DESIGNING WITH BIAS AND PRIVILEGE?

IDENTITIES, RELATIONS

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ABSTRACT

Focusing on the relation between design and power requires us to understand the designer's role and position. Based on an understanding of design as ideological and political, we focus on the designer's position from an intersectional feminist perspective. We present two design objects that aim to critically intervene into agency and power structures, and we analyse how the designer's position impacts this intervention. With this case, we demonstrate how a simple argument – that what you design is always influenced by your (lack of) privilege – becomes complex when understood in the concrete design practice. The paper contributes with a critical reflection on how a designer is always part of a construction of power and privilege.

INTRODUCTION

To varying degrees, the design discipline is developing a nuanced understanding of its ability to further social, cultural and political change. Those design forms that engage with complex social, cultural and political challenges do not just focus on solutions but are intentional proposals for future change, for how we should lead our life and build our future (DiSalvo 2012, Dunne & Raby 2012, Smith et al. 2016). As such, designers are in a powerful position to project ethical and meaningful change onto people's everyday life and society in general, even if the actual effects of a design are always also a product of its context. This relation between designers, the designed objects, people and society, and the ways that designed objects support change in people's everyday life, connects design with notions of power.

In this paper, we focus on how design is an *act* of power, or a *potential act* of power; that is, how design stages people's agency, the structures that impact people's agency, and how designed objects themselves seek to perform agential power. In this context, agency describes the capacity of individuals to act independently and to make their own choices. However, agency is tightly related to people's participation in social structures and it is influenced by factors such as gender, race, class, religion etc. Although never in a predictable and stable way, designing (re)configures agency through the relations between the designer, the designed object, people and the context.

RECONFIGURING AGENCY

In discussing how design is an act of power, we follow a distributed notion of agency where agency is not just an individual capacity but is a distributed capacity mediated by the designer's intention, the object's form, and how it appears in contextual use (Suchman 2002). This connects design as power to notions of ideology and to the political realm. In critical-inspired fields of design it is presumed that design is ideological and political (DiSalvo 2012, Dunne 2005). When we in this article discuss how design is an act of *power* by its seeking to (re)distribute and (re)configure *agency* it is because design is also a *political* medium. Through the design, the designer seeks to change the world in a way that is influenced by the designer's *ideology*. Even when the designer is not aware of this.

In the following, we discuss the importance of reflecting on what you bring into the design practice, especially if you are a designer that aims to act critically towards societal challenges, social change, and the political condition. It is important to reflect on how your position – your worldview, agency, sociocultural context – frame the designs you make, and how this could be different. This is not a controversial argument to make but it is

surprisingly hard to unpack analytically in actual design practices and so this is what we will do.

To unwrap this argument, we begin by presenting related practices that critically reflect on design as an act of power, after which we organise the paper in two parts. In part one we present the design cases, and in part two we analyse the impact of the designer's privileged position on the cases. We discuss how the position from which she designed, contributed to her agency to critique power structures, but how this position itself was influenced by (structurally privileged) power structures that enabled particular worldviews while oppressing others.

RELATED WORK ON DESIGN AS AN ACT OF POWER
In HCI, the Scandinavian tradition of participatory design started from a particular political perspective on how to design information technologies. The early 1980s UTOPIA project worked with worker's unions to integrate Marxist ideals and values into the design of systems in workplace settings (Bødker et al. 1987).

Lately, different practices of critical design have looked at how unconscious values, belief systems and the designer's background influence the design practice. Reflective design expresses how unconscious values and cultural assumptions are embedded in computing, including the designer's own personal preconceptions: "As designers, we are left to wonder: what values, attitudes, and ways of looking at the world are we unconsciously building into our technology, and what are their effects?" (Sengers et al. 2005). Likewise, feminist HCI explores how designers may de-naturalize normative conventions in HCI and instead foster pluralism, as well as "benefit" from the epistemology of feminist theory that aims to disclose the researcher /practitioner's own sociocultural position in the world (their goals and intellectual and political beliefs) (Bardzell & Bardzell 2011).

