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Designing Towards Ways of Living

Stella Boess

Stella Boess has been an assistant professor in the product usage research group at the Faculty of Industrial Design Engineering of Delft University of Technology since 2002, having lived and worked in the Netherlands since 1998. From 1997 to 1998 she was a research associate at Staffordshire University, UK, and continued as a 'remote' PhD student there, receiving her PhD degree in 2002. She received her Industrial design degree from the HDK Saar, Germany in 1994. Professional experience ranges from product design consultancy and research to user research for design, both employed and as an independent consultant.

This paper, firstly, argues for a user-oriented self-understanding of a designer. Secondly, it seeks to contribute to the understanding of the interrelationship between user-centred design and sustainability. Thackara[1] argued that a strong market and technology push is influencing the development of new products. Could such a development also be informed, even countered by a 'user push', and could that lead towards environmentally and politically sustainable consumption? Thackara[2] and Schön[3] argued that it could, and should. I reflect here on a case of user-centred designing in which these issues also arose. My starting point lies in one pragmatic design problem, if you like, a micro-perspective.

In carrying out a user-centred design task – not a technically highly complex one, for a particular situation rather than for mass production – and evaluating its outcomes with users, I was prompted to reflect on my design activity, and to question the underlying concept of user 'wishes and needs' employed.

Research for User-Centred Design

The goal of a study on bathing for older people was to find out about users' wishes and needs prior to designing. The work was initially carried out for a client, a sheltered

housing cooperation. Demirbilek[4] had reviewed the literature on design for older people specifically, concluding that user participation was widely called for but not yet extensively realised. Our study sought to realise such participation. The user-centred stance was furthermore based on campaigners calling for access for older people to non-stigmatising commodities and provisions for public and private life.[5] Initially, the study did not seek to challenge what Fry has critiqued as "a functionalist design reform rally call" to "design for need", nor to reflect on clashes between sustainability and production-driven notions of need.[6]

Rather, problem-setting was based on gerontological literature highlighting physical problems faced by older people in everyday life environments,[7] on studies that concluded that assistive technology for older people was often disliked, underused, and found to be stigmatising by them,[8] and on research that had shown that the design of a bathing environment can contribute to making people feel less or more disabled.[9]

Participants of our qualitative study were residents of sheltered housing in England. The study comprised focus group interviews including visual work, individual interviews and photographic documentation, with in total 24 participants. The study methods and activities have been reported on previously.[10]

In the literature on user-centred design, there is little guidance material on the theoretical ground of *interpreting* research with users, although there are many reports of studies.[11] Recent examples of methodological guidance don't even mention 'data analysis'.[12] Earlier guidance material had been rather technical and positivist in orientation.[13] How sure could I be that what I asserted about users was accurate? A Grounded Theory perspective, more widely used in e.g. nursing research, was initially adopted.[14] The analysis resulted in a model describing participants' efforts to realise their needs and wishes by negotiating their well-being through physical, perceptual or projective interactions with their environment. The research outcomes were applied in design input on an 'assisted bathroom'. This type of room exists in most older people's residences. Its main purpose is for carers to assist people in bathing who cannot do so in their own flats.

Seeking to address participants' needs and wishes in accordance with the model, the design work should:

- answer cultural needs ("I'm not into putting on the style, not at my age, but I would like a nice peach bathroom and peach curtains […] and […] a few flowers in the window…")
- realise usability: adaptability in use and low physical demands on the user; unobtrusive safety. ("Grab bars [are for] them, the disabled".) But ("Getting in and out, it's difficult, you know")
- provide for an overall relaxing atmosphere ("I love a good soak. Get the Radox going ...").

The design work was evaluated by me, visiting again after the residence had been in use for a year. Traces of use were noted;

and short interviews with five residents, two carers and a longer interview with the manager of the residence were conducted.

