Journal of Engineering Design
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=a713429619

A practical approach to teaching abstract product design issues
Wouter Eggink *
* University of Twente, Laboratory of Design, Production and Management, Faculty of Engineering Technology, Enschede, The Netherlands

First Published on: 19 February 2009
A practical approach to teaching abstract product design issues

Wouter Eggink*

University of Twente, Laboratory of Design, Production and Management, Faculty of Engineering Technology, CTW-OPM, PO Box 217, Enschede 7500 AE, The Netherlands

(Received 25 April 2008; final version received 8 August 2008)

‘Buy an identity’ and ‘surprise your senses’ are two of the ideas that were the outcome of a course ‘Design for a specific Theme’ (in the year 2006–07) held for 4th grade students of Industrial Design Engineering at Twente University. The theme in the title of this course was philosophical, based on the theory of globalisation of German philosopher Peter Sloterdijk. In the following year 2007–08, the theme of the course was ‘leisure’, and it proved again that the structure of this course was particularly suitable for the conversion of such abstract themes in tangible product design. This paper describes the structure and the associated teaching methods of the course, gives examples of student results and discusses the points of interest and application possibilities of this type of course.

Keywords: design education; product values; philosophy; Peter Sloterdijk; leisure; design projects; design philosophy; student teams

1. Introduction

In these times, the focus of consumer product design is shifting from primarily offering functionality towards experience and emotion-driven product characteristics (Green 2002). As a lot of competing brands are offering the same functionality in their products, the consumer has to choose on different grounds. According to the theory of product phases (Eger 2007), products will thus end in a phase characterised by individualisation or awareness. In these phases, the affective, emotional and abstract product values become more and more important (Desmet 2002, Norman 2004). Individualisation and awareness are, not accidently, also high up in Maslow’s hierarchy of needs, and in our Western society, the more basic, functional needs are relatively easy to fulfil. Recently, there has been much discussion about how to implement this emotion and affection in product design. Some authors even argue that affectivity is not influenced by the design at all, but only through the meaning that the user attaches to the product (Csikszentmihalyi 2007). Even then it seems important to facilitate the consumer in attaching this meaning to a product. For instance, by actively implementing a deeper thought into the design of the product.
In order to get our students familiar with this more abstract thinking about product concepts, we started the course ‘Design for a specific Theme’ in 2003. In the first place, this was in association with advertising agency KesselsKramer; later on, we used their approach independently. In the academic year 2006–07, the course was fed with a philosophical theme, and in 2007–08, the theme was leisure. This type of themes was also chosen because we are aware that it is not only important that the students practice with emotions and meaning, but also that engineers are aware of the societal consequences of product design and the matching responsibility of the designer as an actor in a societal context. In the end, it is also a means of coming to different products than the obligatory mobile phones, coffee makers or mp3 players.

In the course, the students worked in groups and treated the themes in the beginning in a very broad sense. Later on, they had to formulate their own assignment within the theme and from there on, tangible product concepts had to be developed.

In this paper, the themes of the course will be described first, including how the themes were explained to the students. Then the structure of the course will be described, together with some detail about the workshops that were held. Then some results will be presented and the paper ends with a short discussion on points of interest and application possibilities of the described features.

2. Introduction to the themes

At the beginning of the course, the students have to get familiar with the themes, preferably in a way that is not directly linked to product design, thus emphasising on the societal aspects, problems and possibilities associated with the theme. It seems best to have a recent cause for the theme, so the relevancy for developments in society is immediately clear for the students.

