Towards a deeper understanding of gender barriers in the IT business
Ulrika Danielsson & Thomas Persson Slumpi
Department of Information Technology and Media
Mid Sweden University, Östersund, Sweden
ulrika.danielsson@miun.se, thomas.persson@miun.se

Abstract. In this paper we analyze barriers for women to enter and take on professional roles in the IT business. It is argued that earlier research concerning these barriers only has scratched on the surface and to be able to take appropriate measures a deeper understanding of the foundation the barriers rests upon is needed. In this paper concepts from gender research, the so called four relation types: power, production, emotion, and symbols; are introduced and used in analyzing the barriers identified in earlier research as well as in case studies of IT professionals and youths at a IT high school. This analyzes shows that gender regimes in our society, when it comes to the IT business are, more or less, hostile to women. It also shows that using these four concepts adds a new dimension to the discussion concerning the under-representation of women in IT business. By focusing on relations, measures can be designed to target specific problematic relations instead of targeting a problem that is a complex of two or more relations.

Keywords. IT business, roles, barriers, relations

1. Introduction

The IT business in Sweden and in many other countries is gender segregated. A majority of the employees working as consultants, computer service technicians, web designers, IT managers, hardware- and software developers etc., are men (Ahuja, 2002; Panteli, Stack, Atkinson, and Ramsay, 1999; Statistics Sweden (SCB), 2006; Stanworth, 2000). The under-representation of women in the IT business is problematic and Björkman (2005) argues that it should be given attention, time, and effort. Some common motivates for this are for example a shortage in labour, missing women’s contribution, gender equality
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motives, and a general broad representation in the field1 (ibid). These four motives are of course not of equal strength. For example the labour shortage in the IT business is for the moment, at least in Sweden, not acute, while the gender equality work has a prominent position on the Swedish political agenda. No matter the strength of each motive, it is argued for this paper that any of these four motives is enough to motivate research in this area.

As indicated above, the problem with under-representation of women in the IT business has been recognized and there have also been some suggestions on how to solve the problem, such as programs for early participation by girls in software development projects (Denner, Werner, Bean, and Campe, 2005), helping girls and young women with career choice and -planning (Kekelis, Wepsic Ancheta, and Heber, 2005). Ahuja (2002) also identifies mentors, role models and female friendly networks as crucial for women on entering the IT business. Even though the under-representation is recognized as a problem and measures are taken, so far they have had very little effect. Statistics shows that, depending on what occupations are included in IT business, at best the division between men and women is stabile, but in worst case, the over-representation of men has increased over the past ten years (SCB, 2006). A key question is what is preventing or discouraging women from entering the IT business and taking on a role as an IT professional? According to research in the field there are social- as well as structural barriers that in one way or another are hindering women from choosing careers in the IT field (see for example Ahuja, 2002; Denner, Werner, Bean, and Campe, 2005). The social barriers are social or cultural biases that incorporate both the internal view (women’s own image of women) as well as the external view of women (society’s image on women). Structural barriers are the institutional structure that is affecting women’s opportunity of hiring, retention, and advancement, as well as the opportunity and interest in engaging with technology. The two types of barriers are of course not working isolated from one another, but are highly dependent on each other. (Ahuja, ibid, Denner et al, ibid). However, in this paper it is argued that the identification of these barriers really is only scratching on the surface of the problem. It is not enough to be satisfied by establishing that an imbalance between men and women exists, identify barriers that cause the imbalance, and suggest ways to overcome them. Or, as Björkman writes:

[T]he risk is that this research stops at the level of explanation instead of promoting change, and also that many other factors contributing to the problem might be overlooked (Björkman, 2005, p 109)

The main question for this paper is: What are the barriers founded upon? It is argued that an understanding of the very foundation of the barriers is needed if any change initiatives would succeed. Hence, the aim of this paper is to provide some concepts from the gender research and use them in the analysis of the barriers to identify the latter’s foundation. The barriers analyzed are partly from earlier research but to get a strong

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1 Björkman focuses on the CS field but the authors of this paper argue that the same motives are applicable in the IT field as a whole.
connection to contemporary society we also use results from two case studies, one in the IT-business and one performed at an IT-high school. By using these studies as illustrations we will get an understanding of how individuals with relations to the IT business describe their life roles, and by this get a better understanding of the barriers.

