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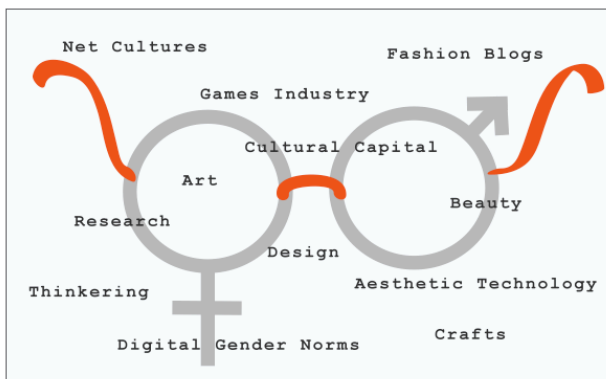
Theme IV: Gender and Contemporary Media Chapter 28

Can You See Me Now?

The Digital Strategies of Creative Girls

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Sweden



Can you see me now? – The digital strategies of creative girls aims to make visible girls as creative developers of the Internet and new technology, which has been investigated through interviews with students, artists, project managers and entrepreneurs. Why do so many girls choose to blog? What is it that influences girls’ choices of new technology? How is digital creativity affected by gender norms? The prevailing social gender norms appear to be reflected on the Internet as *digital gender norms*, where girls and boys seem to prefer different communication tools. While working with the question of *digital gender*, I have developed the hypothesis of *aesthetic technology* namely that girls often have an artistic approach towards technology. Girls mainly learn technology for a reason, planning to do something once they have learned the technique, and their goals often have aesthetic preferences. The issue of girls learning technology, *becoming technical*, is clearly more complicated than one might first think in relation to gender norms. Even though young girls are often just as interested in technology as young boys are, it is difficult for them to keep or adapt their technical interest to normative femininity, as they enter their teens. Another problem is that expressions of technical competence or innovation, which do not

correspond to the predominant male norm, might be hard for us to see. Creative girls who undergo education within the digital field can easily end up in a situation where they must first work with equality and become entrepreneurs in order to have a chance to practice their profession.

Digital Gender

Fashion blogs or forums for game development on the internet – which shall I choose? The question may appear to be superfluous – of course I will choose the sites that contain information and discussions about the topic I am most interested in, whether it is fashion or games development. But what happens if I, as a female, am interested in game development and there are basically only males on the game development sites? Will I be accepted by the boys? Do we have something in common through our interest in game development? Do we share a common view of what constitutes a good game or what would be an even better game? Are we going to understand each other?

The questions that arise are not a unique feature of the Internet; the same pattern or problem is also found in homosocial contexts *in real life* (IRL). The problem is seen distinctly on the Internet because the net is supposed to be, using the term of American social and literary critic Katherine N. Hayles, a “disembodied” social meeting place and to some extent thought of as an arena where it ought to be easier for us to put our gender, age and cultural identity aside in order to treat each other more equally. (Hayles, 1999). During the early days of Internet’s development, such utopian hopes were expressed by e.g. feminist researchers like Sherry Turkle (1995) and Donna Haraway (1991). However, contemporary Swedish studies have shown that our behaviour on the Internet is not very different from our behaviour

IRL (Sveningsson Elm 2007; A. Hirdman, 2006; 2007).

The way we behave when communicating on the net, even when we are not physically visible or audible, can reveal more about our identity than we ourselves can imagine (Suler, 2005; Dunkels, 2009). Social codes that we are not even aware of can expose us. The symbolic or cultural capital, *habitus*, which, according to the French sociologist Pierre Bourdieu (1979), we always carry with us, affects our options for choosing which roles we are able to take on in a convincing way both on the Internet and in a physical setting. The question of which places on the Internet we can conquer and make our own is therefore more complicated than simply being a matter of our interests; different social norms, like for instance gender norms, are of significance for our freedom of choice.

