United Nations Division for the Advancement of Women (DAW, part of UN Women)
United Nations Educational, Scientific and Cultural Organization (UNESCO)

Expert group meeting
Gender, science and technology

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Paris, France
28 September - 1 October 2010

Gender Dimensions of Product Design

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Abstract

The gender research and user experience research carried out by the project team of the Danish "female interaction" project uncovers a number of gender dimensions in product design that need to be addressed to make more women friendly tech-products.

1. the value dimension
2. the functions/benefit dimension
3. the interaction dimension
4. the aesthetic dimension
5. the communication dimension

Based on the observation that tech-products often are biased towards males, the paper presents which female values, motivations and barriers can be addressed to make advanced electronic products more relevant and attractive to use for female users.

The "female interaction" principles that are presented can serve as practical guidelines for understanding and addressing needs of female users.

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[*] The views expressed in this paper are those of the author and do not necessarily represent those of the United Nations.

Introduction

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physical design of the product - its shape, colours, surfaces and branding. These different

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The insights derived from these activities will lead to the final conclusions and guidelines to be made by the project team in 2011. Presented in this paper are the preliminary findings and guidelines generated by the project, based on 1.5 year of research carried out by the multidisciplinary project team. These findings have been through a number of iterations already, influenced and refined by reviews and insights of scientists, designers, product development and marketing specialists both inside and outside the project team. The project website, www.femaleinteraction.com, can be used for getting further and updated information on the project and the project team.

Methods

The methods and activities of the project team can be found at the end of this paper, along with a list of references. In general terms we can say that we try to combine qualitative in-depth user studies (design ethnography) with quantitative studies (market research techniques) for a verification of the large picture. We also go for a combination of regional and international user studies with different techniques, in order to find a mix and balance that are practicable, swift and affordable for the companies, while still giving valid results.

Results

What are the gender dimensions of product design?

When analyzing products and user experience from a gender perspective, it is essential to distinguish between the following dimensions:

- the value dimension
- the functions/benefit dimension
- the interaction dimension
- the aesthetic dimension
- the communication dimension

Each of these dimensions can be gender biased and needs to be specifically focused on to create the whole user experience.

Our analysis of the case products (a climate control system, a mobile headset and a media player) shows that all of these dimensions need to be integrated with a common approach that reflects women's preferences for product design focused on women to give them the best user experience.
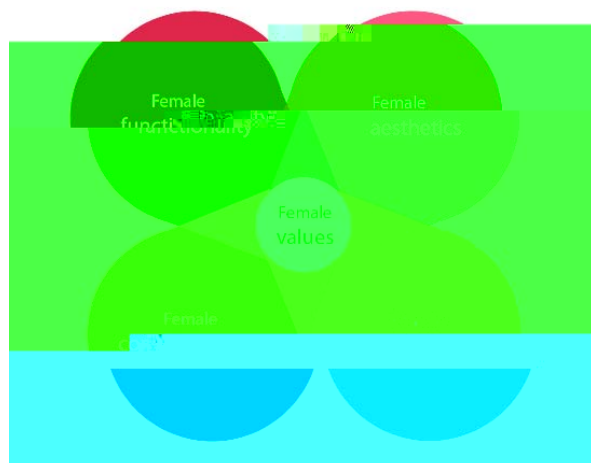

Figure 2. Gender dimensions

Gender is a continuum

The differences described above present extreme traits of each gender. We find it relevant to present gender as a continuum with the clearly female and clearly male traits on each opposite side, and the unisex in the middle. The position of individuals on this scale will vary.

Figure 5. Gender is a continuum

Situative gender factors

When we observe the way a specific person expresses gender in a specific situation, we find the following model is helpful: the way gender comes into a specific situation is a combination of biological gender disposition of the individual, cultural and situative norms. Besides a person's biological gender disposition, there can be a difference in how gender is expressed in Denmark or Zimbabwe, and the norms for acting gender will be different in a job interview than at a wedding.

Converting this insight into practical guidelines for designing products means that in order to be able to navigate gender you need to investigate cultural gender norms (which can vary depending on region and/or sub-culture) and you need to map situative aspects of use concerning the product you design. The user knowledge gained through the combination of expert knowledge and specific user studies will help the developers identify specific gender factors to be considered in the design of a product.

Figure 6. Gender factors influence observed behavior in specific situations

Enacting gender roles

With regard to the situative gender factors, the following principle helped us understand barriers and motivations for using technology. Our research shows that a person's ability to operate a technological product is related to the motivation to do so. Their motivation depends on whether operating the specific product would fit with his/her gender role. There

may be shifting cultural norms as to which gender is supposed to operate a lawn mower, but there can also be specifically negotiated arrangements on this issue within a group of people or between a man and a woman in a household. An example of a rigid cultural norm, on the other hand, is the ban on women's driving.

Figure 7. Enacting gender roles

How can female stereotypes be avoided?