2. Methodological considerations

In this section we explain the authors’ chain of thought, describing the contribution of the different parts of the paper, as well as providing a structure for the rest of paper.

We start out by discussing the key concept role, since by being offered to enter a certain profession is at the same time an offer to take on a professional role. These roles are more or less predefined and put the individual in the position at first, to either adjust to the role or give up any attempt to enter the profession. Later on one can start to negotiate the role, but in the beginning, the only alternatives are to accept or pass. A starting point for this paper is that the role as an IT professional, is one that men find easier to accept and adjust to than women. Hence, it seems obvious that women are facing other types of barriers than men on entering the IT business.

Because of the different barriers women unlike men are facing it seems rather safe to say that the role as an IT professional has gender barriers that discourage women. In gender theory the imbalance between the sexes in different settings is frequently discussed, and is also a re-appearing discussion in the presentation of the analytical framework used in this paper. The framework is based on Connell’s (1987; 2002) work on relations, where she presents four different types of relations: power, production, emotions, and symbols. These relations, Connell argues, are crucial to understand gender. The decision to use Connell’s work, draws on a paper written by Thurén (1996) where she argues that Connell’s framework is a good example of analytical- or describing concepts for the gender research field (see for example Thurén, 1996).

In the following section some related research concerning barriers women are facing in the IT field, as well as the two case studies conducted, are presented. The presentation of related research is divided into the two barrier categories, social- and structural barriers, mentioned in the introduction. The presentation of the empirical data is structured in five different themes: social relations, use of ICT and own responsibility, expert in the area, the home, and plan for the future. These five themes originate from the question themes in the studies. By this a rather good image of the role as IT professional as well as of the barriers women are facing on entering this profession have been achieved.

We continue by applying our framework on the barriers identified, to be able to better understand the barriers and identify at least some parts of the foundation. The presentation of the analyses is structured from the four relation types. In the last section we discuss our findings and the implication of them.
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3. Background

The youth is psychological, social and cultural, a special phase in humans’ life (Danielsson, 2000). It is a phase were young people are moving from their family members in to new emotional and social bonds. But it was during the 20-century that the working-class children got their youth and also when the school got a more central part of the development of ones youth (Holmberg, 1994). And school, together with the family, is seen as important stages for the development of the personality and identity of young individuals (Berglund, 1998). Therefore we notice the importance to compare young knowledge workers, in this case employed in the IT business, with high school students (who are leaving the school life to entering work life) to get a deeper understanding of the changes of the life roles. To be able to discuss different roles and meaning of role models, we start this paper to describe common background theories of how a person possesses a number of roles and how these together constitute ones life role.

3.1. Life role and social relations

In the introduction the concept of role was mentioned several times with out any deeper explanation. However, we think it is important that this concept is clearly defined before we move on. A role is really the position that a person has in different relations. Our various roles are linked to special obligations and expectations since they are enacted on a public stage in our society. The role is given specific characteristics which are never free from value judgments. In psychology, it is common to describe identity in relation to a person’s social environment. The real problem in role playing is to feel accepted by the people you admire. Even if we feel that our self perception is something highly personal, it is basic rooted in the role-playing we are engaged in (Damon, 1983).

According to Goffman’s (1974) social theory, all individuals are actors who perform on different stages in purpose to make an impression on their audience; in other words, we are putting on a show. Daily, we interact with other people in different situations, for example at work, at home, at school, on the Internet etc. When people socialize, they feel a need too make it clear to each other who they want to be seen as, or who they really are. We are putting on a mask suitable for various roles to be able to present ourselves in a positive way. Based on these premises, individuals seek a definition of a situation that can be agreed on, and the play can then continue.

As mentioned earlier are the school together with the family important stages for the development of the personality and identity of young individuals. The world of the family is of great importance for a young person’s ability to handle difficulties and problems in life. What this stage “looks like” and what happens at school are two questions that research has steadily been focused on. School is a meeting place for young people and a place where they can learn and experiment with identities and life styles. Young people, as a group, often spend more time with their friends than they spend with their parents. Based on a number of theories, a few environments and” stages” and their possible effect on our self perception, have been mentioned here. An individual acts on three different stages: home, school/ work, and society.
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Every person will possess a number of roles (father, researcher, neighbour), and these constitute together a life role. A person’s life role can be divided into three major roles, the Professional role, the Private role and the Citizen’s role (Bradley 2001, Danielsson, 2002). In this paper we will exclude the citizen role which will be discussed in other papers. A short definition of the other two roles and how these concepts will be applied in this paper is presented below, including some examples concerning each role brought from the case studies.