According to Haraway as a researcher, you might find it difficult to see anything other than the patterns or pictures you expect to find, so in order to make the invisible visible one must perhaps also make the actual seeing visible (Haraway, 1991). This is why norm critical theories and postmodern feminist analysis (Lykke, 2010) have become important for the analysis and problematizing of this work. According to postmodern feminist theory, based on American philosopher Judith Butlers theories of “performativity”, one of the fundamental thoughts behind the term “gender” is that identity is negotiable and is formed and created through everyday actions that are continually repeated, as we “do gender”. (Butler, 1990; Ambjörnsson, 2004). When someone breaches gender norms, we often find it provocative. In particular, men who deviate from male gender stereotype patterns are often subjected to comments about a presumed non-heterosexual orientation (Connell, 2002). This may be seen an example of how our culture’s heteronormativity affects our freedom of choice when it comes to interests or professions through the identity-forming process (Ambjörnsson, 2010).

When we *do gender* we use *the principle of keeping apart* in order to set up a *gender order*. One fundamental idea within contemporary gender theory is that we create differences between the sexes by categorizing male and female characteristics in a state of opposition to each other (Harding 1986, Y. Hirdman, 1990; 2007). For example, according to *gender order logic*, being *technical* is a male trait as

long as it is not a female trait. If more women would become technical, there is a risk that the *dichotomist* order that is based on male and female characteristics being each other’s opposites, will begin to break up. The consequence being that *technical* could no longer be regarded as a male trait. By the same logic, a prerequisite of masculinity is that a *man* is *not a woman*. Distancing oneself from anything that can be associated with femininity is a way of *doing* male gender (Lykke, 2010).

Why are girls and boys attracted by these seemingly different forms of socializing and communication on the Internet? According to facts that emerged through the statistical investigations of what young people do on the Internet, conducted regularly by the Swedish Media Council (2010), girls who use the Internet are more focused on *communication*, although this is a conclusion that could be challenged. Being active in blogs and in social forums is one way of communicating, but playing online could also be seen as a form of communication (Linderoth & Olsson, 2010). Socializing through online gaming is generally done in real time; communication is direct; it is created and then disappears again instantly. However, the words or pictures that make up the communication in a blog live on and this requires more consideration by the person who is communicating. It would appear that it is more common for girls than boys to consider in advance how the things one says and does will be perceived by others (A. Hirdman 2006; Sveningsson Elm, 2009). Perhaps it is a reflection of gender norms that, generally speaking, more females than males write blogs while more boys than girls prefer to play or develop games on the Internet, which has been shown through the statistical investigations of what young people do on the Internet, conducted regularly by the Swedish Media Council (Findahl & Zimic, 2008).

In order to find out more about digital gender norms and how young women view themselves as the producers of pictures on the net, in the spring of 2010, I began to interview girls studying the aesthetic upper secondary school programmes about their use of photography in blogs. This resulted in a paper called *Blog pictures* (Morén, 2010). To gain a deeper and wider perspective of the significance of gender as regards creative girls’ entry into the field of digital technology, I continued the research the

same year, by interviewing two university students, and five women at work. The informants were all engaged in the field of digital technology, two of them were studying fine art, one was a game designer and researcher; one worked as a photographer and pedagogue; one of the interviewees was a sound artist; and two of them worked as project managers within digital culture and media.

Blog norms

According to the upper secondary girls I interviewed, fashion bloggers are young girls who can earn money on their blogs because many people follow them. The girls I interviewed expressed respect for certain fashion bloggers, for instance, those who blogged about design rather than just about fashion, and who expressed themselves in a personal way. Other fashion bloggers were described with some contempt because they were superficial, self-centred and provocative. There seems to be links to the *normative feminine ideals*, identified by the English anthropologist Beverly Skeggs (1997) in her studies of how young girls behave in order to become *respectable*. Examples of these female ideals are moderation, control, empathy and caution. Some of the bloggers seem to live up to these ideals while other bloggers appear to provoke them in a challenging way which can bring on different kinds of attention from their readers. Generally speaking, it seems that fashion bloggers receive more positive comments and are more respected the closer they stay to the normative feminine ideals, but if they deviate from that norm, they may sometimes attract a larger number of readers.

