Information technology at the crossroad of multiple layers of sociotechnical relations[1]

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Introduction

Technologies (re)produce both old and new dreams. Dreams can be about growth, prosperity and participation. Dreams can be concerned with a good life, citizens' agency, how to create accountable and equal digital realities where gender, ethnicity and class are considered as resources opposed to dominance and exclusion. New technologies have led to changes and improvements whereby many of us have reaped the fruits of these transformations. Despite this there are however concerns, concerns which require further examination of the tensions and ambivalences shaped by new technologies since technologies structure on one hand people's lives through formalisation and standardisation. And on the other, they enable people to create better living conditions and other understandings as compared to the means currently at our disposal.

Nordic political strategies and action plans concerning information technology (IT) both on a national and transnational level are based on visions to shape an information society or knowledge based society for all. From a democratic perspective it is important to gain humans' agency and participation but also to consider the multiple stories or meanings which may be present. Citizens' involvement and participation in the shaping of their future and lives is a presupposition if the vision is to create an information society for all. Moral and ethical issues are in focus in addition to the manner in which meanings are created within dominating discourses, discourses which govern, for example, who has the right to speak and about what, when. People create meanings in their everyday practices such as in the design and use of technologies. However meanings are also evident through policy documents. In practices various meanings and representations of realities are contested within and through discourses.[2]

In this article we will discuss how citizenship emerges in Swedish IT-policies and IT-related projects. In order to understand the basis of agency in a Nordic welfare society, like Sweden, using IT both as a means and goal there is a need to study how the Swedish government has defined and framed the space and borders of citizenship. The policies will be confronted with the enactment of agencies in the stories of citizens' own design of IT in their everyday lives. We will discuss also how the societal changes connected to new technologies intervene and get intertwined in the everyday work of employees in the public sector. We will present some examples from our ongoing research project »From government to e-government: gender, skills, learning and technology«[3] exploring the boundary crossings between IT and government. We will close the article by asking what the challenging and troublesome questions for the future digital society might and should be.

Points of departure

We are particularly inspired by the feminist technoscience scholar Donna Haraway's diffraction figuration that elucidates how visions and dreams are kept alive, along with various meanings created in local practices. Donna Haraway (1997, 2000) uses the optical phenomenon of diffraction to cast light on various meanings or stories that exist at the same time. It also invites us to be sensitive to lower frequencies in our investigation among texts and practices and »seeing, thinking and acting together. That begins to change the way humans and the many others to whom they are connected know and live together now and in the future« (Schneider 2005, 21).

In our use of the concept of information technology we besides artefacts and systems follow Jose Luis Ramirez' (1993, 7) Aristotelian exploration of design in a humanistic perspective. He expresses: »We shape not only so called material artifacts but also everything else which is given a certain meaning for us: organization, work methods, activities.« We add IT policies, information technology, and citizenship to Ramirez' examples.

Citizenship – the rights and obligation approaches

Citizenship is often understood as ›an overall concept which sums up the relationship between the individual and the state‹ (Yuval-Davis 1998, 68), where the individuals form a unified universal group. The relationship between the individuals and the state can briefly be called the ›rights approach ideology‹ and the ›obligation approach ideology‹. To put it very shortly, we can say that the rights approach tunes the individual citizens rights to civil (as freedom of speech), political (as voting) and social (as social benefits) rights. Citizenship based on the rights approach defines citizenship mainly as a status ›to be a citizen‹ connected to the formal equal access to the rights and benefits provided by the state (Lister 1997, 13; 15ff.).

How the obligation approach has been theoretically defined and practically implemented has changed during history. Obligation can mean anything between citizens' direct political participation in decision-making as well as citizens' (work) duties towards society. The common feature is the definition of citizenship as an activity, ›to act as a citizen‹ rather than (only) a static stable status (Lister 1997, 13ff.; 19ff.). Lister does not mean that there is a sharp dividing line between the aspects of being a citizen and acting as a citizen, but she rather wants to point out that rights are a resource necessary to be able to act as a citizen. She wants to argue for a critical synthesis integrating the aspect of being a citizen and acting as a citizen. We have to develop and make use of our human agency, to be able ›to act as agents‹ (Lister 1997, 36). Lister emphasizes the complexity of human agency, thus exploring how the agency is constructed and the arenas of agencies that exist.

