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UNDESIGNING¹ CULTURE

A brief reflection on design as ethical practice

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Abstract. This essay furthers the understanding of design as ethical practice. Based on a perspective on the relationship between humans and technology as a material-discursive practice, an argument is developed in which the meaning and matter of a technology is not perceived as the effect of use only. Matter and meaning emerge in each iteration in the design process of a technology. A design strategy is presented in which ethics becomes an integral part of the design process.

1. Do artifacts have culture?

In 1980, Langdon Winner asked, "Do artifacts have politics?" This was a provoking question, which resulted in much debate. Since then we have asked similar questions: Do artifacts have gender (Berg & Lie, 1995)? Do artifacts have ethics (Ensmenger, 2007)? Do artifacts have culture? At the CATaC conferences this question is asked differently: What are the cultural attitudes towards artifacts? This formulation of the question may suggest to some that artifacts, such as information and communication technologies, have no culture, only people or nations have culture.

There are different ways we can discuss the relationship between culture and technology design. We can, for example, talk about the differences in culture between the designers and developers on the one hand, and the users on the other. When there is too much discrepancy between the perspectives of the designers and users, a technology design may fail. Oudshoorn et al (2004) showed how designers projected their interests and needs on the future users and then scripted those users into the design. We see this

¹ With a nod to no. 1 *Undesigner*, the late Tibor Kalman (see <http://www.undesign.org/undesigners>). The essay continues an exploration started in a yet unpublished article in which we looked at strategies for gendering design (see van der Velden et al., 2010 under review).

also happening in well-willing ICT projects for use in developing countries or in design projects in which a particular type of use and user are inscribed in the technology (e.g. vignette 2).

A common understanding of the relationship between culture and technology is found in social constructivism. In this perspective it is argued that a piece of technology gets “meaning through use” (e.g. Rundle & Conley, 2007). The cultural appropriateness of a technology is explained by the social context. In this perspective, information and communication technologies are tools for human activities. This perspective is shared by software engineers, computer and information scientists, and designers alike, even when they disagree on many other issues when working on the design, development, and implementation of a piece of technology. It is also shared with the users, who, from a consumer perspective, may decide to buy and use one piece of technology, but not another, because of the meaning they subscribe to such technology.

There are many different ways to theorise and investigate the relationship between humans and technology. In this essay I will work with another perspective, which can be found in feminist science and technology studies. In this approach, the interactions between humans and technologies are understood as a material-discursive practice, in which materiality and meaning come into being when humans and technologies not interact, but *intra-act* (Barad, 2007). Lucy Suchman (2007, p. 267) describes the notion of intra-action as follows:

“Whereas the construct of interaction suggests two entities, given in advance, that come together and engage in some kind of exchange, intra-action underscores the sense in which subjects and objects emerge through their encounters with each other”.

In this perspective, the characteristics, properties, and meanings of technologies emerge from the intra-actions with other artifacts and with humans. The culture of an artifact is the effect of a particular configuration of humans and things. Artifacts do have culture, but not as an intrinsic characteristic, neither as something given by its users.

I am interested in a particular question about the relationships between technology and culture, namely: Can we design networks and databases that allow people to archive and share their knowledge in a manner that is appropriate to their knowledge and to their way of knowing the world? Will our designs be more culturally appropriate when we take culture into consideration in the design process? If I follow the feminist tradition of Barad and Suchman, we can say that a technology gets its power, agency, and meaning in a configuration of humans and things. In other words, cultural meaning is not given in the design, but the property of an assemblage, which include the design. This perspective presents us with a serious problem: How can we do justice to culture in design if we cannot specify culture in a design?

In the next sections I will explore this question with the help of two vignettes taken from my research on knowledge sharing for development. The vignettes bring the different roles of technology design to the foreground and confront us with the need for technology designs that do justice to culture. I will continue my exploration with a brief discussion of some of the insights of the ethical philosophy of Emmanuel Levinas. Brigham and Introna’s understanding of Levinas’ perspective on the relationship between the Self and the Other gives a possible answer on my question about the relationship between culture and technology: *we have to undesign the design!*

2. Knowledge sharing for development

The following vignettes are based on my fieldwork in India and Kenya in 2006 and 2007. I investigated a global distributed computer network for the sharing of 'local knowledge for local development'. In my research I followed the notion of knowledge, mapping out the people, organizations, technologies, laws, and practices, which played a role in establishing the different meanings of 'local knowledge for local development' in this particular project.

VIGNETTE 1

The healer shows me two red seeds. They are used, she says, to draw out the poison from snakebite. Another healer shows me how she draws out the healing oil before she picks the leaves. While we discuss the medicinal characteristics of the different plants, I notice that the community volunteer follows our conversation by moving her finger along the words in a large notebook. When we later sit down in her house to eat some lunch, I asked her what she was doing. She shows me the notebook in which she has written down what the community healers told her about how to prepare treatments for all kinds of illnesses and wounds. She tells me how she has copied the treatments into files on the computer and how she sent such files via a local computer network to the local research centre. When I later visit the local research centre, the knowledge sharing coordinator shows me how the local names for local herbs, plants, and trees, and their medicinal characteristics, are taken from the file and transferred to another file. Here the Latin names, based on the Linnaeus nomenclature, are added. The file is then sent to the main Research Centre. Some time later I attend at the Research Centre a presentation on the design and development of the databases that will contain local knowledge for local development. I asked if I could find the healers' knowledge about plants and treatments in one of these databases. The answer was that such knowledge could only be added to their database when the validity of the knowledge claim is established in a proper laboratory.