Some design researchers argue that design is always a political form (Keshavarz 2015). Following this, any designed object enables and constrains people's everyday life in some way and, intentionally or not, they shape how people perceive themselves, each other, and the world around them. In "Adversarial Design", design researcher DiSalvo describes how design may use agonism to engage the political condition of life. Like agonism, adversarial design acknowledges conflicts as an inherent part of democracy, and it works with design's own political impact—its agency and power—to question e.g. hegemony and bias in society. DiSalvo describes how bias is required and appropriate when doing the work of agonism. Further, he describes how designers may work with power by revealing hegemonic forces in society and by foregrounding and give privilege to what is commonly excluded (DiSalvo 2012). Similar to adversarial design, design activism works with the political role of design, but focuses more on the designerly impact of political artefacts in people's everyday life (Markussen 2011).

According to designers Dunne and Raby, who work with critical and speculative design (SCD), "all design is ideological, the design process is informed by values based on a specific world view, or way of seeing and understanding reality" (Dunne & Raby 2001). This type of design practice deliberately challenges assumptions of our everyday in order to critique it, imagine alternative presents, or speculate on a broader spectrum of preferable futures based on alternative values and beliefs. SCD gives the designer an authorial role and reflects on the sociocultural and ideological role of design. However, SCD has been criticized by feminist speculative design of being blind of its own privileged position; primarily practiced in white, male, middle-class, Northern European academic settings (Prado 2014, Prado & Oliveira 2015). Feminist SCD provides an intersectional perspective on SCD and seeks to give privilege to the marginalized groups that are commonly excluded, and it does so by focusing on how the design practitioner's own sociocultural position challenges or affirms intersectional feminist matters of concern, such as gender, race, and class.

PART 1: DESIGN (NOUN) + POWER
Design can be understood as a noun, *a design*, and a verb, *to design*, in part one we focus on the noun, the design objects (Flusser 1995). The two speculative design objects presented below are outcomes of the first author's design practice in her PhD research on intimate technologies in a feminist perspective.

POSITIONING OUR DESIGN OBJECTS
The goal of our two speculative designs, PeriodShare and Marcelle, is to critically intervene into power structures and to (re)distribute agency between designer, people, and industry. They challenge how (female) bodies are usually perceived in technology industry by focusing attention to culturally tabooed issues of menstruation and sexuality. Through foregrounding different values and beliefs than those commonly built into wearable technologies, the objects speculate on alternative, preferable futures for our intimate interaction with technologies. By inducing critical thinking in a commercial or industrial context, the objects make space for a critical discussion on gender issues and how the tech industry could act differently. The positioning of these objects is highly influenced by the authors' positions as white, female, middle-class, Northern European design researchers who care for feminist issues; we will get back to this in Part 2.

DESIGN RATIONALE
The design objects are critical-feminist and are inspired by a critique of Solutionism and ideals of "the good life" that we find in contemporary technology R&D.

Some of the biggest dreams of the future are dreamt in commercial future visions; the visualizations of how an everyday life would look like if you used a particular design. Like science fiction, future visions inspire our

collective imaginations (Dourish & Bell 2013). They shape and inform the way we perceive design proposals, ourselves and the world around us, and they shape which collective ideas we have about the future and the present. Some of the present collective imaginaries about the future involve the domestication of IoT and wearables in smart homes and on our bodies.

The neoliberal ideology that pervades technology development, such as in Silicon Valley, has been discussed by media critic Evgeny Morozov under the term "solutionism" (Morozov 2013). Solutionism is the use of technology to fix problems; ranging from technological solutions to problems that were never really a problem, to the use of simple technology to fix very complex social, cultural and political issues. However, solutionism not only pinpoints an ideological approach to technology that makes design's critical impact for social change hard to spot, it also points out issues relating to the representation and perception of human beings and their everyday life. In solutionist tech narratives, everyday life is often presented as perfect, smooth and frictionless. People are happy, the interaction is flawless and society is without crisis. The perfect depiction of everyday life that is designed and sold in tech industry reproduces normative ideas of "the good life". Feminist scholar Lauren Berlant describes the fantasy of "the good life" as the collective imagination that binds people in particular normative directions (Berlant 2011). "The good life" is a fantasy because, although it is impossible to obtain, people cling to its false promises in search for better opportunities.

Reading contemporary R&D through Morozov's and Berlant's neoliberal critique, Solutionist tech industry promises a better future and a fantasy of "the good life", through the deployment of emotionally appealing digital technologies. In addition, these dreams grow in homogenous circles informed by the neoliberal capitalist ideology of individualism and privatization. This raises at least two concerns; the lack of critique and socio-cultural analysis of the context in which the technologies may be used, as well as how values and beliefs are embedded in the design, intentionally or not.

