

# GENDER BENDING THROUGH DESIGN - AN ACCOUNT OF A STUDENT PROJECT ON GENDER.

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This paper deals with an explorative student project which was conducted as part of a consumer research project on gender in design. In the project master students in design explored and reflected on gender issues through practice, and the resulting objects were assembled into a public exhibition. Departing from gender theory we describe and reflect on the experiences of the students and the reactions to the objects and the exhibition.

## INTRODUCTION

Scholars have shown how objects are “gendered by design” (e.g. MacKenzie & Wajcman 1985, Cockburn & Ormrod 1993, Green, Owen & Pain 1993, Wajcman 1993, Oudshoorn, Rudinow Saetnan & Lie 2002; Sparke 1995). However, despite the significant consequences this may have on gender equality and usability etc., research that investigates the relationship between gender and design is still scarce within the field of design research (Gislén & Harvard 2007).

This paper presents a study of a student project in design where the intention was to explore and reflect on how gender is expressed in design, and to reflect on this through design for an exhibition on design and gender. This project was part of the interdisciplinary research project *Gender and design* [Genus och Design] (CFK

2009-02-20), in which four researchers participated, representing design, marketing, ethnology and gender. The research aimed to emphasize the possibilities of giving gender equality a commercial dimension through design. Within the research project the study of the student project was contrasted with other studies of how professional designers have dealt with gender issues in commercial contexts (e.g. Jahnke 2006; Mörck & Petersson 2007a; 2007b; Petersson & Mörck 2007). The student project consisted of three related stages, first a seminar series in which the issue of design and gender was explored. The discussions and explorations of the seminars were then used as a foundation for the second stage, the design of discursive objects for the exhibition on gender equality and design. Finally, the design of the exhibition itself. This exhibition was part of a public program discussing gender and feminism through films, seminars and other events during the winter of 2006 at the culture center Blå Stället in Angered - a typical 60's concrete suburb of Gothenburg. Our *research objective* was to observe how design practitioners “to-be”, and “in action”, would make sense of and relate to the topic of gender as reflections through practice. And also how gender could be negotiated and re-constructed through discursive objects. For this reason the students were both observed during the process and interviewed at the end of the project. Such an approach, to study design practice ethnographically, is for the most part lacking in the already scarce research on design and gender.

The purpose of this paper is to describe the student project by outlining the processes involved, and to present and briefly analyse the designed objects and their reactions.

First we begin by presenting an introductory theoretical section on design and gender research as a contextual background to the project. This is followed by a description of method. After this we discuss the three stages of the project and then end the paper with a reflection on experiences of the project.

## DESIGN AND GENDER RESEARCH

Within STS, Science and technology studies, and feminist theory literature, the centrality of gender relations to the social shaping of technology has been explored for some time now (Wajcman 1993; MacKenzie & Wajcman 1985). Unlike a deterministic view of technology, STS shows how technology is not just influencing society but is also being shaped by the same. In this context gender has come to be an important perspective and some studies include design aspects as well (e.g. Oudshoorn et al. 2002; Cockburn & Ormrod 1993; Green et al. 1993; Wajcman 1993).

An interesting case described in this context is that of the microwave oven. Its entire life trajectory, from design to consumption has been outlined by Cockburn and Ormrod (1993). It was shown how the microwave was transformed in terms of design, function and selling strategies when the target group was changed from male to female users. It went from a brown, complicated looking high-tech heating gadget, sold in so called brown goods stores together with stereo equipment and such, to be sold in white goods stores with other kitchen appliances, and marketed as a perfect and easy to use cooking instrument for the housewife, now white and with simple pictograms etc. During its life-cycle it has thus changed gender or genderscript (Oudshoorn et al. 2002). This transformation can be explained by the inscriptions of traditional representations of gender that was made by designers, engineers, marketers etc. In both incarnations, different competences, skills, tastes etc. were by designers actively ascribed to male and female users based on norms and values. These were then reflected in the design of the object.

However, studies show that an object's genderscript is in no way fixed. Users can modify and change the script, i.e. they do what Akrich (1992) calls "de-inscriptions", and may create new meanings and uses of the object, regardless of the designer's intention.

The gendering of objects has been addressed in the design field as well. An example is the work of Ehrnberger (2006) who made visual the gender coding of products by exchanging the expression of a power drill with that of a food hand mixer and vice versa. A traditional power drill is tough-looking, green or red with black rubber surfaces, and other functionally related details. After the swap, the drill suddenly seems easier to use, more harmless, and more feminine if you like. The mixer on the other hand, which is traditionally white or in light colours and with organic shapes, now looks powerful, more "professional" and masculine. In reality, both tools are rather easy to use but can also become dangerous if used carelessly. Together with the example of the micro-wave oven this reveals how design elements like form, colour, texture, etc. create very different expressions for products in traditionally female domains (e.g. the kitchen) and male domains (e.g. the construction industry and the electronics business). This also influence the value of the objects since the traditional masculine taste is valued higher than the female (Oudshoorn et al. 2002). The same tendencies also concern functionality, for example in the case of crash test dummies. These have until recently been solely modelled on average male proportions and weights etc. This has resulted in car seats designed according to a narrow representation of the user, leaving out smaller users. A direct consequence is a 100% higher risk of whip-lash injuries among female drivers (Jahnke 2006).

