



# Positive Design: An Introduction to Design for Subjective Well-Being

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This paper addresses the question of how design can contribute to the happiness of individuals—to their subjective well-being. A framework for positive design is introduced that includes three main components of subjective well-being: pleasure, personal significance and virtue. Each component represents an ingredient of design for happiness, and we propose that design that expressly includes all three ingredients is design that promotes human flourishing. People who flourish are developing as individuals, live their lives to their fullest potential, and act in the best interests of society. The intention to support human flourishing is the explicit, central design objective of positive design. Five characteristics of positive design are proposed, all of which are of relevance to organizing design processes that intend to result in designs that stimulate human flourishing. In addition, some contemporary design approaches are discussed that focus on quality of life, including nudge, capability approach, and experience design. Four important research challenges are outlined to indicate directions for a research agenda. Together with the framework, these research directions are intended to offer inspiration for designers and design researchers to join forces in their endeavours to design for subjective well-being.

**Keywords** – Design for Subjective Well-Being, Happiness, Flourishing, Design Framework, Positive Design.

**Relevance to Design Practice** – This paper introduces a general framework for designing for subjective well-being and discusses research challenges in the domain of “Positive Design.”

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## Introduction

In the past, TV commercials for the Dutch national lottery traditionally featured ordinary people enjoying expensive luxury products after winning big on the lottery. (Picture a local farmer driving a Lamborghini: see [www.youtube.com/watch?v=MWWkysK7FGo](http://www.youtube.com/watch?v=MWWkysK7FGo).) The message was straightforward: “*Money generates happiness because it enables you to buy the products that you can only dream of with your current bank balance.*” Although these campaigns have varied over the years, that message was consistent for at least a decade. Surprisingly, the most recent campaign communicates a very different message. The commercial shows people who are engaging in interesting social activities or giving a helping hand to others. (Imagine a young man helping his grandmother to fulfill a dream: see [www.youtube.com/watch?v=st5SL4JiH0g](http://www.youtube.com/watch?v=st5SL4JiH0g).) The new message has become more nuanced and more truthful: “*Money generates happiness because it provides you with the means to pursue meaningful goals and to help your loved ones to do the same.*” In other words, the lottery is no longer seducing us to buy tickets by addressing our desire for material goods, but by addressing our desire to be *meaningful*.

The new commercial representation of human happiness in lottery advertisements is by no means a coincidence. It is in line with the gradual but persisting transformation from a materialistic to a post-materialistic value system that is taking place in many Western societies (referred to as the “silent revolution” by Inglehart, 1971, 2000). A materialistic perspective assumes a direct relationship between happiness and material wealth, as seen in the original lottery commercial. Post-material values, however,

give higher priority to the fulfilment of personal goals such as belongingness and self-expression. This assumes a more indirect relationship between happiness and material wealth: Material wealth can support individuals in their pursuit of happiness, but it is not a direct source of happiness in itself, as expressed in the new lottery commercial. This change of focus from material to more personal values also aligns with the findings of psychologists examining the conditions for human flourishing (Seligman, 2011; see also *Positive Psychology*, page 7). Numerous studies have confirmed that it is not personal resources that make a person happy, but rather how those resources are exploited (for an overview see Biswas-Diener, 2008).

This idea of material wealth as a resource for happiness opens up a different perspective for design, given that consumer products are also resources. A smart phone, for example, is a resource used to listen to music, organise work, or show consideration through thoughtful text messages: activities that can be meaningful by providing joy, personal direction, and even virtue. The concept we wish to advance in this paper is that if products function as resources that address meaningful goals,

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then they can contribute to users' happiness: It is not the products nor their material value, but what we do with products that can make us happy. The seven design examples provided illustrate that design can enable, stimulate, and inspire engagement in meaningful activities. We are excited by the idea that design can spark inspiration and empower people, and we believe that it is possible to design for happiness.<sup>1</sup>

## Thankful Rotterdam

Design by G. Santokhi & S. Vanhoof

Imagine taking a walk in a park in Rotterdam on a late autumn afternoon. Many trees have already lost their leaves, but in the distance you see one that is still full. As you come closer you see that among the natural leaves, people have been hanging 'thank you' notes. A staircase guides you in a swirl to the top of the tree—every step carved with the word "thank you" in a different language—where you find the material for making your own thank you note and tying it to the tree. Touched by this experience—of expressing your own gratitude as well as appreciating the gratitude of others in your city—you continue your stroll with a smile. "Thankful Rotterdam" is a design concept developed in a course on design for subjective well-being that we teach at TU Delft. It illustrates the impact that design could have on the happiness of people, irrespective of its material value.



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In recent years, inquiry in the domains of psychology, philosophy, economics, and politics has shown a heightened interest in the science of happiness, or subjective well-being (used interchangeably here). This particular focus on (long-term) human happiness has now entered the arena of design. Clearly, we cannot assume that products, luxury or otherwise, automatically contribute to individual happiness. Someone who lives with an abundance of smart phones, TVs, dishwashers, cars, and computers is not necessarily happy, and likewise, someone who has to do without these resources is not necessarily unhappy. Equally, we cannot assume (as is sometimes done in the domain of positive psychology) that products make no salient contribution whatsoever. The relevant question is not whether products contribute to happiness, but *how*. How can design increase happiness and support people's efforts to lead full and satisfying lives? And, how can design processes factor in the explicit intention to increase the happiness of individuals and communities? These questions indicate a need for a fresh perspective not only on what is meaningful in design, but also on how design can intentionally contribute to people's quality of life and how it can reduce the destructive (long- and short-term) side effects of unsustainable consumption. We have seen this need expressed via a growing number of design initiatives, such as the INDEX design award, the What Design Can Do event, and the Designers Accord project.<sup>2</sup> These are three examples out of many similar initiatives. Likewise, in design research, lively discussions have been reported on emerging new approaches, such as design for experience (Hassenzahl, 2010), design for human capabilities (Oosterlaken, 2013), design for socially constructive behaviour (Tromp, 2013), design for social innovation (Manzini, 2007), and design for well-being (Keinonen, Vaajakallio, & Honkonen, 2013). Although varying in focus and theoretical underpinnings, these approaches all aspire to employ design as an enabler, to focus on quality of life and to look at human needs and life aspirations in a constructive and sustainable fashion. 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.