2.1. Theme 2007–08: leisure

The leisure theme was illustrated with the Dutch documentary ‘Pretpark Nederland’ (‘Luna park Holland’) from filmmaker Michiel van Erp. In his film, Erp (2006) shows how the Dutch people fill in their free time nowadays and especially portraits the professional leisure industry that supports this. The people enjoy themselves with trips to the Efteling (fairy tale theme park) or the Batavia City factory outlet and to the Amsterdam Canal Gay Pride or the Libelle-week (Female interest magazine) right in the middle of nowhere. In the film, all the activities are observed from a distance and from two sides, through the eyes of Chinese tourists visiting the Netherlands with a bus trip and through following the organisers of the events and facilities. Especially from the latter, it is made clear that leisure has become serious business. People spend more and more money in their free time and are becoming more demanding, expecting every experience to be special (Mommaas et al. 2000). The film also shows that this is changing the physical and spatial arrangement of the Netherlands. Here the film visualises the phenomena that Metz (2002) described in her book Fun! Leisure and landscape.

2.2. Theme 2006–07: Peter Sloterdijk

The philosophical perspective comes from Peter Sloterdijk’s book Im Weltinnenraum des Kapitals (Sloterdijk 2005). In his book, Sloterdijk pictures the spoiled western people who imprison themselves in their own safety environments. The Crystal Palace at the Great Exhibition of 1851 in London functions as a metaphor for the convenient lives of the civilians of western capitalistic countries. A gigantic greenhouse, aimed on shutting out and neutralising all danger and unexpected circumstances. According to Sloterdijk western people are so used to this conditioned
climate that they are no longer able to cope with adversity, misfortune, calamities or even real danger (Volkskrant 2006). In line with this, the modern world is regulated, organised and every possible good is for sale. This invokes on the other hand a complex need, or longing for real experiences, with real emotions and real danger. All these, of course, are guaranteed to have a happy end. In the lectures, this concept was explained with an example from daily traffic. If you live in the Netherlands, the traffic is extensively regulated with separate lanes, speed bumps, traffic lights, signs and roundabouts. This reduces traffic accidents, but also can make you feel dull. Traffic in China or India is very different. Immersed in this crowded, lively and dangerous surroundings every day, you do not feel much like going bungee jumping (or performing other western extreme sports) when you come home. (This idea by the way contributed a lot to the choice of the leisure theme for the next edition of the course and the theories of Peter Sloterdijk were also mentioned in the workshops there.)

Peter Sloterdijk was chosen as a philosopher in the first place, because he is contemporary, and in his trilogy ‘Sphäre’ (Sloterdijk 2004), he has shown that his theories on society are based on a close connection between the social aspects of society and the way our surroundings are organised and designed (Depondt 2003). And as these surroundings are inevitably influenced by our design activity, it seemed relatively easy to combine Sloterdijk’s theories with product design practice.

3. Structure of the course

The course was set out as project-oriented education (Ruijter and Boomgaard 2006), where the students were working in groups of four. In project-oriented education, the course is arranged around an open-end assignment, in this example defined by the themes. The project-oriented education focuses explicitly on the development of the students and their competencies by placing the students in a realistic engineering environment (Ponsen and Ruijter 2002). The educational input given in the courses directly supports the student’s execution of the project. The execution of the assignment itself is largely left to the students’ self-activity. The total duration of this course was 10 weeks, part-time with a total workload of five European Credits. The course is optional in the curriculum, open for third-year Bachelor students and first-year Master students.

The course itself was set up around a couple of workshops and lectures. In between, the students’ progress was reviewed in project meetings with the supervisors. For the Peter Sloterdijk edition, the first 3 days of the course were specially hosted by the design agency D’Andrea & Evers Design.

The project started with a 1-day ‘do-together’ workshop, followed by a 1-day ‘disruptive images’ workshop, where the final group assignments had to be defined. After 3 weeks, there was lab training for making ‘concept boards’, followed by a presentation of the concepts at the design agency. Then there were several weeks to develop a chosen concept and then 2 weeks to document this in a report and a prototype, model or maquette. In the end, this had to be presented to all the participants in a final presentation.

