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# Questions on Design, Social Justice and Breastpumps

**Catherine D'Ignazio**

Emerson College  
Boston, MA 02115, USA  
catherine\_dignazio@emerson.edu

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**Abstract**

This paper outlines questions about the role of design and the designer in addressing issues of social justice, particularly in light of the fact that justice issues are not purely technical in nature. Treating them as such may lead to design for an unjust, unhealthy status quo. Using a case study of a large, human-centered hackathon where participants innovated breastpump designs, I suggest three preliminary ideas for how designers might tackle the ecology of a sociotechnical problem more holistically.

**Author Keywords**

Participatory design; Social Justice; Feminist HCI; Motherhood; Breastpumps.

**ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

**Introduction**

In September 2014, I co-organized the "Make the Breast Pump Not Suck" Hackathon at the MIT Media Lab. The event brought together 150 babies, engineers, mothers, designers, fathers, lactation consultants, midwives and pump manufacturers for a weekend of

reflection and action to improve the breastpump, the pumping experience and learn more about the needs of women and families in the postpartum period. The event received a great deal of public attention. There were over 80 articles written about it in the popular press. More than 1000 mothers responded to our call for ideas to improve the pump. And the conversation has continued in a Facebook community called "Hack the Breast Pump" where researchers post surveys, people post their Kickstarter inventions, women recommend pumps and we applaud progressive policy. Together with my co-organizers we have written about the design of the hackathon [5]. Our full paper contribution to CHI2016 is a data analysis of the 1,136 design ideas from mothers to improve the breast pump [4].



Figure 1 The Helping Hands team at the hackathon created a smart, compression-based breast pump.

I would like to use the opportunity of this short format to ask and reflect on some of the questions that linger

on in my mind from this event. These are questions that have their origins in this particular case of crowdsourcing innovation for the breastpump, but I believe they have relevance for reflecting on the role of design and social justice issues more generally.

### **Is innovative design a compromise for bad policy?**

In our paper, *A Feminist HCI Approach to Designing Postpartum Technologies*: "When I first saw a breast pump I was wondering if it was a joke" we discuss the breastpump as a sociotechnical object. It sits at the intersection of public health recommendations, federal policy, social and cultural norms, workplace regulations, insurance claims, health care practices, family history and individual experience. The Feminist HCI quality of *ecology* [2] is significant here because of the extent to which breastpump access, education, use and experience is affected by other domains such as law, policy, healthcare and social norms.

One of the key findings we discuss in the paper is the sheer negativity of women's feelings towards breastpumps and the pumping experience. Mothers report feeling shame, anxiety, pain and humiliation. Many cried the first time they used the pump. They speak about the social isolation, the awkwardness, the noise, and the lack of mobility while using a pump.

But this begs the question – is it really about the design of the breastpump? As Mother 2783 says: "Ultimately, no pumping technology can overcome the fact that our society pushes women back to work too early, with loads of supply-dropping stress about how costly childcare is, and until we fix that on the policy front, no pump is going to meaningfully change the landscape of

what nursing mothers are up against.” The US is the single “developed” nation that does not guarantee its citizens access to health care. It is one of four countries in the world with no guaranteed family leave. The others are Papua New Guinea, Sierra Leone and Liberia.

What we saw repeatedly in our data analysis is that *women internalize the failings of public policy*. Women are placed in the impossible situation of attempting to breastfeed a baby for 12 months, as recommended by the APA and the Surgeon General [1][7], while returning to work 12, 6, sometimes 3 weeks after giving birth in order to provide for their families or keep their health insurance.

These are not individual problems; these are collective problems. These are also not exclusively technical problems but also problems of history, gender inequality and public policy.

### **What is the ethical role of the designer in this situation?**

Do we remain focused on the design object, because it is squarely within the domain of design? Designing a more discreet, smarter, less humiliating, more comfortable, more affordable breastpump would be no small achievement. Shining light on the lack of innovation in this domain and the experiences of mothers and families feels important and consistent with Feminist HCI’s commitment to marginalized users. This is what we tried to do in our CHI paper and with the project generally.

And yet, the fact that so many women in the US need to buy and use a breastpump in order to nourish their babies may be symptomatic of the larger issue which is

that public policy is systematically failing to support new mothers and families and that postpartum women are individually absorbing the bulk of that emotional and economic burden. Focusing on the pump could be conceived of as perpetuating the status quo – ignoring the “elephant in the room” that researchers and journalists have named [3] and pursuing what Bardzell names as the relatively conservative, traditional stance of HCI [2] to make small improvements to the current state of affairs. Do we accept the unjust, unhealthy policy climate and try to design the best compromises that moderately improve mothers’ postpartum experiences?

### **What is the alternative to designing for the status quo?**

Given that designers are not policy makers, health care providers or insurers, is there an alternative that allows designers to take a more expansive social, ethical, and political consideration of problems that relate to social justice? Here are some possible avenues of exploration:

1. *Continual reconception of the design problem as its ecology emerges*. Social justice issues, like this one, are complex which is why consideration of the entire ecology in which an artifact participates is essential. Upon reflection, analysis and many conversations, I now believe that the most urgent design question for us is not how to design a better breast pump. Rather, it is how to either a) design technologies that could connect postpartum women to each other to build solidarity and decrease isolation or b) design technologies to mobilize the internally focused

negativity and anxiety of the postpartum period and direct it towards political goals.

2. *Design process as public conversation about the future.* While designers may not be policy-makers, nursing mothers or insurers, they may stage large-scale, public conversations with these stakeholders as a way of understanding the ecology and additionally also as a way of producing new relationships, understandings, and empathy across stakeholder positions. In this sense, the design process can be a moment of relational production in and of itself with the goal framed as collective listening to the voices of marginalized users.
3. *Speculative, critical, utopian, semi-fictional design.* Increasingly we are seeing the production of works that fall in the realm of speculative design, critical design and design fiction [6]. In these works, designers increasingly take on the role of provocateur, social critic, and futurist. The point of such projects is not to solve problems that currently exist but to offer up new problems as part of a public conversation about the future. In this way, design becomes more rhetorical - more media than object, more symbol than solution, more social than technical. This could be a powerful strategy for architecting attention in relation to marginalized voices and issues.

These are three very preliminary ideas for how design and the role of the designer may be conceived in order to consider the entire ecology of a problem space, particularly in relation to problems which are not entirely technical or design-based in character. Through

the discussion of the "Make the Breastpump Not Suck" Hackathon I have illustrated how social justice issues that initially present themselves as design problems may actually be problems of policy, bureaucracy, history and systemic inequality. Rather than retreating from this complexity, I offer some preliminary ways for designers to find ways to address it.

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