- Private role include activities that refer to private life (the home as work environment and private environment, service on the net etc).
  - How does one define one’s spare time?
  - Are there any boundaries between work time and leisure time?
  - How does one define one’s home?

- Professional role include activities that refer to work life (work content and different aspects of the psychosocial work environment, physical and virtual places for performing work etc.).
  - What problems can exist concerning the interplay between psychosocial and organisational factors and ICT that are relevant for work and at home?
  - How does one define workplace and if there are any boundaries between work place and homes?

A human is a social being and the personality is formed by the social groups within which she functions (Mead, 1974). It is possible to succeed with one role, performed on one stage, while failing with another role, performed on another stage. While striving for affection and a sense of belonging, an individual constructs a self image and interprets his or her feelings and values in interaction with the opinions, thoughts, values, feelings and behavior of others. In our striving for appreciation, the failed role can be compensated by the successful role. To clarify this argument, one might add that an individual with a positive self image values his or hers successful role performances more than the less successful ones. Differences in gender about adding positive images to ones role can be seen between boys and girls how they chose to describe their knowledge of using the computer (Hernwall, 2003). Girls think that boys are more into bragging about their own “computer knowledge” than girls are. This type of bragging gives direction that this type of knowledge has a high status, at least for the boys.

Maybe we can define a further basic need to add to Abraham Maslows “steps to self-fulfilment”? What we know for sure is that every human have a need to feel needed by other humans (Jarrick, 2005). Humans get “tied up” to each other because that they cannot manage to live on their own. When they establish relations made of mutual help they can also made them needed of each other. Therefore this need can be seen as one of the fundamental needs of a human. But the feeling of having a relation to someone can be both physical and virtual, for example physical meetings friends at work or at school or feeling connected to an idol/model. A lot of young people feel a “fiction” relation to the people they see on TV or read about in media, that those people could be someone to model themselves on. In that way humans can have none-spatial relations to other people.
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Even in our time we can notice relations that represent vertical loyalty for example in the none-unionised IT-business.

The feeling of being indispensable may be the reason why so many young people choose to expose their private life in public, for example in different documentary “soap” program, public diary on the Net etc. Especially when we today define our society as “interaction society”, where the individual, a group, an organization and/or the society frequently interact with technology and each other, at all times, not only work time but also leisure-time and other forms of social interaction time. This interaction society has formed new ways of behaviour as well as new modes of availability (Wiberg, 2005).

4. Four types of relation in constructing gender

Gender is generally considered to be socially constructed, and Connell (2002) states that an individual’s gender is not a fixed state, it is rather a becoming. Gender is something we do every day, consciously or unconsciously, in negotiation with other people (Elvin-Nowak and Thomsson, 2003). According to Connell (2002) relations are a central theme in the gender doing process. Relations are according to her what connect or divide individuals, groups or organizations (ibid). These relations can be divided into four types: power-, production -, emotional -, and symbolic relations. Connell (ibid) claims that all four types must be present to fully understand gender. Even though, it is possible to distinguish four different types of relations, these four are highly dependent of each other. They interact and reinforce one another.

How these four types of relations are expressed within an institution, for example a company, a school, a family etc., can be called a gender regime (Connell, 2002; Thurén, 1996). According to Thurén (1996), a gender regime is a historically constructed pattern of relations between men and women as well as the cultural perception of this pattern at different institutions. A gender regime is a part of a society’s gender order but can both agree and diverge with it (Connell, 2002).

In this section we are presenting and discussing the four types of relations that structure the gender doing process. Since the paper has a focus on IT, the connection to the IT business is also presented.

4.1 Power relations

According to Connell (2002) power relations and the practice of power can be divided into two subtypes, one organized and institutionalized type and one discursively type. The first type is maybe the easiest to recognize. This is the kind of power one is subjected to at home, at school, or at work where there is an authority for example a parent, a teacher, or a boss that can and have the right to exercise power. In gender theory this relation between superior and inferior is identified to be the same as between men (superior) and women (inferior). Wittig (1997) takes this a little bit further and claims that in our society, men are viewed as masters while women are viewed as slaves.
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Furthermore, Connell (2002) claims that medias are broadcasting the image of women as passive, without importance, and stupid (ibid). This might not be the way the majority sees upon their relations with the opposite sex, but a look at how power is distributed in our society; men have more power than women. Men are for example overrepresented in company boards, as leaders of political parties etc.