CASE 1: PERIODSHARE

One of the big trends in tech industry during the last five years has been the quantified self, or the tracking and datafication of the body and daily activities, such as running, sleeping, walking and eating. In 2014 Apple released HealthKit: an integrated system that allows for the tracking of personal health issues on an iPhone. However, HealthKit lacked one central aspect that half of the population has historically tracked through analogue media: the menstrual cycle. It was not until 2015 that menstruation tracking became an integrated feature in HealthKit, and critics wondered if the highly gender-unequal tech industry and the structures this creates had something to do with how tech industry neglected menstruation (Perez 2015).

The year menstruation made it into tech industry was also coined as "the year of the period" (Hinde 2016). A fourth-wave of feminism, a movement that uses social media and cute/girly/feminine aesthetics to challenge hegemony and capitalist structures in present society, has had a particular focus on menstruation. One example is Rupa Kaur who challenged Instagram's censorship rules by posting a picture of herself with a bloodstain on her pants, and another example is Kiran Gandhi, who ran a marathon during her period but without wearing a hygiene product (in itself a biased term). Events like these circulated the Internet and provoked discussions on why women are still feeling ashamed of a natural bodily function, and how this is an example of the social and cultural aspects of gender inequality.

To critically investigate gender inequality in tech development and how the messy (female) body is perceived by technology, as well as the culture and society that form the basis of these technologies, the first author designed PeriodShare.
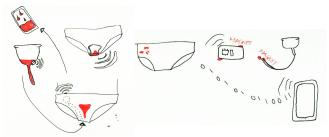

Figure 1: Early sketches of PeriodShare.

PeriodShare is a concept for an internet-connected menstrual cup that tracks menstruation data directly from the blood and immediately shares the data on social networks such as Twitter or Facebook.

The physical prototype comprises a pair of white panties with electronics and conductive materials sewn into the garment, a menstrual cup that is implemented with a sensor and connected to the panties through wires, and a mock-up of a connected smartphone application. In addition to a physical prototype, the design included a real Kickstarter campaign and a performative intervention at a technology fair. In both the campaign and the intervention, the first author performed as a start-up founder looking for funding for her new wearable product. The tone and style is girly, DIY-amateurish and somewhat aggressive, and she used humour and the normative language of start-up companies on Kickstarter to engage with the audience. The project did, however, appear slightly strange or disturbing in its break with conventional rules of taboos and its somehow ironic undertone.

Figure 2: PeriodShare is white and clinical although not trying to hide its technological features. This breaks with the expectations of what you would normally insert into your vagina and how menstruation is dealt with as something messy and impure.

CASE 2: MARCELLE

Another trend in tech industry is Internet of Things (IoT); digitally augmented and internet-connected physical objects, that e.g. track their use or their surroundings and hereby seek to optimize and manage daily activities. IoT devices are deployed in urban as well as domestic settings and even in very intimate settings such as children's toys, reproductive health technologies, and sex toys. When digital technologies intervene into these intimate and vulnerable parts of everyday life, aspects of privacy, control and consent become increasingly important. An example is the internet-connected vibrator WeVibe that tracks the user's sexual activity and suggests improvements. This results in extremely intimate data; data most people would keep to themselves. However, recently it was revealed that the data was shared with the company without the user's consent (Hern 2017).

To investigate issues of privacy, control and consent relating to physically intimate IoT products, the first author designed Marcelle. Marcelle is inspired by the protagonist in "The Story of the Eye", an erotic novel written by surrealist Georges Bataille in 1928. In the novel, Marcelle is a young girl who the story's two sexually-active main characters find intriguing because of her pure and uncontrollable erotic desires. However, Marcelle is suffering from a mental diagnosis and commits suicide, partly because she is ashamed of her sexuality. Nearly 100 years after its release, "The Story of the Eye" still provokes people because of its transgressive depiction of sexual lust and eroticism. Inspired by the poetics and story of Marcelle, as well as

by contemporary issues of privacy, control and consent, the first author designed a contemporary sex toy that both acted as a tribute to Marcelle and a speculation into how a technology based on Marcelle's values would look like. What could a 'different' sex toy look like if it was to explore IoT issues and critique the normative oppression of female sexuality?

The speculative design Marcelle is a pair of internet-connected panties implemented with vibrators that respond on the surrounding WiFi-landscape. The more WiFi-networks the panties detect, the more they vibrate. This means that in densely networked spaces (such as urban spaces) the vibrations will be intense, while in less occupied spaces (such as the countryside) the vibrations will be minimal. In the panties, the user can place two vibrators at four different spots.

