The Gender Perspective in Cultural Probes
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ABSTRACT
This paper is an experience report about the appliance of participatory design methods for a gender sensitive approach. Investigating their appropriateness to gather gender specific insights, we are particularly interested in their potential of avoiding the recreation of gender stereotypes. In this context, we reflect the design of our research environments, methods and tools according to their unconscious gender assumptions which might cause stereotype answers. Our empirical study, called Women’s Phone, aimed both at involving female prospective users to avoid gender clichés and to critically investigate conventional and stereotypical design solutions of mobile phones.

We judge the suitability of the methods used in two respects:
- Their value in keeping researchers away from reproducing conventional gender images,
- Their meaning as an incorporation of the researchers’ attitudes and its impact on the research results.

We consider our set of ‘cultural probes’ used in the project as the strongest evidence of the researchers’ inherent gender assumptions. Therefore, we will explore the visibility of the ‘gender point of view’ in the probes and draw implications from it for future gender-sensitive design inquiries.

Keywords
Gender and Design, Cultural Probes, Mobile Communication, Participatory Design

INTRODUCTION
The main idea of participatory design is to reduce the risk of serving only the common sense of stereotypes instead of real human individuals by involving prospective users into the development of new products. This risk becomes particularly evident when the design explicitly addresses the different needs of men and women. Current products meant to be gender-specific tend to confirm existing clichés about masculinity and femininity[1-3]. Their adequacy as gender-sensitive solutions remains questionable.

Mobile phones are a good example to illustrate this fact. To address females, their design commonly uses smooth shapes, pastel colours and floral-style, decorative elements. Concealing the technical character of the product approves the popular view on women who are stereotypically depicted as not interested in and less skilled with technology than men. This design strategy may be adequate for a specific part of the female customer segment. It may, on the other hand, fail to satisfy the variety of needs and lifestyles among women. In any case, it constrains the gender aspect of mobile phones to the formal-aesthetic level of design. Additionally, it neglects non-tangible aspects like interactions and emotions, or sensory dimensions like smell, taste and sound.

Our project ‘Women’s Phone’ aimed at gathering inspirational material for a mobile device from an explicitly female perspective. The outcome should serve as the basis for a mobile phone design with unexpected and subtle gender details beyond the common image of ‘feminine’ appearance. In future, the designed prototypes should base on the female participants answers but did not necessarily and exclusively address female needs. Using participatory methods, we intended to enhance and differentiate our image of female phone users and avoid gender stereotypes. We also wanted to question the appropriateness of existing supposedly feminine mobile phone solutions as being gender sensitive.

BACKGROUND
Sociological investigations of virtual communities reveal that gender is supposed to be the most guiding information referring to interaction contexts [4, 5]. Knowing about the gender of the conversational partner, has a
crucial impact on behavior: Being polite, e.g. opening the door for someone is often a decision made in dependence of the counterpart’s gender [6]. Designers are strongly involved in the production of gender images. By creating their hard- and software interfaces, they define communication settings. They contribute more or less consciously to a recreation, modification or deconstruction of traditional gender representations. If gender predominates our culture [4, 7-9], we agree with Brandes [4], that designer has to consider it equally in research and practice next to criteria of usability, ecology, technology and economics. While practitioners need to reflect the different contexts, interests and experiences of men and women, design researchers have to apply, evaluate and develop appropriate methods to investigate these contexts, preferences, needs and desires.

Referring to our project, we discovered in hindsight that our research environments and tools did not meet the requirement to be gender-sensitive in any case. Some probably support stereotypical answers and unconsciously carried out our own stereotype assumptions about feminity, which we critically discuss in the following.

**Research Questions**

From the onset of this investigation, the following questions were sought to be answered:

- Do participatory methods keep researchers away from reproducing conventional gender images or from being suggestive?
- Which impact does the researchers’ attitudes have on research environments and tools? How do they influence the probands’ answers and finally the research results?

**Research Structure and Methods**

We structured our project according to Liz Sander’s framework for user self-expressions (‘saying’, ‘doing’ and ‘making’, see [10-12]). Seven female participants, aged between 25 and 35, all employed with an academic education, living in a highly urban environment, were invited to join the project. It was separated into the following phases using different methods of participatory design:

**‘Saying’: The coffee party**

All participants were invited for an initial meeting to inform them about the project. They were given a cultural probe package (see below) and briefed in an informal discussion about the inquiry subject. The briefing was conducted in one of the researchers’ flat, offering coffee and cake in order to establish an informal and private atmosphere.

