and the continuous touch points. While researcher and designer take leading roles in turns, they remain continuously involved, sharing their knowledge and questions. We found that physical proximity encouraged 'trust', which allowed us to see how research and design really supplement each other. Researchers aren't slow; it is science that is a slow process. Designers aren't merely daydreamers; they base their ideas on experience and user tests. Experience-based knowledge can be worth just as much as quantitative evidence.

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When they design a PSS, designers try to find a balance between flexibility and control to create effective and socially responsible value for users and other stakeholders.

THE CRUCIAL ROLE OF CONTEXT-AWARENESS WHEN DESIGNING FOR WELL-BEING

Evelien van de Garde & Dirk Snelders

How can we safeguard the intended positive impact of a PSS design on people's well-being? **We discuss the crucial importance of considering place and time when designing a PSS.→**

Which context?

In design, visions about how people ought to live have focused on various aspects of well-being. During its history, design has attempted to measure a 'good life' against such criteria as luxury, freedom, or health. These efforts practically always acknowledged that visions depend on a particular historical context. For many design historians and designers, these contexts were defined by the ideas that groups of people held in common in certain places and times. But what if it is not the ideas that make up the decisive context, but the actual placement and timing of the design itself?

Relaxation: anyplace and anytime?

As part of the GRIP project, we looked at designing PSSs to help balance work-related stress. We designed the GRIP adaptive relaxation space, an environment that stimulates paced breathing and helps people to relax at work (for a full description, see CRISP magazine #3). When we installed the first and second version of the adaptive relaxation space, we were unaware of the crucial role of place and time in PSS design for well-being. Instead, we departed from the broader notion that the time had come for organisations throughout the Netherlands and the rest of the world to address work-related stress.

The first version of the relaxation space was built and tested at Philips Design in Eindhoven. Before the prototype was built, a small group of Philips Design employees had already been involved in the GRIP project for 2,5 years. Their colleagues were thus aware of the issues within and the intentions of the project. The space was located in a long awaited, newly developed part of the building dedicated to building and testing prototypes. When the space opened, Philips' employees were notified and teasers were placed in the offices. The relaxation space was very well received.

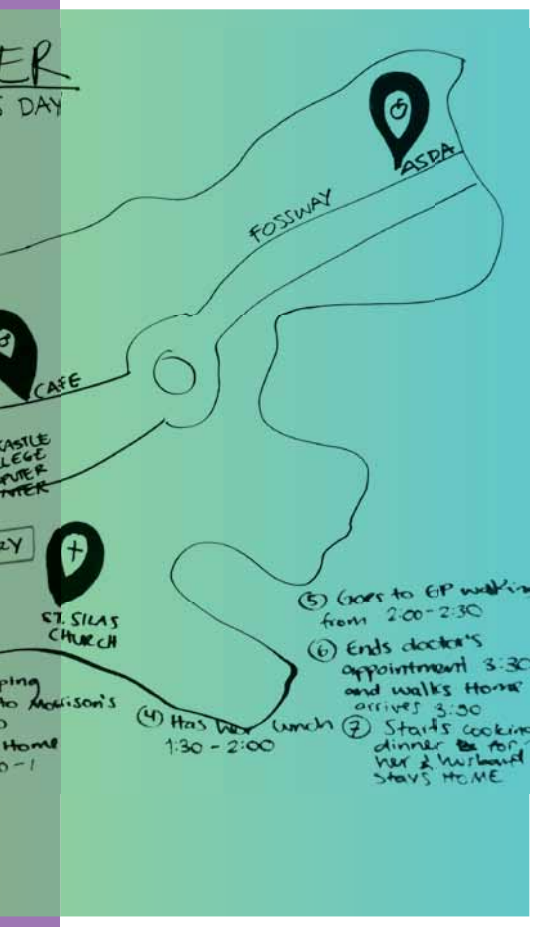
The second version of the relaxation space was placed in the main entrance area of the Health Innovation Centre of Southern Denmark, in Odense. The design of the space was similar to that of the first version. However, the employees did not have a long history with the GRIP project and were unfamiliar with its focus on work-related stress. In addition, there was no one available to give an introduction to the space and its intended use. In effect, the prototype relied exclusively on the system's technical qualities. As such, it was positioned as a placeless and timeless demonstrator rather than a support tool embedded within a particular, local organisation. The connection between the relaxation space and employee well-being was not easily recognisable in this setting.

A third version of the relaxation space is currently being built, and intended for use by employees of GGzE, a mental health-care organisation in Eindhoven. This again is a different organisation with different needs at a different place and time. How can we ensure the relaxation space fulfils its potential in this new setting?

A place-making map that that illustrates how individuals move and dwell in space, which is essential to understanding place.

Contextual embedding for well-being

Alison Prendiville is an ethnographic researcher from London College of Communication, University of the Arts. She argues that well-being "is served if designers can help to create meaningful places for local communities." She gave a dedicated workshop at the GGzE on place-making with respect to the relaxation space that we are about to install. She uses place-making maps created on the basis of design anthropology, which draw out the lives of individuals as movements in place and time. Such maps translate the messiness of everyday life into visual, human-centred values, which capture the rich social and cultural practices of people at a location (Prendiville, 2014). In addition, this approach encompasses how people's understanding of a place, and its meaning, is rooted in local history. Compared to the more linear customer journey maps, her approach reveals a deeper understanding of the lives of local people, which results in more suitable designs for a particular place and time.



We have taken these newly obtained insights into account, and have begun local contextual research at the GGzE in Eindhoven. This approach has already influenced how we define the relaxation space itself. Compared to the two previous versions, we are now less concerned with creating our own space within a building and, instead, focus more on how the relaxation activities can most fruitfully be embedded in the places provided by GGzE.

Our experiences over three different locations have taught us the following: first, a PSS should not be regarded as a solution unaffected by place and time, with socio-technical qualities that will easily apply everywhere. Instead, the local setting in which a solution is embedded will set its own criteria for evaluating effects on the well-being of users. Design research should reveal local criteria for evaluation to help ensure that PSSs are well placed and well timed. In addition, users and providers should be treated as 'locals' with a history of exploring, constituting, maintaining and abandoning a place. Any PSS, even highly mobile ones like Nike+ or Fitbit, will impact the place-making activities of its users and providers. Only when it is designed with place and time in mind, can a PSS reach its full potential.

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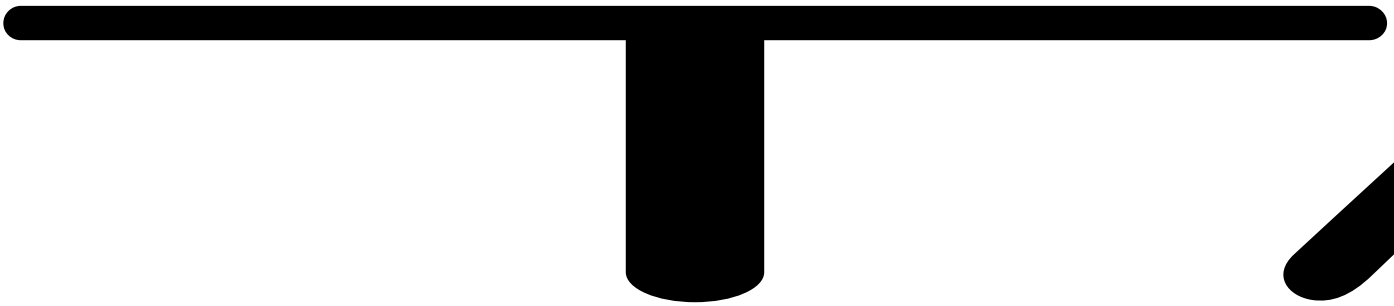
Carolyn Strauss and Ana Paula Pais from slowLab work in the fields of design, art, social activism, and environmentalism. In this article, they offer a unique yet holistic perspective on well-being and sustainable forms of living through Slow knowledge.

Carolyn Strauss & Ana Paula Pais

IN THE PURSUIT OF WELL-BEING,



At a time when 'fast' has become the default pace for many—from habits of material consumption to spatial, relational and sensory experience—the word 'Slow' speaks to people of a different tempo and the possibility of a richer, deeper experience of life.

There is an emerging awareness today that new design directions are needed to address the complexity of an ever-accelerating world. However, many recent developments still lack the holistic, reflective and critical perspectives that are essential to achieving truly balanced and inclusive forms of well-being. This is the territory that the research organisation slowLab has been cultivating for the past decade, probing the potentials of Slow knowledge in design thinking and practice.

Slow knowledge is a ground of thinking-sensing-acting-relating, from which to more comprehensively experience the now and more consciously vision the future. 'Slow' refers less to a speed than to a quality: a mental attitude and an active position that creates a deeper space for reflection, dialogue and engagement. It's a way of thinking holistically; it's a vehicle for investigation. And, it's a seeding process that can transform how we—individually and collectively—move toward more sustainable ways of living.

When applied in design, Slow knowledge yields new rhythms, forms and strategies within the systems, services, resources, and relationships that define life today and stand to influence the future. It encourages designers to explore a fuller spectrum of stakeholders and variables, the material as well as the immaterial. It nudges them to embrace an expanded palette of spatial and temporal tools. And it challenges them not to hone their skills in service to a culture of consumption, but instead to view themselves as vital contributors to a planet in transition.

At slowLab, we explore Slow knowledge through a framework of six core research topics. The following examples from slowLab's network begin to demonstrate the richness and diversity that Slow knowledge affords within and across those fundamental spheres of life. Importantly, we've chosen examples that are not only 'design' developments, but polydisciplinary approaches that we believe make important contributions to contemporary design discourse.

Slow Identity

A Slow approach to identity begins with awareness of self, context and connections to others: from the intimate scale of mind and body, to experienced environments and interpersonal relationships. It creates a bridge between people's inner and outer dimensions, helping to bring them into fuller resonance with the world around them. Much of this topic is immaterial; however, a beautiful example in the realm of physical objects is 'Metronome' by German interaction designer Monika Hoinkis. While a traditional metronome dictates a beat to be followed, 'Metronome' instead keeps time to the rhythm of the person who shares the room with it. The individual in this instance becomes the purveyor of tempo to the object rather than the other way around, enhancing awareness and accountability for one's presence.

AKE IT

SLOW IS NOT AN ANTIDOTE TO FAST, BUT RATHER A MUCH-NEEDED PARTNER

Slow Agency

This topic brings focus to the rights and responsibilities of individuals and communities to act independently of dominant systems, structures and practices, in the interest of personal and collective well-being. The creative intervention 'This Is Your Chair' created by Dutch product design student Angela Donkers is a simple example of how design can encourage people to exercise agency in even the most mundane aspects of daily life. Developed in the context of slowLab's 'Slow Lloyd' programme, Donkers made a backpack-pillow that could be used to strap together random objects found in the Lloyd Hotel to form a stool. By activating the latent potentials of locally-available space and materials, rather than only relying on the designs of others, the project stimulated hotel residents to (literally) take things into their own hands.