But it is not only in the direct exercise of power that power relations become visible. It can also be expressed in routines and criteria that are favouring one group over another, for example men over women in an employing situation (ibid). These power relations are not necessarily targeted at women only, but can also be targeted at minorities in society such as homosexuals or ethnic groups with discrimination or even violence (ibid).

The institutionalized power structures are easy to identify in the IT business. For example Peterson (2005) writes:

[The idealised character of IT consulting is a gendered construction that gives precedence to hegemonic masculinities (Peterson, 2005, abstract)]

The other subtype of power relations is, according to Connell, (ibid) a more blurred kind which is practiced discursively by the way people speaks, writes, and conceptualizes the world. This subtype works directly and affects people’s bodies as well as their identity and conception of their place in the world. One example is fashion’s effect on mostly women, with impossible ideals etc (ibid). But also knowledge of the latest technology, how to benefit from it, or just knowing the right “buzzwords” is a potential source of power.

4.2 Production relations

Production relations are basically how work is distributed between different groups in society. In general one can say that there is a division of work between men and women where men are doing one type of work and women another (Connell, 2002). This creation of more or less mutual exclusive entities and more or less a taboo against sameness are according to Rubin (1997) the corner stones of the so called sexual division of work. This is for example mirrored in the choice of professions where women are dominating care occupations while men are dominating occupations where technology of different kinds is prominent. For example it is more likely to find men in the position of designer of technology and women as user of technology than the other way around. But what is considered to be men’s work and women’s work is nothing universal or biologically determined, it is rather something that differs between cultures (Connell, 2002; Rubin, 1997).

There is not only a gender difference in the choice of profession, but also a gender difference in the division between professional work (paid work) and domestic work (unpaid work). In general the sphere of paid work is considered to predominantly be the sphere of men while domestic work is considered to be the sphere of women (Connell, 2002). Of course both men and women are taking part in professional work as well as domestic work but women are still taking a larger responsibility for the domestic work.
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Hartsock (1997) claims that because of the more or less even distribution of professional work and the uneven distribution of domestic work, women are forced to pull double burdens.

4.3 Emotional relations

Emotional relations are described by Connell (1987) as emotionally charged social relations with other people. These people can of course be found in different settings. Some we have a close and very personal relation to like our parents, siblings and maybe our closest friends. While other we have a more distant relation to like our co-workers. However, the important thing is that emotional relations are present, to different extents, in most of our social relations and can be positive or negative, loving or hostile but also being positive, negative, loving, and hostile all at the same time (Connell, 2002).

At the work place emotional relations can be found in different forms. Some work tasks are more emotionally charged like for example a debt collector who wants to induce fear (ibid). But, the whole service industry is more or less funded upon emotional relations between customers and providers, the IT business as well. When this industry is growing, it is likely that emotional relations become increasingly important.

Emotional relations in cooperation with the sexual division of work also have a strong effect on how boys and girls are formed into men and women. Children are initially doing gender in relation to their parents (Chodorow, 1997, Hartsock, 1997). According to Hartsock (1997) girls learn roles from observing their mothers, while boys must learn roles from an abstract set of rules because their father is primarily working away from home.

4.4 Symbolic relations

The symbolic relations are, according to Connell (2002), interpretation of the world through a system of accumulated understandings, implications, overtones, and allusions. These symbols are manifested through the way we talk, write, dress, wear make up, but also in movies, literature, gestures, and buildings (ibid). Concrete examples of gender symbols are for instance the phallus that is perceived as a symbol for male dominance, but also the construction of women as the other is a powerful symbol according to de Beauvoir (1997). It is also argued, by for example Faulkner (2001), that technology can have gender relations embodied with in it self as well as being more closely associated to one gender, without having any obvious embodied gender relations. Faulkner (ibid) divides technology in to hard- and soft technology. Hard technology is represented by powerful technological systems such as power plants, weapon systems, space rockets, and computers, while soft technology is in much smaller scale such as kitchen appliances or organic such as drugs. In daily life hard technology is recognized as “real” technology while soft technology is most often not recognized as technology at all (ibid). Hence, technology has been associated more closely to men and masculinity than women and femininity. This is something that Mellström (2004) draws upon when he claims that
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there is a strong symbolic relation between technology and masculinity. Technology plays an important role in the socialization among men and often excludes women (Mellström, 2003; 2004). Technology’s central position in the creation and maintaining of masculinity, as well as the exclusion of women have given men a more favourable and powerful position when it comes to development and use of technology (ibid). Hence, technology can be interpreted as a symbol for masculinity.

