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Gender and the Rescue Services (Genus och Räddningsjänst) – literature review

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Introduction

In her recent book, *The terror dream. Fear and fantasy in post-9/11 America*, Susan Faludi (2008) discusses how the USA has reacted to catastrophes and hazards by recreating images and stories of passive women in need of protection from heroic men. This is true in stories of how New England was colonized, in stories of how the “West” was won from the Indians, as well as stories in the media coverage on terrorism after 9/11. After September 11, 2001, male strength was first and foremost symbolised by the fire-fighters who rescued people from the Twin Towers after the attack. Although this research overview mainly relates to the rescue services in Sweden, Faludi’s book clearly illuminates how catastrophes and crises create distinctive ideas of gender and gendered practices, both within the rescue services itself as well as in the eyes of the general public.

This introductory section provides background information on the Swedish Rescue Services Agency itself and the context within which it operates. The research questions which structured this report are also detailed, followed by a brief discussion of the understandings of gender which informed the work and details of the methodology used.

The Swedish Rescue Service – background

In Sweden the local fire and rescue services are organised and run by the local municipalities. The rescue service duties are both operational work in response to emergencies and emergency preparation work. At the national level, a government agency exists, the Swedish Rescue Services Agency (SRSA) with duties related to emergency prevention, preparedness and response in case of emergencies. One of the tasks of the SRSA is to support the local rescue services in different aspects of their work. The agency also offers training and education in different areas including training fire officers for the municipal fire brigades. The SRSA employs approximately 800 persons in 2008. By the 1 of January 2009 the agency will together with two other agencies, SEMA - the Swedish Emergency Management Agency and SPF - The National Board of Psychological Defence form a new agency by the name of Swedish Civil Contingencies Agency (SCCA), an agency that will employ approximately 600 persons.

Gender equality work in the SRSA

Since the beginning of the 1980s all Swedish employers are obliged by the Equal Opportunities Act to undertake active measures towards equality in working-life including measures to promote an equal distribution between women and men in various types of work and within different categories of employees¹

Furthermore, since 1994 all government agencies are obliged to work with gender mainstreaming as a strategy to meet the overall national gender policy.

The main objective of the government's policy is that "women and men shall have equal power to shape society and their own lives". A prerequisite to accomplish this is that women and men enjoy the same opportunities, rights and obligations in all spheres of life.²

This means that the responsibilities for public organizations to work with gender equality are quite broad.

The SRSA has in recent years worked actively with gender equality issues both on issues in relation to the agency as a work place and also when it comes to the core activities. The agency also has a special assignment in the letter of regulation to support the municipalities in order for the gender representation to become more equal and so that the ethnic and the cultural diversity among the employees increases.³ Another special assignment in the letter of regulation is to that the SRSA shall in relation to working with the agency's recruitment strive to promote diversity and gender equality.⁴ The gendered patterns within the agency and in the

¹ If the workplace have ten or more employees there has to be an annual written Equality plan which should consist of goals, measures to reach the goals and a report of the evaluation of the work from previous year¹. The Equal Opportunities Act also includes a prohibition against discrimination as well as an obligation to investigate and take measures against harassment. There is also protection against discrimination for employee or job applicant who is, has been or will be on parental leave.

² *Interim objectives are:* 1) An equal distribution of power and influence. Women and men shall have the same rights and opportunities to be active citizens and to shape the conditions of decision-making. 2) Economic equality between women and men. Women and men shall have the same opportunities and conditions with regards to education and paid work that provide life long economic independence. 3) An equal distribution of unpaid care and household work. Women and men shall take the same responsibility for household work and have the same opportunities to give and receive care on equal terms. 4) Men's violence against women shall come to an end. Women and men, girls and boys, shall have equal rights and opportunities to physical integrity.²

³ "Statens räddningsverk ska: [...] redovisa vilka åtgärder som vidtagits för att stödja kommunerna så att könsfördelningen mellan de anställda blir jämnare samt att den etniska och kulturella mångfalden bland de anställda ökar" (Regleringsbrev 2008:2).

⁴ "Inom ramen för sin kompetensförsörjning ska Statens räddningsverk främja mångfald och jämställdhet. [...] Statens räddningsverk ska, utöver det som regleras i förordningen (2000:605) om årsredovisning och budgetunderlag gällande myndigheternas kompetensförsörjning, särskilt redovisa hur myndigheten levtt upp till egna mål om främjande av jämställdhet och motverkande av diskriminering och trakasserier. Redovisningen ska, utöver en bedömning av måluppfyllelsen innehålla en beskrivning av hur Statens räddningsverk omsatt befintlig

local rescue services are traditional and also persistent, with little changes during the last decades work. At the SRSA and at the training camps run by the agency there have been reports of sexual harassment. During the autumn of 2008 a program to combat sexual harassment has been launched with educational activities as an important part. Also initiatives to gender mainstream core activities of the agency have been initiated even though there are many areas that still have no regular, or very little, gender mainstreaming activities.