Veenhoven (2011) defined happiness as "*the degree to which an individual judges the overall quality of his/her own life-as-a-whole favourably*" (p. 399). In this definition, happiness represents a positive appreciation of one's life. Several scholars have proposed that this life appreciation is best considered to be a multi-componential phenomenon. Lyubomirsky (2007), for example, defined subjective well-being as "*the experience of joy, contentment or positive well-being, combined with a sense that one's life is good, meaningful and worthwhile*" (p.32). Eid and Diener (2004) proposed that subjective well-being "*refers to one's multi-dimensional evaluation of their lives, including cognitive judgments of life satisfaction as well as affective evaluations of moods and emotions*" (p. 245; see also Diener, 1984; Diener & Larsen, 1993). Despite variations in wording, these (and other) definitions generally agree that subjective well-being includes various affective and cognitive components.

### See Better to Learn Better

Design by fuseproject / VerBien; Y. Béhar, J. Morenstein, P. Puttomgul, I. Olsson, M. Swinton, M. Malone, and J. Olson

“See Better to Learn Better” is a Mexican government-supported initiative to provide Mexico’s children with free corrective eyewear. Proper eyesight is indispensable in a traditional classroom setting. However, in some areas in Mexico, every other school child is in need of corrective eyewear and therefore at risk of not performing well at school. The project seeks to change these children’s lives by enabling them to learn. A central component of the program are the eyeglasses themselves: The two-part frames are customizable (7 colours, 5 shapes, and 3 sizes), thereby increasing acceptance and making replacement of the glasses easy, while the hyper-flexible material safeguards durability. The success of the program might be facilitated by the specific design, which was carefully crafted for the context, but, in the end, it remains up to the children to make the most out of this new opportunity.



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### Positive Psychology

The term “positive psychology” was introduced by Maslow (1954) and later popularized by Seligman and Csikszentmihalyi (2000) in a special issue of *American Psychologist*. The term indicates the study of the conditions and processes that contribute to human flourishing or to the optimal functioning of people, groups, and institutions (for an overview, see Snyder & Lopez, 2002). Positive psychologists focus on what makes life worth living and determining the conditions for human well-being. Note that their aim is not the denial of the distressing aspects of life, but rather to study the other side of the coin, thereby addressing the full spectrum of human experience (see Gable & Haidt, 2005). Examples of areas currently under exploration by positive psychologists are optimism, gratitude, forgiveness, altruism, and hope. Others study the psychobiological underpinnings of happiness or techniques that can improve well-being, such as mindfulness meditation or well-being therapy.

The multi-componential character of happiness is reflected in the design literature: Different initiatives focus on different components of subjective well-being. While this stimulates a rich discussion, it also makes it more challenging to compare design initiatives because authors often do not explicitly state which component they may have focussed on. This makes it difficult to explore where ideas overlap, contrast, or complement each other. We therefore propose that the field is in need of a language of subjective well-being that is both understandable and relevant to the domain of design. In this paper, we aim to contribute to the development of such a language with a “positive design framework” that addresses three main components of subjective well-being, resulting in three ingredients of positive design. In developing this framework, our theoretical approach was both top-down and bottom-up: We reviewed the currently booming field of positive psychology, and we reviewed current developments in design theory. Our framework for positive design combines and compliments both domains.

In this paper, we begin by introducing the framework and its three ingredients, which combined, result in design for human flourishing. We then proceed with a discussion of specifications to be met by positive design and a research agenda that considers both theoretical and methodological aspects. The overall purpose of the paper and our framework is to facilitate the positioning of existing initiatives and to be of help to those who want to design explicitly for subjective well-being or to research the impact of design on people’s happiness.

### Framework for Positive Design

Positive design initiatives deliberately intend to increase people’s subjective well-being and, hence, increase an enduring appreciation of their lives. It is important to note that this target is the explicit, central objective at the outset of a positive design process, not simply a fortunate side effect of a design: In positive design, the design’s *raison-d’être* is determined by its effect on subjective well-being. The positive design framework combines three key components of subjective well-being, as shown in Figure 1.

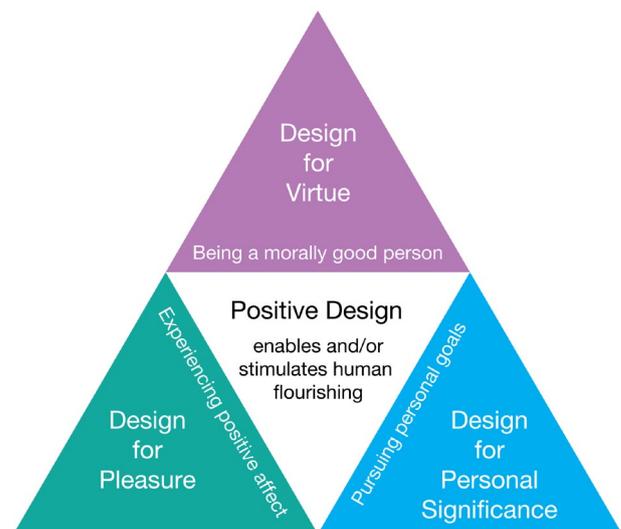


Figure 1. Positive Design Framework.

The three cornerstones in Figure 1 represent positive design ingredients: design for pleasure, design for personal significance, and design for virtue. Each ingredient independently stimulates subjective well-being; positive design sits in the “sweet spot” where all three ingredients intersect. This intersection is where people flourish. What is flourishing? If we represent subjective well-being as a spectrum, a person who is near the low end of the spectrum is languishing, whereas one who is near the high end is flourishing (Huppert et al., 2009). In the Aristotelian tradition, flourishing is referred to as optimal human functioning and living to one’s full potential (Ryan & Deci, 2001). According to Seligman (2011), to flourish, besides having positive emotions, an individual must also have a sense of meaning, engagement, interest, and purpose in life.<sup>3</sup> Accordingly, positive design goes beyond mere pleasure. Although pleasure is an essential component of subjective well-being, it takes more than pleasure to flourish: A full life is one that also gives a person a sense of meaning and results in greater life satisfaction (Peterson, Park, & Seligman, 2005; Sirgy & Wu, 2009). The idea that we advance here is that although each of the three design ingredients can serve as a guide for designing for well-being, positive design, i.e., design for flourishing, takes all three into consideration. This implies that, in our view, experience-driven design that contributes to subjective well-being by generating pleasure is positive design only if it also addresses the user’s sense of virtue and personal significance. Note that positive design does not necessarily address all ingredients to the same degree; there can be an emphasis on one of them. However, in all cases, it should be ensured that the design will not impart any negative effects on the other two. For example, even though a product may not stimulate virtuous behaviour, it can still be considered to be positive design as long as it does not stimulate un-virtuous behaviour when supporting one or both of the other ingredients.

