CHAPTER 5

Reflections on Experience Design

> "It is now about creating experiences beyond just products and services, about creating relationships with individuals, creating an environment that connects on an emotional or value level to the customer" (AIGA, 2002).

This summary of Experience Design provided online (but unfortunately no longer available) by the AIGA, the American professional association for design touches upon many of the themes discussed in this book. It is not about products anymore, it is about the experiences they deliver. This requires a broader perspective, extending the designer's scope to context and its control. The goal is to fulfill needs (values), which in turn creates meaning and emotion. So far so good. The question at hand is the following: "But how, Marc, tell us how?"

Don't expect this final chapter to provide a definite answer to this question. Traditional design is a challenging business, and Experience Design is not making it in any easier. However, there are some—to my mind—crucial themes to be discussed, some of them obvious for designers, but maybe it is less so for readers with a background in psychology or computer science and *vice versa*.

5.1 OUR *MENSCHENBILD*

Our image of humanity, our *Menschenbild*, is ever-present, but it is only rarely made explicit or discussed. It, nevertheless, influences any approach to the design of a product, be it interactive or not. "Things have to be simple, convenient, easy to understand, and learn;" for example, is a claim almost everybody in Human-Computer Interaction (HCI) or Usability Engineering would support without much further thinking! But is it really true? Playing the violin is a challenging and demanding endeavor. Why on earth is anybody bothering with it? The same holds true for planning adventurous holiday trips, solving mind-boggling puzzles or cooking tremendous five course menus. It is complicated, hard to master, and not always convenient—but apparently a lot of fun.

The intellectual roots of HCI are work science, work psychology, and ergonomics. All those disciplines were basically triggered by a more or less economically-driven demand for an improved workplace (Karwowski, W., 2006). One strategy was to select and train people to increase work performance, the other to adapt workplace design, machines and so forth to the skills and capabilities of workers. In this context, efficiency and effectiveness was clearly an institutional and not a personal goal. Better performance equaled more money. The human was viewed as a necessary, but yet

improvable part of the system. Do you remember *Billow's Feeding Machine* (Figure 5.1) in Charlie Chaplin's *Modern Times*?

Figure 5.1: *Billow's Feeding Machine* (from Charlie Chaplin's *Modern Times*, 1936, see `http://www.youtube.com/watch?v=8-UiCnxARJY` for the complete scene).

The feeding machine is "a practical device which automatically feeds your men while at work. Don't stop for lunch: be ahead of your competitor. The Feeding Machine will eliminate the lunch hour, increase your production, and decrease your overhead. Allow us to point out some of the features of this wonderful machine: its beautiful, aerodynamic, streamlined body; its smoothness of action, made silent by our electro-porous metal ball bearings. Let us acquaint you with our automaton soup plate—its compressed-air blower, no breath necessary, no energy required to cool the soup." Back in 1936, the economic world seemed so obsessed with efficiency and effectiveness that Chaplin could mock it easily.

Since then, the general objective to increase performance remained stable; however, the underlining reasons have been forgotten. For instance, a well-accepted international standard on usability, ISO 9241-11 (ISO, 1998), re-iterated and further popularized the performance objective of usability by calling for efficiency and effectiveness. It also added a third objective, namely *satisfaction*. Although

broadly defined as a general positive attitude towards an interactive product, in the minds of many practitioners and academics, satisfaction became tightly coupled to performance. Satisfaction was framed by the ISO standard as a subjective perception of efficiency and effectiveness, as a by-product of performance, rather than as a self-contained, independent aspect (Lindgaard and Dudek (2003); see Bevan, N. (2010) for attempts to extend the concept of satisfaction). This implicit coupling of performance with satisfaction further helped establishing a notion of users as *Homines Oeconomici*. This breed values technology only insofar as it saves time to do whatever else is concerned pleasurable. Performance became an end in itself.

In his book *The Armchair Economist*, Steven Landsburg (1993) fervently pointed out a common misconception. Economics, so he argued, is not about being productive; it is about being happy. "We live in an age of 'policy wonks,' who judge their programs by their effect on productivity, or output, or work effort. […] Wonks want Americans to die rich; economists want Americans to die happy" (Landsburg, S., 1993, p. 44). I would argue that only the most puritan will regard productivity as a value in itself. Productivity is a means, sometimes important, sometimes not. With its strong focus on effectiveness and efficiency, HCI was about to take the same false turn as economics took. Experience, however, reminds us of all the things beyond performance.

If we challenge the image of humanity as being obsessed with their own performance, we need feasible alternatives. Landsburg suggested the more cheerful image of humans as striving for happiness. In line with this, Bill Gaver (2002) suggested *Designing for Homo Ludens*. By implicitly or explicitly following the notion of the *Homo Oeconomicus*, he argued, we will end up "surrounded by technology devoted to taking care of our everyday chores, giving us the leisure to pursue whatever activities we really value." The crucial question he further posed was "But what if technologies helped us pursue those activities now, directly, rather than merely helping us get the chores done?" In other words, technology use in itself can be meaningful and a pleasure. Accomplishing externally given tasks alone is a too limited view of what people do with and gain from technology. Gaver's (2002) alternative to the *Homo Oeconomicus*, the *Homo Ludens*—a term borrowed from Johan Huizinga (1939)—understands humans as playful creatures. We are not characterized by performance alone, but "by our curiosity, our love of diversion, our explorations, inventions and wonder. An aimless walk in the city centre, a moment of awe, a short-lived obsession, a joke—all are defining and valuable facets of our humanity, as worthy of respect as planning, logic or study." Bill Gaver is one of the few people writing about the design of interactive products who explicates his underlying notion of the humanity he is designing for. *Homo Ludens* as such may be debatable; the importance of stating the *Menschenbild* is not.