Slow Governance

An alternative, Slow approach to governance can be experienced through the growing collection of 'Public Fruit Maps' created by the Los Angeles-based art collective Fallen Fruit. These simply-designed, open source maps identify the locations of fruit trees growing in public urban spaces, encouraging people in cities to freely reap the harvest of their locality. This project uses fruit as a tool to promote advocacy for community management of common goods and more inclusive and cooperative ways of living. The artists say, "From protests to proposals for urban green spaces, we aim to reconfigure the relation between those who have resources and those who do not, to examine the nature in and of the city, and to investigate new, shared forms of land use and property."

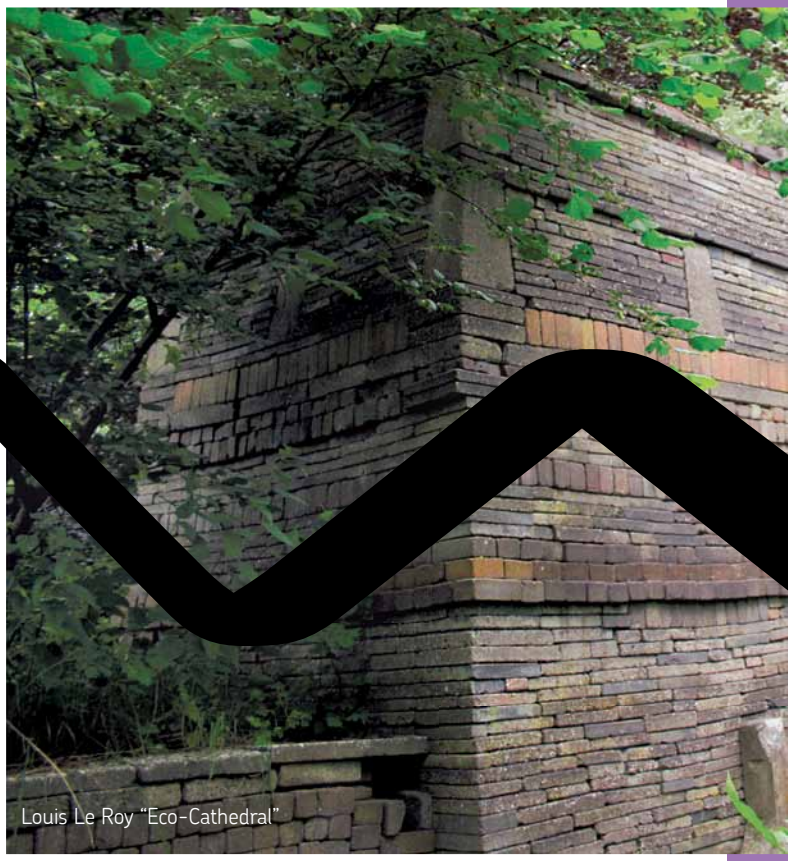
Slow Economy

Moving beyond the idea of financial markets as primary drivers of economic prosperity, Slower modes of economy range from simple (and popular) concepts like car-sharing to politically-sensitive initiatives like 'seed freedom' networks that directly challenge monopolistic, corporate interests. The project 'Edible Landscape - Outdoor Brewery' by socially-engaged designer Henriette Waal demonstrates how design can be a catalyst for new, localized networks of production and exchange. Waal originally created her project on the wild, overgrown site of a former water treatment plant near Tilburg, the Netherlands, with the goal of making the land itself "drinkable." Her research uncovered more than 50 amateur brewers living in the area, all working independently. Waal invited them to come together and collaborate around her public brewing structure, making those people's personal expertise more visible while reconnecting them back to the local landscape. Plants growing wild in the surrounding countryside were combined with rainwater to make a batch of "landscape beer" that was shared by the community. The project demonstrates how innovative configurations of personal know-how and overlooked common goods can have both tangible and intangible value, strengthening ties in a locality while bypassing the consumer marketplace. ➜

SLOWLAB

slowLab / Stichting slowLab Europe is a research platform for Slow design thinking, learning and practice. Based in the Netherlands, slowLab supports an international network of Slow thinkers and creative actors (designers, artists, architects, technologists, environmentalists, social theorists, economists, educators, and activists) who participate in its research, public presentations, publications, academic projects, and evolving dialogues.

SLOW



Louis Le Roy "Eco-Cathedral"

Slow Ecology

A more comprehensive understanding of ecology considers humans not at the centre of the universe, but rather as participants in complex systems and relationships. This idea is expressed in the 'Eco-Cathedral,' a project by urban visionary Louis Le Roy. Le Roy's first 'Eco-Cathedral' in the Dutch province of Friesland demonstrates a holistic approach to building that respects the unique rhythms and wisdom of the natural world. The project challenges dominant approaches to urbanism today that are based on short-term, anthropocentric notions of 'functionality' and 'efficiency.' In contrast, the Eco-Cathedral creates awareness about time as a condition for healthy and dynamic cooperation between natural and built environments; it is sometimes referred to as "a place where time regains space and space regains time." Le Roy, who died in 2012, proposed that the project be continued by others at least until the year 3000, and already the local municipality has signed up for the next 100 years.

Slow Pedagogy

Last, but not least, is a Slower approach to pedagogy, which offers open and collaborative forms of teaching and learning based on trust, cooperation, transparency, and mutual respect. Unlike top-down models of education, Slow communities of knowledge production are characterised by horizontal mentorship and facilitation, whereby every individual is an active and equally-valued participant. Processes of learning and sharing gain new dimensions when Slow methods and principles are at their core.

The ideas and examples presented here serve as an introduction to the rich offerings of Slow knowledge, demonstrating the spectrum of possibilities that can emerge when it is applied in design thinking and practice.

Above all, this article is an invitation to you, the readers of CRISP, to seek out and cultivate Slow knowledge in your own lives, localities and relationships. Whatever your role, within and beyond design fields, we challenge you to consider whether your current approach could be Slower. Are your processes and aims truly comprehensive and inclusive? Or might they still reside within unsustainable models, focusing on narrowly defined interests? Does your strategy only concern the (temporary) welfare of people directly engaged along a given line of production and consumption? Or is it part of a more all-encompassing (Slower) awareness of the people, places and resources that it impacts? How might it expand to embrace broader markers of prosperity, including the enduring health and well-being of communities and natural systems affected across larger stretches of space and time?

Angela Donkers "This Is Your Chair"

It's no small undertaking to apply this depth and scale of analysis to every project, but at slowLab we believe it's important to try, because actively exploring and striving to integrate Slow knowledge in design processes equips us with a greater breadth of understanding and a more robust set of capacities with which to navigate the complexity of our world. It opens doors of awareness and meaningful realms of experience. It stimulates creative practitioners and the communities with whom they collaborate into new areas of research and development. It generates unexpected, interdisciplinary partnerships. And, it moves us all toward Slower horizons, where creativity is allowed to flow freely into holistic and truly durable territories of well-being.

DESIGN BECOMES SLOWER WHEN IT'S SEATED WITHIN A MORE ALL-ENCOMPASSING AWARENESS

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Marc Hazzenzahl, professor of Experience and Interaction at the Folkwang University of Arts in Essen is an internationally acknowledged thought-leader on the topic of Experience Design. His book 'Experience Design—Technology for all the right reasons' was one of the first to provide insights in how technology can contribute to user well-being.

LET'S DESIGN PEOPLE HAPPY

Marc Hassenzahl

"There is no way of avoiding designing for happiness," says Marc Hassenzahl. "Happiness is a consequence of engaging in meaningful activities. Since most activities are mediated by things, design plays an inevitable and crucial role in shaping those activities. **The difference lies in whether this is done with or without well-being in mind."**

Designers have always been busy reinventing the world. While beloved and ridiculed visionaries of last century's modernism, such as Buckminster Fuller, focused on better houses, better transportation, better food, efficiency and practicality, we now focus on the social and emotional life of people — their psychological well-being.

We yearn to make people happy through design. Nevertheless, we have to be aware that while there once was a time when most techno-utopian suggestions were enthusiastically received, today's post-modernistic stance is less forgiving. There is ambivalence, there is scepticism, and there is a plurality of lifestyles to be catered for. The time of the "master narratives" has passed and post-modernism has left us a little confused and dazed, because now "anything goes" and all seems highly individual and relative. Under these circumstances, can we and should we, deliberately design for happiness? Or is it just a delusion of grandeur, a disquieting and outdated attempt to create a new master narrative? Isn't the best we can hope for to go on solving the more practical problems of life through sliced bread, machined coffee, and advanced driver assistance? Why not just let people appropriate the things we make for them in the way they prefer? They surely will find ways to increase their (un)happiness.

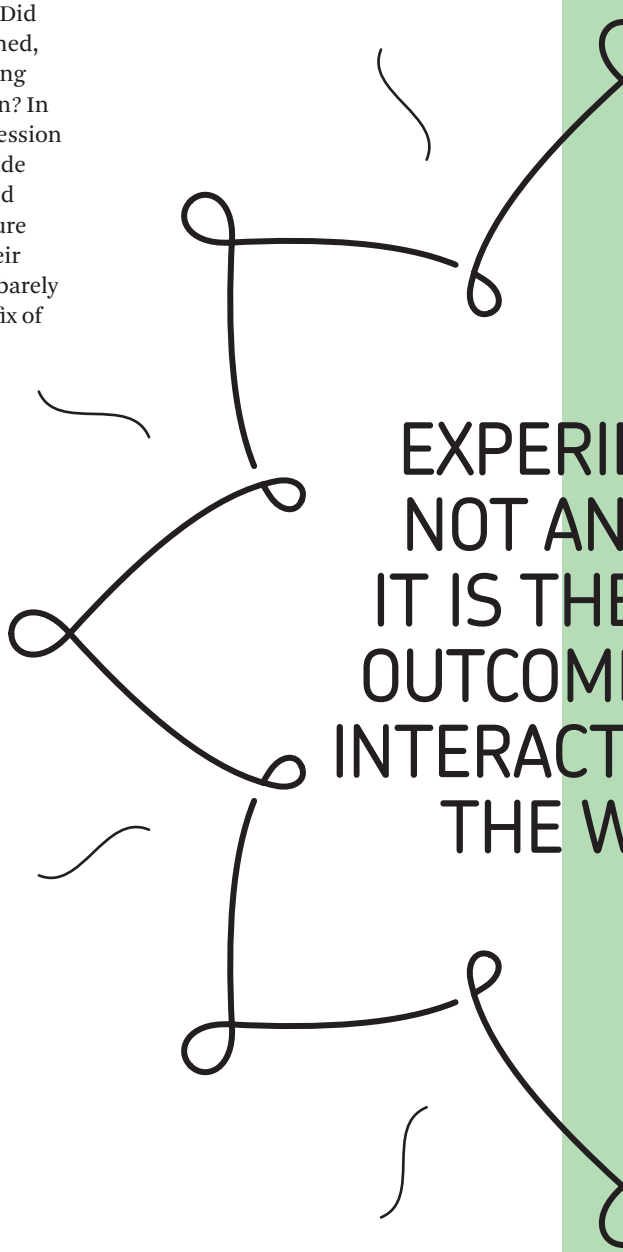
All these questions imply choice. A choice which we unfortunately are not privileged to have. The philosophy of technology is clear about the pronounced role that "things" play in human development. We are homo faber. We make use of the material world not only to survive, but also to carry out our own projects of self-realisation (Lee, 2009). In *Shaping Things*, Bruce Sterling (2005) made the point that even the accomplishment of breaking rocks and using fire is not human at all; it is prehuman. These were skills we inherited from a previous species, and turned out to be necessary preconditions to become humans. Goal-directed behaviour mediated through artefacts is our very mode of being: we have hands, brains, and goals.