Swedish IT politics[4]

The Swedish government bill concerning information technology (Prop/ Bill 1995/96, 86) *Åtgärder för att öka användning av IT* was the basis of the social democratic governments' policy during the 1990s. The policy was stated more precisely in the bill *Ett informationssamhälle för alla* (Prop/ Bill 1999/2000, 125)[5]. Hardened international

competition together with a fast development of information technology provided the opportunity to develop or transform the policy. IT as a force to secure growth and prosperity in the national state has a prominent position in the policy. Simultaneously, the bill emphasizes the necessity to deepen democracy but also that the shaping of technology demands humans and their qualifications. A more negative image was also introduced where the risks to reinforce marginalization and social exclusion with IT was emphasized. The official governmental direction for the information technology politics in the Swedish bill from the year 2000 includes eight main sectors where the goal is to promote economic growth, employment, regional development, democracy and justice, quality of life, gender equality and equality in general, an effective public sector and a sustainable society (Prop/ Bill 1999/2000, 125). The discourse of technology, growth and prosperity, and the (gender) equality discourses exist in the Swedish governments' vision to be the first nation to implement an information society for all.

The loving and caring state

The Swedish bill (1999/2000) very strongly reproduces and strengthens the idea of a state that takes care of its citizens by providing equal access to the services of the welfare state. This has been the ruling social democratic ideology in Sweden since the Second World War, having its roots back to the 1920s where it became known as ›folkhemmet‹[6] (Hansson 1935). The main character of this ›folkhemmet‹- ideology has been to build up a strong welfare system that guarantees social benefits, such as child care, health care and school education, for every member of society.

The actual bill does not seem to re-negotiate the relationship between the state and the citizens concerning citizenship from the rights approach perspective. It enforces the construction of citizenship (›to be a citizen‹) within the rights approach.

The traditional ideology of the Swedish welfare state has been based, put in quite simplified and rough terms, on a view regarding citizens as a collective. Thereby also the services the state provides have been based on an ideology of not supporting individual choices. The actual bill still supports the basic ideologies of the welfare state but also contains signs of change. One of the perspective changes is to put the individual citizen in focus and stress the active role of citizens in developing the democratic functions of the state:

> *The development of the Internet opens up new possibilities to public control and dialogue, direct democracy and the control by the citizens. The dialogue on these [virtual] arenas can change the possibility of the citizens to gain influence.*
> (Prop/ Bill 1999/2000, 125)

Citizenship here is no longer a question of being a receiver and user of public services but rather demands that citizens are both responsible for their own choices and in activating their own opinions, claims and wishes. What the citizen can do is to more directly control the functions, decisions, and directions of the state. This seems to be the message of the government. We are invited not only to be citizens but to also act as citizens (Lister 1997, 41).

Is the performance of citizenship based on individual voices? Does the performance mean that the »individual citizens are reduced to atomise passive bearers of

rights whose freedom consists of in being able to pursue their individual interests« (Lister 1997, 23)? Is the agency, stated in the IT-politics, based on communicative participation? If so, is the performance of citizenship »expressly political and, more exactly, participatory and democratic«, in which politics involves »the collective and participatory engagement of citizens in the determination of the affairs of their community« (Dietz 1987, ff.; 1985; 1991 in Lister 1997, 29)? Do people conceive themselves as ›speakers of words and doers of deeds‹ mutually participating in the public realm (ibid.)? The bill does not problematize the question if and how (all) citizens are available to act as citizens nor does it address from and with which resources and experiences these citizens should draw.

Citizenship and information technology

In the following chapter we return to the two traditions of citizenship as presented earlier in this paper. From the perspective of the Swedish policy documents we could identify clear statements pointing to the direction of citizenship based on the rights approach. How does information technology get involved when talking about rights?

Perhaps the most evident way to understand the linkage from the rights perspective is to claim that information technology will enforce the access opportunities to the services and benefits of the welfare state and thereby enable the citizens to make use of these services and benefits. The Swedish government takes care of the citizens, from school children to senior people, by offering them courses to gain computer skills. Furthermore, the government facilitates the availability of essential IT-artifacts, either through private ownership or through public service channels. The great governmental project building up an IT infrastructure takes us back to the famous speech of the Swedish prime minister Per-Albin Hansson, who in January 1928 stated:

> If the Swedish society is going to become the good citizen home we have to fight against the class differences, we have to develop the social welfare, we have to diminish the economical differences between people, we have to build up democracy and implement democracy also socially and economically (Hansson 1935, 20).

The connection and continuum to this ideology is existing and vivid. But now it is time to talk about the digital ›folkhemmet‹ (Det digitala folkhemmet 2003)

Information technology and active citizenship?