Figure 3: The visual presentation of Marcelle depicts a woman living in an urban area and wearing the panties on a mundane morning.

THE CASES AS A COLLECTION

PeriodShare and Marcelle can be read both as individual projects and as a design collection. In addition to sharing an aesthetic style/look –white cotton panties implemented with internet-connected electronics in a visually explicit way – both projects implicitly address how the tech industry works with the female body, and both use humour and provocation through employing feminist issues and taboos.

Rather than solving a problem or empowering a particular group of people, the projects aim to open a space for discussing agency and power structures in tech industry. They are anti-solutionist in their approach by going beyond the glossy and smooth future visions often

depicted in tech commercials and by resisting to propose simple solutions to complex sociocultural issues, such as period-shaming, gender inequality, and women's sexuality. As such, the collection is an act of power that seeks to empower an alternative design perspective. The two projects reveal and expose the hegemony and power structures of technology use and development in order to engage in an ongoing discussion and questioning of the point of departure taken by contemporary R&D. The collection questions: Who has the power to decide what technology is developed? Which implicit values and biases are built into the products we use, and how can we expose them? And what kind of agency does the "user" have to perform in the social structures mediated by the technology?

In this design collection, we have used the first author's position to investigate ways to (re)distribute agency between the designer, the users, the industry, and the objects and systems. Assuming that hegemony extends in all directions and is not merely uni-directional from a powerful tech industry to submissive users, then we have used design to (re)distribute agency and re-negotiate the social structures that allow for acting differently. The question is, however, not just how the first author has pointed to other people's position to act as well as to the tech industry's power structures, but also how she herself exists in a particular structurally privileged position and navigates in structures of power that enable her to see and act in a particular way. How does the first author's position influence her agency and ability to critique hegemony? And what issues does this position also hold? In answering this, we will take one step back and consider our onto-epistemological methodology. This is how the simple argument – that what you design is always influenced by your structural privilege – becomes complex when unfolded and understood in the concrete design practice and situation.
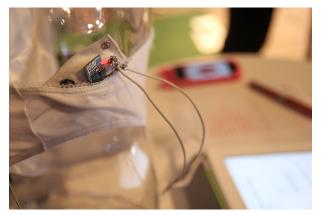

Figure 4: The collection as it was exhibited at a technology fair in Denmark.

PART 2: DESIGN (VERB) + POWER

This paper is motivated by reflections on how these feminist design projects can be analysed from an intersectional perspective. Whereas the designs deal with gender issues, they do not necessarily deal with intersectional issues of for instance race and class. Or, more precisely, in the design process we never reflected on how also projects like these are always political and ideological in intersectional ways; we knew that they were but never took the analytical consequences of it. When then actually doing this, it made us reflect on how positionality and self-disclosure also matters in a critical and feminist design practice. In this Part 2, we seek to unpack how the first author's design practice is deeply influenced by our sociocultural context.

THE DESIGNER'S POSITION AND AGENCY

Coming from a structurally privileged position as white, Northern European women and exploring a feminist agenda for design, we wish to ask how intersectional perspectives on race, gender, and class may be useful in reflecting on and critically intervening in a privileged, Northern European culture? Seen from part one of this paper, the central issue is how a design researcher's own position in the world influences the project as a whole. Which impact on the projects did it have that the first author is a female, white, middle-class PhD student living in Northern Europe, supervised by another white etc. woman? Does it matter at all, if yes, then how? And how is this an example of how *every* design is always already socio-culturally situated, ideological, biased, and informed by particular values, beliefs and ways of looking at the world?

The collection we described in part one is particularly suited for this discussion because they are clearly biased. Both appear "extreme" precisely because they go against what is considered "normal R&D" and their obvious bias makes visible that the designer's position influenced the design practice. As the quotation marks indicate, the collection is only "extreme" in a context that regards them to be so; in this case, a male-dominated tech industry. In a different context, the designer's position and the design's reception would support a different political impact and social change. In

other words, design is always socio-culturally situated and so is its power to challenge status quo.

Figure 5: The first author performing in PeriodShare's real Kickstarter campaign and wearing Marcelle.

A POWER TO CHANGE?

Power may be interpreted in numerous ways. Something might be *power*ful, you can em*power* someone, and people are in *power* and can execute *power*. Power is also contextual and while someone can try to exert or divert power, the actual effects on actions cannot be predicted.