What would be a notion of humans compelling for the present perspective on experience? Borrowing from Deci and Ryan (2000, p. 229), I understand humans as active and growth-oriented. They are naturally inclined towards integration of their feelings, thoughts and actions into a unified sense of self (provided through experiences) and the further integration of themselves into larger social structures. This is not just humanistic claptrap. Actually, this notion of humans has concrete implications for the design of interactive products. It defeats high levels of automation and in some

domains, typical approach to mask complexity through overly simplistic technology. It urges us to *not* underestimate peoples' skills and abilities, and their interest in learning and improving themselves. And finally, it calls for meaningful, self-relevant experiences delivered through technology and an ever-present focus on the social processes and practices, in which technologies are embedded.

5.2 NORMATIVE POWERS OF DESIGN

Imagine yourself being in the clutches of a market researcher. Fair enough, she seems genuinely interested in your view. Finally, she comes up with a really tough question: "Image future home electronics, such as portable music devices, computers, and so forth would be white. What do you think?" You think. "White? Entirely? Completely" She smiles: "Even the headphones!" "What a crazy idea," you reply, "White reminds me of hospitals, doctors, washing machines and old science fiction movies, such as Spielberg's …uhm …Emmerich's …wait …Kubrick's *2001—A Space Odyssey*. And, on top of that, it is utterly impractical. I don't want to clean my MP3 player every other day, not to speak of the headphones." "Well, well," the market researcher says, "I take that for a No!"

I doubt that a conversation like that really took place, but it nevertheless summarizes more or less what you would have got as a market researcher from people in pre iPod-times, when consumer technology was brown or silver, never white. Today, the white coated headphones became Apple's unique brand signature. It seems to be so central that even if you buy a matt black iPod classic, it comes with silly, white coated headphones—something I found quite hideous when I first found out (first-hand); especially for a company that is praised and praises itself for its taste and style.

"Empirical Measurement" was one of the three "golden principles" John Gould and Clayton Lewis (1985) devised to design for usability. Since then, HCI never lost its empirical stance (e.g., ISO, 1999). And in fact, meddling with real people, observing, asking, and confronting them with new ideas and products is an important step towards a better understanding of how people feel, think and act. However, one should keep in mind that the relation between designer and user (consumer, recipient) is bi-directional. It is not as if users have well-defined requirements, which only wait to be discovered. Indeed, requirements are *co-constructed* in the ongoing dialog between user and designer. Each interactive product is a proposition, a new opening in the design space. It will inevitably alter expectations and ultimately the requirements users formulate concerning future technologies. John Carroll and colleagues Carroll et al. (1991) already described a similar effect, but focusing on tasks: Their *task-artifact cycle* acknowledges the fact, that through the use of new technologies, existing tasks will be altered and new tasks will emerge. To broaden this notion: An interactive product can be understood as a theory about its users, purpose, and context of use (Carroll et al., 1992). The better the theory, the better the fit to the world as it is. Or it can be seen as an alternative to the existing way of doing things; a proposition, which will—if being accepted by people—change the world.

To be aware of the normative powers of design is crucial. I have no patience for designers, which create overly expensive, wasteful, fast and aggressive looking cars, used to terrorize people on German *Autobahns* and escape their responsibility by announcing that this is what consumers want. (Not even if the designers try to further justify it by acknowledging the seemingly "dark sides of

humanity.") On a product level, consumers only desire what they know about. To believe that people have an inborn "need" for fast cars is either ignorant of one's own powers or a cheap trick to escape responsibility. Either way, it is unacceptable. In line with this, Sheldon et al. (2001, p. 336) argued that needs (as discussed extensively in the previous chapter) "carry little information about exactly what behaviors to engage in, a fact that allows for considerable behavioral plasticity." In Experience Design, we actually suggest particular activities through an interactive product. As long as this leads to need fulfillment and, thus, to a positive experience, we may consider it as appropriate and good. However, this does not free the designer from taking on the responsibility for the particular way of fulfilling a need she or he just devised. Each product is a proposition, and we cannot escape the fact that it has the power to change how people feel, think, and act. To do this consciously is important. The more, the better we fulfill our goal to design deep, meaningful experiences.

5.3 EXPERIENCE BEFORE PRODUCT

Remember: experiences are emergent, and in Experience Design, we use functionality, content, presentation and interaction as materials to create and shape experiences. Experience is prime, and the product only a means. Accordingly, one of the basic claims of Experience Design is to consider the experience *before* products. The notion of experience as an emergent story, a narrative summarizing feelings, thoughts and actions, developed in Chapter 1 helps here. Experience Design urges us to set the story straight before we start thinking about how we can create this story through a technology.

Although a simple idea—to put experience before products—to live it is difficult, especially for designers and engineers. The reasons for this difficulty are manifold, but they all revolve around the designer's quite natural focus on the only tangible aspect of the experience to be created: the product. In addition, design and engineering is often taught as a concrete problem solving exercise and especially engineers and industrial designers are sometimes more interested in solving technical or formal problems than in the overall experience they create. You need an interest for humans, not technology if you want to be an experience designer. In addition, many products do not seem to have much potential for novel, experiential narratives. A chair is a chair, is a chair, and it is used—well—for sitting. It is only obvious to focus on form, material or constructive aspects of a chair. To speak of a sitting experience seems utterly forced. This is surely one of the reasons why Experience Design is so tightly related to interactive products. Interaction, its temporal dimension and its heavy focus on action, makes the idea of a story much more applicable. Don't get me wrong. I am not arguing for restricting Experience Design to interactive products. It is always worthwhile to think experiences through, and most of the time, an experiential perspective yields insights even for products, which are not highly interactive.