If citizens are regarded as subjects who are constituted by an ensemble of subject positions there are many practices of citizenship (Mouffe 1992). Thus, it is impossible to speak of a unified and homogenous agent or citizen in the way the bill does if the aim is to create an information society or a knowledge based society for all. Humans are integrated in the circuit of sociotechnical networks where the subjects are positioned or placed depending on their relationship in a certain situation (Haraway 1991). Relations such as gender, ethnicity, class, sexuality, age, region etc. are intertwined with the interactions between humans and non-humans. The agencies take certain forms in specific situations since an individual person can be a subordinate in one relation and dominant in another (Mouffe 1992). We will, therefore, also give room for other

voices than those in the policies. In these stories meanings of IT, gender, women, men, gender equality, democracy, and agency are created.

The Women Writing on the Net (WWN) project in the end of the 1990s was a subproject within the framework of DIALOGUE-project directed in Bologna in Italy, London, Lewisham in UK and Ronneby in Sweden. The overall aims of the Dialogue-project were to further grass roots democracy by working with »empowerment«, to conquer and re-define the public arena, to stop the drawing up of boundaries or dualism between public/private or expert/non-expert and to build virtual communities. The goal of working with »empowerment« within the WWN-project was to encourage the participating women to re-define themselves: to become and act as insiders in IT contexts, as well as in society as a whole. By using their own experience as a source of knowledge, women were able to renew the value and strength of these experiences. The vision was to weave together the overall goals with the practical working methods and the individual elements of the project.

Two groups, consisting of women with greater or lesser experience of using computers, met every Tuesday for a year to discuss, write and learn how to use the new technology. The aim was to create a virtual space for women on the Internet and to explore the writing process in terms of aim, tool and method. The method of approach incorporated reflections and discussions about empowerment, democracy and representation of women. This created a more complex understanding of the values of the dominant IT discourses, and revealed the »cracks« in, and possibilities of feminist redefinitions of these values (Ekelin 2007; Ekelin/Elovaara 2000; Elovaara 2004).

Another example is the Swedish county Blekinge's involvement in a special regional development program at the end of the 1990s called IT Blekinge.[7] The aim was to explore how the region could embrace the challenges of the growing information society but also how it could avoid the negative consequences of new technologies. One project was the establishment of telecottages, BIT houses, in villages in Blekinge. The project was conducted by an umbrella project BIT-världshus i Blekinges tätorter (BIT houses in the villages of Blekinge) with 10 local BIT houses. Three main aspects were prioritised: to enable citizens' to get access and gain skills in information technology, to establish small local companies, and to investigate the possibility for the region to become a laboratory for full-scale experiments of IT. The BIT houses became meeting places for citizens where they were able to use e-mail, surf the net, use and learn new technologies, play games etc. The local activities were in line with the Swedish governments aim to create an information society for all as well as the regional development projects aim to involve the citizens in the development of the region (Ekdahl et al., 2000).

These projects are from the end of 1990s. Internet cafés and people's use of broadband connections in their homes have replaced telecottages. Consequently one of the goals in Swedish IT policies is achieved, thus citizens' access to new technologies and services has increased.

Layer of voices and silences

Today, year 2007, Swedish public sector is involved in an overwhelming change process aiming towards strong political hopes to create a good service society by imple-

menting IT. The current transformation process is united under the overall concept of e-government characterised as a modernisation process with the use of concepts such as rationalisation, efficiency and effectiveness. This is the grand narrative or the dominating discourse of Swedish society and especially the changing public sector (e.g. SOU 2003:55; SOU 2004:56; RegProp/Gov Bill 1999/2000:125; RegProp/Gov Bill 2004/05:175).

However, another discourse (or layer) is the silences of employees' agencies, their participation in the development of IT-based (electronic) services and administration. This also indicates that the dominant discourse of modernisation is silent about the employees' competences and experiences. Consequently they are also silent about the public sector as a female dominated and the competencies and skills they posses are made invisible. The modernisation of the governmental routines and services with the implementation of IT will probably change the working conditions and practices radically for civil servants. Based on the earlier implementations of IT in the public sector there should be great concerns about how skills, experiences and gender intersect but also how they could and should influence the transformation processes; a process that again seems to be dominated by a technological determinism and a strong belief on IT as a driving force in the modernisation of the public sector.

But as always there are other initiatives and stories. Women working at various sectors in four municipalities in the county of Blekinge in South Eastern part of Sweden participated in the research project »From government to e-government: gender, skills, learning and technology« between November 2005 and June 2007. During the project we used a repertoire of methods, such as cartography, taking photos and digital story telling, sensitive to everyday practices in order to create space and time for women and their individual and collaborative stories. That is, narratives full of certainties, uncertainties and possibilities.