Commenting is an important part of the blog culture. The upper secondary school girls I interviewed said that they regularly comment on other people's pictures and blogs, not just those belonging to their closest friends. One of the girls described to me how *the commenting* itself can be used as a creative tool for building up networks where one's own blog is strategically woven into part of a larger social network.

Upper secondary pupil: "I often comment on blogs so that people will look at my blog (...) the whole point is for me to become well known (laughs). On blogs I want to, well, the whole point is for me to get comments, not for me to make comments, and so I look at someone's blog and make a comment. In order for them to see that I have been there and read it, I'll

write: "Good blog, point, good contribution" and then if I see a phrase "Kent is great", then I'll write "Oh, yes, Kent is really great" as a comment. I don't need to comment on 'Bilddagboken' because there you can see that I have looked at the picture."

The strategy of commenting works by a person attracting new readers to his or her own blog; it's a way of building up and extending one's own network.

According to the Swedish gender researcher, Fanny Ambjörnsson (2004), the homosocial reflecting of one's self, the need to be compared, assessed and appreciated by other girls, is a typical feature of young women's forming of identity. In Swedish *fashion blogs*, identity is often manifested through fashion, culinary culture or an interest in design (Saxbo, 2010). Girls mostly read other girls' blogs and the upper secondary school pupils I interviewed mentioned this phenomenon more or less in the passing, as if they had not really reflected much about why this was so; it was simply the case that girls in general are more interested in other girls' pictures and narratives. Even though the Internet is a completely new social field that might be characterized by irrationality, fragmentation and the breaking up of traditional hierarchies (Lindgren, 2009), it would nevertheless seem that most of the youngsters who present themselves on the net endeavour to appear to be as normal as possible in relation to prevailing gender norms (Sveningsson Elm, 2009).

The feminine gender norm appears to encompass certain human characteristics but exclude others that do not seem to fit, for instance, outgoing self-confidence or physical aggression. The traits that do not fit in with femininity must be either concealed or be expressed in a different way. Girls have, according to American author Rachel Simmons, special *code words*, which are used to set up behaviour norms among themselves in a homosocial female network. When girls say that other girls "*think that they are somebody*", this is an example of that type of coded message (Simmons, 2002). According to Simmons, girls can contribute to the maintaining of the predominant gender order by actively repressing each other's self-assertion, with the help of various behaviour norms. This often results in girls being forced to conceal the very behaviour they should need to become successful in a competitive society. Female fashion bloggers risk being subjected to double pun-

ishment: partly sexist oppression from males in the form of negative comments, partly contemptuous *coded messages* from other girls. This is perhaps because bloggers, as female entrepreneurs they appear to be self-assured, outgoing and self-assertive and these are traits that do not fit into the feminine norm.

Identity Online

But why do girls and boys choose different forms of socialising on the net? Why do these homosocial environments arise and what makes it difficult to enter the other party's social room? One banal explanation why so few girls take part in multi-player online games could be that the games do not have many characters with whom the girls can or want to identify themselves, something a project manager whom I interviewed pointed out to me.

Project manager: "But when it comes to how one creates, attitudes to gender roles, and how beauty ideals are maintained or that type of thing, I believe we must look more carefully at the games that are consumed today, what most of them are like, because they help to maintain ideals that people in other contexts are trying to break down. If one is always going to portray female game characters as "busty dames", then we are not going to get very far in our discussions about the equal worth of men and women generally and how we are going to overcome objectification and other such matters. This is going to be difficult if one of the most popular forms of entertainment is still in the 1800s when it comes to outlook on people."

