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Studying The Entanglement Of Humans And Technologies In Work Practices: A ‘Modest Intervention’

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Introduction
As in many other countries, a transformation process is taking place in the Swedish public sector. This process is fuelled with strong political hopes that information technology will create a better service-society. E-services and e-administration are part of the overall e-government concept used in the characterisation of the transformation process. The change process is also described as a modernisation process with notions such as efficiency, rationalisation and effectiveness. (Mörterb and Elovaara 2010).

The case: ‘Front office’ and ‘back office’
A municipality in the north of Sweden conducted a transformation process with the aim to provide better services to the citizens and to make the municipality more effective. The process was carried out by a project group consisting of a project manager, members of the IT team, team leaders from each of the ten administrative departments, and a steering group with representatives from all departments. In addition, the remaining staff was involved in temporary working groups, working on e.g. in writing the guidelines for the ‘front office’ and creating groups of ‘back office’ civil servants. The local authorities approved the project and in April 2007, the first phase, three administrative departments were integrated in a ‘front office’ combined with a ‘back office’. The remaining departments were integrated in February 2009.

The intention to provide better service was achieved with the establishment of a front/back offices arrangement. The ‘front office’ provided an unified entry point into the municipality: a kind of interface between the citizens on the one hand, and the municipality and the primary work process in the municipalities administrations, the ‘back office’, such as social care and service, city planning, and infrastructure. The opening hours of the ‘front office’ were between 7.00 and 19.00. All citizens phone calls (or visits) should be answered by the front office. The vision was to reduce the waiting time in the telephone queue to be not more than 2 minutes. Another goal was that 70 % of the cases should be registered and completed in the ‘front office’, the remaining 30 % in the back offices. Citizens could expect to get feedback from ‘back office’ within 3 days. In addition, the ‘front office’ would eliminate some of the administrations workload by giving back office civil servants more time to deal with each case and to make decisions without being interrupted by phone calls.
A range of guidelines were developed to support the ‘front office’ in serving citizens and their questions, which were jointly developed by the project group and ‘back office’ representatives. The guidelines served as manuals for the ‘front office’ to deal with citizens questions e.g. to ask for building permission, day care services, garbage bins and so forth. Each case was registered in a case management system. The civil servants in the ‘front office’ had permission to complete certain cases. The uncompleted cases were first registered in the case management system, and then submitted to the appointed ‘back office’ group. The IT system generates an e-mail to be sent to the ‘back office’ to make them aware of the uncompleted cases. Each administration had appointed groups responsible for the uncompleted cases. These civil servants were experts who provided more qualified services than the ‘front office’. In addition, they had other responsibilities and authorities e.g. the right to make decision of e.g. social benefits, building permissions, etc.

The aim of this paper is to explore the role of technology in an organisational transformation process. Interviews with civil servants of a local authority in north Sweden, conducted in 2009 and 2010, will provide the data on how the technology is used and experienced, and how the imaginations of the use context during a transformations process affects the use practices.

The rest of the paper is organised as follows. In section two the notion intra-actions and agential realism are presented. It is followed by a presentation and a discussion of the empirical material. The paper ends with some concluding remarks.

**Feminist Science and Technology Studies – material-discursive practices**

The interaction between humans and technology is the focus of a range of perspectives or approaches. For example Science and Technology Studies (STS) are paying particular attention on the relationship between the humans and nonhumans. Although the inseparability between humans and nonhumans is shared e.g. by Actor-Network Theory and Feminist Science and Technology Studies, differences exist. They disagree on whether or not the subject and object pre-exist their encounter. In Karen Barad’s (2007) *agential realism* subjects and objects do not pre-exist, but are constituted in the entanglements; in intra-actions. Lucy Suchman (2007:267) 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’.

We propose to understand the encounters between humans and technology as *intra-actions*. When we study the practices in which these encounters take place, it matters what is included in our observations. A practice creates a specific
enactment, in which all bodies, human and nonhuman, emerge. This interpretation of the encounter between humans and technology does not consider users, use, citizens, consumers, civil servants, design, designers as pre-existed or independent entities, but rather something that is becoming in various practices. These practices include more intangible practices such as methods, gender division of labour, reforms, laws (e.g. Swedish elderly care reform and social service law) (Barad 2007).

The ideal citizen and other users
Understanding the practices in the transformation process in the Swedish municipality as intra-actions, we are able to see the diversity of uses and users of IT that emerge in these practices. In what follows we will pay particular attention to the notion of the ‘ideal user’, an image which is often used as a normative standard for design decisions and judgments in an organisational change process. Secondly, we will focus on the entanglements of norms, values and gender that take place in practices we observed.

An Ideal Citizen
‘We are present and answer’ is an argument why the ‘front desk’ works well. That is, citizens come through, the lines are not occupied, some cases are answered and completed in the front desk, while others are registered and submitted to the back office. The new entrance into the municipality reconfigured the citizens interactions e.g. the telephone system suggested some choices s/he had to chose from, the direct line to the department or a particular person was replace with the number to the front office. S/he had interacted with a civil servant, a person s/he sometimes knew from previous contacts, at the administration that offered the services or care s/he asked for. In the new organisation the citizen had to establish relationship to the front office. Further, s/he didn’t know if the same person will answer her call from time to time. An ‘ideal citizen’ emerged out of the establishment of the ‘front’ office. Such a citizen has access to a phone to call the ‘front office’; has the possibility to wait in the call waiting service; will asks questions which can be solved by the ‘front office’; or can wait until a ‘back office’ civil servant calls back or deals with the uncompleted case. In these encounters a different ‘ideal citizen’ emerges than in practices that were in place before the front/back office arrangement. In the new practices boundaries between humans and nonhumans are drawn differently. This has material, discursive, as well as ontological consequences (Barad, 2007; Hekman, 2010).