I like to bake cakes; nothing illustrious, though, just plain cake with apples or chocolate. To my utter disapproval, my three year old daughter Greta loves to join in. I am not complaining. This could all be a very sweet daughter-father (relatedness) experience, except for the explosive mixture of willpower, stubbornness and lack of motor skills so typical for three year olds. Greta insists on cracking the eggs, and I have to pick small pieces of egg shell out of the mixing bowl. She enjoys

beating the batter vigorously, which is crucial to a good cake. A standard hand-operated mixer, however, is just too heavy for her. Consequently, I have to do a lot of cleaning and wiping afterwards. What we need, Greta and I, is a proper—what Katja Batterbee (2003) might call—*co-experience*. I really enjoy doing things with Greta, at least in principle, but I also take pride in my cakes. Greta seems to enjoy only specific aspects of the baking procedure, such as cracking the eggs, beating the batter, putting in the ingredients, resetting the kitchen scales. For her, the whole activity even seems to have a different structure. I consider baking to be finished the moment I remove the cake from the oven. Greta loses any further interest the moment we finish working on the batter. Because this means, she can lick the beaters clean. For her, the cake is just a welcomed but secondary outcome.

An Experience Design perspective would focus on baking as an activity—in the present example, as a *shared* activity (hence the reference to *co-experience*). It would identify the important experiential aspects of the whole procedure and the barriers that may prevent the experience to be entirely positive. It would create a new script, a slightly revised, better "baking story" for the two of us and a set of physical products, which allow the story to be acted out. Thus, an experience-minded designer would provide us with a way to crack eggs safely with verve and fun and underdeveloped motor skills. He or she would create a mixer, which can be operated by a three year old. However, the tools are only a means to an end, and the criterion for a good tool is neither practicality nor efficiency but the emergence of a better baking co-experience for Greta and me.

In 2009, students, Anke Bernotat and I participated in the *Philips Creative Challenge*. The general objective was to explore "hospitality from a well-being perspective." Among the emerging themes, one particularly interesting touched upon the duties linked to the roles of host and guest. Typically, hosts set and control the setting for acts of hospitality, whereas guests submit themselves to the benevolence (or tyranny) of the host (Douglas, 1991, in Lynch, P., 2005). Hosts are expected to take responsibility, action, and control—an asymmetric situation, which is not always experienced as entirely pleasurable by both, host and guest. A way to reduce this asymmetry may be "guest participation." This is similar to recent work on "customer participation" in commercial hospitality settings (e.g., Lugosi, P., 2007), which emphasizes the guest's role in creating a pleasurable hospitality experience.

One of the student groups we supervised, Nora Helms, Anna Kuperski, and Simon Pfarr, further explored this idea and found music to be a promising subject. Indeed, in many cases the music, which accompanies gatherings, is considered important by hosts and guests alike. However, hosts find it difficult to cater for the potential different tastes of her guests, especially when they are not much interested in music themselves. In addition, controlling the music is considered a burden on top of all the other duties of a host. In contrast, guests often have no clue how the stereo works, don't dare to touch it, or don't know the music available (which prevents selecting something appropriate for the moment). Even if guests brought their own music, for example, on an MP3 player, they are still afraid of virtually "usurping" the party with their music.

As a response to this analysis, Nora Helms, Anna Kuperski, and Simon Pfarr created the concept of a "sociable" MP3 music player. Nora is invited over to her friend Anna's house (see

Figure 5.2, for a concept story board). Before leaving her own home, Nora selects her favorite music and copies it to her player. The moment she meets Anna, the player senses the proximity of another, Anna's player. They automatically connect, combine their playlists, and start playing songs in random order, but synchronously through their inbuilt loud speakers. In fact, the player only works, given a second player is in proximity. This reflects on the necessity to meet face to face to create a social experience.

The concept in itself is simple and surely debatable, but for the time being, it is a good example of what the claim *experience before product* suggests. Take the controls as a first example. Any generic MP3 player has similar controls, such as play, pause, stop, or skip song. It seems only natural to exploit this and copy this quasi standard to the music player at hand. But wait for a second? Imagine you filled your player to the brim with music, carefully chosen for this upcoming occasion. On arrival, the player connects to the network of all the other players people brought to the party. As a courtesy function, the player is programmed to insert a song from a subsequently added player into the running playlist. Thus, the next song will be one of yours—what a wonderful start for a party. You immediately recognize *Crystalised* by *the XX* from the first couple of seconds it is playing. It is one of your favorites, a song inclined to be a classic. It is just perfect, until this guy in the other corner, you barely know, stopped the song from playing because he pressed the skip button. You are annoyed and, to be honest, a bit hurt. This is the type of social experience one can surely go without.

To place the experience before the product implies understanding every function and every detail of the product as a way to shape the emerging experience. If the objective of the player is to create a pleasant social experience, skipping songs is just not very helpful. Given that all people brought their favorite music, to skip a song is simply rude. A function useful and commonplace in many other seemingly similar devices (technically it is just a networking music player) may cause severe problems in terms of the desired experience.

There are a number of other, less drastic examples. Does the player need a display? From the perspective of the emerging experience, the answers is surely not. Imagine you like the song playing, but you have no clue what it is. What would be the most natural thing to do? You would simply ask the name of the song. And as long as this song is someone's favorite, there should be a person with a little extra information around. Or even better, imagine asking the name of the song and two people answer simultaneously. They shoot a curious glance at each other, well aware now that they may share a similar taste in music. All these occasions have the power to positively impact the overall experience. They are icebreakers and entry points for communication, and a simple, innocent display may have the power to decrease the likelihood of their occurrence.