Evaluating User-Centred Design

The evaluation showed that users of the room valued some of the design outcomes, and I wondered whether that could be reproduced in future work. Other aspects were viewed negatively, and I was asking myself how that had arisen and how it could be avoided. I embarked on a new reflection of the entire activity, including reflections that had arisen during the work itself, but that had only partly been used in order to inform the Grounded theory analysis (research diary). The aim was to trace the interpretations and understandings that informed actions during the project. And through that, to contribute to an understanding of whether and how knowledge gained from user research usefully informs user-centred design. Here, this was done for the most part retrospectively. But the idea is for the resulting concepts to be applicable *in* a situation of design activity.

Adopting Hermeneutic Phenomenology

Van Manen,[15] in championing 'hermeneutic phenomenology' to reflect on professional *pedagogical* practice, appeals to the need to assign value to what one sees, for the sake of a meaningful lived relation between pedagogue and child. The applicability of Van Manen's methodology to user-centred design, lies in the relationality that is also implied in the term 'user-centred design'. It is a different sort of relation, as is investigated in the 'exegetical' part of the reflection, below. But the idea of a relation itself is a useful starting point. Van Manen explains that:

> Hermeneutic phenomenology … is a descriptive (phenomenological) methodology because it wants to be attentive to how things appear, it wants to let things speak for themselves; it is an interpretive (hermeneutic) methodology because it claims that there are no such things as uninterpreted phenomena. … the (phenomenological) "facts" of lived experience are always already meaningfully (hermeneutically) experienced. Moreover, even the "facts" of lived experience need to be captured in language (the human science text) and this is inevitably an interpretive process.[16]

I employed two approaches laid out by Van Manen: an *analytical* approach, "examining systematically the various themes that […] narrative[s] reveal, "in an ever-widening search for ground" [17] and an *exegetical* approach, looking at literary and philosophical material, "in terms of a discussion of those texts and the structural themes that their authors have already identified and discussed", and "treat[ing] the[ir] works […] as incomplete conversational scripts".[18] The outcomes of a hermeneutic phenomenological inquiry describe and interpret the essential nature of a phenomenon,

deepening my/others' understanding of it, and enabling me to live more thoughtfully in the relation with the other. However, I also took onboard the arguments by Coyne and Snodgrass, that *"the Romantic terminology of essence […] removes the concerns of design from the everyday world. It obfuscates the concern […] with the social, cultural, political and physical forces*" involved in design.[19] They argued, rather, that we need new 'hermeneutical metaphors' for the design activity that reflect its intersubjective nature.[20] Schön too argued that:

> We need … to become aware of the generative metaphors which shape our perceptions of phenomena. … A multiplicity of conflicting stories about [a] situation makes it dramatically apparent that we are dealing not with "reality" but with various ways of making sense of a reality. Then we may turn our attention to the stories themselves.
>
> In order to bring generative metaphors to reflective and critical awareness, we must construct them, through a kind of […] analytic literary criticism, from the givens of the problem-setting stories we tell.[21]

I resolved to use a hermeneutic phenomenological reflection in order to develop a generative metaphor for a user-centred designer's activity. The benefit of the metaphor should be that a designer who adopted it would be able to interpret and *act in* the design situation in such a way as to find out *"what contributes toward the good of that person …; at the same time remain[ing] sensitive to the uniqueness of the person in this particular situation."*[22]

Themes from Narratives (Analytical Approach)

I examined the narratives emerging from the research, design and evaluation activities for me, and grouped them into three themes.

Theme: Integrating Design Issues towards User-Centredness

"We like a bit of both, the old and the new"

The design of the assisted bathroom, overall, was said to be liked by users. Examples of shortcomings that became apparent, were:

The grab bars had been selected because they were the standard choice to comply with functional requirements for an assistive room of this kind. Users of the room found that the combination of items which carried different associations for them, disability versus homely bathing, detracted from the quality of the experience of using the room. The problem did not lie in the combination of the old and the new. Traditional looking tiles and a contemporary 'assisted' bathtub were both viewed positively by users.

Diverse user needs. The research had focused primarily on one group of users: the senior residents who would bath in the room.

The staff's needs had been researched through interviewing and interactive use of a scale model, but not through observing and following actual activities, and as it turned out, not enough. In the room design there was not enough provision for the storage of cleaning equipment. That ended up being left out in the open, which was perceived as a problem by users.