Also design historian Sparke (1995) shows how gender is marked in forms and tastes of either males or females. The traditional dichotomy of gender is evident in strategies of differentiation, not least in the classic 'shrink it, and pink it' strategy to reach female consumers. This kind of strategy is challenged by Barletta (2004) and Learned and Johnson (2005) who argues that this approach is an insult to the real needs of women. However, they still argue in terms of the traditional dichotomy of gender without reflection. The logic is to act on and enhance perceived differences between women and men.

Instead, we want to push for diversity and a cultivation of a more inclusive and open interpretation of gender in design. Our research is based on an understanding of gender as socially and culturally constructed but negotiable and not stable – a more post structuralist approach. Such a perspective implies that gender does not exist beyond the acts, postures and gestures that supposedly 'express' gender, and which we perform

everyday (Ambjörnsson 2004). To wear a skirt or sit with your legs crossed are thus acts that contribute to the 'doing' of gender – in this case often interpreted as a female gender. But these acts need to constantly be iterated to be experienced as believable and fixed – gender is not a statical condition but a continuously ongoing process (Ambjörnsson 2004).

This view is inspired by Butler who sees gender as a discursive practice or 'performance', and argue that gender and the heterosexual position cannot be predefined (1990, 1993). The female and male is thus only categories of gender and not something essentially natural or biological. This means that gender can always be done differently than the way it is performed in a particular context.

Gender thus remains contingent and open for interpretations which invites subversive action. However, the space for such actions is not wide open. Gender is always enacted within defined cultural frames where norms and representations guides our acts and what is considered right or wrong. The idea of heteronormativity is for instance deeply rooted in our culture and queer has become a reaction towards this (Ambjörnsson 2006). Queer can be used as a strategy to "open up" for the unexpected and subvert conventional and normative thinking of gender identities.

Just as interpretations of masculinity and femininity are unstable, so are interpretations of gendered objects. We argue that objects as materialized representations are part of the performativity of gender, which makes design a tool for gendering as well as for gender-bending.

As we have seen, the gendering of products play with foreseeable ways of being men or women and that this involves the designer. Relating to these implications we believe that it is important to study the practice of design "in action", as a complement to *post-facto* studies. Although the project we have studied is not representative of a commercial design process, we argue that this approach enables us to get close to the challenges, considerations and reflections when in this case designing with gender in mind.

## METHOD

### CATEGORY OF DESIGN

The type or character of design that this project concerns could be argued to fall into either of the categories of "critical" or "conceptual design".

However, we find that the more recently proposed

concept of "discursive design" (core77.com, 2009-02-20) somewhat better reflect the ambitions of the project. According to Tharp and Tharp, discursive design refers to the creation of utilitarian objects that are tools for thinking that intends to raise awareness and understanding of debatable issues of psychological, sociological, and ideological consequence (*ibid.*). The primary driver, the intention of the designer, is to express ideas. It is thus the objects' discursive voice that constitutes the *raison d'être*. This is certainly aligned with conceptual design as inspired by conceptual art (Robach 2005). This concept however has the drawback of, on the one end of the spectrum, easily being mistaken for more traditional conceptual design of industry, and on the other end might connote a too close relation to art.

Critical design as a concept could also have been used. The problem is in how "critical" has a tendency to be understood as a solely negative position. And even though this is a quite narrow understanding of critical, discursive has the advantage of being understood as more inclusive – the ambition to engage in discourse. Tharp and Tharp (n.d) argue that critical design falls into the realm of discursive design. All in all, discursive design seems to better match the design concerned, with its intent of opening up for discussion through utilitarian-like objects.

### PROJECT CONTEXT

Seven first year master students in design at HDK, the School of Design & Crafts, participated in the project. The project was not compulsory and competed with other projects at the school that were possible to engage in. The time-span of the project was one semester and the intensity about half time.

The more specific brief for the students was to participate in a seminar series and by drawing from this, through reflection and explorations, design individual objects for an exhibition on gender and design. The students were also asked to collectively design the exhibition framework.

### FIELD WORK

Our research is inspired by ethnography (Hammersley & Atkinson 1983). The paper is based on collected field material that consist of observations carried out during student seminars and workshops; the objects included in the exhibition; photos of objects; observations of visitors to the exhibition site; and interviews with the participating master students.

## THE STUDENT PROJECT

### THE SEMINAR SERIES

The seminars were held every second week during a period of about two months in the fall of 2005. Each seminar, which lasted about three hours, had a theme which was defined as part of the process. For example, when the discussion seemed to steer in the direction of how gender is expressed in marketing, the theme for the next seminar would be Gender in Marketing, and an exercise would be to study commercial messages in shops and magazines and bring examples to discuss at that seminar. Such assignments also included to search for stereotypical objects, gender neutral objects, to observe presentations of objects in stores, to scrutinize media images etc. The samples brought back, for example in the shape of products, photos, clippings etc, and the observations made, were also presented and discussed in the seminars.



Razors, for men and for women – an example provided by students  
Source: Gillette

In addition to this, a suitable text to read was also chosen and authors covered were for example Butler, Sparke and Landström.