The player's memory capacity is another example. If it becomes too large, people may tend to copy all their music onto the player and not just their favorites. However, the latter is crucial to the overall concept. Note that limiting memory capacity is only one solution. An alternative is to simultaneous make playlist creation mandatory and to limit the overall running time of the playlist. In either case, we have to consider this detail while we design—not from a practical point of view, but in terms of helping or obstructing the emergence of the desired experience.

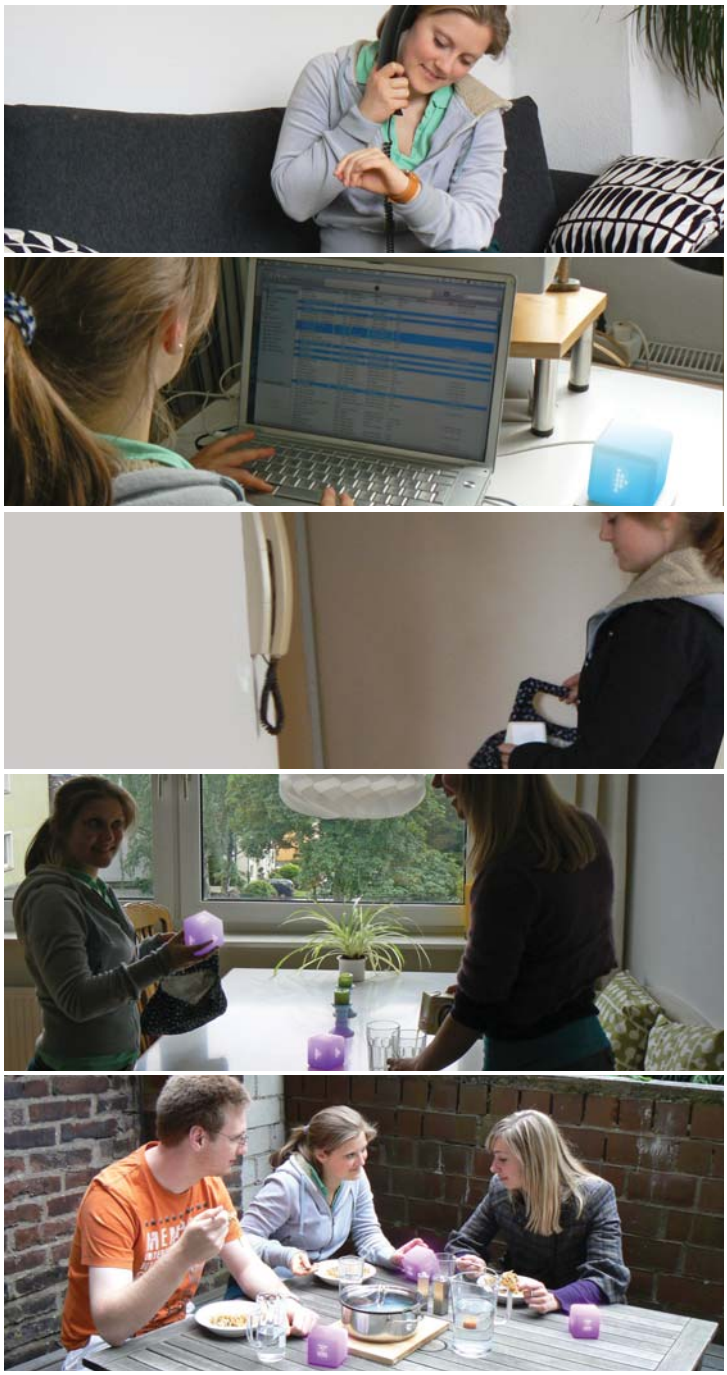

Figure 5.2: An experiential music player (photos courtesy Helms, Kuperski, and Pfarr).

Experience Design is, thus, more than adding something to a product's core function to make it a little more interesting. Experience Design puts experience before products, and acknowledges that all aspects of a product, its functionality, content, presentation and interaction, have to be in line with the experience to be designed. In addition, Experience Design may even take a normative, prescriptive stance. In many cases, its objective is to *improve* experience. To achieve this, it not only provides products that fit a given context particularly well (a usability approach), but also alters, rewrites, and invents new experiences. Take Gaver and colleague's (2004) *Drift Table* as an example. It is designed based on the philosophy of *ludic design*. In brief, *ludic design* uses ambiguity, defamiliarization, and an overall anti-utilitarian stance to create open-ended, exploratory and fulfilling experiences.

Figure 5.3: The *Drift Table* (Copyright © Interaction Research Studio, Goldsmiths, University of London).

The *Drift Table* is a small coffee table (see Figure 5.3). It has a circular porthole to a screen that shows aerial photography that "drifts" according to the distribution of weights on the table with

a maximum of 50 kilometers per hour. The current 'location' of the table is shown on a small screen on its side. Almost a terabyte of aerial photography of England and Wales is available for viewing.

Interestingly, Gaver et al. (2004) decided against a number of seemingly useful functions, such as travelling at higher speeds or the direct input of coordinates. The stated rationale was to "evoke the impression of drifting over the countryside, as if an opening had been created in the home's enclosure. But fundamental to the table's design is the fact that it isn't 'for' anything in particular but creates an evocative situation for people to explore" (Gaver et al., 2004, p. 893). Functionality such as direct access to locations seemed to get in the way of the desired experience, such as the display on our music player would get in the way of a satisfying social experience.