**‘Doing’: The probe package**

According to [13], we created a probe package addressing the aforementioned topics. In this paper, we focus on this test session in particular regarding the probes as the most evident materializations of the researchers’ gender assumptions. Cultural probes are a set of tasks and questions that often consist of different data-capture devices (like disposable cameras and voice recorders), maps, diaries or collage materials. The probes use ambiguity and uncertainty to engage the participants into a mutual interpretation process with the designers.

The participants had two weeks to work with their package and were asked to return it to the final workshop. It contained the following items:

- A map with coloured self-adhesive dots and pictograms to visualize one’s social network (friends, family, and colleagues) and preferable ways of communications with each person.
- A „telephone diary“: A journal of communication partners, the form of communication and the associated thoughts and moods.
- A disposable camera and initial instructions what to take pictures of (e.g., ‘the favourite place to be’, ‘the telephone’s place’, ‘the pet’)
- Postcards providing open-ended questions about mobile phones (e.g., ‘how would you call your mobile phone by name?’).
- A bag to collect olfactory and sensual probes.
- Material examples (rubber, fabric, metal and paper) for inspiration and as raw material for collages.
A blank notebook for drawings, collages, to collect things and thoughts.

In our project, the probes should serve the following purposes:

a) Provide playful and intriguing material to motivate the probands’ personal engagement;

b) Sensitize them for the final workshop by encouraging self-observation;

c) Gather deep insights and reveal tacit needs and desires;

d) Provoke unconventional feedback for design ideation by changing the participants’ perspective on everyday communication activities.

The probes’ usefulness according to these objectives mentioned above can be characterized as follows:

a) All tasks were perceived as enjoyable. They were well adapted and obviously well understood. The probes’ playful character proved to be very helpful for the acceptance and leave considerable space for self-expression.

b) The sensitization worked well and prepared the participants for the final workshop. They developed creative concepts that were surprisingly far away from conventional mobile phones.

c) From an analytical point of view, the returns – especially the ‘telephone diary’ and the ‘social map’ – gave detailed and holistic insights in the respective everyday life, the role of communication and the personal cores of the respective social network. Despite the different tasks and forms of documentations, we were surprised about the stringency and correspondence of the answers which clearly reveal the personality of each female participant.

d) The unconventional questions and instructions (e.g. which animal is similar to your mobile? If a fairy could transform your mobile – what would it become?) indeed led to prospective data which was useful for the ideation process. Especially the very free and open-ended tasks had a high prospective potential: The female participants documented very concrete ideas.

"Making": The prototyping workshop
In the final workshop, we encouraged the participants to build an ideal prototype of what their mobile phone should look like and should be able to do. Each woman received a raw wooden block and a wide range of different materials to work with. The participants were furthermore asked to create a collage, expressing their attitude towards their phone.

RESULTS AND REFLECTIONS
We found the researchers’ point of view in cultural probes well accessible, visible and dominant. Therefore, we will look at the probes in terms of what they tell us about our attitudes and hypotheses as researchers, especially regarding the gender perspective. This retrospective analysis of the probes should help to establish requirements for ‘gender sensitive methods and probes’.

In the following, we report the observations made regarding cultural probes both as a tool and as designed objects. We describe the advantages and difficulties we encountered with probes and present the conclusions we draw from our project. First, we judge the value of probes of keeping researchers from reproducing gender stereotypes. Second, we discuss the design of our cultural probes package as an example of how our own implicit assumptions about gender are incorporated in the probe design.

Probes as a tool
Considering the probes as a ‘dirty’ research tool [14], we met several difficulties during their design process such as:

- Acceptance of the task implementation: We had to negotiate the probes’ comprehensiveness in relation to their open-endedness and surprise potential in order to make them appropriate for our focus group.

- Hybrid combination of different objectives: The probes as a tool combine analytical and projective properties and were therefore suitable for our exploratory project. However, the value of rather analytical probes for projection and the projective
probes for analysis remained difficult to judge for the researchers.

- **Involvement of the designer/researcher:** The implementation of the probes added more assumptions to the tasks than we had intended. Additionally, the researchers themselves represented the addressed focus group; there was no external view involved.