A designer's ideology is based on a particular way of seeing the world and perceiving reality; a position that is tightly interconnected with their situated knowledge and the sociocultural context in which design is practiced (Haraway 1988, Suchman 2002). A designer is never innocent; she is never not biased, design is never from nowhere (Suchman 2002). However, it is difficult to reflect deeply on the ways of looking at the world we bring to the design process; and few design methods seek to handle this in depth. Even in practices of critical design—practices that explicitly critique existing power structures and speculate on preferable futures influenced by different worldviews and ideologies—the designer's own (structurally privileged) position is often left untouched (Dunne 2005, Prado 2014).

In this case, the collection's intention was to provoke reflections on issues of gender oppression and/or questions of identity in a private vs. a public setting where commercial interests intervene intimate living. However, they do not explicitly intervene into other minority oriented issues like for instance race and class.

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Or at least, that was not the designer's intention. Yet, as argued, when she created them and started discussing them with others—including discussing them from the perspective of readings and projects from other designers and researchers—it became clear that also a project like this is culturally situated and thus biased in other ways than those we had designed for. It is obviously possible to question the structural privilege of the white, Northern European context that the projects are built in and from. But what consequence does this position have, for good and bad? One obvious aspect is that in different contexts and cultures these projects will gain meanings that reflect the issues in different ways. This is related to the discussion on critical design's white male privilege (Prado 2014). Another aspect then becomes if and how this is relevant and to whom, and here the perspective of intersectional feminism can be brought into play.

Questioning the design projects from an intersectional perspective means to ask: How does the designer's position as a white, middle-class Northern European woman affect the designs, the design process, and the reading of the design objects? And does this matter, provided that she makes her position and awareness of her position (and bias) clear? Is it even possible to be aware of all biases? Also, how can she act on this: Is it possible for her as designer to act differently, given that these particular designs seek to discuss issues of gender, embodiment, and data agency in a solutionist context?

These are open questions, and as fragments of a larger discussion they can hopefully prove useful for others engaged with design, politics and power, including when discussing the culturally situated context of both designers and researchers. Because even though the sites of power that these design projects live in—such as issues of "the good life" in solutionist tech culture—seemed crucial to discussing the privileged context in which they were made, these can prove very different from another perspective. Consequently, this question of a designer's privileged position is also a question of accountability for how agency is (re)distributed. Even if designers do not intentionally address their position and privilege, they are accountable for how their position influences their design practice and how this either challenges or affirms the status quo (Suchman 2002).

When designing futures, addressing social, cultural and political challenges and aiming for *meaningful* change, it, thus, seems highly relevant to discuss not only how the world could be different, but also from which position we perform this imagining. This implies that design practitioners critically reflect on their own position in this world, and how it influences the world they see, the world they build, and accordingly the world they change.

CONCLUSION

In this paper, we proposed to understand design(ing) as an act of power in order to investigate how designed

objects are also ideological agents set in motion from the designer's point of view.

Design can change the world, also when it is engaged as a political medium. And when design (re)distributes and (re)configures agency between designer, objects, people and the context, it performs an act of power that is influenced by the designer's *ideology*. Whether aware of it or not, designers bring values and belief systems into the design practice based on their position in the world, and this influences the design in a particular way.

Arguing that designers influence their design is not a controversial argument to make, but when design deliberately engages with power, social change, and the political condition, it seems increasingly important that designers critically reflect on their agency and position.

We have used the first author's design practice to demonstrate how the simple argument – that what you design is always influenced by your (lack of) structural privilege – becomes complex when unfolded in practice. We have presented the designer's intention behind two speculative design projects that aim to critically intervene into agency and power structures in tech industry. We have disclosed the designer's standpoint, and analysed how her position as a white, middle-class Western woman has influenced the ideology of the projects. Lastly, we have used an intersectional perspective to begin a discussion of how design projects may be read differently from intersectional perspectives on race, gender and class.

Intersectionality can be an antidote to solutionism and ideals of "the good life" in tech industry, but if the design case of this paper is a biased example, we argue that it exemplifies how *every* design practice is influenced by the designers' position in the world and their power and privilege to act and see differently.

With this we aim to contribute with a critical reflection on the power and privilege of the designer's position and inspire other critically engaged designers to reflect on their own position and how their implicit biases and privileges influence their design practice.

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