Following knowledge, from the embodied and situated knowledge of a traditional healer in a small Indian village, to the verified and codified knowledge of a database in a large research centre in the city, brings out the role of the technology. Technology, in terms of a notebook, computers, software programmes, networks, and a laboratory, played an important role in making the translation and transportation of local knowledge possible. The result, however, is a kind of knowledge that is not very useful for local healers, as information about when, where, and how to pick the leaves, bark, or seeds, and how, when and where to apply the treatment, has disappeared.

In the next vignette, I describe how Jonathan, one of the volunteer knowledge workers in the global network, uses the software programme. The design of the software was flexible and open in order to address the cultural diversity found among the users². The default settings could be adapted to the particular needs of the local community,

² At the time of my research, the Network connected organisations and communities in thirteen countries in Asia and Africa.

such as the language of the user interface and the categories for organising the articles on local knowledge in the local and global network.

VIGNETTE 2

I sat next to Jonathan in his office at a Maasai training centre while he used his satellite radio to establish an automated Internet connection with the global knowledge-sharing Network. He downloaded new articles and uploaded the articles he had written himself. Afterwards we looked at the articles he had written the past year. He showed me how he used the Network's software to write an article. He then chose the categories that indicated the article's 'type' (news, knowledge, event, etc.), 'subject' (agriculture, health, etc.), and 'intended audience' (housewives, farmers, fishermen, etc.). We looked at all the possible categories. Jonathan showed me that there were no categories for the audience for which he usually writes his stories: Maasai communities and other pastoralist peoples in eastern Africa. I show Jonathan the option to create local categories. This option was however located outside the screen he normally uses to write, classify, and upload his stories. Jonathan responded that he did not see it as his task or responsibility to use that option to localise the classification system. He had not been part of the team that decided on the categories in the default classification system and he did not feel that his mandate to work with the software extended to other screens than the ones he uses to read and write articles.

The global network for local knowledge sharing was established to bring out the role of local knowledge for local development. What we see in these vignettes is that local knowledge became both visible and invisible when mediated through technology. What happened? If we would apply Heeks' (2002) 'design-actuality gaps' model, we could bring out some of the design failures. The vignettes point, however, to the need of a more complex analysis, based on a different understanding of human-technology relations. The vignettes give us insight into the emergent effect of the outcomes of a particular design. These effects are the result of particular configurations of people and things, in which new possibilities and constraints emerge. In vignette 1 we can read how knowledge is shared in ways that radically alter the meaning and ownership of the knowledge (van der Velden, 2006). In vignette 2 we can read how knowledge becomes invisible in the default classification system of the global network. Jonathan was not able to add the categories 'Maasai' and 'pastoralist' to the classification system in his iteration of the design of the software, which made these categories also invisible for future iterations of the design by the volunteers who will take over from Jonathan.

The vignettes show the need for technology designs that allow people to archive and share their knowledge in a manner that is appropriate to their knowledge and to their way of knowing the world. The challenge is to find a design strategy, which addresses both the need to do justice to culture in design, as well as the understanding that design, culture, use, and their relations, are emergent.

3. Undesigning the design

In “*Invoking politics and ethics in the design of information technology: undesigning the design*”, Martin Brigham and Lucas Introna (2007) argue for a radical understanding of the division between humans and technology. Maintaining the ontological division between humans and technology, they argue, prevent us from having an understanding of the role of politics and ethics in design. The authors argue that technologies are relational effects, transforming as “they ‘travel’ between places and over time and refashion the context into which they are introduced in ways that surpass intentions and that cannot be predicted completely in advance” (p.5).

Brigham and Introna (2007) tell us that we need to look at ethics, not politics, when we want to address the ethics of design and use, in particular in situations in which we are concerned with ‘others’, such as users from other cultures than those of the designers, or users who were not specified during the design process. They call upon the ethical philosophy of Levinas, whose ethics of the Other addresses our responsibility for the Other and the relationship between our Self and the unique, unknowable Other (van der Velden 2008, 2009).

Brigham and Introna emphasise two aspects from Levinas’ ethical philosophy, which are important for our discussion. The first one is the difference between *need* and *desire*, the second one the difference between *saying* and *said*. Need, according to Levinas, is an instrumentalist assumption, as in ‘we need to do justice to culture in technology design’. Such is a *need* is a self-centred need, an expression of our “attempts to control, categorise and order” (p.6). Need is thus the fulfillment of one’s own wants and is about the love for the Self (ibid.). Need is contrasted with *desire*, an a-satiable need, which is about the love for the Other. A desire cannot be fulfilled because one can never know the Other and his or her *desired* (the need of the Other).