The discussions that evolved departed from issues of colour and form related to gender. For example how different shapes reflect current norms, and how a perspective of power reveals a higher or lower value of certain colours, of ornament, usability etc. This lead on to a close look at marketing and sales messages, including shop displays, advertisement, commercials etc. The quite massive impression of a stereotypical way of depicting men and women as a common strategy exposed the role of the designer. One student expressed: "Am I educating myself to become a cog in this consumer society? It is a question you ask yourself all the time. It's just a flood of material products."

Personal stories were added such as one student's discouraging experience of attempting to raise gender issues when working for a children's clothing company. An engaged discussion was ignited, not least by the ambition of the students to find strategies on how to reconcile their practice with their personal values and beliefs. Implications of how stereotypical design may restrict both expression, accessibility and function were probed and challenged the students to search for other ways of working through design to avoid the stereotypical and also to improve situations for neglected users. In relation to this, human behaviour was discussed at length and whether for example sitting positions or toilet habits of men and women, and the traditions behind different behaviour, are socially constructed or essential, and how to relate to this as a designer. This discussion also connected to related areas such as heteronormativity and ethnicity.



An observation photographed and brought to the seminar by Alves

In the discussions the students argued that stereotypes and strictly binary perspectives restrict freedom of creative expression and solution space. Instead, strategies and inspiration could be found in the mixing of attributes as well as in 'bending' established norms through exaggeration, humor or provocation – to go beyond gender. Or even to circumvent problematic areas and when possible avoid unnecessary gender connotations by connecting to the immediate purpose instead. For instance, why is an extra large parking space marked with a "family sign" (see photo above) when it could be marked with a "P+" sign?

### THE DISCURSIVE DESIGN PROCESS

The students' own design processes started gradually during the seminars and after about two months the attention was shifted to the individual design projects as well as to the exhibition design project. The sessions became collective tutoring sessions. In addition to this,

personal tutoring was also conducted with members of the research team as well as with teachers of the school. In the tutoring sessions not least issues related to discursive design were probed and discussed. The intention to for example convey a specific message, provoke a question or express an experience, became central and the students together discussed different options. The individual projects are presented briefly below with an emphasis on the *intention* of the student as well as the *outcome* as experienced by some of the visitors to the exhibition, in this case pupils of the Angered high school.

This story begins with three seating concepts. As it turned out, a common interest of three of the students was reflections on gender and sitting, about postures, space and behaviour. These concepts evolved as a dialogue between these three students and can thus be seen as related but also, and perhaps therefore, offering quite different results.

#### *Stiletto by Sigrid Strömgren*

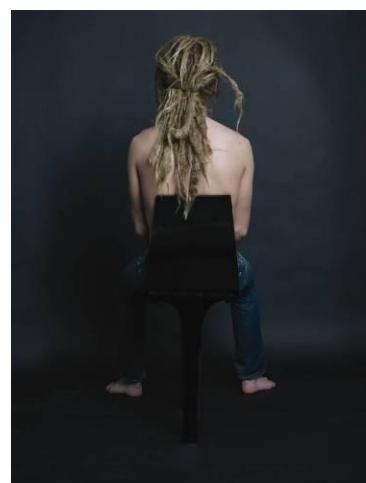
The purpose of Stiletto was to convey an experience of “walking in high heels” - an attribute strongly linked to femininity and beauty. Sigrid meant that wearing such shoes restrains the freedom of movement, and that the wearer has to engage in an unnecessary and uncomfortable balancing act. This she expressed in the text plaque that was composed by each designer for their piece, as:

*“Men are generally physically stronger than women. Products aimed at men enhance this. They are practical and comfortable and allow freedom of movement. Female attributes tuck in, straighten out and push up. At the same time as they beautify they limit freedom of movement. Please sit on the Stiletto and experience how it feels to balance on unsteady shoe. What would society look like if it were men instead of women who wore unstable stilettos?”*

That a chair would be used to express this balancing act was at first not certain. This choice rather evolved as a combination of the experimentation with different concepts and an interest in the chair as an object in itself. The solution came to be a two-legged chair, with the legs in parallel, like the soles of a shoe. From behind it also resembles a high heeled shoe. The two legs makes it necessary to balance sideways, like when wearing high-heeled shoes.

This balancing act was also what came into focus during the exhibition. As an interactive piece of furniture, not immediately understood when laid down and passive, it

demanded to be raised, tested and experienced. Sigrid had placed the chair on a soft round carpet in front of a textile drape with the image of an intentionally androgynous person sitting on the chair (see illustration below). The idea was that the “active” image would contrast with the passive expression of a “resting”, or perhaps even a discarded chair.



Stiletto/Stiletto

For some pupils that visited the exhibition, the balancing act was perceived as implying an imbalance between men and women - if society had been equal, the chair would have had four legs. Another reaction was that Stiletto was surprisingly comfortable to sit on, not as unstable as would have been expected. Some felt, this contradicted the intention of the designer. The black colour was considered a male colour, but if it had been pink it would have been for females, some said. That the chair invited interaction ensured many discussions and laughs.