The ethnography-inspired studies (see also `http://www.youtube.com/watch?v=uRKOypmDDBM`) Gaver and colleagues carried out supported their general idea. One participant, S., commented (Gaver et al., 2004, p. 898): "Initially, I thought fantastic, another hi-tech toy in town. […] I thought about having a switch for double speed. Now that's worn off […]. You should take a look around on the way like on a train journey. One should accept it and use it as it is. Another thing I thought was that it would be great to have a keypad so as to type in a coordinate. Then I thought no, it's for drifting around. I like it for what it does. It's extremely sophisticated but without the arsing about. It has one use. It drifts. […] After a couple of days I was about to get bored with it because of its weaknesses but now those are strengths. From shiny new object, to where's the buttons, to this is what it does." Based on their experience with the table, Gaver et al. (2004, p. 898) recommended: "Don't seek to meet users' immediate desires. […] we consciously restrained ourselves from adding features to support expectable demands (e.g., moving quickly to a particular location). Many people in fact voiced exactly the desires we had decided not to support. Over time, however, our decisions appeared justified as a noticeable subset of users accepted the table for what it was, and relinquished the desire to engage with it to achieve obvious tasks. For these individuals, the table worked to encourage the exploration of new activities and appreciations."

I am skeptic about the general claim of *ludic design* to deliberately exacerbate utilitarian use to foster exploration. It reminds me of my own distinction between pragmatic and hedonic qualities (see Chapter 4) but extended with a somewhat dogmatic demand to focus on the hedonic alone, instead of finding a balance between both. However, taking away some of the theoretical underpinnings, I believe the *Drift Table* to be a perfect example of Experience Design. Gaver and colleagues created a clear target experience, a compelling story. They wanted to create the experience of travelling but in a slow, conscious, reflective way—hence the drifting. They intended to create a feeling of the distance and the time it takes to reach locations. Creating this particular experience required them to eschew some obvious functionality, such as light-speed travel or the direct input of locations. The opposition to this functionality must not necessarily be justified by a dogmatic wish to be anti-utilitarian. It is simply a necessity to create the desired experience; the same as excluding the skip function on the social music player was a necessity to create a particular experience.

An experience designer is foremost an author of experience. Only after having outlined the desired emotional and cognitive content of an experience, the action involved, its context and temporal

structure, we may start designing the product. And then, each and every detail (content, functionality, presentation, interaction) has to be scrutinized according to its potential to create or destroy the desired experience.

5.4 BRIDGING THE GAP BETWEEN EXPERIENCES, NEEDS, AND PRODUCTS

What a wonderful feeling. You just took a hot shower. The bathroom is misted and so is the bathroom mirror. Suddenly, a point of light emerges on the mirror's surface. You smile and place your fingertip onto the point. It starts to move. You follow it with your finger, drawing on the wet and steamy mirror. Slowly, a heart appears—a sweet message left by your spouse and captured by the mirror hours before you got up and took your shower (see Figure 5.4).

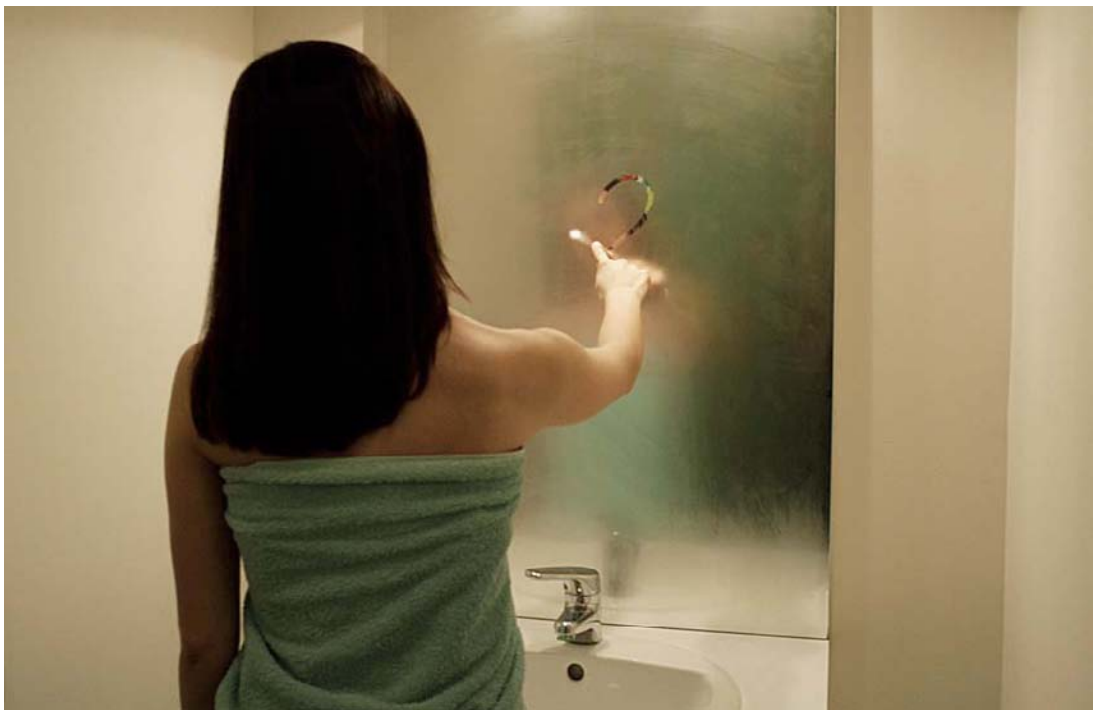

Figure 5.4: A sweet message (photo courtesy of Baffi and Schmeer).