Some aspects of the design which were liked by the users, had not been closely based on the research at all. The colour scheme, for example, did not try to fulfil the research participants' *diverse* expressed preferences. Instead, a warm tone was used that would make skin look healthy.

So there was, apparently, a problem of *integrating* a number of issues in designing. Some attempts to answer needs even ended up counterproductive. How could a designer prioritise so that the needs of all users would be considered appropriately? How could a designer account for those aspects of a design which were not based on research participants' expressed wishes? All these aspects seemed to relate to a problem of *integrating* diverse issues. Dorst too pointed to the importance of integration, making decisions which "link the elements of the problem or solution, adequate in all *relevant contexts*".[23] A generative metaphor to be developed would need to include this. The theme was given the umbrella name of *Integration*.

Theme: Getting Close Enough Long Enough to Learn about Daily Life Preferences

"The room is lovely, but the bench isn't very useful …"

Having elicited potential users' needs and wishes, I produced design work. The later evaluation showed that while some needs and wishes had been correctly recognised (users reaffirmed them), the design still didn't address them adequately. Two examples:

Opportunities to personalise the room had been given by providing ledges on the sides. Users kept forgetting personal things on the ledges, and an extra table near the door was eventually brought in. That turned out to be the place where personal things were usefully habitually deposited.

A bench had been custom-designed so that users could sit on it to undress. A custom-designed grab bar that had been planned to go next to it, had been dropped for organisational reasons. That meant that in the outcome, it was not easy to get up from the bench. An extra chair of a kind that had been popular with participants of the initial research (it was represented in an image as part of the visual tool), was brought in later. The relatively cheap rattan chair had integrated arm rests which were found to be conveniently usable as supports.

In the evaluation, then, it became apparent that the design interpretation of users' needs had sometimes been too literal, and other times not literal enough. It was hampered by insufficient knowledge of users' daily ways of life.

A theme that has occupied design thinking,[24] is designers' distance from consumers, thinking their own experience is representative enough of others' experience. Designs can end up inadaptable to situations deviating from those of imagined normal use. A metaphor to be developed would have to suggest how and why closer involvement between designers and users might be successful, and how both could be comfortable with it. This theme was given the umbrella name of *Proximity*.

Theme: Moving from an Existing Situation towards a Potential One

> *"I sometimes didn't like the designs I produced for older people …"*

I had set out with a partly *ethically* oriented motivation: of realising user-centred design. Possibly being preoccupied with problems of disability and dependence that I sought to address, I ended up not making designs that would also be *attractive* to *me*.

While some participants of our study had said "I'm happy [with my disabled shower]", some also said things like "this *isn't* home", "I'm ashamed of my bathroom", "So we're stuck again". Some of the very environments which, presumably, had been specially geared towards residents' needs and wishes, were apparently perceived by them as oppressive or limiting. Participants *agreed* that they *didn't* want "design for old". How could a designer distinguish between 'being the problem' and 'being subjected to a problem'? How or how much are the things that surround users, intrinsic to their lives, and how much am I just attributing them to them while looking as a designer?

Apparently the problem that I had set myself, to design something "for the old", hampered the inclusion of my own interests in my design work. Schön[25] argued that to serve a user well, a design had to *satisfy* a designer and user alike. A metaphor to be developed would have to suggest how a designer can distinguish the potential in people's lived experience from circumstances constraining them now, and what of her/his own interests a user-centred designer could bring *into* the situation he/she experiences. This theme is given the umbrella name of *Projection*.

Towards a Generative Metaphor (Exegetical Approach)

The *relation* between a designer and a user, in a design situation, is now investigated exegetically, from the vantagepoint of being a designer.

The first description of a relation: Van Manen. Hermeneutic phenomenology, as Van Manen describes it, has one important *sine qua non*: that the inquirer be *in* the relation that is described. Having adopted the perspective as a *research* methodology, the *examples* Van Manen gives of such a relation, are now also investigated for possible ways to act as a designer.