Even if girls can ignore the fact that there is no character with whom they can identify themselves in the gaming world, there still remain some other problems for the girls who choose to take part in multi-player games, above all different forms of discrimination and sexualisation on the grounds of assumed gender (Linderoth & Olsson, 2010). Gender related discrimination appears to be quite a common occurrence when females are in a male dominated setting (Faulkner, 2001; Hedlin, 2009), no matter whether it's on the net or IRL. Changing one's gender identity is a strategy sometimes used by girls playing multi-player games online in order to avoid discrimination. Endeavouring to be *one of the guys* is a relatively common strategy used by women in male-dominated environments IRL (Wajcman, 1999; Salminen Karlsson, 2003).

Although research in recent times has shown that the net is a rather normative place (Sveningsson Elm 2009; A. Hirdman 2010) there may be much to be discovered and learnt about precisely norms and gender by experimenting with different identities online. Several of my informants have devoted themselves to the artistic examination of the making of gender and the creating of identity on the net. One of the upper secondary school girls I interviewed told how she had spent several years studying gender-crossing digital identities in different social forums on the Internet. She described how she was treated completely differently depending on whether her *fake user* was as a girl or a boy. My informant also described how her experiences as different fictive characters had given her new insights into human relationships and inspiration to create characters in her manuscript writing.

Upper secondary school pupil: "I suppose that is why you develop so much on the Internet too, because you learn how people react, and how people develop, and how people behave as well. So then you perhaps start to think about that more and in that way you yourself change in the way you write and show pictures and so on."

Even if a digital change of identity only works in certain ways, it is still a strategy that can give new insights into how identity is created and how normative prejudices work. One of the art students I interviewed told me about an artistic project that she had worked on for some years where she created a *persona* on the Internet that was partly fictive. During that period of her life, her artistic work was made visible solely on the net. With the help of pictures and narratives, she explored the field in order to create identity and myths about the persona.

Art college student: "The whole point of this project is that it is just me, but "just me" must also encompass the person that "I could be or could become".

However, some experience of life is needed in order to successfully change gender or identity digitally. It is difficult for young people playing multi-player games online to fool older friends on the net that they are the same age as them. They rapidly expose themselves because of their lack of social competence. However it does seem possible for a female player in her late

teens or older to play under a false male identity without being exposed. The reason why girls choose to do a digital gender swap is because otherwise, as a minority group in online gaming environments, they are likely to be discriminated against (Linderoth & Olsson, 2009). One disadvantage of concealing their female identity might be the risk that playing and socializing will then be on entirely male normative terms.

Aesthetic Technology

For many young girls blogging is not just about writing some kind of public diary, but a way of communicating identity, style or, using the term of British sociologist Beverly Skeggs (2000), “female cultural capital” through all the possibilities that new media has. Photography and digital image processing is a current growing hobby among young Swedish girls, which proves in the fact that it is, according to my experience, fairly easy to attract female students to such courses in contemporary Swedish online education. Perhaps this might even be related to the use of the photography in blogging. However, fewer female students apply for courses in multimedia or programming. According to several of my informants, girls prefer a planned route of learning with a set objective in sight. Girls seem to need a goal in order to feel that learning technology is meaningful.

Photographer: “I like to think that I myself am quite representative of my sex (gender). I think that boys/men are better at experimenting their way forward and testing things out while girls/women tend to want to know what to do before they start.”

When it comes to digital technology, it would appear that the goal is often artistic and the technique is a way of achieving aesthetic expression. In the contemporary Swedish blogging scene, girls communicate mainly with text and photographs in interaction, using pictures which they have produced themselves. Common subjects of girls’ blogging are e.g. fashion, food, design or styling, all themes connected to the concept of good taste and commonly expressed with beautiful images in advertisements and magazines.