This concept for volatile messaging, *Touch Trace Mirror*, was developed by Tom Baffi and Johanna Schmeer in one of my courses on Experience Design at the Folkwang University. The objective was to create a *relatedness experience*. Beyond all details, the gist of this design is letting the message to be re-constructed by the receiver him or herself. This is supposed to create a feeling

of closeness through a virtual, time-shifted form of co-construction. In fact, Baffi and Schmeer started with the need for relatedness, identified leaving messages as an activity related to that need, developed the idea of message co-construction, placed it in the bathroom, picked the mirror as the communication device, created a story of message leaving and receiving revolving around the bathroom mirror and then started to work on the aesthetics of the actual interaction. Obviously, it is a long way down from abstract universal needs to the concrete design of *Touch Trace*. The challenge for Experience Design is to bridge that gap or, at least, to allow for shorter leaps from need to product.

The notion of "scripting" an experience, of creating a narrative of acting through a product developed in the preceding section is central. Before determining the functionality of a product (the "what"-level) and ways to operate this functionality (the "how"-level), the experience designer creates the story of product use. *Touch Trace* uses an already existing story: leaving love messages on the bathroom mirror. This story already holds a number of connotations, such as memories of a spontaneous night, which—surprisingly—led into the love of one's life, or a simple "thank you" for a wonderful shared experience. From both, it becomes apparent that messages on bathroom mirrors are already intimately linked to relatedness, as a way of expressing and creating a relationship. In addition, Baffi and Schmeer did that little bit of "rewriting" of the story by using the available technology to craft an experience of message co-construction. Suddenly, I am not only the receiver of a message, but I am also involved in constructing it, as if receiving and answering at the same time.

To develop those enhanced narratives is crucial to Experience Design. But while in retrospect, the link between mirror (product) and relatedness (need, experience) is plausible; it rests completely on the skills of the designers, their ability to find and enhance those stories, and their interest in people. The question at hand is the following: how can we support this type of design work?

In a recent project with Joonhwan Kim and his team from *Samsung*, Kai Eckoldt and I explored what we called *experience patterns* as a way to reduce the gap between needs and a specific product experience. Experience patterns attempt to condense seemingly complex positive experiences into a minimal set of crucial insights. This set is then sufficient to explain why people enjoy experiences of this type. By that, it becomes a blueprint of various positive experiences and serves as a "molding form" for shaping an experience.

In their compelling review of patterns in Human-Computer Interaction, Andy Bearden and Janet Finlay (2006) distinguish between patterns as solutions to problems and patterns as descriptions of behavior. The latter "emphasizes patterns as recurrent phenomena or structures that must be observed and discovered" (Dearden and Finlay, 2006, p. 58). For example, Martin et al. (2002) used patterns as a way to summarize findings from their ethnographic studies.

"[…P]atterns are derived from the lived world (Lebenswelt) of everyday experience and they gain their power, if at all, not by being proven empirically correct, but by showing us a direct connection between the pattern and our experience […]"(Dovey, 1990, cited in Dearden and Finlay (2006, p. 81)). Our version of patterns owes much to this view. They are foremost congealed experiences, blueprints for stories to be told through the use of a product. Nevertheless, they go beyond the

mere description as long as they also prescribe ways of optimizing an according experience. They are grounded in our *Lebenswelt* but at the same time, idealized, optimized versions of everyday experiences. In contrast to the view of Dovey, we believe that patterns can be empirically proven correct or not. However, the question of empirical validity should not dominate their use. Accordingly, our minimal set of requirements for quality experience patterns consists of a clear scope (i.e., not too broad), plausibility (i.e., face validity), and "resonance." Resonance is a feeling of "recognition" and affirmation by the pattern's *user*. Patterns, which appear "outlandish," are not likely to be useful or inspiring. Beyond this, patterns have to be evaluated through their use. Quality patterns prove applicable (i.e., there are domains/products which benefit from the insights captured by the pattern), generative (i.e., able to inspire designs), and successful (i.e., produce superior products).

Each of our experience patterns is related to a particular need, that is, they are generic ways to fulfill a need. In other words, autonomy patterns are about creating and maintaining individuality, relatedness pattern about deepening interpersonal relationships, and so on. Examples of experience patterns already made in this book were "mind reading" and Gibbs et al. (2005) *SynchroMate* as an example of a product concept, which creates the feeling as if romantic message "cross each other in the air" (see Section 2.3). Baffi and Schmeer's co-construction of a message is a further example for a potential relatedness pattern.

For a more concrete example of an experience pattern and its application, consider the following story (from the *Samsung*-collection): "Bernhard has this hard to explain weakness for watching gory horror movies. His wife, Anna, detests this. She neither understands nor easily accepts Bernhard's 'passion'. To avoid constant conflict, Bernhard agreed to fight his 'bad habit.' At least officially, he threw away his complete horror DVD collection. However, once in a while, when Anna is out, he takes his favorite DVD—the one he secretly managed to save—out of a hidden place and watches it. When Anna comes home and asks Bernhard about his evening, he says 'Just wonderful!' and grins. He feels at the same time a little guilty and much more alive."

I guess many of us know this story in the one or the other version. The secret itself may vary. The behavior and the accompanying feelings often follow a similar pattern. We call the essence of the story the "keeping a secret"-pattern and describe it as follows: "Many people have 'true' secrets. Revealing them would have severe consequences. It would disappoint people they love, they might lose their job or face other severe threats to existence. In this case, keeping a secret is a necessity. However, there are also situations, where keeping a secret is of its own value. Having secrets supports autonomy. The self, individuality, is not a closed, well-defined entity. It consists of self-knowledge (e.g., things done, experiences made, people one knows), but also of other people, possessions and so on. Especially people in close relationships may experience a blur of the boundary between one's self and the close partner. To maintain self-knowledge, which is truly one's own, creates a boundary between the person and others. By this, it reminds people of their individuality and helps them to define themselves. This is supported by the observation that secrets are an important part of children's development. Although 'keeping a secret' is positive, it may create mixed feelings due of the tension between the pleasure of having a secret and the guilt of keeping it from close others.

