

Things with attitude: Transformational Products

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Abstract

This paper suggests *Transformational Products*, a genre of interactive products, which attempt to actively shape their users' attitudes and behaviour. While clearly embedded in the field of „persuasive technologies“, *Transformational Products* address people's interest in personal growth, flourishing and self-improvement more explicitly than many other persuasive technologies. They do so by engaging their users in an active, „material“ dialogue – a conversation without words. We present the general notion of *Transformational Products* and two exemplary objects to highlight and discuss some of the subtleties and challenges of designing „things with attitude“.

Introduction

Technology – just like any other artefact – shapes and changes the way we live [3]. However, many of these changes are *second level effects*, that is, unintentional side effects rather than planned benefits. A well-known example is the typewriter and its role in „liberating“ women in the US. The inventor, Christopher Sholes, certainly had efficiency and effectiveness in mind. Nowadays, many historians praise the typewriter's role in opening new job opportunities for the women of these times, laying ground for more independence and autonomy (e.g., [1], pp. 134). Instead of leaving it to chance, we could try to better anticipate and deliberately design for benefits beyond the mere functional, by understanding technology not so much as a solution to existing problems, but as way to provide new, but informed opportunities [2]. The difference is subtle, but with a profound effect: Just think of the potential differences in designing an application, such as *Facebook*, from the perspective of designing for the lonely in exile (i.e., to solve a problem) or from the perspective of providing a novel, additional way of being related to each other. Technology design has the tendency to focus on the former, on clear-cut solutions to apparent problems. This degrades the possible novel, meaningful emotional and social experiences to mere unintentional side effects. To counteract this, we advocate an experiential approach to technology design, suggesting that „experience is prime, and the product only a means“ ([5], p. 63). An experience becomes meaningful and positive through the fulfilment of basic human needs, such as „being close to others,“ „being popular,“ or „being competent“ (e.g., [5], pp. 41). This provides „intrinsic“ value to activities, objects, situations beyond the mere functional benefit. Don't mistake this as a call for shallow, ever-present amusement. Besides providing pleasure, products can also challenge the way we think or act.

These „objects for the good life“ [2] appeal to people's interest in growth, flourishing and self-improvement and help along in their self-set mission to change. We call this product genre *transformational* (see [6], but also [9]). Other than persuasive technologies [4], *Transformational Products* emphasize the active role of the individual and the dialogue between the product (its designer, the world) and its user.

While the general notion of „things with attitude“ – things to shape their users rather than being shaped by them – is certainly more and more accepted (e.g., [4]), there is limited knowledge of the detailed design of these objects. However, the particular materialization (form and interaction) of a product is crucial. This is just like the difference between arguing that „good arguments will be persuasive“ (they are, if the central route is activated [8]) and actually building a good argument for a given situation.

The present paper further discusses the notion of *Transformational Products* through two examples, thereby touching upon some of the challenges and opportunities of thinking of products as „materialized arguments“ [7].

The never hungry caterpillar

The *Caterpillar* is an extension cable intended to engage its owner into a dialogue about wasting energy with devices in stand-by (see Figure 1). The *Caterpillar* has three different modes: It breathes slowly in the case of „normal“ energy consumption through a device, such as a TV. If the TV is switched to stand-by,



Figure 1: The *Caterpillar* on the floor connected to several devices.

the *Caterpillar* starts to twist and turn awkwardly, as if in pain. This can be resolved by disconnecting the TV entirely. The metaphor of a caterpillar touches upon (at least some) people's

tendency to help and take care of living things. Through its behaviour, the *Caterpillar* conveys an attitude towards the consumption of electricity, the „pain“ implied by stand-by and offers a simply remedy, framed as an act of helping. It tells a story. It engages in a „conversation“ (without words) and reveals the intended argument of its maker. The difference to other solutions is obvious. Technically, the *Caterpillar* could just detect connected devices in stand-by and simply switch them off automatically. This would be practical, it would save energy, but it would not engage in any argument or dialogue. This is, because argument and



Figure 2: Forget Me Not closed and dimmed.

dialogue require an aesthetic of „friction“ rather than an aesthetic of efficiency and ease. We built the *Caterpillar* as a functional prototype. So far, three brief user confrontations revealed that the *Caterpillar* is able to tell its story. Participants mentioned that „it is like a living creature, which struggles,“ „it tries to make me rethink my electricity consumption,“ or „Although it is so abstract, I do not want to watch it, struggling on the floor.“ It seems out of question that a standard switchable multi-socket would not create comparable responses.

Forget me not

Forget Me Not is a reading lamp (see Figure 2). After being switched on, the lamp closes slowly like a flower, obscuring and dimming its light over time. By touching one of its petals, the lamp re-opens and shines bright again. This involves its user in a constant dialogue about whether she still needs the given light, thereby reflecting on the limitedness of resources and the responsibility of making appropriate use. We deliberately designed *Forget Me Not* as a reading lamp. This provides a suitable context for the intended dialogue. Using the same idea for the main lighting would be simply annoying. Compared to a regular light switch, *Forget Me Not* engages in a constant dialogue. Again, we built a functional prototype, filmed it and proposed the concept to people. One person, for example, argued that „...it should be possible to deactivate the dim-function or to stop it in a certain position“ whereas an other fancied the ever-changing light intensity and said that „...the lamp appeared like a living plant“.

Conclusion

Transformational Products engage people in a dialogue about their prevailing attitudes, opinions, and habits. The notion is to make aware of and to support potential change. The primary objective is, thus, *not* necessarily maximizing change (e.g., reducing energy consumption) *per se*, but supporting people with realizing the goals, they find worthwhile to pursue, but hard to implement. The most striking difference between „normal“ and transformational products is certainly that artefacts, such as the *Caterpillar* or *Forget Me Not*, are not problem-solvers, but troublemakers. Technology is typically seen as problem-solver, and well-designed technology is supposed to follow an according aesthetic of efficiency, ease and – ultimately – automation. *Transformational Products* attempt to break up rather than to fit into established routines. They intentionally cause friction. And as well as we need to understand, what efficiency and practicality actually means for design, we must now establish an „aesthetic of friction“ to explore ways to engage users. This is just one of the many challenges to designing *Transformational Products*.

For an additional video figure see:

<http://hassenzahl.wordpress.com/2011/04/18/things-with-attitude/>

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