Seen from a norm critical perspective, one might assume that there is no gender normative gain in learning technology *only for its own sake*, - as girls

are not expected to be *technical* within the stereotype feminine norm. For boys however, it may be worthwhile learning the technology without asking why or wondering what use they will have of the technology. In the male *hegemonic* (dominating) gender norm, technological knowhow is an important trait (Connell, 1995). Boys are expected to understand all kinds of technological equipment simply because it is part of being masculine. That is why many boys, on their own initiative, read through camera manuals or books about programming (Nissen, 1993). It is also common for people to expect that men will spontaneously be able to explore technically advanced equipment without supervision and understand it, as if technical know-how is a *natural* male trait (Mellström, 1999).

Girls seem to make gender by communicating and confirming cultural similarity thereby creating the networks that are an important part of the process of forming a feminine identity (Ambjörnsson, 2004). Feminine identity is formed on the net in relation to other users, through texts and images, where expression of style and taste are continually commented on, reflected and approved by, in the first instance, other girls. During the first half of the 19th century, femininity was linked to *beauty* and different forms of aesthetic expression by an emphasis on appearance and a demand for gracefulness (Skeggs, 1997). The homosocial network seems to be confirmed by young girls showing each other that they master the expressions of what the German 19th century philosopher Immanuel Kant referred to as “beauty”. According to Kant, *beauty* is beautiful in more or less the same way as an object that is suited to its purpose; it possesses a *necessary* delight. However that which is *beautiful* lacks purpose since it is not intended to be of any *use*. According to Kant, beauty is founded on an *aesthetic* judgement that *is not logical* (Kant, 1792).

When girls write, take photographs and digitally process their pictures in order to put them on the net, they often present an image of their life that has been adapted and put right (Sveningsson Elm, 2009). In that perspective, it might be worth the effort and time that it takes to learn advanced digital image processing, as it brings tremendous opportunities to beautify the image of your everyday reality. Aesthetic preferences or an interest in *beauty* seems to be an important part of the feminine *doing gender*. If one

uses the dichotomist model for how gender is constructed, where gender is made through differences and opposites, then a lack of interest in beauty, not caring about something's appearance, or holding the opinion that functionality is the most important aspect, could be linked to masculinity. But perhaps beauty and function are dependent on each other? Ideas like this were expressed back in the 19th century, for example by designer and utopian William Morris, who was engaged in the English *Art and Crafts* movement. Could it perhaps even be the case that some people find it difficult to use a digital tool that is *not beautiful*, that has been created without considering aesthetic preferences, or where too much attention has been paid to function instead of form? Some of my informants described how they had chosen not to use functional digital technology precisely because it was ugly or boring.

Art college student I: "But I really wasn't that interested either; I think it was mostly a question of – aesthetic resistance, everything in the computer was so ugly, it was a laptop, I think it had a lot to do with the fact that I thought everything was so incredibly ugly!" (laughs)

Art college student I: "It was so incredibly ugly and I couldn't hide it away and there were not very many choice options either".

Art college student II: "No, exactly."

Art college student I: "What it should look like and so on."

Art college student II. "Exactly."

Art college student I: "Yuk!" (laughs)

Art college student II: "Yeah, yuk! (laughs).

Trying to understand the issue of 'form' or 'beauty' in software design, from a gender perspective, I have come up with a hypothesis, which I call *Aesthetic Technology*. The term is inspired by the work of the American psychologist Sherry Turkle. In the 1980s, when Turkle studied children who were doing computer programming, she discovered differences in how boys and girls thought and related to the computer. It emerged that the girls had a different approach to the machines: they attached greater value to any personal features of the program which meant they made use of bugs or allowed errors to remain since they made the program and the computer more

alive. According to Turkle (1984), the girls used an *aesthetic style of programming*; they thought more like artists and created programs where the code was just as sophisticated as the boys' code but with completely different solutions. As an intellectual experiment, if we try not to either belittle or idealise the traits or interests that are associated with normative femininity, perhaps we can instead find new approaches to how girls do in fact handle technology, how they assess, develop and try to improve existing technology, for example by using it in novel ways, or in ways that the technology was not initially intended for. One example of this kind of progression would be how female photographers like e.g. Sophie Calle (2003), Barbara Kruger (1983) or Cindy Sherman (1990) renewed the field of contemporary artistic photography, starting in the 1980s, shifting focus of the media from technical to conceptual or aesthetical questions (Rosenblum, 1994).