Self-defining secrets only work if they remain a secret. Even the mere fact that one has a secret is not to be revealed. Any plain signifier of a secret (e.g., locked drawers or boxes, password protected parts of computers) must be avoided. Self-defining secrets are rarely 'true' secrets. If they become revealed accidentally, others are often unable to understand, why it was kept as a secret at all. Given the psychological function of the secret, this is easy to understand: it is keeping the secret and not the content of the secret that matters."

The pattern describes a particular experience linked to the need for autonomy. It further details some crucial elements, with direct implications for design. At this point, you most hopefully agree with the content of the pattern—it may "resonate"—however, how it can possibly support design may still be vague. Take the example of an electronic picture frame, we developed based on the pattern in a workshop with Samsung. Figure 5.5. shows four stills from an a resulting video prototype.

Figure 5.5: Marc's picture frame is holding a little secret (stills from a video prototype by Eckoldt, Hassenzahl, and Kim).

The upper left corner shows a picture frame with a photo of the *Wedding Tower*, a famous *Jugendstil* building located in Darmstadt, the city I am living in. Upon lifting and tilting the frame to the right, however, the *Wedding Tower* slides away and reveals a more personal picture of my wife and my younger daughter Greta. Leaving the tilting gesture causes the secret picture to be masked

immediately by the original picture, which slides back into place. Through the functionality of the hidden picture, "keeping a secret" can be acted out and, thus, experienced through the picture frame. It is a function, but it is carefully grounded in and modeled after the experience to be provided. It does not sport any signifier of the secret, no latch or switch or keypad. The interaction necessary to reveal the secret was carefully chosen. It ensures a certain privacy as long as picking up other peoples' picture frames—for example in an office—appears bad-mannered, akin to opening other people's drawers or peeping through key holes. This does not prevent certain people from doing it nevertheless, but most agree that it is unacceptable behavior. In addition, the whole gesture is one of shielding the hidden picture against unwanted peeks. The sliding of the picture emphasizes the impression of revealing something and maps at the same time the potential physical consequences of tilting. The sliding back upon leaving the tilting position is needed for consistency; however, the secret picture is masked immediately, again reducing the chance of unwanted peeks. If you manage to not look too guilty, if caught in the act of fiddling with your picture frame, your secret is relatively safe.

The picture frame is a—to my mind—very good example of an experiential product. It is able to create a story, an experience, through the provision of a secret picture function. In addition, the whole interaction is carefully designed to be in line with the experience to be delivered. In contrast to much other functionality one can put into an electronic picture frame, the secret is one that provides meaning and is fun—at the same time. The according experience pattern captures this essence and makes it available to the design process as a "molding form." Just take a second, and use "keeping a secret." Apply it to your mobile phone, laptop, television, or coffeemaker. I am sure you will instantly stumble across a number of interesting design ideas.

5.5 THEORY-INSPIRED DESIGN

McCarthy and Wright (2004); Boehner et al. (2007) and many other phenomenology or ethnomethodology inspired researchers and designers in HCI eschew the idea of (content) models and theories in Experience Design. A common argument is one of unjustified abstraction and reduction and the envisioned danger of losing the richness of experience (see Section 1.2).

I am critical about this claim for various reasons (see Hassenzahl, M., 2008b). First, it assumes a richness in experience, which might not be that ubiquitous in everyday life. We continuously experience, but rich, deep, meaningful experiences may be less frequent. In addition, rich accounts of experience might require an outstandingly reflective and attentive "experientor." I suspect experiences with technology (as many other experiences as well) to be far less unique and far less variable as implied by the proponents of the "phenomenological" approach: we all like to be challenged; we all like beautiful things, we all care about what others think about us and we all like romantic sunsets. Accounts of according experiences, however, might differ in their quality, the experience itself does not so. A poet may find beautiful words to describe his or her experience; this does not make it superior to experiences of more mundane people.

Designing an experience (and according products) requires a detailed understanding of the people and the context it is designed for. In addition, designers need inspiration. They are able to build ideas from anecdotal observations and loose associations. Certainly, a bottom-up, ethnographic approach and method is able to provide this. It urges us to leave our laboratories or studios, to meddle with real people, in the real world. On the other hand, many contexts are already substantially explored by other people's research. The obtained knowledge takes the form of models or theories, reductions, and summaries. But still: they condense important knowledge already available.

Take marriage counseling as an example. I'm sure that the problems couples encounter and the actual experiences they make in their relationships are rich and diverse. A thorough understanding of each case is necessary to pick or even develop appropriate approaches to, for example, solve marital problems. However, counseling and intervention also requires a more general understanding of what intimate relationships have in common and how classes of marital problems should or shouldn't be approached. Both is a reduction—the combined result of many people trying to understand this problem domain, the distillate of hours and hours of counseling work. No seasoned practitioner or researcher would dismiss this knowledge, and to always start afresh each time.

However, closing the eyes to already available knowledge—either because of ignorance or dogma—seems to be a common theme to HCI. In a recent, unpublished report, Stephanie Heidecker, Uwe Hillmann, Kai Eckoldt and I reviewed published concepts broadly addressing the mediation of intimate relationships—relatedness experiences in my terms. We collected 144 published concepts. Interestingly, those concepts refer to a small number of papers only as their basis for understanding intimacy and close relationships. One of those is Vetere et al. (2005) study of six couples over a period of seven weeks. They used Gaver et al. (1999) *Cultural Probe* technique and contextual interviews (Beyer and Holtzblatt, 1998). Both techniques are bottom-up and ethnography-inspired. This work resulted in a published "framework" of intimacy and close relationships widely used.