### The Three Ingredients of Positive Design

The components of Figure 1 are loosely based on classifications proposed by philosophers and psychologists, including Parfit (1984) and Ryan and Deci (2001), and adhere to frameworks suggested in positive psychology (e.g., by Seligman, 2002). Although partly overlapping, they are conceptually different and thus indicate different design opportunities. One may wonder whether these three cover the *entire* range of essential components of flourishing. Indeed, we argue that the three high-level constituents of subjective well-being—pleasure, personal significance, and virtue—embody the essential ingredients of positive design. A multitude of life domains (e.g., health, work, relationships) can be represented in all of them; however, the forms of operationalization vary among the components. Imagine, for example, the domain of work and someone working in an office environment. This person could find virtue in being sincere, maintaining order, and striving for wisdom; he/she could seek personal significance through the ambition to develop leadership skills, work toward a promotion, or start on a new project; and

could find pleasure in enjoying lunches, taking short breaks, and in sharing successes with colleagues. Put differently, although the essential ingredients are universal, their manifestations are personal and depend on context and life domain. In the following, we will first introduce each ingredient, and then discuss how they combine to form a framework for positive design.

#### (1) Design for pleasure

The first ingredient addresses happiness that comes from enjoying the moment, i.e., subjective well-being that is achieved by the sum of a person’s momentary pleasures. The focus is on the here and now, the presence of positive affect and the absence of negative affect: being relaxed, having fun, being free of problems. Products can evoke positive feelings (maximizing pleasure and comfort) or reduce negative feelings (minimizing pain and discomfort). Design can also be a direct source of pleasure (e.g., one can savour the fine details of a handmade leather bag) or facilitate pleasurable activities (e.g., one can enjoy a day of sailing, which is facilitated by a sailboat).

Various approaches and frameworks have been articulated that would enable designers to stimulate or generate particular user experiences (see “Recordis” below). Drawing on a framework developed by Tiger (1992), Jordan (2000) introduced his influential pleasure-based approach, which distinguishes four distinct types of pleasure that people may seek in human-product interaction: physical, social, psychological, and ideological. With the goal of investigating nuances of user experience, Desmet (2012) assembled a list of 25 positive emotions that can be experienced in human-product interaction, and Hassenzahl et al. (2013; this issue) have developed a narrative approach to experience design, involving many smaller and contextualised momentary experiences that combine to form holistic user experience narrations.

#### Recordis

*Design by I. Owusu*

Some designs focus on a specific emotion. Owusu (2012) found in the research for her graduation project at TU Delft that people with dementia rarely experience pride. With this in mind, she designed a social, interactive activity: A turntable on which users (patients with dementia) playfully match record pieces so they can play music from their past. The activity has been shown to stimulate the recall of autobiographical memories, enrich social interaction, and evoke feelings of pride.



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## (2) Design for personal significance

The second ingredient addresses happiness that comes from a sense of personal meaning. The focus is not on momentary affect, but on one's personal (long- or short-term) goals and aspirations, such as getting a diploma, building a tree house, owning a palace or running a marathon. Personal significance can also be derived from the awareness of one's past achievements or from a sense of progress toward a future goal. With this in mind, products can be resources that people use to attain these goals. For example, musical instruments enable musicians to develop their talent, while running shoes support the development of an athlete's individual running technique. Products can also remind users of their current goals, (e.g., the MijMo suggests ways for the user to find and maintain a balance of activity and relaxation; see "MijMo" on page 11) or symbolize the achievement of past goals (e.g., an energy-saving thermostat that symbolizes one's achievement of living an eco-friendly lifestyle; see "Nest Learning Thermostat" on page 10).

An alternative to traditional welfare economics, the "capability approach" proposed by Nussbaum (2000) and Sen (1993) is an interesting example of an economic approach that focuses on personal significance. Instead of judging prosperity based on wealth or resource indicators, their approach looks at what people are able to do with their resources. It is based on the proposition that in order to have a full life, one requires the freedom to pursue one's personal goals. The approach therefore focuses on fostering fundamental capabilities (or "freedoms") that enable individuals to pursue their personal version of a full life. Examples are "affiliation" (e.g., the freedom to form friendships or to be treated with dignity) and "bodily integrity" (e.g., to be able to avoid violence or to exercise reproductive choice). For a discussion of these capabilities and their relation to technology, see Johnstone (2012) and Oosterlaken (2013).

## (3) Design for virtue

The third ingredient addresses happiness that is the (by-)product of virtuous behaviour. Here, the question shifts to a moral level: "Am I behaving honourably?" The very question implies a normative distinction between what is good (e.g., development of abilities, altruism) and what is bad (e.g., losing dignity, sadistic pleasure) that is independent of what we might enjoy or strive for. It is based on the proposition that there is an ideal mode of behaviour, or a sense of excellence or perfection towards which one should strive, that leads to a virtuous life. Virtue is an idealized human value that is operationalized in many ways (Rokeach, 1973; see "Human Virtues" on page 13). For example, one may find virtue in philanthropy and may embody this by giving to one's favourite charities. Design itself can support people's efforts to be virtuous: For example, eyeglasses can facilitate reading and learning (i.e., the virtues of knowledge and wisdom; see "See Better to Learn Better" on page 7), and thank-you cards can enable us to express our appreciation (i.e., gratitude; see "Thankful Rotterdam" on page 6). On the negative side, products can also enable or even stimulate non-virtuous behaviour, such as production that uses polluting technology or products that stimulate unsustainable consumption.

### Jazz Shower

Design by J. Innemee & A. Stekelenburg

For many music lovers, listening to jazz can be a powerful and evocative experience. The client that Janine Innemee and Anna Stekelenburg designed for (in a course on design for subjective well-being taught at TU Delft) was an 85-year-old, active jazz DJ with a collection of over 1,000 vinyl records. For him, listening to and sharing jazz was pleasure and purpose alike. The collaboration resulted in "Jazz Shower," a public installation that plays different genres of jazz in a unique way: To really hear the music, the user has to stand directly underneath a showerhead-like speaker, which is designed to enhance immersion into the experience. Jazz Shower is an example of how personal significance (passion for jazz) can add value to a design.



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In the last several years, a variety of behaviour-focused approaches have been introduced that use design and technology to stimulate people to be virtuous (e.g., Tromp, 2013). An example is nudge theory, a concept based on the distinction between two systems of human thought: the automatic, which is rapid and instinctive, and the reflective, which is deliberate

and self-conscious. According to nudge theory, an individual's automatic decisions can be "nudged" by altering the environment in which such decisions are made (e.g., Lee, Kiesler, & Forlizzi, 2011). For example, placing fresh fruits at eye level in a canteen can stimulate people to choose this healthy alternative. In their book on nudge theory, Thaler and Sunstein (2008) typify nudge as "libertarian paternalism" because it aims to stimulate better choices without forcing people to make them (i.e., they can still decide to choose an unhealthy snack).