The work to support the local rescue agencies has been done since 1997 with various activities such as to initiative different studies and to support activities at the local rescue services for example for women to learn more about the fire fighter profession.

Research questions

In this section we outline the main points of departure for the literature review conducted. The research questions are arranged into three sections, reflecting the three themes of this report: political processes and crisis management, gender and organisation, and, finally, technique development and management.

Political processes and crisis management questions

In research fields such as gender and organizational theory, and studies of political institutions and gender, different aspects of gender in an organization and political processes are analyzed (Lovenduski 2005, Andersson 2003). For example, how to understand gender and gendered practices within an organization like SRSA. Within the area of political processes and crisis management the aim is to explore previous literature like research, reports, and other publications from NGOs and governmental agencies on gender, political processes and rescue services, as literature connected to gender and crisis management. The overview of earlier research will work as an inventory for where further research is needed on gender and gendered practices.

There is some Swedish research already done from a gender perspective that investigates for example international missions by the Swedish Rescue Services Agency from a gender

kunskap och erfarenhet i praktisk handling och en beskrivning av det arbete som bedrivits för att motverka olika former av diskriminering och trakasserier. Av redovisningen ska framgå hur Statens räddningsverk arbetar med frågor som rör diskriminering och trakasserier på grund av kön, etnisk tillhörighet, religion eller annan trosuppfattning, funktionshinder samt sexuell läggning. Av redovisningen ska även framgå hur myndigheten verkat för en jämnare könsfördelning inom alla personalkategorier” (Regleringsbrev 2008:10p).

perspective (Ivarsson S and Edmark 2005). There is also international research on gender and disaster studies that explores empirical effects from catastrophes and crises from a gender perspective (See for example Enarson and Hearn Morrow 1998). Research about these areas can provide ways to illuminate gender and security and organizational cultures as political processes on national, regional and local levels in help to provide workplaces that consider gender equality and diversity in the practical work of the SRSA.

Gender and organization questions

Within the area of "gender, organisation and rescue service" it is of special interest to focus on how the prevailing gendered structures and practices within the rescue service can be changed (both in regards to content and method) and indirectly how the SRSA can support the local rescue services in their work to promote gender equality. Research questions of interest are related to the practical work to "transform" the organization according to the specific objectives which constitutes the prerequisites for gender equality work both in the SRSA and in the municipalities. What research is there on methods and models that have been applied in the practical work? Both national and international research is of interest. Research on gender mainstreaming is of particular interest. Also research that have focused on initiatives to implement gender equality objectives and organizational change processes that have been studied with a gender perspective is of relevance.

Another research field of interest is the "doings of gender" within the rescue service. This is because research with this focus connects to the areas that need to be addressed in the work to promote gender equality in the rescue service. In the different research perspectives outlined in this section the question on intersection between gender and other social categories are of interest.

Technique development and management questions

Using a broad definition of 'technique' and drawing on established critical frameworks, the third area of this report will provide both an overview of the existing literature on technique management and development within rescue services, as well as considering the relationship between gender and technique.

'Technique' is here understood as both tools and practices, allowing this overview to take into account the uniforms, vehicles and technologies as well as the processes, guidelines and

training utilised by the Swedish Rescue Services Agency (SRSA) and other equivalent organisations. Considering ‘technique’ in this way positions it very much as a human behaviour or practice which emerges in dialogue with gendered behaviours.

This overview will thus pose the question of what is meant by ‘technique’, as well as asking a range of questions about the relationship between gender and technique in the distinctive context of the SRSA. These questions include (but are not limited to): how are particular techniques gendered? Are some techniques considered ‘suitable’ for only men or only women? Are some tools only used by men or only by women? Who is involved in the design and implementation of techniques?

Understandings of ‘gender’

This report is based on an understanding of gender as social, rather than biological. That is to say, gender roles are not ‘natural’ or pre-determined, but, rather, sociocultural constructions or learned behaviours. A range of ‘acceptable’ gender behaviours emerges within each society, to which individuals conform in order to become recognised members of that group. Ideas as to what constitutes ‘acceptable’ behaviours shape language and bodies. Simultaneously, the daily lived experience of being a gendered individual comes to shape language and embodied behaviour – this can be thought of as a continuous feedback loop which draws the boundaries of gender roles while still allowing them to evolve across time and space. This approach views gender and gender relations as shifting and changeable, reflecting different socio-historical dynamics at different times. Understandings of gender, sex and sexuality developed within a sexual difference framework (Grosz 1994, Braidotti 1994) and queer theory (Butler 1993) have provided useful models for understanding gender in this way.