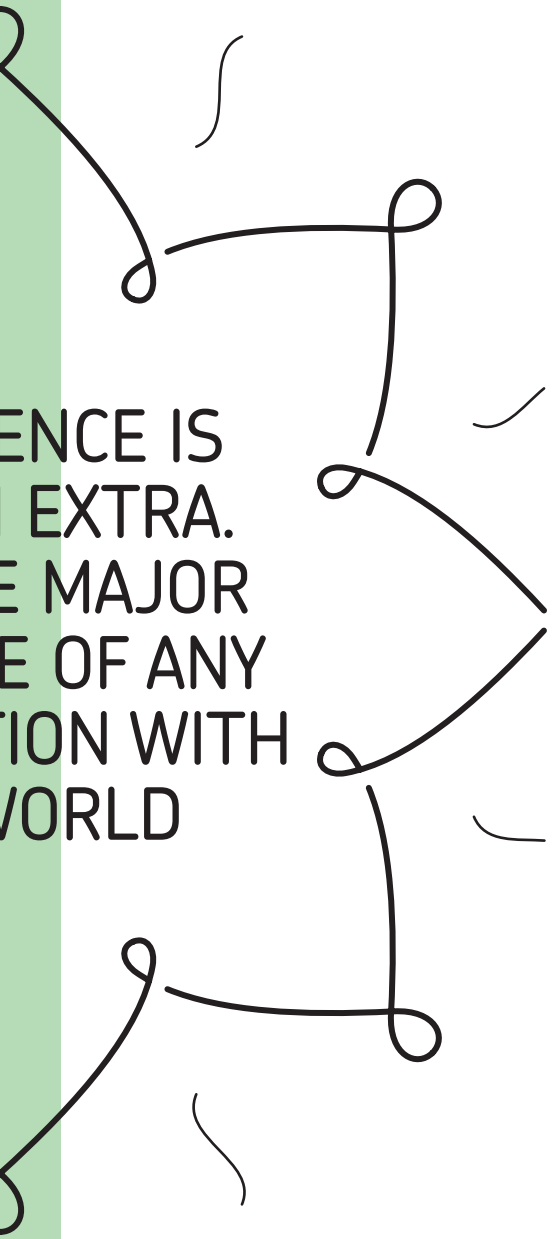
This makes the story of designing for happiness a simple one (e.g. Hassenzahl et al., 2013). Happiness is, among other aspects, a consequence of the activities — or better practices — we engage in. And each practice is inevitably shaped by the artefacts it involves. Take driving a car as an example. Driving elicits the experience of control, competence, a feeling of "oneness" with the car, all of which can be a real pleasure. A little bit of driving can add at least a tiny bit of →

transient happiness to our lives. Obviously, everybody tends to assume that the car itself plays an important role. The car is a crucial creator and mediator of the experience through its very existence and its particular design. Add, for example, driver assistance, such as adaptive cruise control, where the car does a little bit of the driving on its own, and the experience changes profoundly (Eckoldt, Knobel, Hassenzahl, & Schumann, 2012). The "oneness" is lost, suddenly the driver assumes the role of a passenger, and being driven is void of competence feelings. Whatever laudable practical goal was behind adaptive cruise control, switching it on inevitably destroys a potential for well-being. Of course, it opens up other ways to feel good, through contemplation and deep relaxation, good conversations or the option to enjoy scenic views. But the point here is that we cannot 'not' experience. Focusing on solving practical problems — what Evgeny Morozov (2013) calls, derogatorily, "solutionism" — does not free us from considering the potential impact this solution has on experience and well-being. To believe that Google's self-driving car, which obviously "solves" the "problem" of driving, is meaningful without sensibly addressing the questions of what to do instead of driving would be naïve. Google certainly has a plan, a plan which somehow will include us spending more time with their products. That's why we have no choice between designing for happiness or down-to earth practical problems. We can only choose between accepting the responsibility for creating meaningful experiences or not. I believe we should do so.

If we accept the responsibility for designing for well-being, at least for the moment, let's talk about the how. Martin Seligman, a prominent figure of the science of well-being, developed a series of interventions to "build happiness" (Seligman, Steen, Park, & Peterson, 2005). One example is the "gratitude visit". Think of a person who has done something for you, but has never been properly thanked. Write a short testimonial, call up this person and make an appointment, without telling him or her what it is all about. During the meeting, you read the testimonial out loud. "Everyone weeps when this happens," says Seligman in his 2004 TED talk. He tested it with 80 people and found that this intervention "produced" a month-long increase in happiness (compared to a placebo-controlled group of people).

While I admire the rigor of Seligman and colleagues' work, I find the gratitude visit crude. Let me venture into a bit of a design critique. Obviously, the visit is a designed activity, creating a positive experience with a significant and lasting effect on well-being. But I can hardly picture myself doing it. It reeks too much of "inspirational quotes", "self-help", religious mash-up. Will I ever find time to do this? Then, I start to worry about how my "target" may respond and feel. Will he remember what he has done for me? Did he help me on purpose or was it unplanned, leaving him with the guilty feeling of being thanked for something for no real reason? In fact, Seligman never measured the depression scores of the people to whom the gratitude was expressed; this may have skyrocketed after the visit. Now, I am starting to picture "happy heads" aggressively pursuing their well-being by gate crashing people they barely know, just to get high on their monthly fix of gratitude. Plenty can go wrong.





I have no ready-made idea to counteract this. But central to our approach in the Experience and Interaction Studio at the Folkwang University of Arts is the creation of well-being, not through extra activities, but through fine-tuning existing practices. It's the mundane that should be rejuvenated with more happiness. Coffee making, TV watching, a family dinner, the daily commute — any everyday practice can be understood as a possibility to feel closer to your loved ones, to feel competent, autonomous, stimulated, popular, secure, and healthy. Artefacts can be put in place to subtly shape activities and experiences. In fact, the careful consideration of the experiential consequences of designed things, how they might impact activities, reshape experiences, create or destroy meaning and happiness, must become a standard — no matter whether you consider yourself a "happiness designer" or not. Experience is not an extra. It can't just be turned off. It is the major outcome of any interaction with the world.

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THE CRUCIAL ROLE OF CONTEXT-AWARENESS WHEN DESIGNING FOR WELL-BEING

Marc Hassenzahl points out that designers need to carefully consider the right time, place, and way for their interventions to have the desired effect on well-being. Evelien van de Garde and Dirk Snelders discuss this in more detail in their article on the context of PSSs.

Modern technology and modern design is more akin to applied science than to a craft. Computer technology is a form of wizardry, unthinkable without modern science. This will not change when we start to design for well-being. However, the referent sciences change: psychological and sociological perspectives will become even more important. However, while these theories, methods, and insights are certainly of high quality, the interventions proposed by these disciplines — if proposed at all — lack subtlety. It is one thing to know that expressing gratitude now and then increases well-being, but quite another to find the right time, place, and way to express gratitude. To answer the latter is the strength of design. It requires a deep understanding of meaningful situations, empathy, and attention to detail. I believe that while psychology is crucial to understand well-being, designers' skills are needed to put this understanding into action. To be successful, though, requires an emphasis on the intangible, conceptual aspects of artefacts. Of course, there is material, there is style, there is form, there is construction, there is beauty, usability, and functionality, but at the end of the day, a chair remains a chair remains a chair. Designers' common obsession with details of form and presentation must be complemented by an obsession with details of meaning and interaction. In fact, CRISP's notion of product-service-systems is a first, promising step. It acknowledges the importance of the intangible, the experience, the activity that weaves artefacts together into meaningful systems. This is a necessary foundation for well-being-oriented design. Let's go a step further, take on the challenge, and become confident experts of increasing human well-being through a carefully designed material world — independent of firms, markets, money, and consumerism. Let's 'design people happy'.

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Merijn Hillen studied Industrial Design Engineering in Delft and is a senior strategist at Fabrique. She deals with clients such as Artis Zoo, Allerhande and Rijksmuseum. She's always looking for the right balance between pushing the boundaries to create meaningful experiences for users and consumers on the one hand, and the interests of the client on the other. She regularly publishes about the design profession.

TO WELL ~~FROM ILL~~-BEING

Hospitals in transition

Merijn Hillen

Health and sports apps, preventive scans, mindfulness, and super food — **we live in a zeitgeist of the quantified self and perceived self-control of our well-being.**

Hospitals and care centres, of course, play the most fundamental role in our reduction of ill-being: for a long time this has been their core focus. Today, however, we see an increased awareness of the positive effect of a total 'healing experience'; an experience based not solely on the quality of care, but supplemented with physical, environmental effects, communication, and services. Unfortunately, most hospitals lack a good understanding of how to bring all these aspects to the same level of quality, which leads to incoherent experiences. A hospital might, for example, have a beautifully designed birth clinic, but, if the car park is miles away and a woman in labour can be sent away after arrival because the clinic is already full, her experience will still lead to a negative valuation. Such incoherent experiences signal a missed opportunity. Firstly, a coherent focus on well-being has a positive effect on the experience of patients, visitors, and staff. Secondly, the intended effect of the coherent experience plays an important role in the branding and positioning of the hospital. This opportunity to profile themselves is especially valuable for regional hospitals in times of the sector's privatisation.

Hospital innovation: a wicked problem

But it is difficult to create better experiences and innovate because of the variety of target groups, the difficulties of hospital logistics, and the strict boundary conditions in place in this sector. Worse yet, no one is responsible for creating coherence between all these aspects of the hospital. Together, all these factors place the innova-

Schiphol airport shows that it is possible to create a qualitative interaction throughout the entire airport, despite the complexity of conflicting concerns.

tion of hospitals in the category of so-called 'wicked problems'. When we look at airports, which are similarly complex environments, we see that, despite the conflicting concerns, it is possible to design a coherent experience. In response to the growing competition from smaller airports hosting low-cost carriers, large airports were forced to create additional value through a high-quality, service-oriented, experience. For Schiphol airport, for example, this led to a shared experience-driven ambition. From security flows to retail, from short-stay hotels to self-service check in, the environment they created has a consistent quality of interaction.

