

EMPATHIC DESIGN

Edited by:

Ilpo Koskinen

Katja Battarbee

Tuuli Mattelmäki

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EMPATHIC DESIGN: INFORMED AND INSPIRED BY OTHER PEOPLE'S EXPERIENCE

My friend Bill is blind. He works as an engineer modifying tools and equipment for people with low or no vision. He has wonderful insight about aspects of design that will and won't meet their needs. I frequently ask him to advise on design projects and to relate his own experiences. Usually, I meet him in his lab where sighted people work too. This occasion was my first visit to his home. I wanted to learn about his use of kitchen appliances, so we arranged to meet at his house one evening. He lives on the top floor of a two-storey building. When I rang the bell he "buzzed" open the door from upstairs to let me in. I looked up to see him waiting to greet me at the top of the stairs, but in the pitch dark! Instinctively I was anxious for his safety, seeing him standing there with the lights out. Then quickly it dawned on me—"Well no! No need for concern. This is a glimpse of his world. I'm just stepping into his world. It's me who has a problem with darkness!"

I realized afterwards that, on the many previous occasions I had watched him carefully and listened as he spoke of his experience of the designed world, my learning was at an intellectual level. This fleeting visceral realization of the differ-

ences in our everyday realities had given me an experience of my own that helped me better understand his.

This is not meant to imply that now suddenly I understand Bill or know how to design things that will work for him and for other blind people. No, it is simply about achieving greater awareness, an extended imagination and sensitivity to another person's world in a powerfully memorable way.

DESIGN FOR OTHER PEOPLE

As designers, most of our work is about making things, not for ourselves or people we know, but for other people. Other people have different experiences; they live in other places, have other ideas and habits, other abilities and concerns, other expectations and preferences. How can we learn about what other people need and what they will enjoy? How can we know about what they currently do and how their experiences might be enhanced by things we design for them?

Sometimes it seems there is a paradox at play. On the one hand, many design problems arise when we assume that everyone else is just like us. Poor design is often the result of an assumption that other people will like what we like, do things the same way we do; that they will know, as we do, that pulling the round switch will turn the machine on; that green will remind them of fresh leaves. Clearly, this is not the case. People are very different in many ways.

On the other hand, many problems arise when we think of other people as so different from ourselves that we think of them as "them." Sometimes when we observe, collect data and measure people's diverse reactions to things, we adopt a kind of objectivity more appropriate to understanding physical matter than people. We begin to behave as if other people's behavior and experiences were phenomena quite divorced from our own. Clearly, this is not the case either. People from different cultures and environments, with different world-views and lifestyles, are similar to us in many ways that can provide us with important insights.

Empathic design is all about navigating the course between these extreme ideas. Yes, people do, say, think and feel different things and in different contexts. However, we can make sense of this and design appropriately if we use our ability to learn about, and identify with, their experience. Empathic design is about using our understanding to inform and inspire the creation of more useful and enjoyable things for people we may never meet.

OBSERVATION WITH EMPATHY

To return to the basic questions: how can we learn about what other people need, what they will enjoy, what they currently do and how their experiences might be enhanced? The human and social sciences offer many ways of learning about people. Ethnographic methods from anthropology, physical and cognitive task analyses, social network analysis and testing techniques from experimental psychology—all have been adopted, and adapted, by human-centred design practice. These science-based methods emphasize objective observation of behavior, of what people say and do. These are recorded and analyzed to reveal important things about people's abilities, habits and choices as they relate to design.

To be really useful to design, observation is not enough. We cannot observe people's thoughts and feelings—their motivations, emotions, mental models, values, priorities, preferences and inner conflicts. Yet, these subjective phenomena are so important for designers to grasp, for it is these that make up people's experience. We need to know, not just whether people can use a camera, for example, but whether they will have fun with it and want to make it part of their life. This is where empathy comes in. Empathy is our intuitive ability to identify with other people's inner states based upon observation of their outward expressions, their behavior.

We routinely make empathic inferences from such observations. This is why we experience tearful joy at witnessing a happy reunion, or sadness at a story of loss. If we see someone react to our camera prototype with a grimace and a furrowed brow, we take this as an indication of some displeasure or frustration (and probe a little to understand why). This is our empathic imagination at work, making sense of other people's inner worlds.

Empathy by itself can be a problem too, if we relate so strongly to another person's feelings and viewpoint that we lose sight of other important issues. It is essential to balance subjective empathy with objective observation.