Considering gender as a sociocultural phenomenon calls into question associations between certain roles and genders. Roles which may have been considered as being more ‘naturally suited’ to men, or to women, instead can be seen to be the product of a complex social dynamic. Gender roles should also be considered in dialogue with race, sexuality, dis/ability and other important identifiers – what has come to be termed an ‘intersectional’ perspective.

Interdisciplinary approaches, such as the one used at Tema Genus, Linköping University, bring together perspectives and knowledge from different fields. This facilitates studying

gender as a complex, changeable phenomenon. For example, the ‘Gender, Knowledge, Science’ programme at Tema Genus focuses on how gender relations and beliefs about sex/gender are incorporated into scientific knowledge production, and also how technology and science produce particular ideas about gender and gendered bodies.

Gender shapes every aspect of life, from personal to professional. The existing body of work on gender and organisational change, for example, demonstrates just one area where research is ongoing to develop greater understanding of the effects of cultural beliefs about gender roles. To understand gender as a social construction opens it up to a critical examination, allowing researchers to map existing configurations of gender and introduce gender perspectives into more areas of personal and professional life.

The study of gender within organisational theory has been an expanding field of research during the last few decades (Moss Kanter 1977, Cockburn 1991, West and Zimmerman 1987, Acker 1990, 1998). In Sweden a growing number of researchers has problematised and theorised gender in organisations (Wahl 1992, Wahl, Holgersson och Höök, Lindgren 1995, Andersson 2003). Scholars within sociology, such as Sarah Fenstermaker and Candace West, have discussed how gender is constructed within the theoretical approach of “doing gender”. (Fenstermaker and West 2002) Gender is here seen as a situated “doing”, as practices that continuously are done and produced in interaction with other human beings.

Gender mainstreaming is a concept that has several definitions, depending for example on if we talk about national or regional responsibilities for different authorities. The definition used in the overview is gender mainstreaming as defined by the European Council:

Gender mainstreaming is the (re) organisation, improvement, development and evaluation of policy processes, so that a gender equality perspective is incorporated in all policies at all levels and at all stages, by the actors normally involved in policymaking.

Method and Material

As stated earlier, the research overview is divided into three themes that will each examine different research fields from the question: What forms gender and gendered practices within the rescue services?

These are:

- Research about political processes around rescue services and crisis management
- Research about organisation and learning
- Research about technique management and development

Each theme gives an overview of research done in relation to gender, gendered practices and rescue services. In this part we will give the broad points of departure from what material and with what methods that the overview is built upon. Since we present three areas of research, discussions about specific limitations are carried out within each theme. Several of these research fields are conducted within the boundaries of a specific discipline, and there are also interdisciplinary studies overlapping the research areas. Much of the material, especially in the theme technique management and development is available only in English and reflects UK or US perspectives, although in some cases, Sweden is cited in these materials as an example of a good model for rescue service provision (Rosener and Russell 1987, Baker and Haddon 1974). Furthermore, due to the dominance of English within academic research, searches on major databases such as JSTOR produce results predominantly in English.

We have been looking for research within the three themes above, that all consider gender and gendered practices within the rescue services or interconnected areas. The scientific articles and books that are included in the overview touch upon research of gender connected with these themes.

The main databases that we have used are JSTOR, GENA, ISI, Libris, Arblina, Kvinnsam, Ingenta Connect, MLA Bibliography, Project Muse and articles in the journals: *Journal of Contingencies and Crisis Management*, *Journal of Risk Research*, *International Journal of Mass Emergencies and Disaster*, *Gender, Work and Organisation*, *Science, Technology and Human Values*, *Social Studies of Science*, *Gender and Society*, *Social Science and Medicine*, *Organization*, *Journal of Management Review*, *Fire chief*.

Main keywords were *gender, organisation, technique, and technology, gender equality, equal opportunities, diversity, gender mainstreaming, gender equality, gender and crisis management and gender and emergency management.*

We have used a wide range of sources. For example, academic articles give different information compared to newspapers or reports done by the SRSA or a thesis. Direct contact with the SRSA was useful in bridging the gap between academic research and everyday experience of people at the SRSA. All these different sources create a rich picture of the field, and we have tried to balance using materials from the wider, international field with making conclusions, which are relevant to the Swedish SRSA. We have used libraries as Anna Lindh library at the National Defence College, Linchpin University library and the British Library in UK.