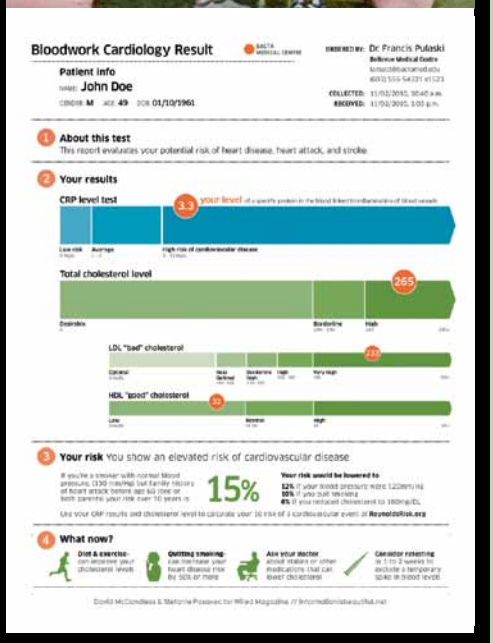
Societal expectations relate to dissatisfiers

It is these well-designed public areas like airports that lead to our dissatisfying experience in hospitals. The new standard of free Wi-Fi, great coffee, and luxurious retail at airports and railway stations makes the current standard of services in hospitals even harder to understand: until recently, we weren't even allowed to use our mobile phones. Most hospitals still sell us cards to watch TV, offer deep fried food in cafeterias and have lousy gift shops. Wouldn't it be highly logical that the place primarily concerned with healing people, actually focused on broadly offered well-being? I believe the future of hospitals lies in bridging the gap between the current narrow focus on care-giving and a more service-oriented focus on well-being that lives up to society's expectations. The key, I think, lies in designing a coherent experience based on well-being for patients, family, and staff.

Designing hospital interaction

The question, therefore, remains: how can we design this experience? How do we create a strong connection between the health product, environment, communication, and services? I believe designers can play an important, three-part role:

1—Develop sustainable ambitions on the interaction between the hospital and patients. These ambitions are linked to the hospital's brand values and societal status expectations and are best created in cooperation with the hospital board, doctors and hospital architect.
2—Implement the interaction vision throughout the various domains of the hospital.
3—Design special, highly visible manifestations of these ambitions.



1—REMAINING YOURSELF

Imagine you could bring your own pillow and bed linen, or choose the artwork in your room: it would make you feel more at home. What if a hospital would offer the opportunity to play music for patients who stay in the hospital for a long period of time?

2—KNOW WHERE YOU STAND

- Offering patients a balcony creates some private space for them.
- What if the hospital offered fun-looking education? It could help (young) patients understand their illness and would offer informative distraction.

EXAMPLE

Zaans Medisch Centrum, the Netherlands

The Zaans Medisch Centrum (ZMC) will be located in a new building designed by Mecanoo architects. This opened up the opportunity to align all aspects of the hospital in order to create a coherent experience of well-being. Fabrique developed the overall ambitions that apply to all aspects of the hospital based on ZMC's mission and values: from interior design to wayfinding, from communication to patient interaction.

MANIFESTATIONS
Play area | Bas | Identity | Education | Special balconies

AMBITIONS
Know where you stand | Positive distractions | Relating to the outside world | Remaining yourself

PERSONALITY
Competent | Challenging | Confident | Concerned

VALUES
Hospitable | Innovative | Reliable

MISSION
Bridging the gap between sickness and health

1—REMAINING YOURSELF

Relates to special office hours offered to wimmigrants, the ability to choose when food is served, to the opportunity to adapt parts of your room, such as the lighting or art, the ability to bring your own pillow and to have a private balcony.

2—KNOW WHERE YOU STAND

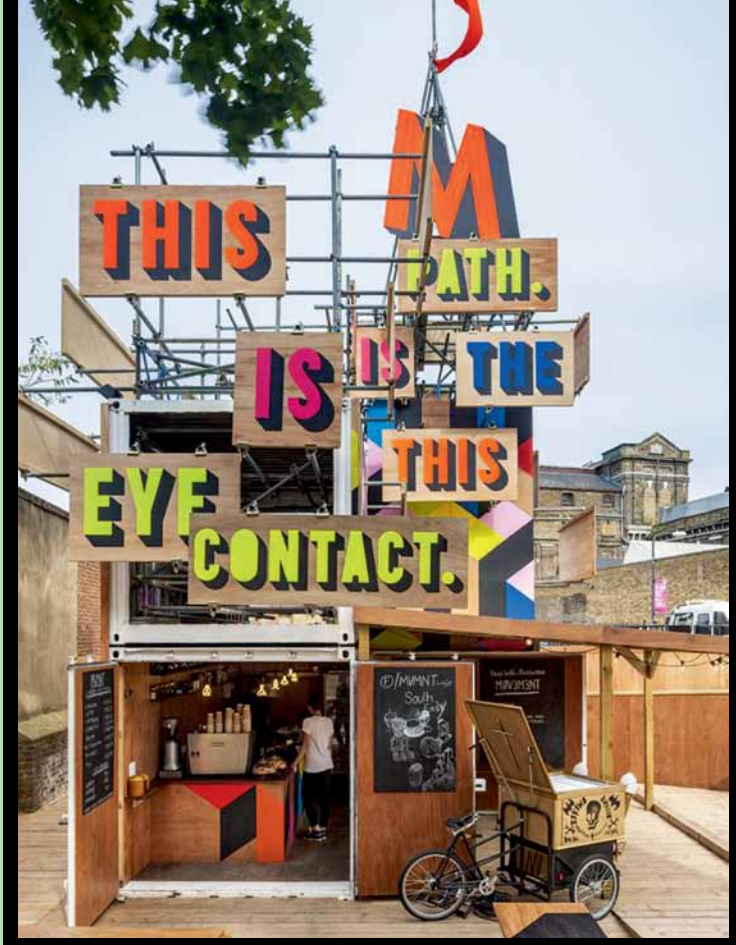
Relates to wayfinding as much as it does to very clear communication, or guiding expectations about waiting times.

3—RELATING TO THE OUTSIDE WORLD

Expressed by the choice of retail, variety of available food, and positive distractions offered.

4—POSITIVE DISTRACTIONS

Introduce lightness into the hospital through unexpected or unconventional interventions in the interior and exterior.



3—RELATING TO THE OUTSIDE WORLD

A bar outside the hospital will bring some life into the area. Urban farming is an attractive activity for patients and neighbours.

4—POSITIVE DISTRACTIONS

A bed curtain with an unexpected drawing on it, a parking place that is fun to look at, or unconventional wayfinding; these can all bring some lightness into the hospital.

Daring is caring

Shifting our focus from ill-being towards well-being demands great leadership, shared ambition, and courage. It takes courage to broaden the point of view and not focus solely on the core product of caregiving, and to start thinking in a designerly way. It takes courage in absence of a solid benchmark in the sector to convince traditional thinkers to think differently. It takes courage to create a firm budget for interior, communication, food, and coffee.

In the short term, it might feel that money spent on these items results in less money being spent on the core product of caregiving. But I believe that hospitals that know how to deal with these tension areas, with a strong vision and the will to make bold statements by following their ambitions, will be at the base of the future of health care.

Ambitions belong to people

Designers can help in developing solid and distinctive ambitions that result in coherent experiences of well-being. But it will always be the staff who make the greatest difference. For example, in the case of the woman in labour who was sent away from the birth clinic, after walking all the way from the far-distant car park. Right before she and her husband entered her car, a gynaecologist hurried all the way downstairs to call them back: "Wait! In MY hospital, we do NOT send away women with 7-centimetre dilation." Half an hour later, the gynaecologist not only delivered my lovely niece, she single-handedly turned the hospital's incoherent experience into a positive one. Great changes might lie ahead, the environment and services might take a leap forward. but a person's hospital experience lies primarily in the hands of every great person working there.

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An inspirational test bed enables textile developers to understand the multi-disciplinary opportunities and challenges of creating Smart Textile Product Service Systems.

THE CAREGIVERS' VOICE

Martijn ten Bhömer, Bianca Pastoors, Corrie Aarts, Malou Verheijen
Interviewed by Christine De Lille

To provide the caregivers' perspective on being involved in design for well-being, Christine De Lille spoke to care professionals at De Wever, an institution which specialises in care for elderly with dementia.

Together with De Wever and other CRISP STS partners, Martijn ten Bhömer developed two Smart-Textile Services in the context of elderly care. This form of bottom-up collaboration with different partners is second nature for designers, but for care professionals it is still quite novel to work with designers.

As Bianca Pastoors, a physiotherapist at De Wever, points out, "People who work in care are currently quite passive. Their attitude seems to be: 'Come to me when it's finished.' I became involved in the project because I wanted to do something that was not directly related to my discipline; technology is not really my expertise. I noticed that designers don't really understand dementia. They have a lot of ideas of which I thought from the beginning: this won't work. That's why I think it is so important that people in care - physiotherapists, nurses, managers, and volunteers - are involved in projects like these, where research plays an important role. As we co-develop the product, we can be involved in the design process and put the focus on what we need."

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WE CAN BE INVOLVED IN THE DESIGN PROCESS AND PUT THE FOCUS ON WHAT WE NEED

"For me," says Martijn, "care for the elderly suffering from dementia was something far removed from my experience as a designer. You always have certain assumptions in mind, which often turn out to be different in reality. That is why I wanted to connect to the context, to experience the context as much as possible. With this approach, you become aware of a different world, quite unlike the academic world. I joined people from De Wever in their daily practice, in different departments, participated in activities with their clients, and tried to implement the prototypes during the design process as much as possible in the real PSS context. I wanted to make sure that it was a shared project for which all of us felt ownership, which means you have to trust the expertise that already exists within De Wever. You develop the PSS step-by-step, together with the people who will actually use and implement it."

"One thing that became apparent while planning," Bianca notes, "is the difference in perspective. In care, most things are arranged rather ad hoc. I thought the projects would be finished relatively quickly, but after a meeting with Martijn I realised, oh right, this is research. He would prepare these meetings with a list of topics and questions, which turned out to be really helpful, as they forced us to stop for a moment and reflect. He would ask us what everybody had been up to, so we would discuss it before next steps were taken. This helped to reduce the complexity and forced us to go back to the basics for a moment."

Corrie Aarts is a project manager at De Wever, "In projects I have been involved in, it is often the case that you start something and, along the way, notice that it does not work. So you have to continually adapt your goal. You learn this by doing many projects. You sometimes have to adapt, but that is also the strength of the project. That is one thing I learned from this project, this approach of switching fast, learning from other disciplines, and thinking out of the box. I remember that I joined the project and I really had to get used to the way of working: what had I gotten myself into? Together with Malou, another physiotherapist at De Wever, I visited some of the CRISP STS events, for example, the Careful Designs symposium at Waag Society and the review sessions to get a better idea of the bigger picture, to better understand the academic world. I have now met other people, for instance, members of the G-MOTIV project, who helped us initiate a new project about humour and dementia. People often don't realise what is happening and now we have a way in. That is a valuable connection for us."

Bianca—"We now know how we should approach things, how to plan a design and research process, for instance updating academic and ethical committees and asking the family members of our clients for permission. What changed for me as CRISP progressed is that I am more aware of recent developments. I am more aware of things outside my area. It doesn't only have to do with my discipline."

Creative leader, Dorian Peters, and director, Rafael Calvo, from the Positive Computing Lab at the University of Sydney propose that modern, digital technologies have the potential to support people's psychological well-being.