Even if the dominant story about IT in governmental activities and processes stresses the ideology of the new public management (Berg et al. 2003), the translation process is not always that straight-forwarded and tight. That IT can create smooth, stable and problem free processes without the helping and caring hand of experienced and knowledgeable humans is more of an illusion. To create a sustainable sociomaterial infrastucture for the public sector organisations, the contribution of creative and experienced humans is of a vital importance, may it be about paying the day care fees, sending correct invoices or making sure that citizens' payments end up on the exact bank accounts. The civil servants attach technology, government and citizens. Their work is conducted on the backstage, it is invisible for the citizens; it is carried out on lower frequencies or in a silent way (Star/ Strauss 1999) but is a necessary component shaping e-authorities and turning them to a good governance.

Future challenges

The diffraction figuration visualises how citizens are integrated in the circuits of sociotechnical relations and how agency, gender and technologies are constituted in enactments in local practices. Information technology and services imply possibilities for people's everyday lives. The separation between the private and the public is blurring depending on how human and non-humans are integrated in citizens lived experiences.

We have argued that the construction of the digital ›folkhemmet‹ (the peoples' home) takes place through the loving and caring state, however, a state and citizenship in transformation. The diffraction figuration has been our companion species whereby we have been sensitive to a variety of meanings of information technology, citizenship, agency, gender and design. However, we will continue to explore the citizens' trust in the state for a while longer. »You Scandinavian trust the state too much« – a statement made by Professor Joan Greenbaum[8]. Greenbaum emphasized that in a society where one has to fight for changes, like the American (USA), one also gains other experiences and creates other collectives than those in the Scandinavian countries[9], experiences of a strong vitality, useful in the political domains (Gulbrandsen/ Aas 1997). Does the digital ›folkhemmet‹, its promising intentions, and the trust in the state still become an obstacle in the creation of more active citizens despite increased access as well as skills and competence of IT? Or do the continuous meetings between IT civil servants and citizens in local practices become the practice where the dreams are weaved together?

If the aim is to create an information society for all, multiple or heterogeneous voices, stories, actants (human and non human) and subject positions need to be involved in the shaping of society. But how is it possible to keep the dreams alive, as well as the heterogeneity while also not underestimating inequality or limitations of existing technology (Ehn/ Badhamn 2002)?

Questions concerning citizenship and agency are today as actual and important as always. What will be the meaning of the local in a world where new digital territories get constituted (wikis, blogs, Face Book, Flickr, Second Life), and where the boundaries between the private and public get blurred more and more and where the issue of vulnerability is on the agenda. At the same time the Swedish – and many other governments too – are re-defining the meaning of citizenship when configuring assemblages of humans and non-humans translating the citizens' political performance to a consuming citizen.

These questions remind us that our worlds are not stable but something that we constantly create. In searching for new futures we need to create relations and connections ›that cobble[s] together non-harmonious agencies and ways of living that are accountable both to their disparate inherited histories and to their barely possible but absolutely necessary joint futures‹ (Haraway 2003, 7).

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Annotations

1   An earlier version of this article has been published in Mörtberg, Christina and Due, Beathe (eds) (2004) Informationsteknologi och kön som prisma i analyser av nordiska IT-policies. Nordic Institute for Women's Studies and Gender Research, NIKK Småskrifter nr. 9, 2004, ISBN 82-7864-018-1.

2   Discourses are »practices that systematically form the objects of which they speak« (Foucault 1972, 49).

3   The project (2005 – 2007) is funded by the Swedish Knowledge Foundation (KKS)/ LearnIT/GLIT.

4   The analysis of the IT politics is limited in this paper. For more extended discussion see for example Elovaara 2001; 2004 and Mörtberg 1997a; 1997b; 2002.

5   There is a later governmental bill (Från IT-politik för samhället till politik för samhället, 2004/05:175), but the foundation in this bill is the very same as in the earlier ones.

6   People's home, authors' translation

7   Blekinge was one of 22 regions in 11 EU countries involved in the program called *Regional Information Society Initiative (RISI)* in 1997– 1998.

8   In a conference *Politics and Technology* held in Norway 1992. Joan Greenbaum is a professor in computer information systems at LaGuardina Community Collage, City University of New York. She has several times visited the Scandinavian countries as a guest professor. The interview was conducted in the Norwegian research project IT and gender she was involved in (see Gulbrandsen/ Aas 1997).

9   In this context the notion to the Scandinavian countries should include also Finland.