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A PRACTICAL APPROACH TO TRANSLATE SOCIAL CULTURAL PATTERNS INTO NEW DESIGN

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ABSTRACT
People buy products to express their desired identity and therefore prefer products that fit their own personality. The personality of products is created by implicit and explicit design features. However the translation of implicit and explicit design characteristics into new designs is difficult for designers. Especially for beginning design students, giving meaning to products by thinking about product associations is really a difficult job. Therefore a design tool has been developed that provides the students with a simple structural step by step support for the design process. The tool is based on a simple input-translation-output model and has been introduced step by step in the first year's design course "Methods of Design". The main focus of this course is to support gaining insight into the cultural patterns of certain target groups and learn to translate associative terms into new design. By using the design tool students create designs that are meaningful to the target groups because the product's semantics are recognizable.

Keywords: Design tool, design education, design methodology, activating students, design semantics

1 INTRODUCTION

What's the first thing that crosses your mind when you look at the cars in the picture below (figure 1)? Maybe you will recognise the old forms of the 'Fiat 500' or the cute, cosy and a little bit endearing design of the car. The other car looks very powerful and maybe you can imagine yourself driving around in a rough scenery? All everyday products evoke associations like these cars do. These associations are generated due to our social cultural background or the history of experience and knowledge we have gathered in our lives. We've learned that red means stop or danger and we can recognize the characteristic forms of the old Fiat 500 in the new one. These associations will lead to an emotional feeling or experience and will also help us to form our own view on the product [1].

Figure 1. (left) New Fiat 500. (right) Toyota 4WD

The design of a product acts as a carrier of different symbolic meanings. Besides having a need for the main function of the product, people can also chose a product to express themselves. In general people feel more attached to a product when it fits into their own lifestyle [2-3].
The new Fiat is a very small car with smooth forms; the Toyota 4WD has an entirely different language of form. Its characteristic forms evoke associations with powerful products such as big trucks. The silhouette of the Fiat 500 on the other hand will rather be associated with a ladybird.
A product needs to evoke similar associations in the majority of people to have the effect a designer intends [4]. Therefore a designer needs to "put features into the product" that evoke associations which are to some extend universal. As designers we have to identify associations and recognize and understand the underlying social and cultural patterns to be able to do this. Anticipating associations and manipulating design features to create new product associations is therefore a crucial skill for

product designers. However, it is a quite difficult job to manipulate design features to elicit the "right" associations, especially for beginning design students. In this paper we will present a design tool that has been developed to help students to create meaningful designs and gain more insight in social & cultural patterns behind associations. The focus of the tool is to translate associations into design features in a way that goes beyond merely "copying" identification marks into product features.

2 TRANSLATING SOCIAL & CULTURAL PATTERNS INTO DESIGN

When we talk about products, we often speak in terms of personality; a car is *cute* or a vacuum cleaner is *reliable*. Products can provide a symbolic function of self-expression to their owners. People buy products to express their desired identity (congruity) and they prefer products that fit their own personality [2].

Research also showed that congruent design positively influences the consumers' perception of a product [5]. To achieve a congruent design all design features must fit the intended character of the product. In an experiment Van Rompay used different combinations of bottles to define the term 'luxury'. The experiment showed that the combination of the bottle with the slimmest form and the finest font was perceived as the most congruent design by the participants. This bottle was the most credible design.

Karjalainen [6] states that it is difficult to make a translation from associations towards new design. This applies to for instance a follow-up model of a car (the new Toyota Corolla) and even more for to a product without predecessor. According to Karjalainen the main problem is that an association is established in the *language* domain and that the other one takes place in the *physical* domain. However product associations are not limited to the language domain (words) but can also comprise images. Both, words and images result in feelings towards a product.

