

# Aesthetic interaction, communication on different levels

Developing a personal opinion on aesthetics of interaction by redesigning an alarm clock based on scientific research.

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## Introduction

The course 'Aesthetics of interaction' consisted partly out of reading multiple papers, which all dealt with a different part of interaction between an object and the user. They gave me more insight on all the possibilities for aesthetics of interaction and made sure I knew what it exactly means.

## Reading material

The first paper I read was also the one I found most interesting. The key terms of this article, namely feedback and feedforward [6], in this context were new to me. I thought it was revealing to discover that there is actually a function for simple things that are so common that we do not recognize them as that function anymore. As a designer, it is vital to think about things like this, because during the process of designing an object or device, it has to be decided whether to use a feedback or feedforward for a certain function. By reading this article, I became more familiar with the different forms of feedback and feedforward and realized that it is a must to find the right form for every function when designing.

In another paper, I learned the terms extrinsic and intrinsic value [5]. I found this difficult to understand, but by looking at the examples in the paper ultimately understood the two concepts and the difference between them. I believe now, that it is important to understand the difference and apply both values when creating an interaction. Firstly, a designer has to take the intrinsic value, i.e. the interaction being an aesthetic experience in itself, into account. Secondly, the extrinsic value of an interaction is also important and very influential because the extrinsic aspect makes sure the user feels good when doing and having done the act of interaction. An example mentioned in the paper were the mine-workers who sing a song. Singing the song has an intrinsic value because the act of singing is a nice experience, but it has an extrinsic value as well, because the singing makes them feel better and work harder after singing it.

An interesting and quite new aspect was the mention of the favorability of a continuous interaction [7]. I never realized that people prefer a pushbutton which comes up because they are able to press it again. A

push button is quite useless when it can only be pressed once, unless it is a one-use pushbutton.

I realized through other papers how valuable using experience-prototyping can be in a design process, because it can show which relationships between different parts there are and it can help to come up with new ideas, but also to look at an action in the same way with several people [1] [4]. Another method of using objects in brainstorming is interaction-relabeling, something that could help to brake lose from the existing way of using it and to think out of the box [3].

In addition, the design (outward) of a product is also very important for aesthetics or interaction. The design of a product must be both functional and user-friendly, something that cannot be added after the design process. The design (outward) should help the interaction and vice-versa. For example, buttons that do not have the same function, should also look different [2].

I found it sometimes difficult to immediately understand some of the papers, because things that were very obvious to me were discussed were viewed in a very abstract way, but because we discussed all the papers in my group and lectures, using the theory in practice with my group, I now have a good understanding of aesthetics of interaction.

## Discussion

By redesigning the alarm clock we tried to use the brainstorming techniques that we learned in the papers as much as possible. We started with existing physical prototypes and relabeled them into an alarm clock, by doing this we came up with our first idea's [3]. Then we started with techniques of experience prototyping to come up with new ideas. We started with just making something out of cheap material [4]. See the results of just making something in Figure 1.



**Figure 1. Low fidelity prototypes of our first iteration and experience prototyping.**

About every object we created, we brainstormed by using movement-based design. We took the objects and imitated how the objects could be used as an alarm clock [1]. See Figure 2 of an example how we played with the objects.



**Figure 2. Experience prototyping of final design**

We also imitated to be an alarm clock our self, to find out what a natural way of interacting could be with an alarm clock [5].

During our design process we actually wanted to turn an alarm clock/button, something physically hard, into something soft. In addition to being annoyed to have to press a button with force in the early morning, an alarm clock is also hard in another way, namely that it suddenly pulls you out of your sleep. That is why the alarm clock experience should be made as pleasant and soft as possible. An example is the push-button research done by Wendy Dassen and Miguel Bruns Alonso [7]. This shows that certain buttons create a nicer experience. During the process, we found out that a push button-effect is a nicer experience when the material has a low resistance and is lightly resilient. This gets scientifically confirmed by the felt lantern vs. rubber dome in their research [7].

An interaction in itself is a pleasant experience but also has a good influence on the user. An example from the paper of Philip Ross and Stephan Wensveen [5] is when a group of miners sings a song to spend their time in a fun way (singing the song itself is nice), but singing this song also causes them to work harder afterwards because they feel happier and better. (extrinsic value) With the alarm clock, the feeling of cuddling is already a more pleasant experience than the feeling of pressing a button or turning off an alarm clock. In addition, this also has an extra value because it makes the user feel better about the act of waking up and hopefully feel better throughout the day.

### Conclusion

By reading all the papers, attending the lectures and making my own redesign of the alarm clock, my understanding of all the possibilities and techniques grew to an extent that I can now form my own opinion on the best aesthetics of interaction. I believe that a product interacts aesthetically with its user when the form of the object fits with the interaction. This works best when a user naturally understands how a product works without seeing or reading any

instructions about this. The user will see a feedforward before he interacts with the object and get feedback during the interaction, which causes her/him to understand the function of the object. Furthermore, the be-level and the motor-level of a product have to be in line to make the interaction, next to functional, emotional. In summary, aesthetic interaction means that an object and the user are able to interact in different ways and on different levels.



**Figure 3. Final design**

### Link to video

<https://www.youtube.com/watch?v=oQ5xuyNLuUQ&feature=youtu.be>

### Reverences

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