How do girls learn new technology?

In a learning situation, it is sometimes apparent that boys and girls use different strategies when it comes to learning new technology. With some prejudice, it can be said that girls learn new technology by asking for help while boys look for the answers themselves on the net. Girls are more focused on learning technology through a dialogue than boys are (Staberg, 2002). Males tend to spend more time "thinkering" (as in playfully investigating new interfaces on their own), than females do, when the task is to solve problems using a digital software (Burnett et al. 2011). Several of the women I interviewed, who themselves have experience from running courses describe that they have experienced a phenomenon of gender differences in learning strategies.

Project manager: "What I said earlier, that girls are more quick to ask for help, they want a dialogue-discussion, but if I do this, what happens then? While at the same course there may be a boy who searches for and finds four tutorials and goes through them so as not to have to ask the teacher, so he can find his own way so to speak."

For some reason, it seems to be more difficult for girls to take the initiative to search themselves for answers on the net. However, several of the girls I talked to described how liberating it was to suddenly

realize that all the information they need is in fact available on the net without having to ask someone for help. Perhaps it is a matter of habit, insight or being informed; perhaps it is a matter of changing gender-linked stereotype patterns of learning.

Art college student: "But it was a vital moment for me, that he actually explained some things to me so I could understand, that there is so much information out there on the Internet and, well, just to have a go and keep at it."

Sol: "Did he teach you to search for tutorials or the like or in a forum?"

Art college student: "Yes, that sort of thing. For instance he said something, although I often forget this, but he said that if you Google a question, someone has usually already asked the same question and someone else has answered it, yeah, that's right, that's how it can be. Another example, it's not a matter of being good at it and knowing everything all at once, which is how I think I perceived it all, and then sort of realizing that everything is out there, waiting to be learnt."

Some of the girls who were interviewed also described how they were introduced to *searching for answers themselves on the net* by male partners or close friends. But some of them also told me they received support from other women. One of the art students described how she was allowed to borrow a studio with technical equipment such as cameras, computers and printers from an older female artist colleague. The student described how much it meant to her that someone showed confidence in her when she was going to use the technology. She described how she had asked her older colleague for help in order to learn the program but she was given an encouraging answer which amounted to *"you'll manage that yourself"*.

Art college student: "I got really scared but it was so cool that she said that because it was as if she really believed that I would be able to do it and it really took a lot for me to dare to try it out, that I wasn't useless."

However, getting stuck and having technical problems seems to be a rather common occurrence when females try to teach themselves advanced digital technology and do not have adequate support, and the gender-related expectations that *girls are not able to learn technology* might take over. The female

game designer whom I interviewed told me that it is very common for girls to drop out of the game design study programmes before graduating and that very few girls apply for and get a job within the field after completing their studies. She also told me about her experiences from her time as a game design student. The study programme included a course in programming. It soon emerged that she did not get going with the programming as fast as the boys did, (many of them had previous experience of programming), even so, she was not given any extra pedagogic support. When she told the course leaders that she was considering dropping out of the programming course, she was not offered any remedial education. Rather they supported her dropping out, by explaining that even if she did not do that course, she would still pass the study programme as a whole. She told me that she decided to drop out of the programming course because it felt meaningless to sit through lessons where the level of teaching was way above the level she was at.