Karjalainen divided the translation of design characteristics into two areas, explicit and implicit design features. Explicit design features are the most recognizable features of a product and recognition takes place when a brand repeats a certain kind of form language in the new product. The implicit design features are the values of the product or brand, such as a 'cute' car or a 'luxurious' car. For example the products of Apple are famous for their silhouette with round corners (explicit design features that are associated with the brand), the minimalistic and clean design is also associated with ease of use (implicit design features that are associated with the brand). Creating the implicit design is the most difficult part. It is not something we can indicate directly, but when we *look* at the complete product we experience the minimalistic, easy feeling [6-7]. This feeling is enabled by associations which are based on the experience we have generated due to our social cultural background or the history of experience and knowledge we have gathered in our lives.

3 INTEGRATION IN DESIGN EDUCATION

The translation of design characteristics into new designs is difficult for designers. Most professional designers gather a lot of experience in practice, but after all the way they design new products is not always very clear. Besides that, there is a difference in how beginning designers or professionals work [8] Our experience is, that for beginning design students without any experience at all, giving meaning to products by thinking about associations is really a difficult job. According to Dorst novice students consider the objective features of a situation, as they are given by experts, and follow strict rules to deal with the problem. They need to learn a whole series of techniques and methods of representation. Therefore we developed a design tool that provides the students with a simple structural support in the design process.

In general the design education in the bachelor course Industrial Design of our university has project oriented education [9]. Students explore the practice of design by working on projects. Complimentary they are supplied with courses that focus on skills and knowledge. We've developed several courses with a focus on design shaping skills that follow an educational line based on a simple layered system: basic (first year), broadening (second year) and deepening (third year). In their first year the students will be educated on a basic level in the course "Methods of Design". The methods that are used in this course are easy, introduced step by step and supported by intensive assistance by the lecturers. In the second year the students will get a wider education on designing products and they have to apply the knowledge they've gathered in the first two years independently. In the third year the education has reached a deeper level. The students must define their own framework, deepen their knowledge and are able to apply their knowledge in the design process independently. The assignments within our

course “Methods of Design” are aiming at designing products in a conceptual way, whereas in course projects, the concepts get developed more towards product design for the real consumer market. In our course we enlarge design principles, so students can more easily understand them. In latter courses and projects students will be able to apply the principles in a more subtle way.

4 DESIGN TOOL

The main focus of the course is to make the students realize that design is not just a layer wrapped around the outside of the product. The design of a product acts as a carrier of different symbolic meanings. Every product evokes associations; those associations will lead to an emotion or an experience. When we look at this process the other way around, a designer defines an experience or emotion by deliberately putting associations in his design. Designers can actively search for products and other objects or elements that will evoke associations which fit the intended experience. The language of forms of those objects can then be analysed and used to design new products.

To support designers in this process, we developed a practical design tool. The tool is based on a simple input-translation-output model. We distinguish a starting point (input), such as a target group or a historic style. This input can be illustrated by a mood board of the style, but it can also be a keyword or an association. The goal of the design process (output) can for example be a design of a product fitting a specific style.

The core element of the tool is the translation process. In this process we distinguish four different translation levels: regenerating style characteristics (1), transforming style characteristics (2), giving form to the human product interaction (3) and creating a metaphor (4).

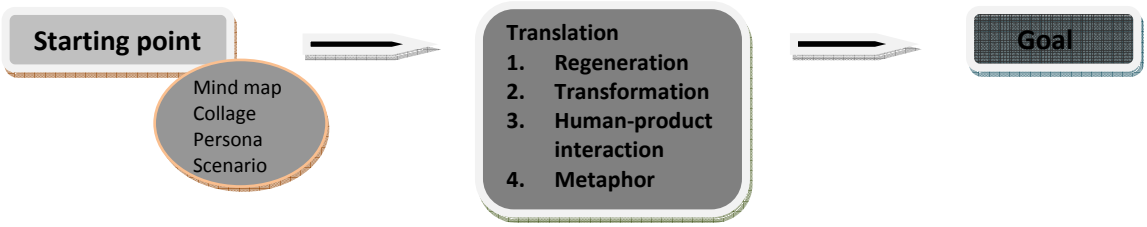

Figure 2. Scheme of the design tool

In every assignment we use different starting points and goals to train the students in using the tool while translating design. In the beginning of the course it is focused on the lowest level (Regeneration) towards the end of the course the students will practice with higher transformation levels. At the end of the course the students are able to use every level of the design tool. In a final assignment students use the design tool independently. In the next section we will describe a selection of assignments from the course to illustrate the different translation levels.