DESIG POSI COMP

Digital experience

Dorian Peters

As a species, we pride ourselves on creating innovative technologies that continually improve our lives, so the question for technology designers is this: **why isn't all the new digital technology we've created making us any happier?**

How much of your experience is mediated or augmented by something digital? Digital devices permeate every inch of our daily experience, from work and play, to intimate relationships, but are we any the happier for them? Economists have found that large increases in national wealth have not led to large increases in national well-being. Remarkably, the same can be said for digital technology. It has yet to make us significantly happier, and an important question for designers is why? Moreover, how can we shape a future in which digital experience actually contributes significantly to worldwide well-being? We believe the only reason digital experience does not contribute to net improvements in our happiness is that we've never designed or evaluated it with psychological well-being in mind. Instead we've designed for proxies, such as efficiency, productivity, pleasure, or satisfaction - surrogates that have proven inadequate indicators or determinants of well-being.

In the past decade, the idea of measuring well-being has marked a turning point in the history of economics, the impact of which can now be felt reverberating through the technology industry. After all, if politicians can measure well-being to inform policy, why can't engineers and designers measure it to inform design? Most familiar to consumers is our recently acquired penchant for "self-tracking." According to a 2013 Pew Research Center Report, 69 percent of adults in the US track their own or a loved one's health, and 21 percent of them do it with technology (for example, using smartphones or wearable sensors). This increasingly includes mental health factors such as moods and stress. Our technologies have already begun to play a role in collecting the data that can inform a new era of design for well-being. But data collection and tracking are only one part of a path towards greater understanding.

GNING TIVE UTING

that helps us thrive

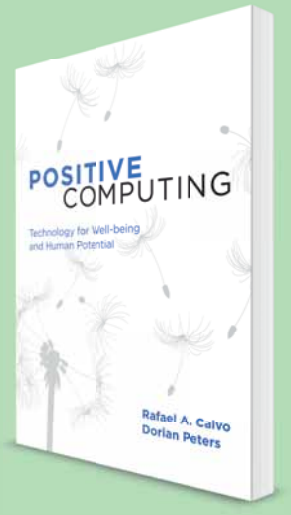
& Rafael Calvo

READ MORE!

PROJECT INFORMATION

In their forthcoming book, Rafael Calvo and Dorian Peters look more deeply at the multidisciplinary theoretical foundations and methods available for work in positive computing, as well as at pioneering work in the field.

R.A. Calvo and D. Peters. (2014) "Positive Computing: Technology for well-being and human potential" MIT Press.



Why is understanding the impact of technology on our psychological experience so important? Simple: our emotional experience and our digital experience are too closely entwined. Where computers once were mammoth machines that only experts could use, we now wear them on our bodies and interact with them when we're working, running, learning, creating, dating, and dreaming. Even in developing countries, the majority of people own a mobile phone, and as their access to technology continues to grow, they will be able to benefit from any lessons already learned by those in other regions. There's really no way to effectively tackle the well-being of the modern human without including technology and recruiting it as an ally in our efforts to increase happiness and improve lives.

Well-being in the digital design cycle

While niche products and apps have emerged to target well-being directly, for example, through support for mindfulness meditation or cognitive behavioural therapy exercises, we believe a revolution in design will only come when *all* digital experience takes well-being into account. Imagine a social network that fosters socio-emotional skills such as empathy, or a word-processor that supports flow. Imagine a world in which people don't associate screen time with stress, distraction, addiction, or compromises to intelligence, but instead with personal development, joy, focus, affiliation, and meaningful activity. To make this vision a reality, digital design will need to be informed by theory and research in well-being science, and the digital design cycle will need to include methods for evaluating impact on psychological well-being. We have called this emerging area (the research and design of technology to support psychological well-being) "positive computing". In order to take up this challenge with sufficient rigour, we need to ensure that a number of principles are in place.

Prove it

When it comes to designing for well-being, there's no room for reliance on instinct or assumptions, so research must be sought and conducted to rationalise our efforts. Just as genuine interest in sustainability has led to "greenwashing", we can already see examples of what might be called "well-washing" or the exploitation of the interest in well-being for unfounded claims and commercial gain. To distinguish genuine work in positive computing from "well-washing," we need to base our work on theory and existing psychological research, as well as subject our own designs to empirical evaluation. As Pohlmeyer and Desmet state in the introduction to this issue, "the success of a design for well-being is assessed by its respective impact on people" so we'll need to integrate new evaluation methods drawn from psychology and the mind sciences into design to demonstrate this impact empirically.

By way of example, take Echo: a smartphone application for reflecting on everyday experiences created in collaboration by researchers at Xerox-PARC and the University of Santa Cruz. The research team evaluated impact using four separate validated metrics from psychological research: the Subjective Happiness Scale, the Satisfaction with Life Scale, Psychological General Well-Being Index, and the Mindfulness Attention Awareness Scale. ➜

APPROACHES TO POSITIVE COMPUTING

In order to facilitate dialogue in the area, we have identified a number of approaches to positive-computing design.

APPROACH	INTEGRATION OF WELL-BEING
None	Well-being is not systematically considered in the design (most technology to date).
Preventative	Obstacles or compromises to well-being are treated as errors and trigger redesign.
Active	Technology is designed to actively support determinants of well-being in an application that has a different overall goal (e.g., email or social networking tool designed to support users' well-being).
Dedicated	A technology that is purpose-built and dedicated to fostering well-being in some way.

EXAMPLES

PREVENTATIVE DESIGN

Facebook has approached the prevention and resolution of conflict by gathering together researchers in the fields of empathy and compassion. Since 2011, they have organised an annual "Compassion Research Day" and implemented what they've learned with a view to fostering empathic perspective-taking in the context of disputes.

ACTIVE DESIGN

In response to the growing frustration over digital experience as being fragmented and distracting, both Microsoft and WordPress have added special features to their interfaces which allow the user to focus more effectively. In MS Word, it's called "Focus View" and in WordPress it's called the "Distraction-free writing" button. These design changes better support engagement and flow - well-being determinants related to the act of writing.

DEDICATED DESIGN

The Gratitude Journal App by Happy Tapper is one of many apps on the market that provides users with an easy way of recording things for which they are grateful. These apps are based on research that shows recalling things you're thankful for at the end of each day increases psychological well-being. Creating a technology to encourage a proven mental health intervention is one approach to dedicated positive computing design.

Another example is the mobile game-like experience SuperBetter. In creating it, game designer Jane McGonigal and her team drew on the work of Barbara Fredrickson to support people in building up mental, social, emotional, and physical resources. A recent randomised controlled trial study of SuperBetter — conducted by the University of Pennsylvania — showed that playing SuperBetter measurably improves mood, decreases symptoms of depression and anxiety, and increases life satisfaction. McGonigal focuses specifically on games for social good, and SuperBetter is one of the earliest empirically evaluated commercial examples of positive computing.

Designers and engineers are not psychologists or neuroscientists, so they will need to partner with mental health professionals and social scientists to ensure the integrity of their efforts. Where we work at the Young and Well Cooperative Research Centre in Australia, a national initiative to support the well-being of young people, our project teams include programmers, user experience professionals, clinical and research psychologists, sociologists and medical specialists, as well as the young people whom the design intends to serve.

Zooming in

As much as news journalists are fond of hasty conclusions when it comes to the impact of technology, it's naive to suggest that a digital system as complex as, for example, Facebook, or a multiplayer video game, is simply "good" or "bad" for well-being. One system represents a large number of actual experiences. Two people will use Facebook in very different ways with different impacts on well-being. Likewise, as research on cooperative shooter games has shown, a game can both support cooperation and increase aggression at the same time. We need to be wary therefore of overly simplistic analyses and, instead, seek to unpack those aspects which are positive or negative for well-being in what contexts, when, and for whom.

To make this task more manageable, we have suggested breaking the problem of well-being down into more actionable chunks. Research in psychology has shown us there are a number of well-being determinants, things that reliably increase well-being such as autonomy, gratitude and relatedness. We suggest focusing on these determinants as a way of defining goals that can be operationalised.

For example, in our "Happy CAMPER" workshops, we focus on six determinants: Competence, Autonomy, Meaning, Positive Emotions, Engagement and Relatedness" which are drawn from the work of psychologists Richard Ryan, Edward Deci, and Martin Seligman. In these exploratory sessions, we help multidisciplinary teams tease out effects of technology use on each of these factors and, in the process, uncover tacit perceptions, concerns, and innovative design ideas. There are of course other determinants and which of these designers choose to focus on will be based on the project.

OUR EMOTIONAL EXPERIENCE CAN NO LONGER BE SEPARATED FROM OUR DIGITAL EXPERIENCE

Zooming out

We also need to keep the larger picture in mind which ideally includes the supply chain and full lifecycle. After all, what good is a well-being technology made in a sweatshop? We envision multidisciplinary projects that connect different levels of well-being-related efforts. For example, a mobile-device project might combine positive-computing design methods and values-sensitive design with sustainable industrial design and manufacturing. A movement toward holistic multidisciplinary approaches has the greatest promise in promoting well-being from all its angles.

Holism can also be served by a PSS approach. Since user needs are increasingly met through combinations of technologies and services, focusing only on one part or touch point may neglect important well-being ramifications that emerge elsewhere. Moreover, continual improvement is necessary since our knowledge of technological impact on well-being is still so nascent, and may remain so forever as technologies change so relentlessly. Therefore, we must be able to react to user needs that emerge through use, and continually improve them in response.

A future of healthy minds

Today, many of us struggle to escape the constant barrage of notifications, emails, and the always-on culture of pervasive connected experience. Surely, humans should be well, not in spite of the technology we create for ourselves, but because of it. Engaging technology design in a quest to better understand ourselves and to use that knowledge to improve our daily experience has the potential to effect population-wide positive change. Imagine a future in which our digital experience helps us develop resilience, engagement, mindfulness, connectedness, and compassion? Sure, this is ambitious, but then we did get to the moon, and when it comes to the well-being of our species, we think it's safe to say: 'failure is not an option.'

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THE DARK SIDE OF JOY

How negative emotions can contribute to our happiness

Sara Ferrari & Steven Fokkinga

In October 2013, Italian designer Sara Ferrari started a six-month collaboration with Steven Fokkinga, a Dutch design researcher in the CASD project. They explored the use of negative emotions in rich product experiences, which led to three concepts.

Steven— You had been happily working as a designer in Italy and London for eight years. What made you decide to come to Delft and work with a researcher?

Sara — I had actually never heard of Delft before! Working in both England and Italy, I realised there were quite a few differences in our approaches to design. In Italy, designers place great emphasis on craftsmanship and making things beautiful, while in Northern Europe the focus is more on understanding the user, and conceptual design. I wanted to combine these two approaches. Italian design professor Roberto Verganti suggested I go to a place where research and design come together, and recommended TU Delft. I contacted Paul Hekkert, who suggested I start working with you.

Sara— What did you think when you were asked to work with a designer?

Steven — I was excited. As design researchers, we develop knowledge and approaches to design, which means our 'users' are essentially the designers. Just as we advise designers to get to know their users, we in turn should spend time with designers. At our university, we work a lot with design students, but this relationship is different. These students are still learning design and are inclined to immediately try out new approaches without first challenging them from their personal design experience. Experienced designers, on the other hand, already have certain approaches and know what it's like out there in the real world, which leads to some good debates.

Sara— Why are you researching negative emotions in design?