#### *Slothfully 2006 by Markus Grip*

As mentioned, several students were interested in stereotypical sitting positions, for example how men claim space by sitting with legs spread, while women by crossing their legs and keeping them together take up less space.

With a somewhat provoking and ironic tone, the chair Slothfully 2006, commented on this and enhanced the masculine expression and made it visible. Its aesthetics was inspired by hotrod cars; the tubular steel “frame” resembling the “roll cage” with sharp angles, a rough surface, visible welds and flat “primer” paint. A small inconspicuous pillow forces the legs apart.

The idea was to that the chair would invite you, irrespective of your sex, to sit as a man. It further

commented on the male slacker, which was enhanced by the picture on the drape behind the chair (see below) and as expressed in the title. In the exhibition, a TV set showed a film with car racing to further strengthen the message.



Slashas 2006/Slothfully 2006

However, for Markus it was not straightforward to arrive at this design. Initially he instead attempted to design a gender neutral chair.

*“During the process it was really hard to do something that didn’t feel strained, but something that felt neutral in some way”*

Markus however felt that to make a unisex chair became too forced and non-inspiring. Instead he played around with the styles and expressions he himself favoured, such as car design, and found that by tweaking his own preferences, and connect those with a traditional male sitting style, via the cushion that forces the legs apart, he could make a comment on stereotypical male behaviour.

*“... then I chose to just go back and exaggerate instead. That was an easier solution in one way.”*



Girls sitting in Slashas 2006/Slothfully 2006 at the exhibition

This strategy worked for some at the exhibition. For others Slothfully 2006 was viewed as a chair for guys.

Yet others thought the flat red primer colour was “girlish”. For some pupils there were no problems with sitting straddle-legged. For one of the girls, it was not even seen as a typical male way of sitting any longer. But for another it felt gross to sit like that, it was just not possible – too revealing and too vulnerable. This was the more common reaction among girls and women.

#### *Duel by Ulrika Hegårdh*

Duel was conceived of as a public piece of furniture with a hidden function that would force people to actively choose how to sit. Ulrika was disturbed by traditional ideas of male and female sitting.

*“I began by looking at male and female sitting, but I didn’t like it ... and that thought. Instead I believe that we are people and individuals .... And then I wanted to erase the question of gender and see how we ... what space we take up as a single person ... or if we are two or more...”*

This reflection was also translated into a shape and colour which she aimed for to be neutral and “blend in”. The intentionally hidden backrest function was inspired by the backrest on a bench she had seen on a boat in Thailand, which could be flipped over depending on how many that wanted to sit close together, for example a couple or a family – the space could be divided in different ways. In Duel - if one person sits alone, the backrest, which is free-turning, forces you to sit in a central position and *take* space. If another person wants to sit and also use the backrest, you have to cooperate - to *give* and *take* space. However it does not necessarily mean that you find an equal and balanced sitting.



Duell/Duel

One way to sit is for one person to take almost all the space and another to sit on the side not using the backrest at all (see photo below).

Duel surprises you in the moment of interaction because the fact that the backrest can turn is only experienced

once you try to lean backwards. One common interpretation was that we have to work together to sit comfortably and to achieve equality – a tool for talking about equality through embodiment.



Pupils sitting in Duell/Duel at the exhibition

In the interaction with Duel, some pupils described Duel as both a girl and a boy couch, as it was possible for two persons to sit on it, or maybe for snuggling as you easily fell on each other when trying to sit on it. Another playful interpretation was that it could be used to find out who is the strongest.

#### *Only Humans by Erika Carnbäck*

One of the objects was more conceptual than the others, an altar-like piece named Only humans.

*"I chose this, that we are only humans. Perhaps it seems banal, that was what made it so difficult, that one didn't want to make it into something banal, but ... as something nice and beautiful, that one is equal and have the same needs"*

Erika argued that our similarities are more important, even if they are sometimes felt as invisible behind all the layers of expressed identity. Erika used two series of Babuschka dolls to mediate these hidden similarities. Her inspiration however came from onions and sallad – from the layers of leaves and layered structures making up the whole.

Her choice of not making a product-like piece was motivated by a feeling that this would be a more direct communication, that her solution was:

*"... not a form of product, like a chair with a function, but rather something to provoke thoughts ... like something which strikes down..."*

The “sacral” expression was motivated by the wish to be “clear”. Some felt that it was a bit “strict”. Erika retorted that:

*"Things doesn't always have to be funny, and this choice of black and white, these colours say hardly*

*anything, or, they are black and white, and that was what I strived for."*



Bara människor/Only humans

#### *Occupied by Mariana Alves, Karolina Larsson, and Josefine Lindgren*

Occupied started as an idea between three of the students, to design a unisex urinal for public spaces. The intention was to address a self-experienced problem area – the lack of public toilets for women. But the complexity of the matter of public toilets grew when the students, during the seminar series, explored the issue by visiting such spaces and also by conducting interviews with different people about the situation. They found an abundance of stories that could be related to a perceived lack of gender perspective in architecture, city planning and design. So instead of making a kind of solution attempt, the group felt that they wanted to communicate these stories to raise awareness.