The research design was clearly driven by different interests: As designers, we focused on the projective qualities of the project and the usefulness of the information gathered for the ideation process. As researchers, we tried to express our hypotheses in appropriate, non-suggestive questions and tasks. In any case, the probe returns reveal some interesting observations about the tension between analytical/instructive tasks and projective tasks:

a) The less instructive the tasks were, the more reflective and suitable the answers for deducing inspirations for concrete design solutions became.

b) The analytical and instructive tasks were very valuable for sensitization and the essential bases for the probands developing projective thoughts which are indeed more valuable for the process of ideation.

**Probes as designed objects**

Despite our relatively high awareness of gender aspects as a team of exclusively female researchers, our own blind spot of culturally constructed gender images was not accessible to ourselves during the project setup. Instead, these images were more or less unreflectedly incorporated into our investigation tools – even against our initial intent. In hindsight, we identify the following ‘gender affirmation’ of our own attitude in the project setup:

- **Materials:** For the material samples we added, we suppose to have restricted the participants to more feminine associated materials like rubber, leather, fabric and fur while leaving out more male connotated ones like e.g. steel, iron. This choice can also be seen as a distinction to the materials currently used for cellphones.

- **Metaphors/Narratives/Wording:** Some of the more associative questions on the postcards may also result from the fact that we – as female researchers - designed for female participants. On one postcard, we asked for the mobile phone’s activity at night – if it should snore or protect the participants or else. The offered answers reproduce the western traditional sense about the hierarchical relationship between men and women. In one of the tasks for the disposable camera, we also asked the participants to take a picture of their handbag – an accessory that is rarely used by males, at least in Germany. On another postcard, we proposed that a fairy might transform the phone into something else that might also be seen as a ‘female’ fantasy. We purposefully implied a strong emotional and close relation to the mobile device. Assuming extreme feelings like love and hate – like what the participants loved the most about their device, or what kind of technical device their phone might fall in love with – the questions’ wordings imply this traditional view on women. They clearly aimed at provoking emotional responses. Nevertheless we might have thought of gathering the same information from male participants with different wordings.

- **Locations and Environment:** One task was to mark the favourite places to use the phone in the apartment as well as where the phone was stored. Both workshops also happened in a private apartment. We did not consider other, more public environments like e.g., the workplace. As treated in [15], the private domain can be regarded as the ‘female’ territory, while the public or semi-public domain is a ‘male’ territory.

- **Lack of control group:** Currently, we neither have any insights from a pure control group of male participants nor have we involved male researchers within the development of the research design. Consequently we can’t compare our research experience at the moment.
**Gender ‘neutrality’:** The project was specifically addressing women. Our research design therefore did not necessarily aim at being gender neutral. However, it also failed to be gender sensitive.

In general, the (more analytic) questions and tasks aiming at recording behaviour or social networks were probably less vulnerable to gender-specific pitfalls. The more associative the questions got, the more our own identifications with the common cultural construction of gender became visible in the probes. At the same time, for the projective tasks, the participants had more freedom of expression.

**CONCLUSION**

Our project shows that, besides the reflection of stereotypes within the product development and design itself, researchers have to be aware of how their methods and test environments are mirrored within the results. This is especially necessary when the researchers are personally involved and their attitude is an integral part of the research design. By designing cultural probes, the researchers include their hypotheses about the objects of investigation. The deconstruction efforts of gender stereotypes lead to reconstructing gender images anew. In this respect, we became victims of our double role as researchers on the one hand and as female members of society on the other. This vicious cycle is already reflected in system theory in terms of the relation between first and second order observation [16]. Moreover, it also belongs to core problem of constructivist gender theory and methodology: Deconstruction first requires the knowledge about cultural (re-)production of gender [5, 17]. However, the data gathered may still have the desired projective qualities, as they may lead to alternative mobile devices, services and interaction models which yet address unsatisfied needs and demands of mobile communication. We take the project as a lesson how to pay more attention to our own underlying assumptions in the future.

**OUTLOOK**

As a next step, we will repeat the activities with male participants as a research group, using exactly the same framework, methods and tools. Some of our female stereotypical questions and tasks may become an irritating intriguing (though unintended) provocation for male participants which may turns out to be an advantage in this case.

Contrasting the results of both projects from a research point of view, we expect to improve our comprehension of the relationship between the probe design and its impact on the results. In this respect, we aim at gathering implications for participatory design methods in a gender sensitive design contexts. Referring to the design practice, we have to compare the results without drawing simple assumptions on gender-specific properties in order to prepare a gender sensitive basis for the development of prototypes for new mobile devices, accessories, interaction patterns and services.

**REFERENCES**