3.1. Do-together workshop

This brainstorming-like workshop is developed by the advertising agency KesselsKramer (based in Amsterdam) and inspired by their own do-project, ‘The ever changing brand that depends on what you do’ (Kessels and Whisnand 2006). This do-approach focuses on the idea that a product is not complete unless the user has added something to it. In this way it is becoming more involved with the product. KesselsKramer laid out a workshop where the participants have to fill
in questions assigned to a statement. These questions vary from ‘What kind of product, service or event could support your do mission?’ to ‘What audience will be interested in your new idea?’ At different stages in the workshop, the students have to stop and exchange, so they will be working on the development of each other’s ideas. The students later commented that this was both an opportunity and a threat (Haagsman 2008). ‘On the one hand, it is annoying to give away a good idea, but on the other hand you are obliged to come up with very daring concepts, because you do not have to finish it yourself’.

The statements in the workshops were derived from the themes and provided by the staff. Some examples for the leisure theme: ‘Reading-, Cooking- and Chess playing clubs are just for elderly people’; ‘A trip always has to be ‘special’; ‘Recreation is not multi-cultural’ and ‘Hobbies are more and more practiced on the internet’. For the Peter Sloterdijk theme, some examples are: ‘TomTom and GPS don’t bring you to unexpected places’; ‘Convenience food is deadly boring’ and ‘Safe cars cause false security’.

At the end of the 1-day workshop, the groups had to present ‘their’ product idea and associated communication strategy to the other participants.

### 3.2. Disruptive images workshop

At the second workshop, the students learned more about the themes in a lecture with discussion and they were invited to come up with more statements in a sort of brain-writing session. To facilitate the discussion, a reader with background information was provided for both the themes, mainly consistent of newspaper articles.

Then the students were asked to illustrate their vision or perspective on the theme with inciting images or collages. We called these collages ‘disruptive images’: combinations of common things that do not seem to fit together, thus creating new insights when they are placed together. One group thinking about the leisure theme, for instance, was conquering the problem of waiting for events as wasting your time and came up with beautiful combinations (Figure 1).

From there on, the students had to work out their own assignment, based on a chosen statement and they were asked to illustrate this with relevant imagery (Figure 2). Some examples of assignments: ‘Reduce time-wasting during shopping’; ‘To break down the complain-culture in the Netherlands’ (leisure) and ‘To make immaterial values buyable’ (philosophy).

---

**Figure 1.** Example from results of disruptive images workshop.
3.3. Concept boards

At the end of the idea-generation phase, each group had to present three product ideas at the design agency with the use of concept boards (Figure 3). The making of the concept boards was facilitated with 1-day lab of training. The training starts with a lecture about the goals, possibilities and limitations of concept boards, illustrated with examples. Then the groups make concept – concept boards that are evaluated by several staff members and the other groups. Afterwards, there are several days to improve the concept boards before the actual presentation.

The idea behind the use of an A2 size concept board for each idea is to force the students to present their concepts in one simple overview, emphasising on the main topics. These presentations
are held at the design agency again to put the students in a realistic environment, applying as much
to the project-oriented education philosophy as possible.

Finally, one concept was designed in more detail, ending with the making of a model, maquette or prototype.

3.4. Assessment

At the end of the course, the groups had to present their work to the audience in a 15 min (computer) presentation, accompanied by a demonstration of the models or maquettes. They also had to deliver a small portfolio, laying out the background of their final solution and some detailed information on the final design. The groups were evaluated by two staff members and two members of the design agency and rated for the quality of the concept idea, the concept boards, the portfolio, the model or maquette and the final presentation. As there is no feature implemented in the course to rate the individual performance of the students, they received a mark as a group.

4. Results

4.1. Results on leisure theme

The results of the leisure theme were as broad as expected, varying from an outdoor version of Trivial Pursuit to update pensioner’s hobbies, to an environmental-friendly powered children’s playground. Two examples are especially interesting because of the different views on society that the students express with both their assignment and end-results.