The second description of a relation: Deleuze. In order to focus on contextual and perceptual aspects that present themselves to a designer, Deleuze's discussion of writing and art, is also taken up.[26] Deleuze is not a phenomenologist but a poststructuralist. Deleuze draws a lot, sometimes implicitly, on texts by Nietzsche, and on Heidegger's later thoughts about context- and perception-orientation. These thinkers also figure prominently in Van Manen's work and have each had an impact on phenomenology,[27] leading me to cautiously draw on Deleuze's ideas for the purposes at hand.

Van Manen discusses the pedagogue in relation to the children in her/his care; Deleuze, the writer in relation to the world she/he writes about. They were not read in order to choose for one or the other, but for how they can respectively deepen the reflection and shape a metaphor. Deleuze's contribution is valuable to me here because it focuses on the context in which a relation is set, as well as describing a less close relation than Van Manen. Most importantly, Deleuze's writer is not in a position of power over those she/he writes about, and this appears much more appropriate than Van Manen's pedagogue-child relation.

The exegetical reading is presented in a summary which already constitutes the generative metaphor that has been derived from it. The metaphor that has been developed, is that of "an Indian who doesn't know how to grow the maize", based on Deleuze[28] proposing it as a metaphor for a writer, based on a novel by Le Clezio. The metaphor that has been developed, proposes for the design process that:

In order to put her/himself in a position in which she/he can integrate perspectives in a design situation, a designer "becomes" "Indian"[29] i.e. part of a 'people' (≈users), though remaining aware of her/his difference.[30] A writer (here: designer) lives with and among those in a "lifeworld"[31] or "others that exist"[32] in a position of "minority".[33] She/he doesn't know "how to grow maize", an activity during which, I interpret, users discover and transform products from commodities or technical artifacts into elements in a 'lifeworld' or 'world of 'the existing'. In order to learn how people live, metaphoric questions a designer might ask are: *in what way are they and I "minor" ones that are "becoming" "a people of" Indians? What is "growing the maize" like?*

In order to seek and establish sufficient proximity for what a designer needs to know about users' ways of living, a designer seeks out the tone of those that 'fit' with her/ him and sympathically shares with them their discovering of 'world'. A designer needs to be *close* enough in order to be able to share a "seeing" and "hearing" with them.[34] The experiential criterion of success is a feeling of sympathy[35] that this partial outsider shares or comes to share with the "Indians".[36] This sympathy might enable users and designers to share more aspects of daily life. Both must also be able to retreat or move on. The experience gained is never more

than fleeting, bringing both into a continued search for it. A designer can ask: *what 'visions' do I see arise when with them, and what 'tones' do I hear when with them, that make us 'stronger'?*

In order to move from an existing situation people experience, to a potential one, a designer projects images into 'the existence of Indians'.[37] Each person throughout their life has developed an inner world or "cartography".[38] A designer can bring this inner world to bear on the world studied, enabling her/him to make displaced linkages with it, thus creatively injecting ideas into it and producing "true visions".[39] This can also involve a 'minorisation' of the language of 'Indians', to reveal its displacements of meaning.[40] Successful design then would be to poetically transform what it is like to be, for example, "an older person bathing" and to project new ways of living it, onto it. A designer can ask: *what images do I want to inject that produce a potential transformation of their (and partially, my) world?*

Re-Research

I re-examined the data from our study for new knowledge that might arise when I look *as* 'an Indian who doesn't know how to grow the maize'. Initially, the data had been categorised into an apparently stable relationship of research participants with their bathing environment, as if it were a naturally occuring process, independent of preferences or perspective (Grounded theory analysis).

Now I would look at the narratives emerging from a design situation, and seek to structure them into themes that constitute (parts of) metaphors for me that are generative of design ideas. I would go to live with research participants, and seek to elicit both expressions of satisfaction and critique from those I meet, in order to learn about the perspectives coming to play in their lives. I would be attentive to my reaction to what I experience, and would seek to creatively bring that into ('inject') *my* interpretation of *their* world. In the light of the 'Indian' metaphor, the methods employed in the initial study were much too formalised. The metaphor would instead imply a favouring of methods like those employed by ethnographers: long term exposure to an environment, and the adoption of a role in it (participant observation).