*"It was an every day problem area that we were provoked by, and that many seemed to relate to. And if we then, with our tools, can expose what is problematic to more people, who might also be provoked and start reflect themselves..."*

So to expose these perceived shortcomings and problems, they enlisted a photographer and “actors” to stage some of the situations that had been picked up as stories.

The resulting fictitious photos were arranged as a photo suite on a black board extending four meters in width. In the exhibition the photo suite generated a lot of discussions and the factor of recognition was great among the visitors. A typical response was to comment on the effectiveness of images to expose something of which a lot is written, but often with little emotion attached – that the problems comes alive with images.



Presentation of Upptaget/Occupied at Blå Stället

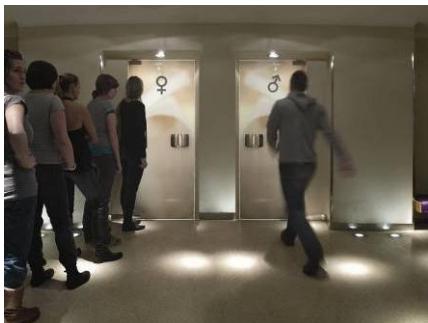
However others demanded a solution and wondered why the design students had not made an object. As a contrast, some of the pupils, all boys, wondered if the students wanted to ban urinals.



Example of staged photo from Upptaget/Occupied

Yet others were provoked that it was so serious. One of the designers retorted:

*"Yes it was serious. Because I get agitated, really angry. Because the thing is, that sometimes you risk your life. Because for a girl, there are no public toilets, well there are, but they are locked at night, and then as a girl you have to go to a park or something... and that may mean rape and assault."*



The centre piece of Upptaget/Occupied

A kind of solution was indeed provided – a unisex lavatory, which was illustrated by an image placed at the sides of the photo suite, whereas a symbolic image of an unequal situation was placed in the middle.

#### THE EXHIBITION DESIGN

The exhibition concept was developed around the objects by the students themselves. The exhibition was initially to be limited by a representation of their personal reflections, i.e. with no demand for a more extensive representation of the scope of design and gender. However, once the students had visited the site, which is situated in a building complex which also holds the social office as well as the high school, they were triggered to also attempt to convey a wider discussion on gender and design, not least to engage the pupils of the Angered high school that would pass the exhibition every day through the corridor. Thus, the over-arching theme of gender and design, in their interpretations, held the objects together. This was achieved in several ways. The title chosen was immediately directed towards the high school pupils and expressed the wider scope of the exhibition. After a session when many possible titles were “thrown up”, the choice fell on “Spelar Roll – en utställning om design och jämställdhet” (Spelar Roll – an exhibition on design and gender equality). In Swedish “Spelar Roll” is a “double entendre” with the two different meanings of approximately “To play a role” and “Does it matter?” – thus the title asks the open-ended question if gender equality is important, but also suggests that gender is acted – the playing of roles.



The exhibition title and logo

A graphic profile was designed by two students. Black was chosen as the common theme, drawing on the fact that in several objects black dominated. Other reasons to go for black, was to actively move away from what they felt were problematic colours and also to express a more contemporary “look”.

To play out the meanings of how gender roles are enacted, the students drew from the title and composed short questions, like “Spelar killar roll?” (Do boys play roles/matter?). These were taped all over the floor of the corridor and also pointed in the direction of the exhibition area in an adjacent room.

The students continued to develop the idea to “surround” the pupils of the high school with thought-provoking questions, examples and images. Questions were composed and placed on the walls of the corridor together with images of commercial messages and images cut from magazines that had been enlarged,

printed and applied to boards. The questions included “*What roles do toys create?*” or “*Is society more equal when men care about their beauty?*”.



Sample of questions and commercial ads on the walls of Blå Stället – “Do women grow older while men age with dignity?”

In the middle of the corridor glass display cases were placed with samples of different objects, such as razors directed to female and male users respectively and girls' and boys' childrens' clothing.

To provide context for their own objects and to spur interaction, these were photographed in front of a black background together with people interacting with them in different ways. These photos were then printed on textile ‘drapes’ that were hung as a background to the physical objects they represented. This process in itself provided more insights about the messages of the objects when discussed in the context of the image. To add to this, poem-like texts were composed by each designer and were printed on small black plaques to accompany the object.

When the exhibition was opened the design students held viewings for high school pupils. In these viewings the images, questions and products were used as examples to discuss design and gender more generally.

## DISCUSSION

Already from the start of the project it became obvious how sensitive the issue of gender can be. This was probably a reason why a couple of students dropped out early on in the process. Some students also felt that others in the group were a bit too confrontational and “*waved the feminist banner a bit too eagerly*” as one student declared. This sensitivity might also be why other students did not consider the project and also why some teachers had problems with tutoring the students. This speaks in favour of the issues of gender to be made mandatory as a tendency is otherwise that only the already committed will participate.

Another experience in relation to the “hot” topic of gender is that when the students had to deal with gender

issues through their explorative and creative processes, they also had to deal with their own personal values and with the complexity of gender implications on design. This initially became a barrier to creativity. This complex situation was however turned into the very impetus for creativity once a personal perspective had been established. This might be a reason in itself to use gender in the teaching of design, i.e. that it is a demanding perspective to consider.