4.1 Translation Level 1: Regenerating style characteristics

The first translation level is the regeneration of style characteristics. The starting point in our students’ assignment on this level is a historic (rural) style which is illustrated by a given mood board. The goal of the assignment is to design a microwave oven that fits the rural style and evokes nostalgic associations. The students have to analyse the products in the (given) mood board and regenerate the explicit style characteristics of the historic style for a microwave oven. This can be supported by drawing products or product details from the mood board. By doing this the students become familiar with the style and its design characteristics. Secondly the students have to begin a design process by drawing a rough shape of a microwave oven and thereby regenerate the historic style characteristics. Subsequent they have to design the oven in detail by using another mood board with images of product details. In this process, style elements are often “copied” one on one. In the example (figure 4, centre) a student used the banded, protruding arrangement of the top surface of the cabinet and the desk, and the heavy cast iron doors of the oven to “decorate” a stereotypical microwave oven.

Figure 3. (left) Mood board historic style. (centre) Microwave oven in historic style designed on regeneration level. (right) Microwave oven in historic style designed on transformation level.

4.2 Translation Level 2: Transforming style characteristics

The second level of the design tool is going beyond merely copying style elements from the mood board towards creating new forms that match the mood board on a different level. For this the students need a deeper understanding of the language of forms. One of the students created a new shape for the microwave oven, which refers to historic bread boxes (figure 4, right). The design fits the historic style. It evokes associations with historic products instead of simply copying style elements. The "input", which was the mood board, has therefore been used in the design by "transforming" it into something new.

Figure 4. (left) Style types. (centre) Alarm clock for the rapper. (right) Alarm clock for the surfer.

4.3 Translation Level 3: Giving form to the human product interaction

The third level of the design tool is 'giving form to the human product interaction'. In the associated assignment students can choose from four somewhat stereotypical user types; the elegant lady, the surfer dude, the rapper and the golfer. Students furthermore have to create their own "input" for the project by elaborating their understanding of the chosen type by making two collage boards. One board should capture the mood or ambience that fits the user type (implicit design cues) and one should display style-products of the target group (explicit design cues). The goal is to develop an alarm clock that fits the user type not only by its "look", but also by the type of interaction that is inscribed in the product. When the starting point is a rapper, the interface of the alarm clock should fit not only the style characteristics - but also the habits of the rapper. Therefore it was important to imagine how a certain type would like to be woken up and how he or she would like to set or stop the alarm clock. One of the students chose to design for a surfer. By analyzing the target group the student defined that a surfer is a laid back person who wants to be woken up smoothly and eventually could fall asleep again if he would be too lazy to get up. He developed an alarm clock that would wake up the surfer by the soft sounds of a wind bell. The design of the alarm clock is inspired by the surfing equipment (figure 5, right). This alarm clock forms a glaring contrast to the student who chose to design for the rapper. The rapper's alarm clock is based on an stereo set with very loud noise. The rapper can upload his own music to wake up (figure 5, centre).

4.4 Translation Level 4: Creating a metaphor

The last and most complicated level is 'creating a metaphor'. Students are encouraged to think in a different way by trying to design objects that evoke associations in the form of a metaphor. Like an object with two different styles, deliberately looking 'bright' and 'dark', as a metaphor for 'good' versus 'evil'. This tends to be the most difficult level for the students to implement. We practise this level in a lesson where the students have to design a gadget DVD player especially for their favourite movie.