5. Barriers for women to take on the role as IT professionals

This section can be divided into two main parts. The first part is a review of earlier research concerning barriers women are facing in the IT business and takes into account both barriers affecting women in choosing a career as an IT professional as well as barriers affecting women already in the IT business. The second part is two studies that serve as illustrations of barriers, one study of IT professionals and one study of youths at an IT high school. These studies serve to identify new or reinforce already identified barriers. Together these two parts will give a good picture of the different barriers women are facing.

5.1. Social barriers

On deciding to pursue a career in the IT business girls and young women must face many different barriers. One is society’s expectations on what boys and girls should be interested in, what kind of toys they should play with, what kind of games they should play, and what subjects they should be interested in at school. For example there are expectations on boys to use and experiment with computers and later encouragement to study technology and computers, while girls are encouraged to be interested of and study arts and literature (Ahuja, 2002). That girls are not encouraged to play with computers or to pursue a career in the IT field was something that Kekelis, Ancheta, and Heber (2005) also identified as a barrier.

Another barrier girls’ have to face is their own negative stereotypes of what it actually means to have computers as a profession. Examples of these negative stereotypes are that the work requires one to be glued to the computer all day as well as that persons who had this kind of work were geeky, smart, lived a solitary life etc. (Denner, Werner, Bean, and Campe, 2005; Kekelis et al, 2005)

For women who decide to enter the IT business and to pursue a career in this field other barriers emerge. One is the work – home conflict where participation in one domain (work) is incompatible with participation in another domain (home) (Ahuja, 2002). Another is a lack of female-friendly networks where information about opportunities in the organization is spread or through which one is socialized into the organization (ibid). Access to these informal networks becomes increasingly important, not least when it comes to advancing in the organization.
5.2. Structural barriers

Structural barriers are also important when girls decide if they want to pursue a career in IT. Examples of such barriers are the lack of role models as well as the lack of mentors, mostly female mentors (Ahuja, 2002; Denner et al, 2005). This lack of mentors which could coach women to advance to higher ranks also influenced women’s persistence in the IT business (ibid). Denner et al (2005) also claim that manuals for software and programming are written for men, and that the education is to narrow and technical and lacks social relevance. These claims can also be categorised into structural barriers as well as the occupational culture in IT business where traditional gender structures prevails, hence reproducing gendered power structures (Peterson, 2005). Stanworth (2000) claims that IT occupations like software developer and web designer are based on male rationality. It is expected of IT consultant to spend long hours and late nights to finish projects. They are also expected to be able to travel, to have the time to constant upgrade their skills, and to be able to respond directly when problem occurs (Ahuja, 2002).

There is also few women on corporate boards (Ahuja, 2002), men continues to dominate status and powerful positions in the IT sector (Stanworth, 2000). Women’s jobs, even though upgraded in skill, are still low in esteem and pay (ibid), the automation of work tasks are more often affecting women’s work than men’s (ibid), and the flattening of organizational structure has decreased the number of promotion opportunities (Ahuja, 2002).

5.3. The role of IT professionals

Now we have all the basic concepts, barriers, roles, and relations to continue our journey. In this section we are presenting some key features for the role as IT professional in the IT business. In many countries, including Sweden, the IT business got a fantastic development explosion. This fantastic development went down pretty ruff after some years and followed by a depression that today starts to recover.

In a study conducted in 2002 by Danielsson the relationship between ICT and the life roles of people in the occupational group “young IT people” in a city were investigated. In this study 10 people were included, 5 women and 5 men, all between the age 25-35. The study concerned the life environment, life role, work environment and psychosocial effects. The empirical survey is based on semi-structured interviews with” Young urban knowledge workers in the IT-business” (Danielsson, 2002). A conclusion of the results follows below.