From a design process perspective, gender is interesting in the way in which the topic connects to both values and also personal experiences of the designer. This highlights the general tendency of designers to relate to themselves as the “user”, to deploy the implicit method of the so called “I-methodology”, even though they may not be aware of this fact (Akrich 1995). This is problematic and an interesting paradox in the case of gender and design. It was the very personal commitment that spurred the creative process, which was also in the nature of this discursive design project. However, this personal commitment might in more commercial design processes stand in the way of a more nuanced and well founded representation of the user through market surveys, consumer tests, and user feedback (Ibid).

Not that this seems to be the big “problem”, since in most cases it is the unawareness, the neglect of a gender perspective, that is at the root of the problem.

Concerning gender and gender equality specifically, we support a notion that equality can be advanced if gender is actively considered in the design of consumer objects, services, systems etc. The ability, as discussed above, to translate a complex issue into some do-able elements could be what is called for to be able to design less stereotypical, yet more equal, useful and attractive objects for the market place. So even though the issues of designing for an exhibition cannot be immediately translated to designing for the market, some issues are probably universal; the ability to open your eyes, to reflect, to turn a problematic situation into an opportunity and to embed a constructive approach in your own design process.

In this project, the fact that the result was an exhibition, and that this meant to engage with the “user”, both first hand, and through the objects, stimulated a discussion outside the ordinary design teaching context. This certainly meant surprising experiences for several students, not least when engaging with the minds of the young high school pupils. Not least were the students sensitized to the rather preconceived and stereotypical views of many of the pupils, and the fact that the users’

own interpretations counts as much as the intention of the designer. The latter is an important knowledge in understanding the gendering of objects (Oudshoorn et al. 2002).

We were interested in how gender could be negotiated and re-constructed through discursive objects. To us it was interesting that students used quite different strategies to make “gender trouble”. For example, Markus used irony for Slothfully 2006. As it turned out this could just as well mean to contribute to a consolidation instead of questioning of existing gender stereotypes. The photo suite Occupied actualized a complex and hidden situation and initiated a discussion through visualization. This was spurred both by recognition and provocation. The intention of Duel was to avoid, or rather moving beyond, traditional positions and instead opening up for an experience. Here the reliance was more on the context and situation which was mediated through a clever and innovative solution. The effect was enhanced by the ambition to create an element of surprise which “positively provoked” interaction.

To sum up, the implications of taking gender into consideration in design processes are complex and filled with contradictions and necessary trade-offs. This project managed to identify some such matters through the active observation of a process in the making. Our hopes are that more projects will engage in similar and complementary ways. This would help increase the understanding of the challenge of designers to engage in the design of products (including services and systems) where properties immediately connects to values and politics. And not least, to make evident that all design, one way or the other, has gender implications.

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URL: <https://www.genus.se/nyhet/teknik-utifran-feministisk-teori/>

# Teknik utifrån feministisk teori

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Feministisk teknovetenskap är ett etablerat forskningsfält i Sverige. För att få insyn i arbetet har vi träffat tre forskare som studerar design, nätverksteknik samt makt inom teknikutveckling.

Forskarna har olika inriktningar på teknovetenskap men delar en ambition om att inkludera fler och mindre aktörer i teknikutvecklingen. De söker alternativa lösningar till etablerade idéer och strävar efter att arbeta med långsiktiga, hållbara metoder.

Intervjuerna är uppdelade i tre delar och handlar om feministisk design, okonventionella IT-lösningar samt vad som händer i tider då teknik får gå före allt.

## Nya lösningar på gamla problem

Lena Berglin är docent i design och ansvarig för textilingenjörsutbildningen vid Textilhögskolan i Borås. Hon har en bakgrund i klassisk teknikforskning och disputerade med en avhandling om interaktiva textila strukturer på Chalmers tekniska högskola.



Lena Berglin

Hennes erfarenhet är att den etablerade forskningen alltför ofta utgår från spekulation istället för reella behov.

– När jag började läsa feministisk teori övertygades jag om vikten av att utgå från verkliga problem och skapa vardagsnära forskning.

Istället för att sitta med ett teknikdrivet forskarteam började hon arbeta med andra forskare och aktörer från olika professioner (som sjuksköterskor, samer, humanister etc.).

Det var också då som hon bestämde sig för att inte låta hennes position som forskare, i en manligt

värderande akademi, styra vad hon skulle forska med. Idag inkluderar hon många olika mänskor och kompetenser i sin forskning för att tillsammans hitta lösningar på framtidens problem.

– Teknikutveckling kretsar i hög utsträckning om problem konstruerade av en liten homogen grupp och som automatiskt sätter vissa områden, som exempelvis bilar, robotar och medicinteknik, framför andra. Här har teknofeminismen en otroligt viktig roll att spela.

## Praktexempel på feministisk design

Lena Berglin misstänker att hon antagligen brytt sig mer om sina tekniska landvinningar än behovet av dem, om hon hade fortsatt sin karriär inom det klassiska teknikspåret. I hennes nuvarande forskningsprojekt låter hon behovet avgöra vilken teknik som ska användas.