4.1.1. ‘Boomer’

This group of five students started their quest with the mission ‘Design a product or service that leads to people no longer seeing travelling as a waste of leisure time’ and came up with several concepts that made waiting during travelling enjoyable. Their ‘watch while waiting’ concept reminded the staff of the old-school ghetto-blasters for urban youth. This concept developed into the ‘boomer’, a somewhat bold music device with integrated beamer and DVD player for watching films or music videos anywhere you want (Figure 4). As the students say in their report: ‘To spice up Luna park Holland’. The product on the one hand encourages social group interaction on the street but provokes at the same time by emphasising the sub-culture of the bling-bling generation.

4.1.2. Brandiserger (fire-is-worse)

This group of four students was very socially engaged from the beginning and investigated the developments that are threatening the atmosphere of Luna park Holland. They write:

‘The Netherlands are a Luna park. Every day there are events, everywhere is entertainment, you just have to be open to it. Unfortunately not everybody is open to it. Moreover, people are more open for negative experiences than for positive ones. These experiences are even not kept for themselves, but these will be shared with everyone to soften their own sorrow. This love for misery spoils our experience of Luna park Holland an in our project we will try to break down this complain-culture in the Netherlands, in order to get the people to enjoy our Holland, our Luna park’.

The students eventually made a campaign with the slogan ‘fire is worse’ to be enrolled in cooperation with a popular radio-station (Figure 5). The idea is that there is always something
worse (i.e. fire) than the little inconveniences of the Dutch citizens. As Sloterdijk says; ‘Little inconvenience will be transformed in deep sorrow’ (Volkskrant 2006). The campaign aims at the people becoming aware of their complaining by giving them a complain button (Figure 5). The complaints are registered and located via GSM technology and visualised at a website. There is a small demo at www.brandiserger.nl.

4.2. Results on Peter Sloterdijk theme

As philosophers try to explain the world we are living in, the students were free to choose whether they agreed with the developments described by Sloterdijk or were in favour of stimulating some
counter reaction. The next two example results are a good illustration of both strategies: one that tries to counteract on the philosopher’s theory and the other that embraces it.

4.2.1. Sneak Preview Food

This is an example of an assignment and outcome that wants to react on the identified development. The students wanted to give the consumer back some real experience, where people have to rely on their own judgements.

The result ‘sneak preview food’ challenges the consumer to look at food in a new way. The anonymous packaging will not provide the user with direct signals about the taste of the product. So he is forced to trust his own senses in the perception of the product. On the other hand, the ‘sneak preview food’ is a strong brand identity that will stand out from the crowd in the supermarket. The students stated that ‘Sneak preview food is still offering convenience, but with a new context, in a way the people get more involved with the food itself’ (Figure 6).

4.2.2. Identity Store

With ‘Identity Store’, the students asked themselves; ‘How can we make immaterial values buyable?’ When according to Peter Sloterdijk, everyone is busy abandoning every possible risk, why not control the risk of having the wrong image?

In their conceptual shop, instead of buying clothes, you will buy a piece of identity. The clothes in the shop are not primarily defined by the brand marketing of the manufacturers, but by the people who actually bought the items. This effect is reached by taking a (Polaroid) photograph of every customer that is added to a ‘wall-of-fame’, associated with the product he bought. In this way, everybody becomes part of the definition of the group. Someone even suggested to have the people pay for the removal of their photograph, when the composition of the group is changed in a way they do not want to be associated with anymore.

The shop is styled like an Art gallery where the group definitions are more important than the clothes itself. The fitting rooms are grouped around a runway to emphasise on the art and fashion.

Figure 6. ‘Sneak preview food’ prototype; highly branded anonymous food packaging.
background of ‘being someone’, inspired on popular television programmes such as ‘Idols’ and ‘America’s Next Top Model’ (Figure 7).