5.3.1. Social relations

The knowledge workers felt they had very strong social networks. A major factor was that their workmates and friends often were the same people. The interviewees had strong confidence in their friends and thus also in their workmates. When recruiting it was not necessary to check previous references since they often employed friends from their
social network. The solidarity among the workmates was very good and as a result of this the interviewees felt safe in their professional role.

5.3.2. Use of ICT and own responsibility

The continuous usage of cell phones in their work environment made them always feel connected to work. Expectations about being reachable came from both their social environment and themselves. A majority of the people remarked that it was inconceivable to not be reached by phone or e-mail for a long time.

The interviewees considered that it was up to each individual to take responsibility for the development of their professional and private role. In the life environment they lived and worked within one could not blame the branch or the development of society, and one had take responsibility for allocation of time and place of work oneself.

5.3.3. Expert in the area

The professional role was described as a role you grew into and that you were responsible yourself for a professional development. Necessary knowledge and qualities they desired in a new employee were an ability to cope with stress and manage oneself, be engaged in the task, have a certain technical knowledge and to work well in a group. They did not pronounce demands of tertiary education, but a certain work experience was demanded.

5.3.4. The home

Most of the interviewees complained about the ergonomically work environment both in the home and at the work place at the company. Most people socialized with their friends in their “work free” time and had their meals outside their home. The fact that they chose to meet their friends outside the home was partly due to their small living space and partly since a big city includes restaurants and entertainment.

All of the women were able to define a border between home and workplace, while the men said that they had problem to define a border.

5.3.5. Plans for the future

Most of the interviewees said that they would like to have a family, find a love one and children, and too keep up the good relations to their family and friends/colleagues.

5.4. The role of youth at an IT high school

The aim of the second case study “High school student’s daily use with ICT” is to find a relationship between ICT and the life roles of students in the occupational group “high school students” at an IT-high school. 10 people are included, 5 women and 5 men, all between the age 18-20. The study concerns the life environment, life role, work environment and psychosocial effects. The method and the questioner was the same as during the interviews with “Young urban knowledge people” (Danielsson, 2002). The
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empirical survey is based on semi-structured interviews preformed in November of 2005. A conclusion of the results follows below.

5.4.1. Social relations
The students wanted their leisure time to be filled with activities that they had chosen and liked to perform, for example play games with their friends or being alone to read a book. Some of the men had started their own company that they worked with during leisure-time. They could use some of their school work in their companies and vise versa. None of the women had their own company or worked extra for another company.

Friends and family were defined as the most important relations to the students. Because of that the mobile was turned on 24 hours and seven days a week, just so they never would miss an important telephone call.

5.4.2. Use of ICT and own responsibility
E-mail was used by all the students and both in private and professional use (for school work). Most of the teachers let the students read their private e-mail some minutes during the beginning of the lecture. During the rest of the lecture time the students were not supposed to send e-mail that were not related to the schoolwork.

The students used the SMS-service more often than calling, and the major reason was that it was less expensive to SMS than to call. Some of the students mentioned that it was perfect using the SMS when they wanted to flirt with someone. It was less embarrassing to send a flirty SMS than to meet the person “face to face”.

Almost all of the students used the internet to play and download games and music, read news and buy things (books and cloths). The most common service they used was the browser.

5.4.3. Expert in the area
To get status one should be really expert in an area, for example a major subject in school. Because the students did a lot of work in groups it was important to be in a group where the “top of the class in knowledge” could work together. One student described it as an A-team and a B-team, the top of the class students wanted to work together, and the rest, the B-team, “had to” work together. A person felt status when class friends asked for help to do schoolwork and when one was asked to be a “member” of their work-group.

5.4.4. The home
Both men and women defined “home” as a social and emotional warm place, were one could socialize with friends and family. The boundary between work place and home was defined with feelings as responsibility and freedom.

When the students defined leisure time, it was with a feeling of been able to” take it easy”, “no stress” and to not be at school. Only the women included housework in their definitions of the home and the leisure. The men defined the home and the leisure time as free-time and didn’t include any “I must”.

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Women answered as followed concerning the boundary between leisure and work:

“Leisure is when one can take it easy, meet friends, when I do the things I didn’t have
time to do before.”

“I don’t do that much, watch TV, make some food, do some shopping and wash
clothes.”

Men answered as followed concerning the boundary between leisure and work:

“Leisure it the time when one stays at home, rest or sleep.”

“Leisure is when one can relax, just lay down and read a book, take it easy, and not
think about school or work, just do what one like.”

