

Relatedness, appreciation and adaptability-forming design

Abstract

The way we construct our immediate surroundings and our ways of living determine how we relate to the whole world as we know it and how we view our lives in relation to it. In other words, our perspective of the wider world and our role within it is shaped by how the things we use are designed and depends on the ways in which we are permitted to interact with our world through these things. This is the focus of this pictorial/short paper, which suggests three interaction design principles to support the process of forming and strengthening the relation between us and the basic conditions of life. These principles are based on the observations made and experiences had during three field trips in areas of wilderness in northern Scandinavia that examined how interactions with essential resources such as water and heat affected the relations of people to these resources. Accordingly, the proposed design principles concern the relational aspect of design in terms of how the actions carried out affect these relations, rather than how the quantities of resources used can be communicated to people through a design or how an interaction will be experienced or engage people. The principles bring up design aspects such as relatedness, value and adaptability.

Introduction

The work presented in this pictorial was based on observations and experiences of three field trips to exposed mountain landscapes in wilderness areas in northern Scandinavia. Each trip was about one week long, took place during both winter and summer conditions, and involved sleeping in tents and mountain cabins. The living conditions in the areas visited during the trips propelled background aspects of everyday life to the foreground, i.e., the fundamental actions such as sleeping, eating, and moving around. A different environment and living conditions were sought for as a way to question how we have designed everyday living in our constructed habitats. Based on the observations made during these field trips, reflections were made on the relations formed with the equipment, clothing, and resources, such as water and heat. These reflections formed the basis for the formulation of three design principles, which are presented in this pictorial, followed by a discussion on limitations and future work.

In the field of interaction design extensive work has been done on looking for alternatives to the predominant. Dunne and Raby (2001, 2013) and Gaver et al. (2003) for example questioned current directions, challenging the visions of the future also by presenting materialised alternatives provoking reflection. That take has its roots in arguments for design playing an important role in a functioning democracy (Jones 1992, 9; DiSalvo 2022).



Image 1. Hiking in September.



Image 2. Tenting in September.



Image 3. The mountain cabin of Tjäkja.

In addition, the notions of reflective design (Sengers 2005), aesthetics of interaction (Lentz et al. 2013), and somaesthetics (Höök et al. 2015) were formulated looking for a greater sensibility, and within user experience not only ideals of seamless and effortless interactions have been advocated for, but also aspects of design friction (Cox et al. 2016). Recently there has been a stronger focus on more-than-human worlds, encompassing a broader array of perspectives.

The design principles suggested in this pictorial are an attempt at forming a link between our living environment as we have constructed it and the world in general through the actions performed by us. The starting point when formulating them were: what kind of (interaction) design processes can be used to form and strengthen our

relations to the basic conditions of life? This question came with the assumption that many of us live our lives far away from both where the resources are obtained and the efforts involved in obtaining them. Design has an important role to play in bringing consideration and meaning into people's relationships to things and that this can take place through the actions we design for.

Relation-forming interactions

The excerpts below illustrate how the ways we interact with the fundamental things that we need on an everyday basis affects how we relate to them, and by extension how we relate to our way of living and the world.

After a day of skiing or hiking, it is time to set up camp for the night. Each day, the camp must be reconstituted. Choosing a place. Shovelling snow. Preparing the ground and raising the tent. To notice the changes in light, temperature, and sounds outside until the next day connects me to the place and the rhythms of day and night.





Images 4-6. Preparations for the night at dusk.

My body is connected to the landscape through all the layers of clothing and equipment. My feet in the socks, in the ski boots connected to the skis in contact with the snow on the ground. In the same way, my hands are connected to the snow through the gloves and ski poles. During the trip it becomes apparent how dependent we are on ski bindings, ski goggles, jackets, etc. to cope with the wind and freezing temperatures, to move forward, to not be forced to shelter. It becomes very apparent that the only warmth available to us is that of our own bodies. If we keep our body active our blood gets warmed up by passing through the working muscles. To be careful not to work too hard as sweat will make our clothes damp, which would cool us down. We balance our body temperature carefully. We wear thinner clothes when skiing, which means we are freezing at the start, and we put on extra clothes as soon as we rest. When sleeping in the tent, we make sure to have a comfortable body temperature when we get in, since lying still will not produce any extra heat. We also balance the level of physical activity when in motion, keeping it at an even level. Going slowly uphill.

In the cabins there is a system, you share the work, and you pay it forward. You make sure there is water and dry wood for those arriving in the evening the day you leave, people you might never meet. Water for drinking, cooking, and washing is fetched from a hole in the ice of a close-by lake or river and dragged back through the snow to the cabin. There is also a certain rhythm to heating the cabins, since they cool down quickly unless a fire is set. You are grateful to the early bird who makes a fire while you are still asleep. In general, people are eager to make sure they do their part.



Image 7. Lighting a fire upon arrival

Image 8. Firewood preparation before leaving.