Figure 5. "The Godfather" DVD player

Students need to find a metaphor that will stand for the general idea of the movie by analysing it. One student chose the movie "The Godfather", a crime drama about a mafia family dynasty. The movie focuses on 'power', 'family' and 'family heirloom'. The final design of the DVD player (figure 6) is created by using all four translation levels. The first and second level are reached by designing an object that would fit the stage properties of the film. The third level is reached by designing a somewhat mysterious object with a hidden interface. The closure of the DVD player is not directly visible. The last step is reached by creating a cup that symbolizes power and victory and could be a family heirloom which is passed from one generation to the next. By this means the DVD player represents a metaphor of the general idea of the movie.

5 FINAL ASSIGNMENT

In a final assignment the students have to develop a transport system for a far away future. The students must develop a vision of the future, by writing down a short story and some keywords/associations and they have to search pictures to illustrate their vision. It is not important that the vision is very likely to come true, but the story must be rich and -most important- consistent in itself.

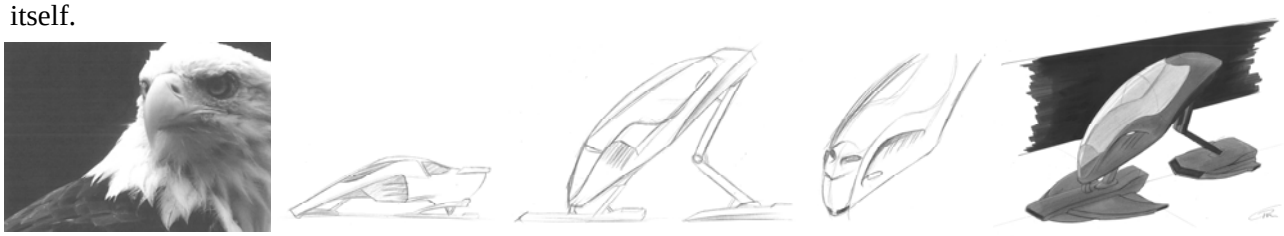

Figure 6. (left) Eagle. (centre) Design sketches for the transportation system. (right) Final students design of the transportation system.

Subsequent the students have to translate their vision into a design of a transport system that would fit their vision. In this assignment students are encouraged to work on all translation levels. By specifying associations and analysing the collected pictures of the future vision, the students can get a grip on the new design of a transportation system. The assignment is spread over two days and at the second day a new edge is added to the assignment: Students must choose an animal that fits their transportation system and work with the shapes, structures and colours of the animal in the shaping of their transportation system. One of the students had a vision of an aggressive and individualistic future. In this example the fourth level (creating a metaphor) is applied by designing a single person transporter that represents the aggressive and individualistic future by the shapes of an eagle's head. The final drawing shows an abstraction of the eagle and his characteristic forms (figure 7).
Summarizing, there are four translation levels with different starting points and goals. The students are trained to use them all step by step in the different assignments of the course. Finally they have to apply the tool by themselves in the last assignment.

6 CONCLUSION/DISCUSSION

The effect of the design tool has been proven in the course "Methods of Design". A benefit of the tool is its clear structure that provides the students with clarity about what to do for a specific assignment. In addition the step by step approach of the tool gives the students an understanding of the possibilities of design to evoke specific associations. They gain insight into the cultural patterns of certain target groups and learn to translate associative terms into new design. Students translate those parameters into forms, materials, and colours and are also able to develop specific ways of human-product

interactions that fit the target group. Over all by using the design tool students create designs that are meaningful to target groups because the product's semantics are recognizable.
All of the students in the course of 2009 were at least able to apply the third translation level. However few students were able to reach the fourth level of translation (creating a metaphor). Probably the understanding of first year students needs to be developed further during additional design projects to reach the fourth level. To support the students in their development of skills and understanding, the theory of the third and fourth level is also subject of the second year course "Human Product Relations" and the third year course "Designing Meaningful Products". The four translation levels of the tool also have another benefit: they enable the educators to underpin grading and therefore provide some transparency in the judgement of design work which is often perceived to be subjective. In conclusion, after completing the course, students will get a better understanding of the possibilities of design by distinguishing and applying the different levels of translation of this design tool.

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