To base concepts rather on a framework derived from a small, bottom-up study of six couples, than systematically exploiting the vast literature on close relationships available in social psychology, is problematic. I am fully aware of the important role of first-hand experience for the design process, and I firmly believe that Experience Design—any design—becomes impossible without asking, observing and confronting real people. However, this should not be seen as a legitimating knowledge already available in form of theories or models.

I am truly amazed when, for example, Vetere et al. (2005) dismiss a whole, detailed corpus of research into close relationships with the lapidary comment: "Despite numerous social science studies of intimacy and the exchanges that occur within intimate relationships, a universally acknowledged definition of intimacy has yet to surface. Of those definitions that have emerged [references] few provide any significant design traction" (Vetere et al., 2005, p. 475). Definitions may not be helpful, but how can the accumulated knowledge about intimate relationships *not* hold any knowledge significant for design? Or to put it differently: what kind of design is not able to capitalize on the available knowledge?

In fact, Vetere et al. (2005), for example, do not cite a single, high quality reference from social psychology. This somewhat rash dismissal of already available information is dangerous. It implies a "do-it-yourself-culture" under the cloak of a particular approach to research and an according philosophy. An only cursory glance into the literature of close relationships reveals that the insights gained in studies such as Vetere et al. (2005), and many additional insights beyond that are readily available. We only have to grab it. Conceptual research done by Human-Computer Interaction with a do-it-yourself stance is just a waste of resources. Even more annoying is the fact that the major insight we could, and a discipline such as psychology cannot provide, is often neglected: the impact of technological interventions on close relationships. Of the 144 published concepts we reviewed almost 40% were not evaluated at all. For the others, the quality of evaluation was very mixed. I am not talking about usability evaluation here. I am talking about an attempt to gain an insight into how a specific technological intervention (as opposed to a general trend, such as internet's consequences for relationships) impact relatedness experiences. Instead of using up all the energy in repeating research already done, Human-Computer Interaction and interaction designers should focus on exploring their ideas' power to impact and change thoughts, feelings, and action—in short: experience.

For Experience Design, I would argue for both: understanding the particularities of a concept idea and context at hand (maybe through a phenomenological approach) and using the already accumulated knowledge available through, admittedly, reduced, but proven models. For me, a theory is not limiting, but inspiring. For example, already in the 60s of the last century, Reiss, I. (1960) suggested a four stages *Wheel* theory of the development of love. It addresses the general notion that relationships are dynamic, changing entities. It focuses attention on the differences between stages of a relationship and according transitions. In our review, we found no single concept which reflected explicitly upon potentially different requirements implied by different stages or potential transitions. As long as Experience Design is not primarily about determining whether the one or the other model of relationships is "true," we can use according theories more freely as a source for inspiration. To ignore them would be culpable.

5.6 THE ESSENCE OF THE CHAPTER

Experience Design asserts design not to be about products anymore but about the experiences they deliver. This requires a broadened perspective, with the fulfillment of psychological needs (values), which in turn creates meaning and emotion, as the prime design objective.

This requires to drop the efficiency-oriented *Homo Oeconomicus* as the guiding *Menschenbild* and to replace it with a more appropriate view on people. In line with the need-based approach of the present book, I understand humans as active and growth-oriented. They are inclined towards integration of their feelings, thoughts and actions into a unified sense of Self (provided through experiences) and the further integration of themselves into larger social structures. This *Menschenbild* has concrete implication for the design of interactive products. It defeats high level of automation. It urges us to acknowledge peoples' skills and abilities, and—even more important—their interest

in learning and improving themselves. It calls for technology, which creates—or at least supports—self-relevant experiences embedded in social processes and practices.

Human-Computer Interaction focuses on the empirical analysis of people and their preferences. By that, evaluation can quickly become a question of whether people "like" or would "buy" a concept, if put on the market. However, one must keep in mind that the relation between designer and user (i.e., consumer, recipient) is bi-directional. It is not as if users always have well-defined requirements, which only wait to be discovered. Indeed, requirements are *co-constructed* in the ongoing dialog between user and designer. Each interactive product is a proposition, which will inevitably alter expectations and ultimately the requirements users formulate. Psychological needs are universal reasons for using interactive products, but they carry little information about exactly what behaviors to engage in. Actually, experience designers suggest a need-fulfilling behavior through an interactive product, thereby hopefully creating a meaningful experience.

Consequently, the basic claim of Experience Design is to consider experience *before* products. It urges us to set the story straight before we start thinking about how we can create this story through a product. By that, Experience Design becomes more than adding something to a product's core function to make it a little more fancy, interesting, or beautiful. It acknowledges that all aspects of a product, its functionality, content, presentation and interaction, have to be in line with the experience to be designed. The experience designer becomes foremost an author of experiences.

A potential tool which supports the designer to author experience may be "experience patterns." We understand those patterns as congealed experiences, blueprints for stories to be told through the use of a product. Experience patterns are grounded in our *Lebenswelt*, but at the same time, they are idealized and optimized. A quality experience pattern has a clear scope (i.e., not too broad), is plausible (i.e., face validity), "resonates" with its user (the designer), is applicable (i.e., there are domains/products which benefit from the insights captured by the pattern), generative (i.e., able to inspire designs), and successful (i.e., produce superior products).

Besides the importance of first-hand empirical insights into context—real people living in the real world—for design, I believe that we should exploit the already accumulated knowledge available through often reduced but proven models and theories. Those models and theories can be as inspiring as first-hand observation. Instead of re-doing conceptual work, already provided by other disciplines such as psychology, we should focus our resources on the study of the effects of our designs on the people we design for.