Integration

My organising perspective of users' needs and wishes, the user-centred view, now comes to revolve around the way 'they' 'are Indian' – in relation to the design task of bathing. Who are they, how do they live ('grow the maize')? The main communality between them that emerged, was the embeddedness of participants' concept of bathing in their idea of 'home'. A home is something that

- they have re-established, re-habitualised throughout their lives, and are still in the process of doing so,
- embodies relatedness (with close ones) for them
- can become a 'not quite home', especially with the absence of relatedness.

Participants variously live ('grow the maize') by making new technology fit with habits, by sharing privacy with close ones, by maintaining independence and their own way of life, by adapting ad-hoc to health events and by staying in accustomed roles. The concept of 'home' and everything that comes to bear on it would now be the integrating idea guiding me in looking at these participants' existing and potential needs for bathing. Living in a sheltered residence had positive meaning for most of those that I met, but there were also problems within that environment. The integrative view would lead me towards designing for somebody's home, guided by the way they live it.

Proximity

How a designer sympathises with participants' experience is not precisely identifiable, it is in an indiscernible 'neighbouring zone'.[41] I sympathised particularly, in the encounter with them, with the 'tone' that is audible of their resilience, fighting back from temporary disability, and with the 'visions' that open up when they assert their preferences, for example in rejecting institutionalised care or (some) technological solutions, instead preferring informal care from a close friend and using ad-hoc tools. I also came to feel a sympathic sadness when visions are blocked, and the tone is numbed that could echo into the future – when organisational decisions and environments meant that somebody got stuck in a situation, or became unable to provide self-care.

Projection

Images that I inject into these users' world I encountered, are 'fictionalised' versions of the participants and their world, 'colouring' it in and 'composing' their, and partly my, relationship with their environment into points of departure for design.[42]

Ideas are informed by how participants want to realise personal care informally and privately, how they do not want to be stuck with technology and objects they cannot use, and how they prefer readily available low-tech tools through which a physical environment remains or becomes flexibly adaptable to the flow of varying physical fitness.

Examples of points of departure:

A home in a home. Any daily bathing functionality should be as closely integrated with a person's home as possible. In a sheltered residence, a bathroom with assistive technology should be situated within close vicinity of the private apartments of residents, and should allow for residents to effect informal care.

Wellness extra. Uses users' wishes for wellness functionality as a first guiding motive for design, rather than users' (dis)abilities. Proposals might involve spa functions (e. g. massage jets, steam bath), potential wellness functionality of plants, or use of colour and sound.

Soft tools. Looks at the 'handlability' of smaller items in a bathroom. Functions are seen in terms of tools that can easily be manipulated and moved around, that are pleasing to the hand and that have an easy-access place where they 'live'. Items might be grouped as 'toolboxes'.

Nature. Refers to a bathroom's position in relation to a house and exterior space. A connection with the time of day, with the weather, and the season of the year could be established.

Fold-up. Physical objects as well as forms of organisation are geared towards adaptability to use at a particular time, in a particular place, by a particular person, yet do not present an obstacle, e. g. through physical volume and weight, in the carrying out of other tasks.

Walk-in. Makes available an 'open space' that can be furnished with appropriate functionality. Possibly also seating functionality set into a wall with water drain in the floor, to provide for walk-in semi-bathing.

Conclusions

I have attempted to give a philosophical grounding to my interpretation of user needs. The metaphor of 'an Indian who doesn't know how to grow the maize' lets me think of the relation in terms of a designer sympathising with users, not as an ethical obligation but as an element of a *satisfying* professional practice through experience. The notion of sustainability has not figured prominently in this research. But the outcomes suggest that a focus on users' ways of life can help a designer to remain critical towards the commodity character of the products of design, to put it in Thackara's words, to ask:

> What is this stuff for? What impact will it have? […] What products or services might we design which exploit technology and connectivity, while also delivering social quality and environmental sustainability?[43]

Characteristics of a manufactured product following on from a research such as the one described here, however, *cannot* be traced back and described as an answer to researched needs, because the organisation of production, technology, and the turning of it into a commodity lie in-between.