We have also used graduate theses, reports from the SRSA, as we have been searching for relevant research on Swedish and British university homepages. As Website for The Guardian newspaper – a daily national newspaper in the UK, <http://www.guardian.co.uk/> and <http://www.thelocal.se/> (Swedish news in English). Google, Google Scholar, Uppdok and Diva.

Structure of the report

The research overview is structured in three themes as mentioned in the introduction. After we have discussed each theme there is an overall conclusion section where the main findings and future research areas from all three areas are discussed.

Political processes and crisis management in the Rescue services

As discussed in the introduction, disasters and crises need to be analyzed in terms of their implications for gender and gendered practices. The aim of this section is to present literature that discusses gender in the rescue services. Limitations are that this theme only discusses gender in relation to two areas; gender and political processes connected to the rescue services and research about gender and crisis management.

There are many definitions of politics and processes. One way to look upon political processes is as a *policy process*, where decisions are made by those in authority, and that

policy implementation begins once the policy decisions have been made. This point of departure have been criticized by those that mean that policy- making is not a linear process, that policy making and policy practices influence one another, and that a large number of actors can have influence (Hill 1997; 2005).⁵ An analysis of political processes may consider how different municipalities handle the responsibility for the rescue services, it may also be a policy developed by the government and how it is implemented, it may relate to top- down processes or bottom up processes in an organization and how different actors influence how policy are shaped. Other aspects are coordination within emergency management and planning and crisis preparedness between different municipalities or within a municipality.

The terms *crisis management*, *disaster management* and *emergency management* are also used in this overview. One definition on crisis management is as a process of preparing and responding to an unpredictable event, and to try to prevent it from escalating to a larger problem or disaster. The Swedish Emergency Management agency (SEMA) defines a crisis as “Crises are events that disrupt the functioning of society or jeopardize the conditions to govern the life of the population. They include serious crises in times of peace as well as war. Such situations demand good emergency management if they are not to undermine confidence in the Government and authorities and potentially threaten the national security and democracy of Sweden.”(The Swedish Emergency Management agency SEMA homepage 16 October 2008). Emergency management can be defined as: ”The management of emergencies concerning all- hazards, including, all activities and risk management measures related to prevention and mitigation, preparedness, response and recovery”(Gender Mainstreaming in Emergency Management 2008: 64). The United Nations (1992) defines disaster in terms of “a serious disruption of the functioning of society, causing widespread human, material, or environmental losses which exceed the ability of affected society to cope using only its own resources.” Emergency management and disaster management are in the literature used quite synonymously. Emergency management and disaster management also refers to the rebuilding of a society after a natural or a man- made disaster have occurred (Haddow George D and Jane A. Bullock 2004). All three terms are relevant to the SRSA since they overlap the agencies responsibilities during emergencies.

⁵ There is a vast research field on policy processes and implementation that will not be discussed in detail here, but is interesting for future research.

In this section search words like *gender*, *rescue services*, *gender mainstreaming*, *gender and crisis management*, *gender and emergency management* have been used. This theme do not consider research about for example gender constructions within the rescue services, like masculinity constructions within the fire services, since other themes deals with these subjects more throughout.

Mainstreaming as a political process

The Swedish Association of Local Authorities and Regions, have since the end of the 1990s taken a major role in advising and training the Swedish municipalities in how to integrate gender in municipal services (Åström 1998, and www.skl.se). The SRSA have also worked to integrate Gender Mainstreaming in international services (Handbok i Jämställdhet för internationella insatser, 2007, Räddningsverket). Since the beginning of the 1990's Swedish gender equality policy have used gender mainstreaming as a solution and as a tool of for implementing gender equality policy. Gender Mainstreaming can be analyzed as a political process, for example in consideration of the integration and implementation of policies at the municipal level and how different actors interact and practice the policy recommendations.

Within interdisciplinary research of politics and gender there are a number of theorists that have focused on gender, institutions and organizations. In research inspired by gender and neo-institutional theory researchers have been focusing on the importance of organizations and institutions cultural and social practices (Lovenduski 2005, Lovenduski and Norris 1993, March and Olsen 1989). **Joni Lovenduski discusses for example how the conditions for acting within an organisation are “gendered” and that gendered patterns are created and recreated within different institutions. Lovenduski argues that both within gender theory and institutional theory it is suggested that institutions have capacity to reproduce their cultures. Institutions often create and recreate gendered patterns through exclusions (Lovenduski 2005: 50). For example can women's underrepresentation on top positions in the rescue services been caused by a number of practices and discourses that are connected and associated with ideas of gender. Gender and neo- institutional theory can have overlapping research interests with gender and organization theory.**

Gender mainstreaming and the Rescue Services

The report *Gender Mainstreaming in Emergency Management: Opportunities for building Community Resilience in Canada* (2008), as a number of other reports on gender and disaster, (Gender and disaster sourcebook <http://www.gdnonline.org/sourcebook.htm>) are all quite practical and are built on empirical cases and sum up for example gendered practices in disasters. In the report on *Gender Mainstreaming in Emergency Management* some major discussions are comparisons between men and women in:

·Exposure to risk and risk perception:

Women have lower income than men and are exposed to poverty in a greater extent than men. Women are often the primary family care givers.