HOW WE LEARN

"What I hear, I forget. What I see, I remember. What I do, I understand." Lao Tse.

Like many people in our culture, my formal education placed higher value upon received knowledge and objectively derived facts, than upon personal discovery. The longer I practice design, the more I am convinced that the most valuable learn-



ing occurs, not as the result of facts and objective data brought to the process, but from evidence and experiences that capture designers' imaginations.

It seems to me that the most effective way to ensure that human-centred principles are embodied in design is for design teams to discover the significant issues for themselves, rather than just be told about them. Through observation, we become informed, and through empathy, the human connection, we are inspired to imagine new and better possibilities for people.

Ranging from the more objective to more subjective, here are three useful ways to do this:

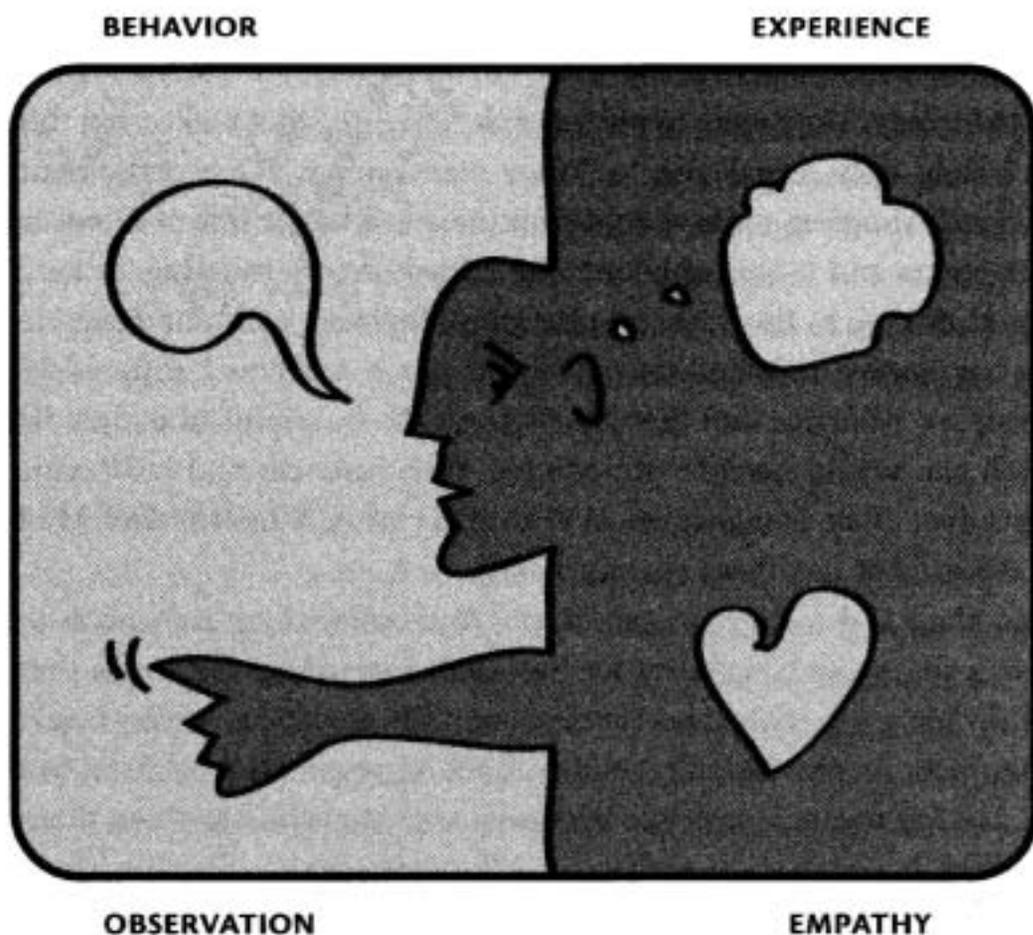
- Looking at what people really do, either in their current natural context or with prototypes we expose to them.
- Asking people to participate, either by making records of their behavior and context, or expressions of their thoughts and feelings.
- Trying things ourselves, to gain personal insights into the kinds of experience others may have.

You will see, from the few examples below, that in all cases the value of these methods depends upon empathic interpretation to be truly valuable to design.

Looking at What People Really Do

It is much easier to get excited about designing for people once we know them and understand their situation. One of the classic ways to do this is to become familiar with a few key individuals and contexts through observation. For example, in designing a new wheeled-stroller for children, the design team—none of whom had children themselves—shadowed a few selected parents for a day and hung out near shops where they could see lots of parents struggling with babies and toddlers.