Related to need and desire are the notions of *saying* and *said*. The saying refers to the meaningful communication between the Self and the Other, which is reduced by the Self to the said. The said is what remains of the meaningful communication after it has been ordered and classified by the Self.

Both *need* and *said* are based on violence against the unknowable Other and belong to the domain of politics. Levinas proposed an *unsaying the said*, in which the saying is revealed again. In a similar manner, Brigham and Introna propose an *undesigning the design*. If the design represents *need* and the *said*, undesigning the design will make it possible to reveal what is made invisible in the design.

If we go back to our original concern, how to design for culture, we can now see how every attempt to design for culture will result in violence. As became clear in the vignettes, the design did not only create new possibilities, also new constraints. Based on the ethical philosophy of Levinas we can now look for a non-violent and respectful way of designing technology. The *undesigning the design* strategy should be based on respect for the Other. Trying to understand the Other on the basis of our own being, our own needs, and our own representations of the Other, will only harm the Other (van der Velden, 2009).

4. Design as ethical practice

This essay concerns the need and desire to do justice to culture in technology designs. Based on a discussion of the ethical philosophy of Levinas, every design can be understood as a new ordering ‘from above’, which need to be questioned and undesigned. What does this mean for our design practices? Can we do justice to culture in design, when every design will result in some form of violence to existing or not yet known future users?

I have proposed to understand the interactions between humans and technology as material-discursive practices in which materiality, in the form of technologies, designs, and bodies, and meaning emerge. An *undesigning the design* strategy would intervene in the ongoing practices. Each iteration in a design process is the enactment of what Barad (2003, 2007) calls “agential cuts”. An agential cut is a particular step in the intra-active becoming of matter and meaning; a moment in the design process in which people and things, such as culture, technology, and users, get determinate matter and meaning. *Undesigning the design* can thus be seen as a design strategy, which enables us to make responsible cuts. Each iteration, each agential cut in the design process, is based on decisions on who and what matters. Each cut creates new possibilities and new constraints, resulting in emergent new inclusions and exclusions.

Undesigning the design does not simplify the design practice and it will not per definition result in better designs. It rather involves us in a design practice that is ongoing, never finished. It complicates our work, as it confronts us with our infinite responsibility towards the Other as well as with the unknowable effects our design decisions. Maybe that is exactly the strength of *undesigning the design*. It slows us down. It makes us think and rethink. It makes us postpone certain design decisions in order to keep certain possibilities open as long as possible. It makes us aware that design is a thoroughly ethical and political practice, and that we, as designers and as ethical subjects, are fully interconnected with this practice.

Acknowledgement

My colleague Christina Mörtberg has been my inspiring guide in feminist science and technology studies, in particular in my understanding of the work by Karen Barad.

References

- Barad, K. (2003). Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter. *Signs* 28, no. 3: 801-831.
- Barad, K. (2007). *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.
- Berg, A & Lie, M. (1995). Feminism and Constructivism: Do Artifacts have gender? *Science, Technology, & Human Values*, 20, 3, pp. 332-351
- Brigham, M. & Introna, L. (2007). Invoking politics and ethics in the design of information technology: undesigning the design. In *Ethics and Information Technology*, 9, pp.1-10.

- Ensmenger, N. (2007). Computers as Ethical Artifacts. In *IEEEAnnals of the History of Computing*, 88, pp. 85-86.
- Heeks, R. (2002). Failure, Success and Improvisation of Information Systems Projects in Developing Countries. Development Informatics Working Paper. Manchester: University of Manchester
- Oudshoorn, M., Rommes, E. & Stinstra, M. (2004). Configuring the User as Everybody: Gender and Design Cultures in Information and Communication Technologies. *Science Technology Human Values* 29, 1, pp.30-63.
- Rundle, M. & Conley, C. (2007). *Ethical implications of emergent technologies: A survey*. Paris: UNESCO.
- Suchman, L. (2007). *Human-Machine Reconfigurations: Plans and Situated Actions (2nd edition)*. Cambridge: Cambridge University Press.
- van der Velden, M. (2006). A license to know: Regulatory tactics of a global network. In F. Sudweeks, H. Hrachovec and C. Ess (eds). *Proceedings Cultural Attitudes towards Technology and Communication 2006*, Murdoch University, Australia, pp. 555-563.
- van der Velden, M. (2008). What's love got to do with IT? On ethics and accountability in telling technology stories. In F. Sudweeks, H. Hrachovec and C. Ess (eds). *Proceedings Cultural Attitudes towards Technology and Communication 2008*, Murdoch University, Australia, pp. 26-39.
- van der Velden, M. (2009). *Another design is Possible: Looking for ethical agency in global information and communication technology*. PhD thesis. Bergen: University of Bergen.
- van der Velden, M., Mörtberg, C. & Elovaara, P. (2010, under review). Between Need and Desire: Exploring Strategies for Gendering Design.