### *It's all in the mix: Design for flourishing*

Our framework for positive design represents an approach to design for human flourishing. Each of the three design ingredients described above can individually contribute to a person's subjective well-being, but all three are needed for a person to flourish. Flourishing has been referred to as optimal human functioning and living to one's full potential, or being the best person one can be (Ryan & Deci, 2001). It encompasses (self-focused) personal development as well as (other-focused) virtuous living in the best interests of society. In the words of Diener and Biswas-Diener (2008, p. 8), flourishing requires a "balanced portfolio." If we only pursue pleasure—to the exclusion of purpose and meaning—we may become hedonists, and unable to find true well-being. Likewise, only focusing on future aspirations, without taking the time to experience momentary joy and pleasure, might make a person miserable. In their research examining the benefits of this more balanced life, Sirgy and Wu (2009) define balance as "a state reflecting satisfaction or fulfilment in several important domains with little or no negative affect in other domains" (p. 185).<sup>4</sup> The beauty is that pleasure, significance, and virtue do not have to be mutually exclusive. On the contrary, those emotions that have a meaningful and virtuous cause are likely to have an especially pronounced impact on our well-being. People who flourish have a deeper sense of purpose and meaning in life, yet they also experience frequent positive emotions. Overall, positive design encompasses the entire life of people and communities, including all facets of subjective well-being.

## **Towards a Positive Design Approach**

It is quite difficult, perhaps even impossible, to find an example of a product that does not make at least one person happy. In one way or another, all design aims to contribute to the subjective well-being of the user, either by increasing well-being or by resolving (or reducing) threats to well-being (see also the discussion on "Objective Well-Being vs. Subjective Well-Being"). We should therefore be aware that there is no obvious or objective distinction between design that contributes to well-being and design that does not. The novelty of positive design—and how it can be differentiated from other initiatives or design in general—is its *explicit* focus on designing for human flourishing. Consequently, the three proposed subjective well-being components guide the entire design process. This requires the designer to formulate a vision of how the new design will evoke positive affect, how it will stimulate and enable people in pursuing their personal goals, and how it will support them in being a morally good person.

## **Nest Learning Thermostat**

### *Design and Image by Nest*

To provide a positive example of virtue in design, the award-winning "Nest Learning Thermostat" is an adaptive climate control mechanism for the home that is intended to minimize energy consumption while at the same time ensuring a user's complete comfort. After first learning its users' behaviours and preferences, for example, typical times that the user is away from home and preferences for different temperatures for day and night, the system programs itself according to a personalized schedule, thereby conserving energy. Contributing to society through pro-environmental behaviour is certainly a virtuous act. In addition, saving money on one's electric bill can be of personal significance.



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## **Objective Well-Being versus Subjective Well-Being**

Well-being is a broad concept that represents an individual's overall quality of life. Studies of well-being can be categorized into two separate but interrelated traditions: objective well-being (OWB) research and subjective well-being (SWB) research. OWB is the degree to which external requirements for having a high quality of life are met. Much of OWB research is concerned with developing and testing lists of such (universal) requirements. For example, in their normative theory of well-being, Doyal and Gough (1991) propose eleven categories of such requirements (e.g., adequate nutrition and water, adequate protective housing, non-hazardous work and home environments). SWB represents a person's personal perceptions or value judgments of her quality of life: the degree to which life is "good" for the person leading it. Note that OWB is generally considered to be a determinant of SWB. In fact, it can be argued that the aim of OWB researchers is to increase our understanding of what are the external requirements that can increase SWB.

One can use the framework for positive design to explain how existing designs stimulate happiness on all three levels. For example, consider a violin: Playing it can give pleasure (“I love playing the violin”), provide a sense of fulfilment (“I am developing my violin-playing skills”), and facilitate virtuous behaviour (exercising the virtue of self-expression, or the appreciation of beauty). Our point here is that positive design may not always differ from other design approaches in terms of outcome, but it does differ in terms of intentionality and process. In positive design, a balanced, positive effect operationalized in terms of pleasure, virtue, and personal significance is the driver of the design process: It initiates the process and is explicit in decisions made during the process as well as in the assessment of the resulting design. This specific point of departure calls for tailored design approaches. Existing approaches (such as the capability approach or persuasive technology) address parts of the framework, but an integrated approach is yet to be developed (for initial explorations, see Desmet, 2011; Pohlmeier, 2012). In this section, we discuss five characteristics of positive design that we propose to take into consideration in the development of such approaches: Positive design should be *possibility-driven*, it should strive for *balance*, it should accommodate a *personal fit*, it should promote *active user involvement*, and it should offer the means for *long-term impact*.

## MijMo

Design by I. Höhler

Imke Höhler, a recent TU Delft graduate, designed MijMo, a system that helps elderly women balance their mental and physical well-being (Höhler, 2013). On one hand, the MijMo watch tracks the user’s physical activity with an accelerometric sensor and, on the other, it occasionally surprises the user with reminders for practicing mindfulness: For example, it can remind a person to spend some time relaxing through conscious breathing, or to savour more fully any physical sensations they are experiencing, or simply to pay more attention to their surroundings. Heart rate variability is used as an indicator of the success of the mindfulness exercise. The design was inspired by the idea that people who are “high in mindfulness” (a non-judgmental, attentive awareness of the present moment) are open to looking at the world in new ways and have been found to be more likely than the average person to flourish (Lyubomirsky, 2007).



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## Possibility-Driven

Using the word “positive” in relation to design is potentially misleading, perhaps suggesting that there is some kind of “negative” design counterpart. Certainly, all design should have a positive impact in some way or another and should not lead to negative consequences. The word is, however, more specific than it might appear at first. The reasons for this are twofold: For one, “positive” represents the intention to specifically design for human flourishing and it thereby refers to positive psychology (Seligman & Csikszentmihalyi, 2000). Secondly, a positive, possibility-oriented approach (Desmet & Hassenzahl, 2012) must also be pursued in the process itself. Common problem-driven approaches to design aim to reduce or solve negative circumstances, behaviour, or features (see Roozenburg & Eekels, 1995). This might make a situation better, but not necessarily good; it might only allow for reaching a state of being “not-bad.” In contrast, a possibility-oriented approach enters the positive space beyond neutrality. The originality of this approach is in the design effort itself, which focuses on supporting existing possibilities and creating new ones, rather than reducing or eliminating some pre-existing negative factor. In other words, the focus is not on reducing deficiencies, but on stimulating excellence. In ergonomics research, for example, it has been common knowledge for quite some time that “comfort” is something different than the “absence of discomfort.” In this example, possibility-driven design would stimulate or add comfort, whereas problem-driven design would reduce or eliminate discomfort. Likewise, design that promotes happiness is something different than design that focuses on reducing unhappiness.