Stereotypes are a human mechanism to make a complex world easier to handle in every day life. These stereotypes, however, can prevent you from seeing and addressing the complexity behind them. A major goal of this project is to help the predominantly male product developers address the complex female target group in a more subtle way which is made complicated by the stereotypical view of women they have.

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eir use and attitude towards advanced electronic products.[2]

ed on the statistic clusters are:

- Young individualist communicators who have no fear of gadgets and use technology both for practical and social means
- Pragmatic traditionalists who are sceptic towards technology and see it only as a mean to gain pragmatic benefits
- Technology benefit seekers who take interest in new technologies and what products and new features can do for them
- Aesthetic benefit seekers who use product design and aesthetics to express themselves

in the design process that is going on, and they
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gigabytes for hours, female participants instead rapidly concentrated on an area that they felt comfortable with: the product design, such as aesthetics and ergonomics.

The analysis of other cases showed the same tendency for implicit use of a male agenda and male bias in ways to communicate about technology - tech talk rather than benefits that matter for women's (social) life.

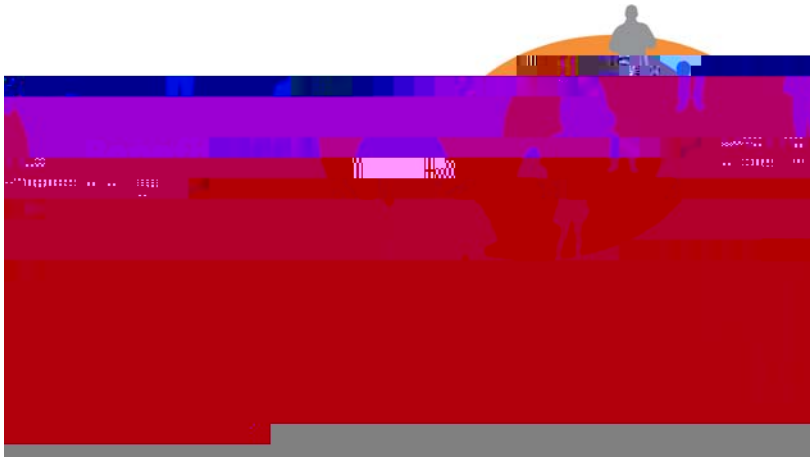We have transformed this insight into the following principle:

Figure 9. Benefits instead of tech-talk

How does gender thinking influence female perception and use of specific technological products?

We have analysed three different case products in the project, which all reveal a potential for better addressing the needs of female users and the gender principles described. As our analysis shows, the design of the climate control system, the media system for private homes and the mobile telephone headset are largely based on male values and thinking, and on the male gender traits described above. In each of the described design dimensions there is a potential for reaching out to the female population in better ways and thereby enhancing their gain of potential technological benefits.

More specifically, the analysis of the mobile telephone headset revealed the following conclusions on gender values, female benefits, motivations and barriers:

- The headset as it is designed now is based on a "performance" value which is predominantly male - "making you more effective by using hands-free communication". To twist the value proposition of the headset for it to fit the female domain, its core benefit could be described as follows: "giving you time to communicate and making you more safely available for the ones that matter for you".
- Female users find the blue tooth pairing of mobile phone and headset a major barrier for their use of the headset. Some female users call others for advice and assistance, while others give up.
- It motivates the female users to be able to make practical phone calls hands free in "spare time situations" i.e. when driving to or from work.

- The female users have a problem with being seen wearing a headset: one reason is that they find it impolite because it signals that they are not fully available for the people around them.
- They find it troublesome to make sure that the headset is available and charged when they need it – daily use needs a lot attention and focus on the device.
- Many women have a practical problem when putting the headset on/into their ear and when taking it off as it tampers with their hair if they wear it long.
- The communication that surrounds the product – both on the website, the user manual and the packaging is too technical, detailed and feature oriented, rather than exposing and explaining the benefits the device gives her.

These findings give an insight into the potential of addressing the preferences of female users more explicitly. They also indicate that removing some barriers can benefit all users, including men (easier Bluetooth pairing, for example), while removing some other barriers will benefit females specifically.

<u>Motivation as a key factor</u>

We differentiate between women's use of technology in their professional life and their private life. In their professional life, women approach technology in a professional way -

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- Case products - MMI check up
- Case products – product history and journey
- Case product – female experience rating

2 User exploration concerning three case products and their value proposition

- Four female personas, based on the cluster analysis of Danish women from phase 1
- International web panel survey addressing 600 women in six countries, gathering kno8(etMnd journeyn)Tjfh0000240230andhearBDCfoT10ingtfechnoldg22 Td0078F Td0078Fj/TT2 1 Tf V

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aler of one of the case products
- Semi structured interviews

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tors, summarizing insight and directing ideation - describing the

ating clusters of related ideas
- Idea prioritizing workshops, discussing and ranking the idea clusters in relation to innovation vectors
- Concept workshops, transforming the ideas into new innovative concepts
- Scenario development
- Rapid Mock ups
- Focus group testing and co-creation, testing concepts, essential values and benefits
- Field tests – user feedback
- Female experience rating