There are recent studies done by the Swedish Schools Inspectorate that show that expectations from teachers influence to a high degree how pupils perform (Skolinspektionen, 2010). In this case, we must consider what expectations we have as regards women's technical knowhow and how that affects girls doing game design study programmes. Another informant described her experiences from a study programme in stage technology. Every time she had a technical problem and asked for help, she had to point out that she wanted to be taught how to solve the problem; otherwise the teachers just quickly solved the technical problem for her without telling her how it was done. With that sort of pedagogy, asking for help does not result in any learning process, and if boys are used to being treated like that by their technology teacher, it is not surprising that they prefer to search for answers to problems themselves.

Digital Gender order

One of the problems with digital technology equality is that women perhaps view technology in a different way from men and women's views and ideas about technology are often ignored. But it is not only men who maintain the gender order; much of the resistance to change lies with the women's own view of themselves (Bourdieu, 1998). Reducing or belittling

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one's own competence is a common expression of female subordination and this happens at a subconscious level. When I asked my female informants to describe their technical knowhow, the answers I received indicated that they themselves do not rate their knowledge very highly. This is something that is apparent in both students' and professionals' descriptions of their own technical knowhow.

Sound artist: "I have tried now and again to make time to learn, well, a little more CSS style sheets (...) I also use Max MSP quite a lot."

Sol: "Yes but that's programming, isn't it?"

Sound artist: "Yes, but, yes, it is, but I mean it's a visual, yes, it is, yes, yes but it is programming."

Sol: - "Visual programming. Was that difficult to learn?"

Sound artist: "Yes, I only know a little, but you do learn, there are many, many examples, you look at examples and so on."

Women in our society handle and use technology daily but, generally speaking, women do not describe their own competence as being particularly technical (Hedlin, 2009), perhaps precisely because technology has such a strong link to masculinity (Mellström, 1999). Masculine and feminine traits are rated differently and a *hierarchical gender order* often means female competence and female-dominated fields are belittled (Y. Hirdman, 1990; 2007). There have been some pedagogical attempts to teach female students technology by letting them spend some time in special women classes. But although girls studying technology learn more and perform better in a homosocial learning environment, they nevertheless choose not to continue because the study programme has lower status and there is a risk that employers will few it as being inferior (Salminen Karlsson, 2003; Olofsdotter Bergström, 2009). One of the girls I interviewed expressed similar anxiety that the hierarchical gender order could lead to courses intended only for girls being marked as inferior to courses that are aimed at both girls and boys.

Project manager: "Perhaps it is more a case of us talking about the difficulties and thereby creating them by talking about them than it is the problems actually existing; if we were to say that, that it is done, that it feels like, that in my work it has been important to,

to support people without excluding them, I guess I can say, well, do you understand what I mean? Sometimes when we use special measures aimed at girls, the only thing we achieve is to create a group (...) it's not always that good..."

Sol: "Can you give an example of such a special measure?"

Project manager: "Well, if we do, like, if we do Photoshop for Girls, well, just as an example, I'm not saying anyone has done this but sometimes it can be worded in such a strange way, these courses. Photoshop for Girls – come and learn and see how it's done and we run the course at a really basic level, then you have created, well then you've sort of made it clear that the pupils are not going to learn much, we going to do things really slowly, and there will not be much opportunity to advance, well, then, in some way you've marked the whole group or sort of stigmatized the entire group, even though the aim was to help them, do you see what I mean?"

Generally speaking, girls are not prepared to attend *technology schools for girls* even though they would actually learn more (Salminen Karlsson, 2003; Hedlin, 2009). The problem is probably a structural dilemma where female-dominated areas are awarded lower status in accordance with the principle of hierarchical gender order. Male gender coding also constitutes a hierarchical symbolic order. This means that a masculine coded field is rated higher than a feminine coded field and there is a risk that a field will be weakened and lose status when women begin to encroach on it (Hedlin, 2009). Men who work within a masculine coded field easily end up in a situation where they join forces to defend their field from intruders, and this defence is often at a subconscious level without them even having to think or talk about it; it is almost instinctive (Cockburn, 1983).