## Balance

Positive design is design in which all three ingredients are deliberately designed for (see Figure 1). It does not mean that the result should always address all three to the same degree, but it does mean that there should be no incongruities produced among these elements. As Waterman (1993) stressed, realizing one’s goals is not always easy: It requires effort and discipline, which may at times be at odds with short-term pleasure. The sense of purpose found in training for a marathon can be gratifying, even though the training itself might be a source of displeasure or even pain. And playing the violin is probably not always pleasurable, especially to new students. In the same way, being honourable may sometimes require us to set aside or delay our personal gratification or achievement of goals. Positive designs might choose to focus on one particular ingredient more than the others, but such designs will universally and explicitly avoid provoking displeasure, immoral behaviour, or threats to personal goal achievement.

It is often suggested that engaging in pleasures in the moment can conflict with one’s intentions to achieve long-term goals: People can either enjoy a pleasure (e.g., eating candy; playing computer game) at the expense of meeting a goal (e.g., eating a healthy diet; cleaning the kitchen), or strive for goals and sacrifice pleasures. In that view, the concern for pleasure conflicts with the concern for goal achievement. By harmonizing such conflicts, design can facilitate balance attainment. An example

is a candy jar that only allows users to eat one candy at a time, helping them to balance pleasure (“I love candy”) and goal pursuit (“I want to lose weight”). Ozkaramanli and Desmet (2012) have developed an approach to design that proposes to resolve conflicts by motivating people to not let their immediate (pleasure-driven) desires prevent them from pursuing their long-term goals. Note that the greatest degree of happiness can be found when people are able to acknowledge benefits in the present as well as in the future (Ben-Shahar, 2008). Climbing a mountain, for example, is enjoyable as an activity, and not a necessary evil required to reach the mountain’s peak. By focusing on both present and future benefits, and in a wider sense by addressing pleasure and personal significance as well as virtue, positive design can support people in living a balanced life with a minimum of conflicts.

### Personal Fit

When it comes to the definition of a desirable life, there will clearly be some degree of difference between each person’s preferences and priorities. Not without reason do we term the phenomenon *subjective* well-being, for it lies in the eye of the beholder. Preferences, values, skills, and aspirations—and a sense of their achievement—differ from person to person (see “Jazz Shower” on page 9). A one-size-fits-all design solution is likely doomed. However, positive psychologists have identified general patterns that can be of interest to design. For instance, a number of core components of subjective well-being such as significant relationships, contributing to a greater good, and personal growth (e.g., Ryff, 1989; Seligman, 2011) all affect people’s happiness. Similarly, psychological needs such as the needs for autonomy, competence, and relationships (Ryan & Deci, 2000) have been shown to be universally of relevance, and Lyubomirsky (2007) compiled a list of 12 happiness activities that have been shown to raise and maintain subjective well-being.

Consequently, design could build on these and similar insights and target universal components and needs (Hassenzahl, 2010; Hassenzahl & Diefenbach, 2012) in order to address relevant domains and reach a greater target group (for a discussion on the aggregation problem, see Van de Poel, 2012). However, Lyubomirsky (2007) as well as Seligman (2011) stress the importance of personal fit: Not all activities are equally suitable for everyone; ideally, an activity fits with a person’s (character) strengths (Peterson & Seligman, 2004). A user-centred approach and an in-depth understanding of the user’s context, lifestyle, strengths, values, and goals will be key to a design’s success. With this in mind, positive designers might choose to provide targeted solutions that attract fewer users; or perhaps they may furnish users with customizable solutions; or they can supply users with general solutions providing basic support that can be complemented by each individual as he or she engages and sees fit.

### Active User Involvement

By definition, a person plays an active role in his or her own flourishing. It is that person’s contributions to self-development that will make her thrive. Accordingly, design for flourishing can only have an impact if the user is actively involved. A study by Lyubomirsky, Dickerhoof, Boehm, and Sheldon (2011)

illustrates that happiness interventions are effective, but that their success partly depends on whether participants are willing to pursue their own well-being and are actually committed to investing personal effort. The same will likely hold true for design solutions: They may offer the means to enable, optimize, and facilitate well-being-promoting thoughts and behaviour, but to foster flourishing they will have to require the engagement of the user. Put differently, lasting happiness and a full life cannot be passively consumed by drinking a particular soda, or driving a luxury car, or wearing a sexy dress. These things might make people feel good in the moment; yet for them to flourish, and

### Echo

Isaacs, E., Konrad, A., Walendowski, A., Lenning, T., Hollis, V., & Whittaker, S. (2013)

Echo is an Android and iPhone application for “technology-mediated reflection” (Isaacs et al., 2013). To use Echo, a person first captures life events through snapshots and text descriptions; later, after some time has passed, the system will prompt them to reflect on these past events. In this way, the system encourages users to learn from their past experiences by writing about them after gaining some perspective. The design objective was to investigate the interplay of human memory and subjective well-being since reminiscence has been shown to be beneficial to people’s well-being (Bryant, Smart, & King, 2005). Study participants had higher levels of happiness and life satisfaction ratings after using Echo for one month. The authors also discuss the possibility of further long-term effects in terms of behaviour change based on the identification of patterns in emotional habits (Isaacs et al., 2013).



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actually identify with the positive change, personal effort must be invested (Diener & Biswas-Diener, 2008; Lyubomirsky, 2007). Imagine a machine that could make you feel good and make you believe that you have a great life. However, you would only be imagining events, people, and accomplishments. Would this be a desirable state? Most people would probably be hesitant to use the machine and would opt for a less pleasant, more authentic life (see the “experience machine objection” of Nozick, 1974, as explained by Brey, 2012). An authentic experience and a sense of contribution to a positive outcome therefore appear to be desirable aspects of positive design.