Steven —I have long been interested in how man-made things can inspire human experiences. When I was studying design at Delft, I got interested in how movies and other art forms can evoke such strong experiences; could consumer products do that as well? Looking at the differences between the two, I noticed that movies, books, and music almost always use some kind of negative emotion — fear when reading a thriller, anger directed at the movie's villain, or sadness when listening to gloomy music — whereas products only try to evoke positive emotions. As a result, products miss half of human emotions. Many psychologists and philosophers argue that negative emotions are just as important for well-being as positive emotions. I wanted to see whether functional products could also evoke negative emotions, but in a pleasant way, just as movies do.

Steven—What did you think when you first heard about negative emotions in design?

Sara — I recognised its potential from the beginning! I have always felt that negative emotions have an important value. When I'm under the stress of a deadline, I am more productive, so I sometimes impose deadlines on myself as a strategy. A slight feeling of depression can help you analyse the world from a distance, and to see things in a different light, which makes you more aware of life in general. In that way, these negative emotions make me happier. I wanted to use these ideas in my work somehow, but I had never tried or thought about how I might achieve that. I was thrilled when I found out someone was actually researching the same topic.

Steven—When we first started to work together, how did you experience the process?

Sara — At first, I was lost. I thought that doing design research meant questioning what products mean to people, and how this meaning might change with time and within a certain culture. But it's not like that: academic research has a lot to do with creating methods and writing papers; it's about creating knowledge with less focus on how it could reach designers like me. The most challenging part of the project for me was to find a way to translate your research so that I could use it in my design process. I started by reading the papers you had written, and sketching some first ideas based on them. However, the process really took off when we started having long conversations about products, experiences, other design projects, as well as working sessions in which we explored product ideas together. ➜

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WHY INNOVATION SHOULDN'T WAIT FOR VALIDATION

Sara Ferrari and Steven Fokkinga's collaboration combined the strengths of a researcher and a designer. In Katinka van der Kooij 's article, she discusses some benefits and challenges of such forms of collaboration.

EVERY GROUP OF DESIGN RESEARCHERS SHOULD HAVE A DESIGNER-IN-RESIDENCE!

Sara — What about you? How disruptive was it to work with a designer?

Steven — It was inspiring to see from close up how a designer works and thinks. You usually start thinking about a specific product, and what that product means in people's lives. In Delft, we increasingly consider the effect you want to achieve first — such as a certain experience or the effect on people's well-being — and only then do we start thinking about what kind of product, service, or product-service system would be best to achieve that effect. When we started out, you were confused about why I wasn't talking more about products, and I wondered why you kept talking about specific objects.

Steven — What are the results of this collaboration?

Sara — I was euphoric when, after several iterations of designing, evaluating, and discussing, we found our starting point: "Emotional paradoxes!" An emotional paradox combines a specific negative emotion with some kind of benefit, such as "the excitement of distress," or "the fun side of annoyance." We explored this concept in three ideas: a piggy bank that makes people more aware of the notion of saving, a set of shot glasses that make people have fun, and a calendar that emphasises the beauty of passing time.

Steven — What role did the emotional paradoxes play in your design process?

Sara — I realised that products can take on a new role: they can serve as carriers of experiences and activities rather than purely being objects of desire and attachment. This is an important change in thinking we have to make when we design for well-being. Take Mr Piggy, the piggy bank, for instance. It's made of plaster and has been designed to eventually break. When it is empty, it is stable, but when it fills up, it gets more and more wobbly and eventually, when almost full, it tips over and shatters on the floor. I think that Mr Piggy's self-destructiveness highlights that, once a product has served its purpose, given the right experience, the object itself does not have to remain.

Sara — How do you see the negative emotions working in Mr Piggy?

Steven — Everyone is familiar with the image of someone saving money with a piggy bank and then, one day, smashing it to see how much they saved. But in that experience, there is excitement only at the very end. With Mr Piggy, each time you save a coin could be the last. This loss of control causes anxiety, but also adds a thrill: it really makes that moment of dropping a coin more significant. Another thing I like is that people will have mixed feelings about the piggy finally shattering: on the one hand, it means they have lost an object. But it also means they have finished saving, and can now spend the money on their goal. I think it can help people reflect on the role money plays in their lives.

Sara — Were you happy about how your research was translated into products?

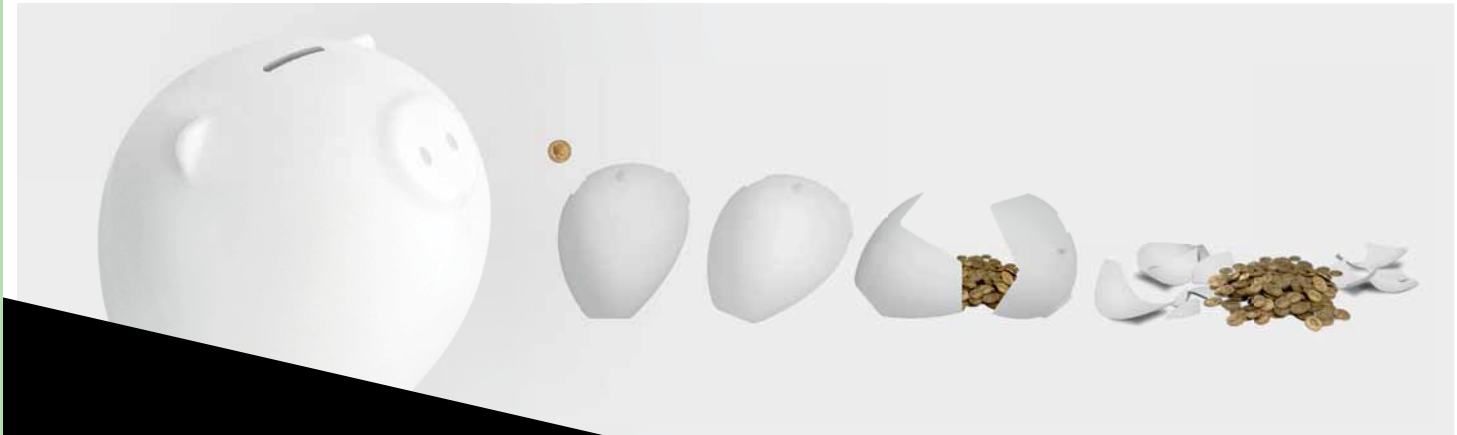
Steven — Yes! I noticed during the project that we, as experience design researchers, sometimes focus primarily on the conceptual part of the design and less on the detailing and the materialisation. It was nice to see how the concepts became better and more concrete with each design iteration. In the first versions, the piggy bank was made of porcelain, but then you came up with the idea to make it from plaster — a cheap and fragile material. That was not just a manufacturing or cost decision, it also changed the meaning of the product — people would find it easier to give in to the prospect of shattering an object made of plaster, also because they could still use the broken bits as pieces of chalk. A lot of the product experience is in the details.

EXTERNAL LINKS

BACKGROUND INFORMATION

Movie
http://vimeo.com/103919271
http://vimeo.com/103919605
http://vimeo.com/103919606

Sara Ferrari & Steven Fokkinga
www.studiolab.ide.tudelft.nl/studiolab/fokkinga
www.saraferraridesign.com



Mr Piggy Perspective — a rendering of Mr Piggy, an unstable piggy bank designed to break when full of coins.

Steven—You are now back on working on your own projects again. What will you do differently in your work after this experience?

Sara — My experience in Delft was proof for me that research can actually be translated into products, and can help to create richer experiences for users. I'm now even more motivated to adopt a human-centred approach, and talk and read about research. As for the products, we are working to bring them to the market! Alessi has picked up one of the products: the Dot. calendar. The other two are being considered by other companies.

Sara—Are you thinking differently about research and design?

Steven — What I took from our collaboration is that you should not instruct designers with absolute knowledge or approaches. You have to find ways for them to play with it and make it their own. I would like to keep working at the crossroads of research and design, as we have been doing in CRISP. I also think that every group of design researchers should have a designer-in-residence!

Glasses steel version — a rendering of "Alla Goccia" glasses, showing the little coasters in the three different designs.

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EMPATHIC A

Heather Daam & M

There is a man in a flower shop. He walks slowly, with deliberation. His gait is careful, his feet shuffling as he takes small steps forward, continually trying to maintain his balance. His knees are bent and barely move.

With hunched shoulders and a crooked back, he searches the shop for some flowers, but he can only see them with difficulty. At the counter, his stiff fingers struggle for some time with the small coins. He is embarrassed when the cashier points out he is ten cents short of the correct amount.

The man is in his early twenties and a participant in an Empathic Adventure. His physical limitations are the result of the ageing suit he is wearing; a suit we designed as design researchers at Design Academy Eindhoven. The small blocks underneath his feet, the weights around his wrist, the rigid gloves, the blurry glasses, the earplugs; all the elements of the suit work together to make this an authentic older person experience. What makes it even more authentic is that the entire experience is a re-enactment of the real story of Betty getting groceries, told to us through the suit, an audio track, and a task. We spoke to Betty to better understand her world and experience and, as a participant, you're no longer a passive observer, but instead you're transported into her world and get to experience it from her perspective.

Although an ageing suit is a great tool to demonstrate the physical limitations older people face, it often leaves out the psychological aspects: the thoughts, emotions, and motivations of people. These are just as important or perhaps even more so when designing mobility solutions for older people. With our approach, we try to go further. In addition to the suit, our 'Empathic Adventure' requires participants to complete an authentic task as well as listen to a soundtrack which addresses the psychological aspects of ageing. In our workshops, we work together with participants and explore the data gathered in our database. We show video fragments, photos, and listen to interview snippets, and together we reconstruct a scene, almost like detectives. Each participant looks at the data from a different viewpoint and notices different elements. As they discuss their observations, participants also develop an empathic connection with the other

DVENTURES

Maartje van Gestel

parties involved, which makes it easier to understand why things are the way they are, and what changing it would involve. Our approach allows non-designers to contribute their knowledge to the design process in a relevant and empathic way.

Because the physical challenges of ageing are so immediate and obvious, it can be difficult to take a step back and look at the broader issues involved. If, for instance, an older lady has trouble getting to the shop and reading the labels, an obvious solution might be to let the shop come to her with a delivery service of some sort. But such a solution would in effect increase her dependence on others, further curtail her mobility, and affect her social life. For many older people we spoke with when we developed our database of stories, the weekly trip to the supermarket serves a greater purpose than groceries alone. The supermarket functions almost like an Italian piazza, where they meet their neighbours and talk about the goings on. This broader context of the situations and needs of people needs to be understood before developers can even see what the right solution is.

In the 'Grey but Mobile' project, we believe that staying mobile is part of successful ageing, and that existing mobility systems are often inadequate in meeting the needs of older people.

We think that offering new mobility PSSs that address older people's needs will contribute positively to the physical and social well-being of our ageing society. Our aim is to create a database of real-life stories about older people and mobility. Designers and industry partners can use these stories to develop an empathic connection with the people they are designing for, and use that connection when developing new innovative ideas.

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Bart Ahsmann & Onno van der Veen

The Top Sector Creative Industry faces several challenges in order to maintain its competitive position through research, development, and innovation. The TKI CLICKNL provides a starting point, but there's still work to be done.