5.4.5. Plan for the future

All the women answered that they first will graduate, and then they weren’t sure about
what would happen, probably get at job. The men answered that the future will give them
lots of fun, get rich and success, self-employed, and get more freedom and possibilities
than they got today.

Woman: “I don’t think that much will happen, I will finish school and then get a job.”

Man: “Get some friends together and open a Web-company, become a business man”

6. Analyzing the barriers

In this section we are discussing the barriers women are facing to accept the role as IT
professional. We are categorizing them by using the four types of relations presented
earlier.

6.1. Power

The culture in the IT business is pervaded by gendered power structures. Men are
overrepresented in powerful positions which lead to a lack of female role models as well
as female mentors. This is of course a loss of power, because female role models and
mentors are the one who are supposed to introduce women into this field of work as well
as to the power structures. If there are no mentors women will in many cases be left
outside, hence it gets harder to enter and persist in the IT business.

Another power dimension is the social networks that the IT professionals stated as
very important. Among the youths the men had already started to create these kinds of
networks by starting their own businesses or by working during their leisure time.
Women had not, and the lack of early introduction to these social networks will influence
the choice of career. It is even more important when it is also identified in earlier research
that there are few female friendly networks in the IT business.
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6.2. Production

The traditional sexual division of work is another theme that is rather easy to identify in the barriers. In general, women have jobs that are low in esteem as well as pay. But, the culture is also such that having a family is very difficult. This is of course something that affects both men and women, but in western society women are still taking a larger responsibility for home and family. This is also something that is introduced at an early age. For example several of the female respondents in the youth group did mention domestic work as part of their leisure time while none of the men did. On the other hand, many of the men were working in their own or in other peoples businesses. The traditional division where men are doing paid work and women are doing unpaid work is rather evident. It is even more evident on asking about the plans for the future. The male respondents had more ambitious plans like starting their own company while women more or less were focused on finishing the current education. The social expectations are also closely connected to the production relations. The notion that men and women does not work with the same things and that some work is the domain of men and others are the domain of women. IT work and the close connection between technology and masculinity could be interpreted as IT being the business of men.

6.3. Emotions

The barriers related to emotional relations were for example, little encourage from the family to pursue a career in IT business and a lack of female friendly networks and role models that could encourage such a career decision, most evident. The need of positive encouragement to pursue a career in IT business which is dominated by the opposite sex is important. A lack of role models both at home and outside of the family of course makes it difficult to make such a career decision.

6.4. Symbols

The symbolic relations among the barriers are first and foremost negative stereotypes girls and young women have of what the IT profession meant and how one should be to fit in. The notion that IT primarily is the domain of men is a strong incentive for not entering the IT business at all. The IT business becomes gendered as masculine. Another notion that also causes women to avoid the IT business is that computers in them selves are interpreted as primarily being designed by men for men hence being gendered masculine.

7. Conclusions

It is rather evident that the gender regimes in our society, when it comes to the IT business are, more or less, hostile to women. Of course this is nothing that is enacted openly, but more or less tacit in its nature. However, it is still something very real and all
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four types of relations are active in the creation of barriers. There are strong power structures in the IT business culture that prevents women from entering the arena. There is a strong symbolic relation between masculinity and IT. The sexual division of work forces women to pull double burdens, but when the work is demanding constant accessibility it becomes difficult to manage. A lack of emotional support from family, friends, and society as a whole, as well as a lack of friends on the “inside” mentors etc. does not encourage. Discussing barriers in terms of power, production, emotion and symbols provides us with a new set of concepts as well as a deeper understanding for the foundations these barriers rests upon. An understanding of the foundations makes it possible to take measures that really will have an impact on the prevailing structures. One type of problematic relations can be addressed instead of addressing a problem complex of many relations. But it is also important how these measures are motivated. Focus should be on relevant motives such as a potential shortage in labor or gender equality motives instead of focusing on more or less essentialistic or stereotypical arguments that women have certain abilities and knowledge that men does not have. We must avoid arguments such as women are needed in the IT business because they have better social skills than men, or that women can provide radical new perspectives and dimensions. Such arguments only put pressure on women to deliver something they might not be able to deliver. However, it is still important to stress that few women in the IT business will entice few women to the business. If this is not changed, what will the consequences be for the IT business and the youths of today?

8. References


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