### Long-Term Impact

Another distinguishing feature of positive design is its long-term perspective. As mentioned above, pleasures, i.e., positive physical and emotional sensations, are a component of subjective well-being and often provide immediate gratification. The affective balance of our day-to-day experiences substantially influences our overall subjective well-being. Life satisfaction, on the other hand, is an evaluation that evolves gradually, spans longer time periods, and lasts for a longer period (Diener, Suh, Lucas, & Smith, 1999). Subjective well-being is a process, a way of living, a state of mind, but not an end-state (Diener & Biswas-Diener, 2008). This process-orientation is perhaps best exemplified by the developmental characteristic of flourishing: Continual development and self-actualization become goals for their own sake instead of only means to reach perfection. While some design projects only aim for user satisfaction during interaction with the designed object, or for the immediate benefits that may be garnered as a result of product use (e.g., task facilitation products), recent attempts in the design field are addressing wider personal and societal issues with accordingly longer-term effects, i.e., behaviour change and life satisfaction (see “Echo” on page 12).

In this section, we have outlined a number of points to consider when designing for subjective well-being. In accordance with the positive design framework (Figure 1), an explicit part of the design process is to formulate ideas about the pleasures, goals, and virtues of the user. Further characteristics of positive design that are of relevance for the design process have been reviewed. We do not consider the above list to be complete, nor do we propose that all the specifications we have proposed are required; rather, they represent some initial insights that were generated by exploring possibilities of the positive design framework in design projects. Future work will further refine and advance the framework. Some challenges in this effort are discussed below.

### Design Research Challenges

Though still in its infancy, the field of positive design continues to evolve. The current picture remains fragmented however, and a number of design research challenges are waiting to be addressed in the future. Below, some of these challenges are discussed. The list is by no means exhaustive. It does, however, indicate important directions of a research agenda that is intended to offer guidance as well as inspiration for designers and design researchers to join forces in their endeavours to design for subjective well-being.

### Human Virtues

Virtues are qualities considered morally good and inherently valuable. They are believed to promote individual and collective greatness and to contribute to our well-being even if we do not desire them or experience pleasure from them (see Brey, 2012). Seligman (2002) proposed three criteria for defining a virtue: It must be valued by almost every culture, valued in its own right (not just as a means to an end), and malleable. He also proposed six core virtues, all of which are recognized across every major religious and cultural tradition: wisdom & knowledge, courage, love & humanity, justice, temperance, and spirituality & transcendence. Each of these virtues can be subdivided into “character strengths” through which the virtue is manifested or achieved. The virtue of wisdom, for example, is expressed through creativity, curiosity, love of learning, open-mindedness, and perspective, while the virtue of humanity is achieved through kindness, love, and social intelligence (Peterson & Seligman, 2004). Some alternative lists of virtues proposed in philosophy are those by Parfit (1984): moral goodness, rational activity, the development of one’s abilities, having children and being a good parent, knowledge, and the awareness of true beauty; Griffin (1986): accomplishment, the components of human existence (autonomy, capability, and liberty), understanding, enjoyment, and deep personal relationships; Finnis (1980): life, knowledge, play, aesthetic experience, friendship, practical reasonableness, and religion. Famous is Benjamin Franklin’s personal list (which he supposedly kept track of in a notebook, as he tried to verify for himself how well he lived up to his ideals on a daily basis): temperance, silence, order, resolution, frugality, industry, sincerity, justice, moderation, cleanliness, tranquillity, chastity, and humility.

### Empirical Evidence and Assessment Tools

Empirical evidence is needed with regard to how design affects subjective well-being. Research to date has been limited to a focus on the connection of happiness and material wealth, i.e., income and financial security (Diener & Biswas-Diener, 2002), but not on design in general. This data only offers a glimpse of the impact that design can have. The material value of a design is neither its only nor its best descriptor. On the contrary, the least valuable design from a material point of view might be the most valuable from a psychological point of view. As stated in the introduction to this paper, in a post-materialistic age, the contribution of design, in particular of positive design, lies in the possibilities of what one can do with it, what it facilitates, or what it stands for (Desmet, 2011; Pohlmeier, 2012) rather than what it is worth. Empirical findings in this respect are lacking.

The importance of empirical evidence applies to investigating the impact of existing design solutions, and also to foresight regarding future solutions deliberately designed to increase subjective well-being. In addition to correlational results, controlled and longitudinal studies are needed to argue for causal effects of different design interventions.

In order to study how design affects subjective well-being, appropriate assessment tools are also needed. The positive design field requires validated scales and evaluation methods that rate the influence of design on different components of subjective well-being, i.e., pleasure, personal significance, virtue. So far, assessment tools have been developed to measure the pragmatic as well as perceived hedonic contribution of products, but their effect on higher-order forms of subjective well-being has remained unexplored. Assessment tools will primarily need to rely on self-reporting, due to the nature of subjective well-being. One difficulty might lie in the potentially indirect link of design to well-being; in other words, if design enables, facilitates, or represents meaningful experiences, the more prominent link is between the experience itself and well-being and not directly between the design and well-being. It is thus a question of attribution, asynchronous timing, and whether users are actually aware of the implications the design interventions might have had. Note that for a design to be successful, it is not a requirement that the user is aware of its link to well-being. The design can stay as it is; however, the assessment instrument might need to change. This again calls for controlled intervention studies in which subjective well-being is assessed before and after the use of a design and compared to control measurements.

Empirical evidence of the practical consequences of design for subjective well-being, e.g., how everyday practices change, would provide important feedback for our theoretical understanding and could contribute to public policy formation and the ethical considerations of design.

### *Design approaches and methods*

The process of designing for subjective well-being is different from a traditional, problem-focused design process. Therefore, the design field needs approaches that fit with this new vision and the intention to focus on opportunities, enabling people to thrive, and creating a lasting effect on people's lives. After all, the aim of positive design is to innovate by offering new designs or advanced re-designs that specifically target subjective well-being. We need to develop general approaches that can be applied in a variety of design domains, as well as distinct approaches that develop various aspects of subjective well-being. Subjective well-being is a complex concept with a multitude of components and influencing factors (e.g., Ryan & Deci, 2000; Ryff, 1989; Seligman, 2011). Each component might necessitate a different (organisation of a) design approach, e.g., nurturing relationships vs. exercising on a regular basis. Therefore, it is important to understand process foundations as well as the distinctions required by respective domains of positive design and how design processes can be best organized to optimize the end result. This may require a holistic approach to design—an approach that capitalizes on the multitude of influencing factors and results in a constellation of designed (material and non-material) interventions. An interesting development in this direction is the application of “theories of practice” in design practice. Design researchers have recently started to explore how such theories, which have been developed in sociology (e.g., Reckwitz, 2002),

can be used in holistic design practice. Kuijer, De Jong, and Van Eijk (2013), for example, developed a design approach that focuses on socially shared practices (e.g., cooking, laundering) as the unit of design. With their focus on opportunities for systemic change, these approaches are also promising for positive design.