5. **Summary of teaching strategies**

Most important in the course is the translation of abstract themes in tangible (product) design. Therefore, in the beginning, everything is focused on reaching the higher abstraction level. After formulating the individual assignments, all efforts should be concentrated on making it concrete again. In the starting do-workshop, the use of open ‘statements’ is key to stimulating the students’ thinking on the societal impact of (product) design.

Then there must be some abstract explanation of the societal developments associated with the theme. Peter Sloterdijk himself provides this explanation of everyday society with his philosophical theory. With the leisure theme, the documentary from Erp illustrated developments as through a looking glass.

The formulation of assignments by the groups itself helps to stimulate the discussion. Visualising the assignments with the disruptive images workshop will make the assignments more defined. Because of the different assignments of the groups, individual work, self-activity and individual feedback are mandatory.

The making of concept boards works, but could be replaced by other strategies. The cooperation with design practitioners nonetheless is very helpful to guide the students into concrete product design.

The students should finish the project with some model or maquette.

6. **Discussion**

Both the philosophers ‘explanation’ of contemporary developments in society and the backgrounds revealed in the documentary proved to help the students to be very successful in translating abstract ideas in real-life product concepts.

The brainstorming sessions in the beginning of the course, powered with the statements, proved to be a good introduction in the theme. When the statements are provided by the staff, it is important that they are inciting, but not judging, thus leaving room for the students to take their position. After two sessions, the students were able to build their own assignment and vision on the theme. Having
proved itself twice, we think that the approach will be useful to get students familiar with other abstract themes as well. But as there is little guidance in between the workshops, it is important that this approach is taken for rather experienced students who already have insight into setting up a proper development project. The workshops merely emphasise on the abstract level of the themes and encourage the thinking on the relationship between product development and society.

An important benefit from the do-together workshop was the notion of the importance of selling your product idea. Because the workshop is set-up by an advertising agency, it emphasises having a communication strategy together with your product idea. It showed that this communication strategy sometimes had a big influence on the product concept itself. So it is very useful to develop these together, especially when relating to new product concepts that aim at influencing people’s behaviour. In one example in the do-together workshop, a board game that was intended to stimulate multi-cultural integration ended up as a set of collectible free cards distributed with crisps in the supermarket. And the ‘fire is worse’ project did not so much develop a product, but rather an advertising campaign. One must, however, be aware that this can distract from a more tangible product design activity. The making of some sort of model or maquette to finish the course helps to pinpoint the students to deliver concrete results.

In general, it appeared that the students were very motivated by the particular theme approach, more than any other year’s editions of the programme, which were executed with more defined (product) assignments. This can of course also be due to the fact that the students could work on their own assignments. A complication of this working on their own assignments is a difficulty in assessing the results in a proper way. From the beginning, there is some dispersal in the level of abstraction of the assignments and therefore the results. In this way, they are difficult to compare or to rate against objective achievement levels. This effect becomes stronger because of the great dependence on the students’ self-activity in between the workshops. There seem to be two strategies for the assessment of the results. First, one can be very clear about the end-goals that have to be achieved and compare the results with the prescribed ‘deliverables’. Second, one can be very tolerant to the class of the end-results and rate them by general objectives such as ‘quality’, newness or consistency. To encourage creativity and ‘taking position’ with the students, we chose the latter, and to make it less subjective, the assessment was carried out by more than one staff member.

What is most important in the end is that with the focus on societal issues, the emphasis of the projects came on the ideas behind the product concepts, instead of the products itself. This appears to be very suitable for the design practice nowadays, where more and more attention is given to abstract concepts, such as brand identity and authenticity. Or the idea of product-invoked emotions and the concept of giving meaning through design (Bürdek 1996).

Acknowledgements

The author gratefully acknowledges the participation of Tom Evers, Mieke van der Bijl-Brouwer and Arthur Eger in this project.

References


Kessels, E. and Whisnand, T., 2006. *One hundred and one things to do*. Amsterdam: BIS.