Working as 'an Indian who doesn't know how to grow the maize', design commissions I would seek would follow my 'already becoming'. That suggests a different conceptualisation than e.g. Rouse's position[44] that designers should talk to users because

designers are not (presently) users. Designers addressing user needs and wishes here would be the more *successful*, the *more* they bring themselves in proximity of them. Designers become part-users, but not all-users – they retain a reflectiveness of their difference, which is an enabler of creativity. Indeed, this reflection has also suggested that users for their part might become part-designers (a conclusion shared by Demirbilek[45]). Black argues that it is not so much designers as *companies* that are often unable to see beyond the constraints of their business processes.[46] The 'Indian' metaphor suggests a *different* demarcation line than the one implied by Rouse (above): not between designers' and users' fields of activity, but between technological and business interests on the one hand, and life interests and creativity on the other hand, even within a single person's or organisation's pursuits. These can be adversarial, and the work presented here has sought to strengthen the latter.

Designers, conceptualised like this, may not only be able to utilise, but also to critique technological development. A designer who adopts such a self-understanding may find that it conflicts with their position as an employee in a technology and commodity-producing firm. Perhaps it puts a designer in closer proximity to a productive cultural and political scene outside of e.g., large corporations. Or a designer might come to occupy a middle ground, becoming a consumer researcher as mediator.[47]

Conceiving of a design activity with greater weight on intersubjectivity and creativity, in the way suggested by the 'Indian' metaphor, rather than on the technological and business aspects of designing, may help designers shift the balance from 'aligning my activities with those that foot the bill', as already noted by Zeisel[48] towards 'seeking to realise my sympathic project'. User-centred design might become something like 'shared experience design' or 'joint exploration design', terms that are closer to 'Collaborative Design',[49] but also reflect a joint directedness towards environmental experience. Thackara too argued that it would be desirable to replace the term 'user' with a less patronising idea.[50]

However, the potential risk to consumers would need to be compensated by a culture that is critical of the technology or commodity 'push'; a culture that is more, rather than less, alive and capable of being counteractive in a situation of closer contact between (part-)producers and consumers.

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27. Herbert Spiegelberg*The Phenomenological Movement. A Historical Introduction* 3rd ed. Dordrecht, Kluwer, 1994.
28. Deleuze ibid 12.
29. Ibid 12 and 13.
30. Ibid 158.
31. Van Manen ibid 46.
32. Deleuze ibid 183.
33. Ibid 15.
34. Ibid 119.
35. In e.g. French and German linguistic usage, “sympathique” or “sympathisch” translates into English as “sympathetic, engaging, likeable, nice, amiable”, or, as “simpatico” in U.S. English, as “agreeable […], being on the same wavelength; congenial”, rather than the common British English meaning of “pitying”. That’s why in this text I use ‘sympathic’ or ‘sympathical’ rather than ‘sympathetic’, to emphasise that I refer to the former meanings rather than the latter British English one.
36. Deleuze ibid 158 and 183, and similarly, Van Manen ibid 46.
37. Deleuze ibid 169.
38. Ibid 85.
39. Ibid 157.
40. Ibid 15 and 146.
41. Ibid 90.
42. Ibid 156–160.
43. Thackara ibid 46–7.
44. William B. Rouse *Design for success: a human-centered approach to designing successful products and systems* New York: Wiley, 1991, 34.
45. Demirbilek, ibid.
46. Alison Black ‘Why I work in User Experience Consulting’ in *Empathic Design* eds. Ilpo Koskinen, Katja Battarbee and Tuuli Mattelmäki, Edita, Finland: IT-Press, 2003.
47. L. Sanders and U. Dandavate ‘Design for experiencing: new tools’ in *Proceedings of the First International Conference on Design and Emotion* Delft, The Netherlands: School of Industrial Design Engineering, Department of Industrial Design, 1999, 87–92.
48. Zeisel ibid.
49. Stephen Scrivener, Linden Ball and Andrée Woodcock (eds.) *Collaborative Design,* Book of Proceedings from the Co-Designing conference held Sept 11–13 2000 in Coventry, UK. London: Springer, 2000.
50. Thackara ibid.