Small talks - lonely persons
In Sweden the municipality is responsible for providing social services. A board consisting of politicians governs the social administration. A citizen can apply for social benefits because of particular circumstances. The civil servants, social workers responsible for social services, who in this municipality work in the back office, base their decisions on the Social Service Act (Socialtjänstlagen) which
regulates what kind of service the citizen can expect to get help with. This Act and the “Ädelreform” (Swedish elderly care reform from 1992) govern care for the elderly (or persons with impairment), stipulating that elderly people have the right to live in their homes as long as possible. In the interviews one social worker responsible for service offered to elderly, explained how trust, confidence, and relationships have been created between social workers and citizens through years of contacts. She said:

‘… If I’m logged on, I don’t wait three days, if I have time I try to get in contact with the person as soon as possible, this is also to be service minded. One has to think, if a person is sitting somewhere, waiting in front of the phone and no one is calling. One has to consider who the citizen is. I mean administration’s responsible for the clearance of snow, garbage bins, and people are annoyed. We deal with human beings in need of contacts.’

A waiting, and sometimes also lonely, citizen emerges in the narrative. The reconfiguration of the citizen and social worker has taken place depending on the implementation of the ‘front office’. At the same time the social worker tries to reconfigure the new situation in order to meet the citizen’s life circumstances. The social worker reflected upon the new situation when she said: ‘some called for small talk a number of times each week and this possibility might have disappeared with the establishment of the front office.’

Small talk contacts might not be as easy as they were before the implementation of the ‘front office’. Even though the ‘front office’ workers are sometimes constituted as ‘listeners’, their time for each call is limited due to the municipality’s goal that none should wait more than 2 minutes. Another change is that the citizens do not know in advance who is answering the call because it varies from time to time. When s/he had direct access to the persons now working in the ‘back office’, s/he knew whom s/he called. (cmf Jansson et al 2007 who report that elderly trigger sometimes security alarms without a need of help but to get contact with the alarm service staff).

Social workers emphasised their clients life circumstances are not comparable with a ‘normal’ citizen’s. A male social worker said that sometimes the ‘front office’ put through phone calls to him without generating cases through the case management system. To register all calls would generate cases every time the client/user calls to come in contact with the ‘back office’ – sometimes it can be many calls during one day. The ‘front office’ and the ‘back office’ civil servants have an agreement that if a particular person calls they connect her/him to the social worker in the ‘back office’. A social worker familiar with her/his life circumstances, can deal with the person directly. Furthermore, a citizen has legal rights to be put through to the person in charge of the services s/he asks for.
**Gender Performances**

The gender division of labour within the municipality as well as in Swedish society were also included in the practices. Care work is associated with women and women dominate it. In Sweden women also dominate social work. In the intra-actions a caring social worker was constituted. She cared for elderly and their loneliness. In another intra-action a caring male social worker was created. New intra-actions appear in which new possibilities appear. This illustrates how dominant values and norms that associate caring with women were questioned. That is, in agential realism ‘performativity is understood not as iterative citationality (Butler) but as iterative intra-activity’ (Barad 2007:184). Discursive and material worlds (realities) were entangled in the practices or in intra-actions in the municipality. Even though the transformation process created good possibilities for promotion in terms of higher salaries, and new jobs with more responsibility gender division of labour was also reproduced. All positions in the ‘front office’ had been recruited internally. Women dominated the ‘front office’. Barad (1996:187) writes: ‘The shifting of boundaries often helps bring to the surface questions of power which the powerful often try to submerge’.

**Concluding Remarks: An accountable design practice**

We have, with some examples from a municipality in the north of Sweden, illustrated some of the interactions between humans and technology performed in day-to-day activities. The examples showed how interactions are located and situated in practices (Suchman 2007), such as the work performed in the ‘front’ and ‘back’ offices. Furthermore, the empirical material demonstrates how new practices, systems, and services intervene in and reconfigure day-to-day activities as a result of the establishment of a ‘front office’ and ‘back office’. Rather than an ‘ideal user (citizen)’ informing the design of the front/back office arrangement, we discussed how a range of subjects e.g. citizens, consumers, clients, and users were constituted in various practices. These practices are both reconfigured and reconfiguring – they are both cause and effect. This became for example clear in the use context and how the social workers dealt with the citizens and the new services.

Choices and judgements made in the design process affect how a technology is used. To understand use as iterative intra-activities foregrounds the accountability of designers, ‘to understand the design as it is used as well as as it is envisioned.’ (Brereton 2009:116). Knowing the possible effects of design choices makes us accountable designers (van der Velden and Mörberg 2011).

Lastly, we would like to state with Donna Haraway (1997) that our feminist methodological intervention in design theory is a *modest* one. Designers can never foresee how the introduction of a technology will (re)configure users and use. Our
intervention is, however, about attesting to having certain skills and to taking responsibility for using those skills.

References