Som ett konkret exempel på när en strävan för rättigheter driver teknikutveckling lyfter hon fram [Karin Högb ergs projekt om mensfattigdom](#) (menstrual poverty). Med hjälp av hennes forskning i Afrika har ett reellt problem, som drabbar miljontals kvinnor, identifierats.

Genom ett teknofeministiskt perspektiv och interdisciplinär forskning har Lena Berglin tagit fram ett mensskydd, som ska hjälpa kvinnor i utsatta områden med hygien. Resultatet är en återanvändningsbar binda av material som torkar snabbt utan att absorbera vätska, och därfor är lätt att tvätta ren med en liten mängd vatten vilket är nödvändigt i fattiga områden där vatten och torkmöjligheter är begränsade.

**"Feministiska perspektiv handlar inte bara om kvinnor och män utan också om små och stora aktörer. Att våga involvera fler."**

– Produkten är ett praktexempel på feministisk design. Det är en feministisk handling att utgå från kvinnors behov och skapa något i samklang med miljön. Feministiska perspektiv handlar inte bara om kvinnor och män utan också om små och stora aktörer. Att våga involvera fler, säger Lena Berglin.

## Reducering framför återvinning

Övertron på återvinning leder enligt Lena Berglin till oförändrad konsumtion, när det vi egentligen behöver är att ändra våra konsumtionsmönster. Att det viktiga är att reducera användningen av industriellt framtaget material, snarare än att återvinna den. Hon poängerar att råvarorna helt enkelt inte räcker till för att fortsätta producera mer plast, och framhåller vikten av attitydförändringar.

– Alla tror att elbilar löser allt men el är ingen bekymmersfri källa. Och visst är det bättre att köpa ekologisk bomull men den utarmar också jorden. Problemet är att vi ska ha så mycket. Här tror jag att feministisk forskning kan bidra genom att utmana etablerade förhållningssätt.

**"Alla tror att elbilar löser allt men el är ingen bekymmersfri källa. Och visst är det bättre att köpa ekologisk bomull men den utarmar också jorden."**

Samtidigt är Lena Berglin intresserad av resursåtervinning och beskriver fascinerat hur samerna tar tillvara på allt efter renslakt. Hon resonerar kring hur andra djur- senor skulle kunna användas för utvinning av fibrer. Ett aktuellt projekt som hon driver i en sameby tillsammans med Maria Udén, professor vid Luleå tekniska universitet, handlar om att industriellt utvinna fibrer ur rensenor vilket har en lång tradition inom samiskt konsthantverk.

– En industriellt utvunnen sentråd skulle till skillnad från en textilmedicinsk produkt kunna nå fler aktörer och dessutom vara så miljövänlig som det bara går. Hantverk skulle generera mycket pengar, till fler och mindre aktörer.

Avslutningsvis lyfter Lena Berglin fram potentialen i den nystartade [nationella plattformen för forskare inom feministisk teknovetenskap](#), som hon ser som en möjlig forskarskola för blivande doktorander. Hon vill inte längre driva projekt inom en klassisk forskarinstitution, eller ha doktorander som ingår i vad hon benämner som "stuprörsforskningen".

Hennes fortsatta målsättning för framtiden är att den feministiska forskningen inte bara ska peka på problem, utan att forskare inom teknofeminism går in och tar befälet genom att bedriva forskning på teknik och visa på lösningar.

## Givna sanningar byttes mot mäktkritik

Redan som tonåring började Samo Grasic att bygga och distribuera wifi-nätverk i sin hemort i Slovenien, som då saknade internet. Det tidiga intresset för nätverksteknik fick honom senare att studera datavetenskap.



Samo Grasic

Studierna tog honom vidare till Sverige och Luleå tekniska universitet där han doktorerade med ett projekt om nätverkstekniken DTN (Delay Tolerant Networking) och dess användningsområden i den arktiska vildmarken. Doktorandtjänsten var förlagd till avdelningen för Genus och teknik.

– Jag var inte intresserad av genus och jämställdhet när jag började. Till min förvåning blev perspektivet avgörande för mig, både på ett professionellt och privat plan.

Inte förrän han hade börjat studera vid Genus och teknik vid LTU insåg han hur ensidig och smal hans tekniska utbildning hade varit. Först nu fick han förståelse för att teknologi inte är på förhand givet, att det finns ett historiskt och politiskt arv som styr dagens teknikutveckling. Det var också vid denna tidpunkt då han introducerades för teorier om normer och makt.

**"Jag var inte intresserad av genus och jämställdhet när jag började. Till min förvåning blev perspektivet avgörande för mig, både på ett professionellt och privat plan."**

– Teknikfältet framställs ofta som neutralt, som ett apolitiskt område med givna sanningar, men all teknik skapas utifrån intressen. Trots att fältet är verkligt politiskt diskuteras inte politiska aspekter inom teknovetenskap. Där tänker jag att feministiska teorier kan hjälpa till att analysera och utröna vilka det är som bestämmer över den tekniska utvecklingen.

## Okonventionell teknik bortom storföretagen

Samo Grasics doktorandstudier från Padjelanta och Sarek nationalparker visar att teknik som kan hantera fördröjning kan fungera som ett kommunikationsverktyg för områden med hårt klimat och utan tillgång till mobilt nätverk. En av lösningarna handlar om renspårning som kan användas av renskötar.

