Feminist, queer, intersectional? What can STS learn from current debates in gender studies? Tanja Carstensen, Hamburg University of Technology (Germany)

Gender issues have a long tradition in Science and Technology Studies; and so do technology issues in women's and gender studies and in feminist theories. Early feminist theories in the 1970ies grounded on Marxism, but criticized the gender blindness of Marxist analyses of capitalism and investigated gendered power relations, structural oppression, discrimination and violence against women, as well as the inequality and segregation on the labour market. Technology was considered regarding its function within capitalism. Especially Cynthia Cockburn (1986) and Judy Wajcman (1991) showed how technology segregates male and female fields of work. Also the household and its mechanization came into the focus. In the 1980ies, the attention shifted from the macro-level to individual actions on the micro-level. Processes of "doing gender" were investigated in every day interactions, gestures, in education as well as in career choices. The under-representation of women in technical studies and occupations was explained by gender specific education: girls and boys get different toys, are treated differently by parents and teachers, girls have no female role model teachers in maths or computer science etc. Inspired by concepts such as Social Construction of Technology (SCOT) the gendering of design and use of technology came into view. Gender and Technology Studies then emphasized that gender relations have an impact on construction processes and the way technological artefacts are designed (Berg & Lie 1993; Cockburn & Ormrod 1993; Oudshoorn, Saetnan & Lie 2002; Zorn et al. 2007). With an anti-deterministic, constructivist view towards both, gender and technology, it became apparent that gender as well as technology are socially constructed – and constitutive for each other, "co-constructed" (Wajcman 2000). Furthermore, influenced by postmodern theories, Donna Haraway (1991) questioned established borderlines between nature and culture, body and technology, men and women and developed a positive vision of a cyborg. What becomes obvious by this short overview is that gender studies and feminism as well as STS have never been homogeneous and consistent. They have been contested fields, influenced by several paradigms.

In the last years feminist theory and gender studies again have been challenged by different insights and debates: These are not - and that is important to emphasize -new issues, but issues which had been ignored by western, white, middle class feminists for several decades, but have been discussed for example by black and postcolonial feminists. Recently, the criticism on a western, white, middleclass feminism, its blind spots and its exclusions became one of the central challenges of feminist theories (e.g. Gutiérrez Rodríguez 2003; hooks 1996; Hill Collins 1996). Points of discussion are e.g. the problematization of 'woman' as a collective identity category; the invisibility of the dominance of whiteness within feminist theories; the category race as a social construct. Disability studies point on the social construction of ability and disability and investigate the processes how bodies are marked as 'normal' or 'abnormal'. And queer theory emphasizes the insight that beside gender also sexuality, desire and heteronormativity are important categories to analyse gender and power relations (Jagose 2001; Woltersdorff 2003). Heteronormativity can be understood as the concept, which defines gender as a binary category and naturalizes sexual attraction as directed at the oppositional gender. Non-heterosexual structures of desire as homo-, bi-, inter-, trans- etc. are marginalized as deviating from the norm. Queer theory is interested in these marginalized perspectives, in inclusions and exclusions, norms and processes of standardizations and naturalizations, normalizations and 'othering'. So, queer theory in a broader sense can be

understood as the attempt to question hegemonic values and norms in society. On the other side of the marginalization the privileges of the 'normal' subjects come into view. And furthermore, queer theory looks for practices of resistance, subversion and for wrong citations of norms.

It is obvious that a range of other categories have come into view and got relevance in feminist theories. So, it is less surprising that the last years of discussion were shaped by efforts to connect these categories of inequality and think about their interrelatedness. Currently, the concept of intersectionality is on the way to become the new leading paradigm within gender and queer studies, trying to combine analysis of gender, class, race, (dis)ability, sexuality etc. (Crenshaw 1989, Knapp 2005, Davis 2008; Winker/Degele 2011).

In my presentation I will follow the question, what STS can learn from these debates and what kind of research fields open up for gender and technology studies for the future. On the examples of studies about body and reproduction technologies as well as about Internet and smart phones I will discuss issues like:

- Heteronormativity in the design and construction of technology, processes of standardization and exclusions
- Technologies which incorporate queer ideas, which are used to queer and irritate gender identities
- Opportunities of using technologies for queer politics
- Users' struggles for queer design
- Technologies which are used to chance one's gender, sexuality or reproduction
- Desiring technology and sexualized relations between human and technology
- Marginalized technologies.

I will end with some remarks on the consequences for empirical research.