2009 was a memorable year for the creative industry. On the one hand, the industry received a 'yellow card' from the Scheepbouwer Commission: a warning that, as an industry, it lacked organisation and cohesion. That same year, though, the creative industry was also given a first opportunity to develop a major research programme, with funding from the FES research fund. Two years later, after numerous discussions with scientific boards unfamiliar with design research and a substantially reduced FES budget, CRISP started with over 60 partners. Now, three government cabinets later, the sector has taken major steps towards achieving Top Sector status.

We have formulated a common international ambition, a central view on education, and with TKI CLICKNL, we have developed a common agenda for research and innovation. Almost all of the stakeholders are now connected and working together to make the agenda part of their strategy.

We think the time has come to take the next step. The creative industry has taken the lead and the challenge it now faces is to bring four parties together: industry, the creative industry, research institutes, and the government. Without the joint efforts of all these parties, there is little fertile ground for cooperation. For this particular dance, it takes four to tango. To make this happen, four conditions must be met:

1—Science funds and policymakers should appreciate the value offered by the 'young' academic disciplines in the creative sector. Design research should be considered a valuable R&D instrument.

2—Creative professionals must broaden their horizon, take the initiative to fulfil their own need for knowledge, and take R&D seriously,

3—Industry should embrace the crossover opportunities with the creative sector and make sure that it leaves room for experimentation. These crossovers will stimulate industry's contribution to the creative sector's R&D agenda.

TOPICS

for a healthcare agenda

The CLICKNL programme is structured around seven so-called 'tables'. One of these is CLICKNL|Design which, in 2013 and 2014, organised several meetings where scientists, designers, and industry stakeholders discussed the increasing need for knowledge in several fields. The results of these meetings have been used to define the research agenda, and have led to initiatives for collaboration between the parties involved. The meetings held on the theme of 'health' have led to the following insights.

Ageing and lifestyle-related diseases call for a shift from treatment to prevention. How do we design to stimulate behavioural change? How do motivation and behaviour work? And, how can you, as a designer, answer these questions? Discussions on this topic led to three directions for research, development and innovation in relation to well-being and health:

'Data-driven solutions for care to the home'

In healthcare, we currently see a shift from hospital care towards home care solutions, a shift enabled by sensor technology. This technology provides a stream of data with which new product-service systems can be developed. Design can both visualise this data and translate it into working applications. This leads to questions like, 'What are the guiding principles, how do you translate this data?'

'Behavioural change'

Many social problems in the healthcare domain are related to lifestyle and behaviour. Consider, for instance, drug use among young teenagers, as discussed in this magazine (p.18). How can designers use knowledge from behavioural psychology to design effective interventions that stimulate healthier behaviour? How can you test this in real-life settings with real users?

'Methods for systemic change'

Many healthcare solutions are systemic by nature. When patients undergo therapy, they are often confronted with the hassle of a large number of different organisations and healthcare professionals. How do you develop product-service systems in a multi-stakeholder system? Which methods and skills do designers need to facilitate these developments so that patients can avoid the complex situations resulting from internal practices?

CLICKNL has taken the initiative for the 'Create Health' programme, which will be introduced during the Dutch Design Week in October 2014.

ISSUE #2

SWARM

The Top sector Creative Industry consists of many different organisations that collaborate in the action plans discussed here. The scheme in the article with the title 'the Swarm' in CRISP #2 magazine provides an overview of the Top Sector.

4—Research institutes should be open to research partnerships with industry, non-profit, and community organisations, as well as with the creative sector itself. CRISP's success serves as proof of the power of this approach.

CLICKNL continues to works towards improving these conditions. It serves as a formalised point of contact for the relevant funding agencies and policymakers. CLICKNL also brings industry and the creative sector together by organising events and programmes. Lastly, CLICKNL is central to communicating knowledge on R&D and innovation. The quadruple challenge can only be successfully met when all four parties engage in these activities and are aware of the conditions that have to be improved.

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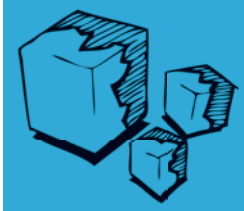
CASD

Foundational project



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Using the strategic role of design to strengthen the competitive position of Product Service Systems and industrial design providers.

Competitive Advantage through Strategic Design (CASD) is about achieving effective strategic design thinking that enhances the competitive position of Product Service Systems and industrial design providers. Product Service Systems (PSS) can help companies achieve competitive advantage. To realise effective PSS, companies should integrate design thinking in their innovation process. Design thinking is characterised as a creative, user-centred and vision based approach—rather than being technology or marketing driven. Design thinking becomes strategic if it is adopted in the fuzzy front end of innovation where opportunities are identified and ideas are generated, or when it informs strategic decision making at later stages. Strategic design thinking can help firms to realise (a portfolio of) PSS combinations that are recognizable, legitimate and coherent for customers.

PROJECT PARTNERS

FABRIQUE · Design Academy Eindhoven · FLEX/the INNOVATIONLAB · KLM · npk design · océ · PHILIPS sense and simplicity · REFRAMING STUDIO · scope · STUDIO DUMBAR · TU Delft · Universiteit van Amsterdam · zeeno

ISSUE #3
A BALANCING ACT AT 30,000 FEET

ISSUE #3
CAN YOU GET SMART IN FIVE DAYS?

G-MOTIV

Foundational project

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Designing motivation. Changing human behaviour using game-elements. Achieving lasting change is difficult; people are often poorly motivated to change their behaviour.

Designing Motivation—Changing Human Behaviour Using Game-Elements (G-MOTIV) is about researching and applying new approaches to behavioural change based on motivation by using game elements. We will conduct research on the motivational effect of game elements in changing behaviour. Our multidisciplinary team of scientists and designers will work on developing intelligent PSS prototypes in the fields of health care and human resources, resulting in structural behavioural change. Achieving lasting change is difficult; people are often poorly motivated to change their status quo! In the domains of healthcare and human resources, this resistance leads to large financial costs for society and reorganisation costs for companies. Currently, people are 'helped' to change using therapy, training and coaching, however these often only result in short-term effects.

PROJECT PARTNERS

Berenschot · Brijder · Careyn · Design Academy Eindhoven · ijsfontein · monobanda · novay · RANJ · TU Delft · VU University Amsterdam

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WHY INNOVATION SHOULDN'T WAIT FOR VALIDATION

ISSUE #1

YOU ARE THE CONTROLLER

ISSUE #2

DRINK IT WHILE ITS HOT

GREY BUT MOBILE

Test bed project

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Improving care-related mobility services for the elderly supporting them to live independently and stay social connected.

Enhanced Care Service through Improved Mobility for Elderly People (Grey But Mobile) is about improving care-related mobility services for the elderly supporting independent living and social connectivity. Importantly, the quantitative and qualitative effects of these proposed services have to contribute to the improved health of the elderly as well as to the economic efficiency of care.

Today, elderly live in their homes longer, predominantly because of improved home care. For reasons of efficiency and costs, this is considered a good development, but it has a downside too. Elderly often live alone and solitude is regarded to be a main cause of health problems. Keeping elderly socially connected and involved, requires them to remain mobile. However, current mobility solutions do not cater specifically for this group.

PROJECT PARTNERS

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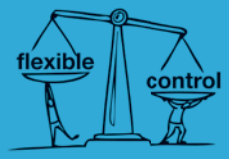
EMPATHIC ADVENTURES

GRIP

Foundational project



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When designing a PSS, designers try to find a balance between flexibility and control to create effective and socially responsible value for users and other stakeholders.

GRIP is about how designers achieve a balance between flexibility and control when designing PSS, leading to the creation of effective and socially responsible value for users and other stakeholders.

When designing from a system perspective, the creative control of design is structurally lower than in product design. The designers have to deal with complex, dynamic environments and need to negotiate decisions with a range of stakeholders. The PSS development process is less formalised and is characterised by a high level of co-creation and co-production. This raises questions like how tight should the designer's grip on the processes and outcomes of design be, when working together with end-users and other partners in PSS development?

PROJECT PARTNERS

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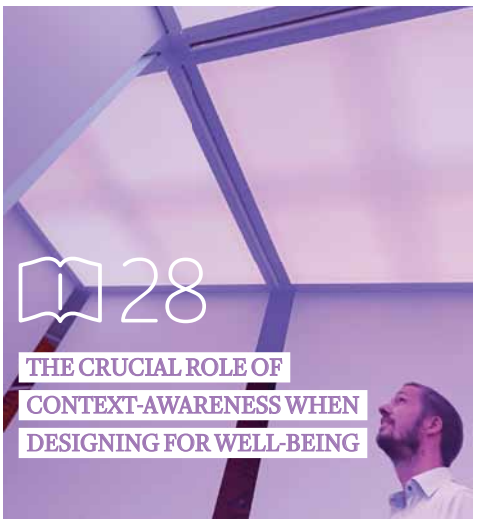

I-PE

Test bed project

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Intelligent Play Environments are those in which a playful persuasion approach encourages social and physical play, which in turn can contribute to well-being. Such environments may counter part of the trend that children are not physically active and risk obesity and isolation.

The Intelligent Play Environments project (i-PE) is about the development of an 'inspirational test bed' to develop fundamental knowledge, insights and guidelines for the design of intelligent, playful environments. This design research includes playful persuasion, emergent behaviour and interaction opportunities that stimulate social and physical play of various user groups. The project examines how an environment should be designed to sense players' behaviour and create appealing play opportunities. Furthermore, a tool is under development to measure the user experience. The interaction opportunities are designed in an open-ended manner to encourage players to interpret the possibilities in their own manner and improvise during play. Also, a decentralised approach has been taken to examine whether we can design a play environment that adjusts to changes in the play context, such as number of players and, or the configuration of play objects.

PSS concepts will be used as vehicles of research, further developing our design philosophy for social and active play. Different play designs have been developed which support various forms of play, for example fantasy play and social and physical play. Furthermore, the design approach has been applied to other application domains, such as way-finding in an amusement park or a hospital.

PROJECT PARTNERS

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ISSUE #1
PLAYFUL PERSUASION

ISSUE #1
YOU MAKE THE RULES

PSS 101

Foundational project

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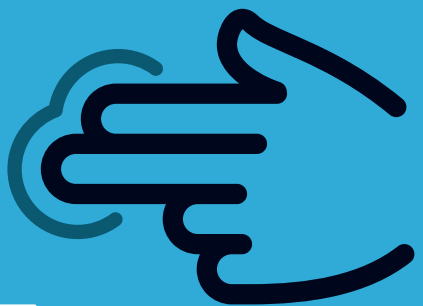
This project is developing a framework of tools, techniques and methods that improves conceptualisation and communication between all those involved in designing PSS, across industries.

Methods for Conceptualizing Product Service Networks (PSS 101) is about developing a framework of methods, techniques and tools that improves conceptualisation and communication between all those involved in design and development, across industries.