Future work should also be devoted to the development of appropriate hands-on methods that equip designers—in particular in the early stages of a design process, i.e., strategic planning, task clarification, problem framing, and conceptual design. In the end, design research methods are needed to understand the happiness of individuals and to translate these insights into designs for many (Van de Poel, 2012). More guidance regarding the identification of patterns and subsequent aggregation for a greater user group (see Hassenzahl et al., 2013, in this issue, on experience patterns) would be desirable. It goes without saying that a user-centred approach is pivotal to positive design, because the user will be the only expert truly able to assess her own subjective well-being. However, despite being the only valid critic regarding personal happiness, when evaluating the effect of a happiness intervention, people are often not aware of the most effective antecedents of happiness and might be misled by commonly-held myths about where we find true happiness (Lyubomirsky, 2013). As a result, user research methods are needed that provide the designer the possibility of taking a similarly empathetic as well as critical stance. A further challenge is that positive design is not simply the optimization of a product's next generation by fine-tuning its features and minimizing its flaws. Instead, it is a proposal for an innovative new design opportunity, possibly expanding into altogether uncharted terrain and therefore new product development.

### *Consumer behaviour*

After a presentation made by one of the authors of this paper, a woman in the audience asked: “Isn't what you presented bad for the economy?” The answer was (and is) that it does not have to be “bad” at all. However, market offerings might have to change, e.g., there may need to be a stronger emphasis on experiences, social interactions, and meaningfulness. As material accumulation per se does not make consumers lastingly happy and as it endangers our ecological resources (Patterson & Biswas-Diener, 2012), the time seems ripe for new business opportunities that strive to facilitate human flourishing. Experiences, activities, and abilities that focus more on the doing than on the having, and that are personally meaningful to users, can create relevant markets.

In order for these markets to be successful, we need a grasp of subjective well-being from a business point of view, e.g., by asking such questions as: Which stakeholders would need to be involved to ensure success? What kind of business models are applicable? How could oversight be achieved? Would there be an impact on the production process? Furthermore, subjective well-being in business is not only a matter of delivering appropriate design solutions, but also a matter of making appropriate value propositions in marketing. Most importantly, these should go hand in hand in order to create authentic value propositions (see Sääksjärvi & Hellén, 2013, this issue). Future work is needed to determine the best practices for “positive marketing” (Lerman & Kachersky, 2012).

As compelling as the findings on the advantages of happiness (Lyubomirsky, Sheldon, & Schkade, 2005) and the effectiveness of psychological interventions (Seligman, Steen, & Peterson, 2005) might be, people's behaviour in the real world does not necessarily correspond to participants' behaviour in research studies. In the real world, subjective well-being is a matter of motivation, awareness, and willingness to put effort into becoming a happier person (Lyubomirsky et al., 2011). While study participants might be instructed to engage in certain happiness-enhancing behaviours, it cannot be taken for granted that people will generally do the same in everyday life with no explicit encouragement. Pursuing happiness, focusing on personally significant goals, and living a virtuous life should be intrinsically motivated. Nonetheless, they can be facilitated or even enabled by external factors such as design. The paradigm shift to positive design calls to some extent for a paradigm shift on the consumer side: Instead of only regarding design as either a means to compensate for practical limitations in everyday life or as a source of hedonic pleasure, it can also be viewed as a means to achieving proactive, personal development. We need a better understanding of consumer behaviour in relation to positive design. For instance, we need to consider: When are people motivated to purchase or use a positive design? What is needed to maintain commitment of usage? Who are typical users of positive design (see Bergsma, 2008, on self-help books) and how could this target group be extended? These insights are needed in order to bring knowledge and design concepts out of studios and exhibition spaces, and into people's lives.

### *Ethical issues*

We need to explore the practical, theoretical, and ethical consequences of design for subjective well-being. The approach outlined in this paper aims to exert a positive impact on people's lives by facilitating a lasting increase in the happiness felt by individuals and communities. In order to feel this impact, people might need to change their behaviour and attitudes, for example, by learning to avoid social comparisons, to savour life's joys or to be open to new experiences. Facilitating these kinds of changes is a delicate balancing act between empowerment and freedom on the one hand, and determination on the other (see Dorrestijn & Verbeek, 2013, this issue).

Recently, a number of design initiatives have advanced under the umbrella term of "behaviour change." These approaches, e.g., persuasive technology (Fogg, 2003), aim to influence human behaviour using products or services that are socially or commercially favourable. When these approaches are deliberately intended to foster subjective well-being, they can be seen as examples of positive design. However, the concept of persuasion, or in general any attempt to change a person's attitudes or behaviour, can immediately prompt a heated debate revolving around ethical concerns (see discussion on ethics in Fogg, 2003). Many questions can be raised: Is persuasion per se unethical? How much influence or guidance through a design is appropriate? At what point does it become critically manipulative? Such debate likely concerns the designer's objectives, at least in part.

According to Fogg: "*Identifying intent is a key step in making evaluations about ethics. If the designer's intention is unethical, the interactive product is likely to be unethical as well*" (p. 221). The reverse of this argument, however, cannot be claimed: Ethical intent is no guarantee of purely ethical consequences. Hence, positive design, despite its honourable goal, needs to be aware of potential ethical considerations.

Positive design is not value-free; by including virtue as a fundamental component in a design's elucidation and outcome, it affects a moral judgment of what is considered good or what prescribes a "balanced" life. Design-related experiences that are pleasurable and personally relevant for an individual should be discarded if they contradict shared morals, despite their ability to evoke individual happiness. While it might be fairly easy to determine desirable outcomes in economic terms, e.g., higher sales, and to some extent also in terms of collective concerns, e.g., keeping the crime rate low, it is much more difficult to define the sorts of behaviour outcomes that are desirable on an individual level, in particular with respect to a person's happiness.

To propose universal virtues can be perceived as paternalistic, even though virtues seem to appeal to a majority. A compelling wealth of empirical evidence from positive psychology has identified activities that can improve subjective well-being, including virtuous behaviour (e.g., Lyubomirsky, 2007), virtuous interventions (e.g., Seligman et al., 2005), and virtuous domains (Ryff, 1989; Seligman, 2011). Wide-scale application, however, is not a guarantee of desirability or effectiveness at an individual level. Furthermore, design for happiness does not necessarily build upon people's desires, as people are often not aware of what affords them the most happiness and often even look for it in the wrong places (Lyubomirsky, 2013). Thus, two design caveats ought to be made in this regard: Firstly, the design must not thwart any person's individual desires, and secondly, it is only deemed successful if the user eventually benefits from it. Still, a future challenge will be to study how design can empower people to flourish without being prescriptive.