Computers are nice, clean machines that do not make a noise and you do not have to be strong in order to hack codes. Even so, most of the computer gaming industry is populated by men; in 2009, 90 % of the employees in the Swedish industry were males (Lindell, 2010). Because the gaming industry is a field that is advancing very strongly financially, there are different groups of people who are keen to see more girls consuming and producing games. Some of the girls I interviewed played, developed or did research on digital games. One topic that came up during our discussions was the strong masculine gender code

that prevails in the field, both in the design and concept of the games and in the digital gaming industry's corporate culture. The gaming industry can be viewed as part of the larger field of technology, which has traditionally been regarded as a masculine field, just like the field of natural sciences (Berner, 1997; 2003). One way of studying male-dominated fields is to see them as *power fields*, an approach adopted by the French sociologist Michael Foucault (1977). Power fields are constructed and preserved by a certain group of people marking out a field in various ways as being their territory, in relation to *the others* who do not fit in. There are many different factors that make it hard for girls to penetrate a male-dominated area. Even though young girls are often just as interested in technology as young boys are (Staberg, 2002), it is more difficult for them to retain and fit their interest in technology into the normative femininity that they are expected to adapt to as they go through puberty and enter the adult world.

Through my interviews I have met several women who have been very interested in working within the field of creative digital technology. When their childhood and adolescence were mentioned, it was apparent that their parents had been supporting and encouraging their interest in technology. These women had a lot of self-confidence and had completed technical study programmes. After finishing their education, they had applied for jobs in the field but then they had been treated with polite scepticism and, after many interviews and some project work, they had not been able to establish themselves in the field with the help of any existing companies. In order to be able to do any kind of work at all connected to their studies, these women have instead been forced to set up their own organisation, often with the help of other women in a similar situation. Several of the girls I have talked to have ended up in the role of project manager. Instead of working in the field of creative, new technology which is what they had studied to do, they had to start off by trying to create the necessary prerequisites for women to be able to enter the labour market. It would appear that having personal experience of gender discrimination can at best be a starting point for women to initiate equality projects and act as entrepreneurs.

Can you see me now?

The gender norms that prevail in society appear to be reflected in the net cultures of young people, as digital gender norms. The communication of girls and boys on the Internet is manifested in different forms of socializing, linked to homosocial gender norms, even though the net is a meeting place that is supposed to be disembodied. Boys dominate online gaming environments, and girls seem to prefer the blogosphere. Blogging could be viewed as a new type of female entrepreneurship with users who continually develop new creative strategies for network communication. While working with the question of *digital gender*, I have developed the hypothesis of *aesthetic technology*, namely that girls often have an artistic approach towards technology. Girls often choose to learn technology for a purpose, planning to do something in that special technique, and their goal often have aesthetic preferences. One example is the common use of digital photography within the blog culture, where girls learn advanced image processing, in order to beautify the image of their every day life. For a girl to become technical may be problematic, according to the crossing of gender norms. Even though young girls are often just as interested in technology as young boys are, it is more difficult for them to retain and fit their interest in technology into the normative femininity that they are expected to adapt to, as they go through puberty and enter the adult world. The female creators whom I have interviewed all had long experience of working in technical fields such as digital technology, web development and the gaming industry, even so they do not describe themselves as being particularly technical. When it comes to technical knowhow, there are normative expectations regarding how technical competence should be expressed. Knowledge or innovation manifested in a way that is not in line with the dominant norm, often appears to be invisible. Since it is hard for females to establish themselves in the existing male-dominated ICT corporate culture, girls who study within the field of creative digital technology are often forced to begin their career by working with questions of equality, instead of practicing their profession. Some of them they become entrepreneurs who, often together with other female creators, run innovative projects, which in the long run might expand their professional field, making it

more diverse. With this work, I hope to contribute to the new growing field of research within the digital cultures, where questions concerning gender and equality in digital technology will be problematized and made visible.

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