Products are no longer just products, Services not only services. Take Océ; once they used to sell printers and now they 'support document management across different departments.' Exact, well known for its Financial and Administrative software, now produces business service systems for SMEs, enabling them to integrally support and manage their business, including relationship management. This type of thinking requires new design and development structures, moving people out of their traditional compartments, meeting the needs of an often diverse and evolving group of end-users. Product Service Systems (PSS) are designed in highly dynamic network environments, mixing people and parties, models, interests and goals.

PROJECT PARTNERS

connect innovate · Design Academy Eindhoven · = exact And it all comes together. · océ · ..STBY... · TU Delft · vanmorgen · zuid zorg Vertrouwd Dichtbij



ISSUE #3

DIGITAL NATIVES INVADE THE OFFICE

ISSUE #1

CROSSING BOUNDARIES

ISSUE #2

A CONCENTRIC BALANCE

SELEMCA

Test bed project

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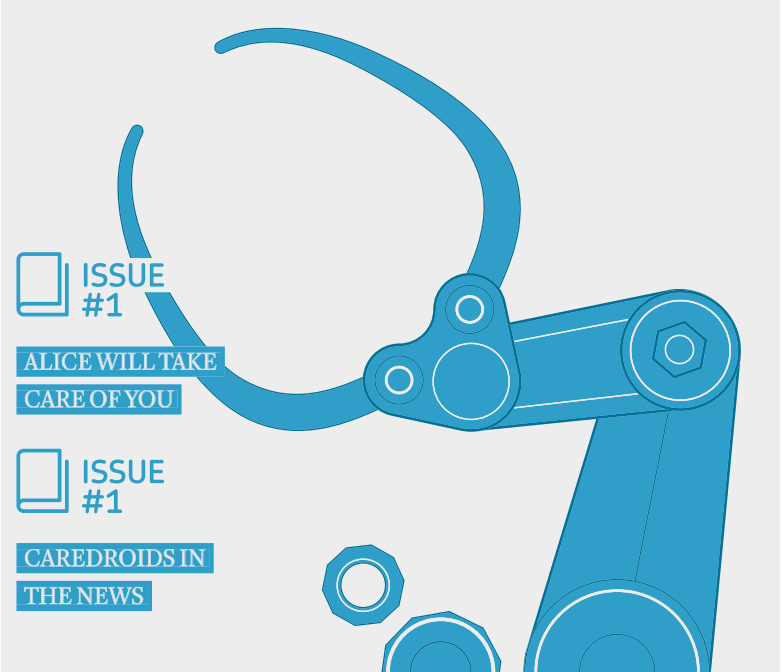
Humanising care-droids using creative technological solutions to supplement and replace existing care-services.

Services of Electro-mechanical Care Agencies (SELEMCA) is about establishing a trans-disciplinary design theory of human-android interaction by investigating the human affective system, emotion regulation, and creativity.
The increasing demand for care services for the elderly and those with mental health disorders cannot be solved by productivity improvements alone. Many of this group are hospitalised or residents of care centres and nursing homes. This target group requires intensive care-giving, administrative care, as well as physical, cognitive and psychological support. A new approach is the use of creative technological solutions to supplement and replace existing care-services. These solutions include agents, robots, ambient and virtual worlds; mechanotronic robots that we call Caredroids—PSS systems that create a better fit between carer and patient. Services of Electro-mechanical Care Agencies (SELEMCA) envisage 3 types of Caredroids, each providing a different service: medical questionnaire and form filling help; matchmaker between carer and patient; and lastly, a robot care deliverer, for example for exercise, medicine coaching and virtual therapy.

PROJECT PARTNERS

Amstelring · germansmedia · IC3D MEDIA · inholland hogeschool · LBi · TU Delft · UNIVERSITEIT TWENTE. · VU University Amsterdam · waag society



STS

Test bed project

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An inspirational test bed enables textile developers to understand the multi-disciplinary opportunities and challenges of creating Smart Textile Product Service Systems.

Designing and Selling 'Soft Product'—'Valuable Service' systems (Smart Textile Services) is about the development of successful methods, platforms, guiding principles and the business models required to understand the multi-disciplinary opportunities and challenges of creating Smart Textile Product Service Systems.
Innovation in the form of the combination of soft materials with high technology has led to the development of so-called Smart Textiles. These are of strategic importance for the European textile industry to sustain their competitive edge and to counter threats from low-labour cost producers. Smart Textiles can conduct light, heat or currents; i.e. the textile becomes an interactive product and can now become part of larger product service systems (PSS). This opens up a vast field of opportunities for textile developers and product and service designers to combine their disciplines in the application areas of well being and life style.
To develop these complex PSS solutions, manufacturers need to move away from their current fragmented, slow or non-existent knowledge exchange methods and team up with relevant partners. Initial investment in this field has led to the design and development of an inspirational test-bed, called 'Wearable Senses' at TU/e.

PROJECT PARTNERS

Design Academy Eindhoven · De Wever · Metatronics · MODINT · Saxion Hogescholen · Stichting Contactgroep Textiel · TextielMuseum TextielLab · TU Delft · TU/e · UNIT040 · V2_ · waag society

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THE CAREGIVERS' VOICE

ISSUE #1
MAKING OPPORTUNITIES TANGIBLE

ISSUE #2
THE NEXT THREAD

GOVERNANCE

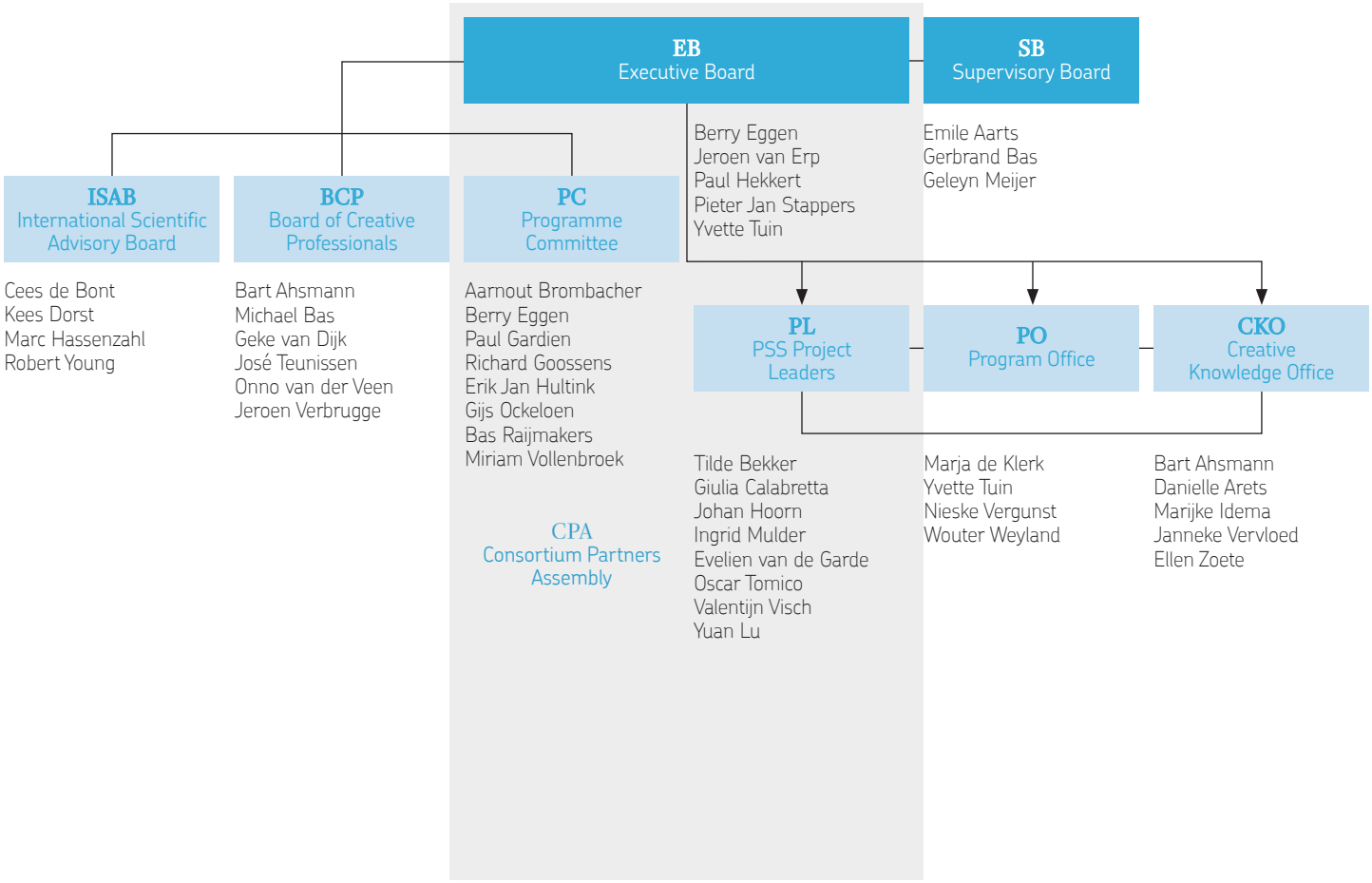
For an effective and efficient governance structure, CRISP implemented functions as:

Responsibilities and liabilities for monitoring, financial, programmatic and operational management; Decision making among involved organisations; Internal and external review mechanisms, evaluation and monitoring. With the requirements of:
— Flexibility in execution
— Giving the creative industry influence on results and interaction
— Clear access point for main external stakeholders

This has been realised by a governance structure as shown, with the bodies:

Executive Board for operational management of the programme
Supervisory Board for strategic decision-making
Programme Office for operational support
Creative Knowledge Office for knowledge dissemination and programme communication
Program Committee for evaluation of the projects' results

International Scientific Advisory Board for engaging and retrieving feedback of leading scientific representatives
Board of Creative Professionals for engaging and retrieving feedback of leading creative industry representatives
Eight PSS projects with their respective project leaders, responsible for the actual research and the **Consortium Parties Assembly** as a community for all participants, anchored in a Consortium Agreement.



GENERAL INFO

CRISP

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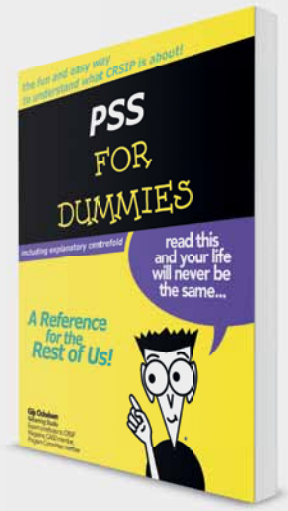
Ministry of Education, Culture and Science

NWO
Netherlands Organisation for Scientific Research
Chemical & Physical Sciences Division

NEXT ISSUE

PREVIEW

Get ready for our "PSS for Dummies" in the last CRISP issue. Everything you need to know to design the most fantastic PSSs yourself! The long expected enlightment of Gijs Ockeloen. And so much more!



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The next issue is expected in June 2015.
If you are interested in contributing, please feel free to send a message to: c.s.h.delille@tudelft.nl

COLOPHON

Crisp #4

Well, well, well...

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CREATIVE INDUSTRY SCIENTIFIC PROGRAMME

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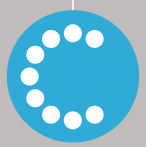

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