Idag arbetar han som teknisk utvecklare för [Dálvvadis ekonomiska förening](#), en samverkansplattform för samebyarna i Jokkmokk. Som utvecklare hjälper han

renskötarna att, trots det kyliga klimatet och brist på IT infrastruktur och energi, få tillgång till internet som bland annat hjälper till att spåra djuren.

– För mig är det ett viktigt jobb. Det känns stort att vara med och skräddarsy en lösning som är anpassad för samebyarnas behov. Jag tycker att det är viktigt att den tekniska utvecklingen sker tillsammans med, och inte enbart för, framtida användare.

**"För mig är det ett viktigt jobb. Det känns stort att vara med och skräddarsy en lösning som är anpassad för samebyarnas behov."**

Samo Grasic tycker att det är viktigt att gå utanför den gängse normen, bortom storföretagens arenor, och skapa något annat, mer robust. Han vill vara med och bidra till hållbara tekniska lösningar som möjliggör liv utanför städerna. Som gör att mänskor och deras verksamheter, överlever.

-Konventionella IT-teknologier är inte användbara överallt. Därför blir det viktigt att som teknisk utvecklare, inte bara följa nutida trender utan även hitta alternativa lösningar som till exempel för mänskor i glesbygd som inte alltid kan dra nytta av de teknologier som är en självklarhet i städer.

## Inflytande över samhällets omvandling

Åsa Johansson är civilingenjör i maskinteknik och genusvetare. Som doktorand vid Kungliga tekniska högskolan (KTH) förenar hon feministisk teknovetenskap med feministiska organisationsstudier.



Åsa Johansson

Hennes kommande avhandling ska kartlägga förståelser av inflytelserika teknikområden, teknikfält som ofta ”hypas” genom att ges mycket uppmärksamhet under en viss tidpunkt och som förväntas få stor inverkan på mänskors sätt att leva.

Ett aktuellt exempel dessa ”disruptiva” tekniker är artificiell intelligens (AI) som av många beskrivs som världens just nu viktigaste teknik. I Sverige satsas det miljarder på utveckling av tillämpad artificiell intelligens (Ny teknik 22/2 2018).

Åsa Johanssons forskning undersöker vad som händer i dessa tider av omvandling och vilka som är med och driver på utvecklingen som spås påverka hela befolkningen. Huvudstudien kommer att avhandla just makt och inflytande; inkludering och exkludering.

– Vem får vara med när tekniska framtidsvisioner formuleras och beslutas om? Vilka idéer och föreställningar om teknik ligger till grund för dessa satsningar? Genom att kartlägga hur makt görs och vilka det är som driver utvecklingen ska jag förhoppningsvis närma mig svaren.

**"Vem får vara med när tekniska framtidsvisioner formuleras och beslutas om? Vilka idéer och föreställningar om teknik ligger till grund för dessa satsningar?"**

Tekniska visioner om framtiden får materialisera konsekvenser menar Åsa Johansson och påminner om tiden runt millennieskiftet då IT-företag utan substans övervärderades samtidigt som nya maskulina ideal sopade jämställdhet under mattan. Hon liknar perioden vid ett undantagstillstånd, som verkar råda när tekniken får gå före allt i stunder av en "hype".

## Teknik som återskapar maktbalans

Utveckling av artificiell intelligens sätter många frågor på sin spets, särskilt den om hur vetenskapen ser på människan och mänskligt kunskapande. Forskning och utveckling av artificiell intelligens har länge gett privilegium till hjärnan. Fältet har fortfarande inte fullt ut tagit till sig kritiken från feministisk forskning om att lärande sker i en interaktiv sammanflätning mellan hjärnan, kroppen och omgivningen.

Feministiskt perspektiv kan handla om gränsdragningar om vad som ska definieras som teknik och att verksamma kvinnors teknikintressen och bidrag ska uppvärderas.

– Om teknikverksamhet konsekvent speglar mäns erfarenheter och sammanfaller med föreställningar om manlighet får detta konsekvenser för teknikverksamma kvinnor som i allt större grad får förhandla med sina identiteter och göra personliga uppoffringar för att passa in i dessa miljöer.

Att anlägga ett feministiskt perspektiv är, enligt Åsa Johansson, att möjliggöra för kvinnliga forskare att delta på lika villkor som män men också ett sätt att säkerställa att de produkter, artefakter och tjänster som skapas riktar sig till fler än just män.

– Om de som tar fram och utvecklar teknik utgörs av en homogen grupp, är risken påtaglig att betydande användargrupper glöms bort som följd, vilket återskapar maktbalans.

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Avslutningsvis lyfter Åsa Johansson fram att all forskning behöver sitt ämne för att få tyngd. Det är viktigt att feministisk teknovetenskap fortsätter att arbeta tvärvetenskapligt men att ämnen behöver egna miljöer för att utvecklas.

– Målet är att transformera andra områden genom feministisk teknovetenskap men det bygger på att de också existerar som egna enheter för att kunskapen ska kunna fördjupas.

**Skribent: Paulin Nande**

**Bild: Samo Grasic**