Some discoveries were based purely on observation and had functional and pragmatic consequences for the design: larger wheels for better manoeuvrability, more space for storage. A deeper insight came from the empathic realization that for most families, a trip with a stroller is not just a way to get from A to B, but serves as a learning and bonding opportunity that could be much better supported by design. Many parents and guardians were observed stooping to interact with the child, using and practising language and social skills as they named and reacted to things they saw and people they met in the street.



We learn about what other people think and feel through empathic interpretation of what they say and do.

However, the child was positioned far below the interaction plane of adults unless they kept bending down, so that the children missed a lot of the action and ended up staring at women's hemlines. A key innovation, a raised seat for better interaction with the child, came about through designers' identification with the emotional experience of the parents and children, not purely from observed phenomena. Here is the creative balance—detailed observation informing the subjective imagination.

Asking People to Participate

A powerful way to probe other people's experiences is to engage them in creative expression. Activities such as collage-making, drawing, photo-surveys, storytelling or diary-keeping are especially valuable in situations in which people may find it difficult to articulate or reveal attitudes and thought-processes verbally.

For example, in a project to design an Internet banking service, a design team asked participants to keep a photo-diary documenting their daily activities as they related to finance. They were to photograph “anything that makes you think about money.” They were asked also to “draw your money.” One participant drew a simple sketch showing a pile of gold coins next to a bigger pile of things including a bike, a stereo and a pair of boots. She added arrows to indicate that the gold pile was shrinking as the “things” pile grew. Together with the design team, she realized her passive and short-term view of finance, and how it differed from some other people’s behavior and thought patterns. To be useful to people like her, a bank Web site would need to provide real-time balances and information about payments due, all at a single glance. With this clarity, the team was able to implement a design that met these specific needs.

These photos, drawings, visual diaries and collages are informative in themselves as well as a starting point for personal storytelling that helps participants explore and express their own perceptions. For designers, such visual and narrative expressions provide rich texture about other people’s physical and mental worlds, making it much easier to appreciate what matters to them than through words alone.

Trying Things Ourselves

We can also begin to appreciate other people’s experiences by participating in relevant activities and circumstances ourselves. Of course, we cannot actually have anyone else’s experience, but we can devise ways to approximate them and learn from our own experiences about how situations might be improved. Sometimes this might mean simply taking a trip with a child in a stroller, or living for a while with an “experience prototype”—sleeping and showering with a wearable medical device, for instance. Other times, it might mean using props and role-playing to simulate different personal circumstances. One design project, for example, explored how hospitals might provide better service to patients and their families. Design team members took on patient roles and went through the preparatory phases of several different medical procedures. They were wheeled around the hospital on trolleys, left to wait in various places for periods of time and interacted with medical staff just as real patients would.

These “patient journeys” gave the designers an embodied understanding of patients’ concerns, sometimes evoking very strong emotions, that directly

inspired many ideas. Some ideas were easy to implement: a rear-view mirror on the hospital trolley, for example, so that patients could make eye contact with the person wheeling them around. Others were more profound, such as the insight that patient and family members need forewarning and physical space to prepare for the moment they are separated and the patient whisked off into the theatre.

Here there is no claim of objectivity. The approach is unashamedly subjective: aimed squarely at promoting empathic inspiration. It aims to feed designers' imagination, by providing carefully selected and relevant experiences quite unlike those we are exposed to in our everyday lives.

INFORMING IMAGINATION

Design depends upon a charged imagination—that ability to think beyond here and now. We use imagination to think ahead about how a future experience might play out, and to generate ideas about how to support it. Imaginations can also run riot into realms of fantasy. To be useful in design, imaginations need to be continually nourished and checked by reality. Empathy is a particular kind of imagination and, similarly, needs a continual reality-check. Methods we use in empathic design are aimed to both inspire and inform this imagination through encounters and exchanges with real people.

Combinations of activities such as those above and described elsewhere in this book— shadowing, interviewing, visual and verbal storytelling, experience prototyping and role-playing— are all ways of exploring other people's behavior and experiences, but not in a distant and impersonal way. Connections are made with real people, with their anomalies and inconsistencies, with their rich and raw expressions, and in real contexts. This is what enables designers to respond with ingenuity to real needs. I hope that we will continue to explore ways to get beyond our own cultures, experiences, rituals, mental models and cognitive structures. We need to keep alive this natural curiosity and amazement about what it is like to be somebody else.