Another point to consider is that one person's happiness may come at the expense of another's. It might even result in negative consequences for some. In general, a range of social implications would need to be investigated—as should be the case with any design.

### **Conclusion**

Positive design is design for human flourishing. People who flourish are those who live to their fullest potential. They are functioning optimally, developing as individuals and acting in the best interests of society. The design discourse related to flourishing and subjective well-being is in its early stages, describing relationships between phenomena and relying on influences from disciplines outside of design. This effort is typical of nascent theory development, suggesting a research area for further refinement (Edmundsen & MacManus, 2007). In design, nascent theories often take the form of taxonomies or frameworks that draw from literature in the human sciences. Theory is more fully developed as researchers make repeated observations over

time, producing abstractions that help to make sense of ideas and their underlying complexity. Intermediate theories contribute to a part of research discourse in which researchers propose new work to extend, refine, or refute the work of others. Intermediate theories also evolve when researchers consolidate many small theories into a larger whole. Mature theory is that which is well established, suggesting that no new evidence is likely to alter an explanation (Edmundsen & MacManus, 2007). Clearly, our work here has been inspired by positive psychology. We have introduced a framework for positive design that combines three main components of flourishing: pleasure, personal significance, and virtue. It establishes a nascent theory and hopefully sets out a research agenda for the larger community. Our aim is to take a step towards operationalizing the holistic phenomenon of human happiness in user-centered design processes. We hope that the design research community will adopt this nascent theory so as to further develop it into a refined and validated methodology.

It should be mentioned that there are a number of different theories in positive psychology, e.g., need and goal satisfaction theories, activity theories, and theories on personality predispositions (Diener, Oishi, & Lucas, 2009), and that not all the concepts and approaches of these theories are accepted unequivocally. Likewise, different approaches with different emphases will develop in the field of positive design. The uniting element however is the quest to enable or to stimulate people to live full lives, to flourish.

Note that many positive psychologists agree that not too much ought to be expected from the contributions to subjective well-being made by consumer products (e.g., Csikszentmihalyi, 1999). In the words of Patterson and Biswas-Diener (2012), “*People likely overestimate the extent to which goods will produce happiness and likely invest disproportionately more energy into their acquisition [than] is sensible from a happiness-return perspective*” (p. 154). These words endorse the well-accepted proposition that the effect of changing one’s behaviour on a person’s happiness is much stronger than the effect of changing his or her circumstances (Lyubomirsky et al., 2005). It is therefore no surprise that well-being psychologists provide us with the following advice: If you want to increase your happiness, don’t buy new products, change your behaviour. In line with this advice, some theorists have suggested that material purchases contribute to happiness only to the degree to which they enable the buyer to engage in enjoyable activities (Sheldon & Lyubomirsky, 2006). We believe that design can do more than that: Besides facilitating enjoyable activities, design can offer a tangible representation of personal significance or purpose, it can direct one’s intentions toward desirable goals, and it can inspire and empower human engagement in activities that are meaningful both to the individual and to the community (see Desmet, 2011; Pohlmeier, 2012).

In the introduction to this paper, we mentioned that we had discerned a real interest in subjective well-being in the design community. Yet our focus on flourishing might also stimulate critical response. To some, investing resources in the alleviation of human suffering may appear more appropriate to the challenges humans face (e.g., improving health conditions or relieving loneliness), or perhaps identifying solutions for societal problems

(e.g., illiteracy or disrespect for human rights) may seem to call for more immediate attention. We would never dispute that design has an important role to play in these domains. But we argue that design also has a responsibility to contribute to the lives of people above and beyond solving their problems and relieving their misery (see Morelli, 2007). Life is more than a problem to be solved and users are more than vessels of unfulfilled needs. Besides their needs and problems, people have values, virtues, personal strengths and talents; they can develop their skills, experience hope, show gratitude, be optimistic, and live full lives.

Moreover, the list of benefits to human functioning produced by happiness is impressive (for reviews, see Eid & Larsen, 2008; Lyubomirsky, King & Diener, 2005; Veenhoven, 2008). To name a few, happier people are more sociable and energetic, more charitable, cooperative, and open-minded. They are better liked by others and have richer networks of friends and social support. Furthermore, they show more flexibility and ingenuity in their thinking, are more creative, and are more productive in their jobs. They are better leaders and negotiators, are more resilient in the face of hardship, have stronger immune systems, and are physically healthier. These are the by-products of happiness, and it is these by-products that positive designs aspire to bring about. In this view, positive design does not deny the place of loss, failure, and negative emotions in the richness of life experience. The intention is not to design so that people always feel good and never feel bad. Instead, it is to design such that people have a chance to embrace all the dimensions of life, including hardship, adversity, and opportunity.

The work presented in this paper expresses our conviction that it should be possible to develop design approaches that are driven by the intent to enable human flourishing, embedded in theory and, at the same time, pragmatic and usable by designers. Ideally, these approaches will support designers in deliberately designing for long-term well-being and in embodying these visions through realistic designs that find their way into the real world.

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## Endnotes

1. In this paper, the word happiness (being happy) is used as a synonym for subjective well-being. Other authors sometimes use the word happiness to refer to a momentary feeling (feeling happy). When used with that meaning, happiness is, however, not a synonym but a component of subjective well-being (see Haybron, 2008).

2. INDEX is a biannual international competition that awards design that improves life, with the intention to stimulate discussion on how to “move and expand the borders and impact of design in the world.” The second is an Amsterdam-based annual conference that is organized by Dutch designers who feel the responsibility to make their profession useful for society and who want to reflect on this with fellow designers. The third is an international five-year design research project that aims to “advance the conversation around the ethics, practices, and responsibilities of the creative community.”
3. Huppert et al. (2009) propose that to flourish, an individual must have three “core features” (positive emotions; engagement & interest; meaning & purpose), and at least three of six “additional features” (self-esteem, optimism, resilience, vitality, self-determination, and positive relationships).
4. People’s activities can correspond or conflict with all three components of subjective well-being. Think, for example, of a student who needs to study over the weekend because he has an important exam on Monday. He may decide to go to the beach instead (supports pleasure; conflicts with personal significance). What if he decides to ride his bicycle instead of driving his car? (supports virtues of health and sustainability). And what if he brings his study books to the beach? (supports all three components). Or, what if the student decides not to go to the beach and instead to study the whole weekend? (conflicts with pleasure). Or if he decides to go to the beach and not study at all and cheat on his exam (supports pleasure and personal significance; conflicts with the virtue of honesty).

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