At this cabin the water hole is about a kilometre away, down a steep slope. We get dressed properly and start walking. By this stage we feel rather used to the procedure of breaking the ice layer, lowering the bucket into the water, and filling up the containers, but when we arrive at the water hole, we understand what the cabin host meant. She described it to us as an adventure, a true adventure for at least two people, preferably three. However, it was hard to tell from her face whether this was an experience not to miss out on or better avoided. One of us, a new acquaintance, state that if he had any say in the matter, this would not be his chosen way of ending his life. We take turns staring down the narrow, four metres deep hole in the snow with rather vertical walls to where we assume the water surface is, trying to convince ourselves that we can crawl down there without drowning. I try to ignore my claustrophobia, but the video material shows afterwards that I do not even get close, I am rather desperately trying to find something solid to hold on to. We fail to get to the water. A woman who has been travelling alone for three weeks comes to our aid. The water we drag back to the cabin is laden with effort, gratitude, and shame. We are careful not to waste any of it.





Images 9 and 10. The water hole.

A couple of days later we arrive at a cabin where there is tap water, mobile reception, and a 19-kilometre path usable by snowmobile that leads down from the mountain to a settlement. I have some water left from the cabin we visited last night. I realise that I'm hesitant to pour it out, even though I believe the tap water here should be fresher and safer to drink. That particular water in the bottle has another taste and value so I take a photo of it and drink it up.



Image 11. ‘Effortwater’, resistant to being poured out.

Design principles for relation-forming interaction design

Based on the observations made and experiences had during the field trips, three design principles are here proposed to facilitate a link between our living environment as we have created it and the world in general, through our bodies and the actions being performed:

- Grounding
- Lading
- Facing

The *grounding* design principle relates to the ways in which we interact with a thing or a phenomenon through things, and how this forms our relation to the thing or phenomenon, and by extension to the world, in terms of *purpose, relatedness, and connection*. The interactions relating to the phenomenon of heat, described above, are one example: dressing and undressing and being careful to stay warm when there is no external heat source. This principle proposes a stronger connection between ourselves as human beings and the environments we live in – by avoiding the urge to put a smooth, damping layer in between.

The *lading* design principle relates to the ways in which we interact with a thing or a phenomenon through things, and how this forms our relation to the thing or phenomenon, and by extension to the world, in terms of *value, carefulness, and appreciation*. The ‘effortwater’ described above is one example of this, as are felling a tree, chopping it and lighting a fire. The principle can be used to, for instance, question when it is preferable not to strive to make things effortless by default because

doing so may provide other benefits, such as increased value, greater appreciation or more careful and considerate treatment of the thing or phenomenon in question.

The *facing* design principle relates to the ways in which we interact with a thing or a phenomenon through things, and how this forms our relation to the thing or phenomenon, and by extension to the world, in terms of *flexibility, adaptability, and being prepared for uncertainty*. This relates to things we cannot control, e.g. the weather in the wilderness, and the principle can assist us in preparing for fluidity and uncertainty in our designs. It proposes that, through design, we can create an awareness that things may be different from what is expected and might suddenly change, and in so doing, build a level of preparedness for a wide array of changes, even relatively unforeseeable ones.



Images. 12 and 13. The snowing stops and some sky is seen, revealing a landscape for a few minutes.

Discussion

As discussed in the introduction, the three design principles proposed above are meant to complement existing principles within the field of interaction design. The aim is to suggest a role for design that takes a critical perspective through the use of embodiment rather than hermeneutic relations (Idhe 1990), and is generative rather than imaginative. For example, instead of informing people about their energy consumption, or challenging their ideas about it through imaginative futures, the aim is to change people's relations with energy as a resource by designing the way in which their interactions shape these relations, with the aim of affecting future actions. In addition to presenting critical, speculative and thought-provoking examples, we need to provide and try out operative alternatives.

Nowadays, commercial interaction often focus on engagement; however, not engagement with the world but engagement with the interaction itself, where our attention is used as currency through advertisements or by collecting user data. The design principles presented are not about such engagement; if using the design perspective here suggested - when someone engages in the action of chopping firewood the interaction itself would not be the intended goal, nor the wood nor heat, but the development of a certain relation to what it takes to change the temperature of the surrounding environment. As mentioned, the goal is not necessarily a reflection on this, but an established relation that might also affect chosen ways of living in the

future. The point here is that it is neither the things nor the interactions that are the end of the design, they are the means to form relation. The example of how the activities around a heating stove in comparison to a central heating system connects people and engage them with their world has been brought up by Borgmann (1984) from a philosophy of technology perspective. Redström and Wiltse (2018, p.87) point out that Borgmann's concept of engagement is useful for considering how interactions connect or disconnect us from our material and social worlds. The question is how to design these relations.

The principles proposed in this pictorial are initial suggestions, where further work is needed, accompanied by an in-depth discussion on the methodology also involving multiple design perspectives. For instance, it is fruitful to regard the interaction itself as the actor in actor-network-theory (Latour 2005). The principles should also be examined in relation to using design to create more sustainable ways of living. To question to a larger extent not only mass consumption and production, but also the very ways in which we can – and also want – to live. If through our actions we are able to reshape our relations with the world, how can we make sure this is more deeply reflected in our design? The suggested principles are articulated with the aim of being in line of bridging that gap.

In analysing our created habitats and in the decisions involved in the creation of them, on product, social, and political level, we need to be able to consider, discuss and value not only the immediate outcome of certain design decisions, but also the fact that these will affect our perspectives of the wider world and our role within it. The question is how to do this designerly? Think of if the principle of *grounding* could be used in the design of the adjustability of showers, *lading* in political policies about personal data, and *facing* in political policies about housing. What kind of living environments could that give us?

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