·Preparedness behaviour

Studies show that women more than men seek information about hazards, volunteer more for local preparedness programs, often engage more in political organisations addressing questions as local environmental or technological hazards.

·Emergency response

Women are more often engaged in recovery after a disaster as crisis workers or human service professionals, health service and the social services. Men are more often engaged in leadership positions in established organizations (economic and political) that respond to disasters as in the rescue services. The report gives some guidelines and steps for action for applying a gender mainstreaming perspective on emergency management. Researchers and reports also discuss the "missing connection" between women's organisations and networks in the health sectors that do not co-operate with local rescue services on emergency preparedness in the extent that the researchers think would be necessary. The content of this literature, where women often are described as victims, has been subjected to criticism by reports by The WHO (World Health Organisation). WHO has published some reports on their website that discuss gender issues in emergency situations. One report put forth criticism on traditional views on 'women and children' as being portrayed as passive victims, instead focus are on that women and men in emergencies can have different vulnerabilities, capacities and coping strategies (*Gender, Emergencies and Humanitarian Assistance*. Bridge Report 33, Nov 1995). WHO conclude that integrating a gender perspective into emergency responses requires different levels of approach. These are clarity about underlying principles, importance of policy guidelines; and that systematic social and gender analysis should be carried out. In the beginning of 1990's many public agencies in the industrialized countries introduced policies and staff training to support integration of gender in relation to emergency

responses (UNHCR 1990, 1991; Oxfam 1993; Williams et al, 1994). Usually these measures were directed towards developing countries.

In the article *Professionalization and Gender in Local Emergency Management* Jennifer Wilson (1999) are focusing on men's and women's different experiences in local emergency organisations. Emergency management agencies like the SRSA traditionally have a background in male dominated professions in the military and civil defence (Wilson 1999, Robertson 1999, Wraith 1997). Wilson explores how gendered expectations, roles and relationships can influence the work on local offices on emergency management. Wilson means that gender is constructed at the workplace in the daily work processes for example in how to organize the work. (Wilson 1999: 113, also Lorber (1994), Rantalaiho and Heiskanen 1997). Wilson talks about that during the 1990's there has been an increasing professionalization in emergency management (Enarson 1997). She argues that it is important to make an evaluation on women's carrier paths in emergency management, due to the fact that **women often have to change their behaviour to be able to work within emergency management structures. There are contradictory strategies that the female workers have to employ. Wilsons description on gendered practices has similarities with practices that the Swedish political scientist Maud Eduards (2002) calls "a balance act" referring to women in politics, when women have to both claim that gender matters and try to be "gender-neutral". As Wilson writes:**

On one hand, women must behave. Look and think like men, effectively becoming "masculinised." On the other hand, women must create a paradigmatic shift that changes the social structure to allow them to remain the way they are – as women- and still be an integral part of the labour force. (Wilson 1999: 118)

Wilson concluded her article by addressing some questions like: What are women's experiences in emergency management agencies, do women experience barriers in doing their job and what are the career opportunities? Wilson means that there is a lack of studies on gendered expectations and interactions within different rescue and emergency agencies.

In Sweden one research project are working with gender and local organizations of crisis management, like Lisbeth Lewander and Åsa Abelins project *Kön och lokala krishanteringsorganisationer*, Räddningsverket 2008. They are interested in gender in relation

to crisis response, information and crisis communication. For example communication behaviour within different professions as medical personnel, police officers, fire fighters, military, information technology managers and the social services.

Another project that studies local emergency management on Sweden is discussed in the article *Developing Local emergency Management by co-ordination between municipalities in policy networks. Experiences from Sweden* by Jenny Palm och Elina Ramsell. The authors do not use a gender perspective in their analyses but the article is interesting because it brings forth the dynamics of the political processes between municipalities on the regional level. They are discussing how co-operation in inter-municipality policy networks in a Swedish region is established and maintained regarding emergency management. **Their conclusions are that co-ordination in municipal emergency management is relatively easy to develop, because actors see the benefits. Limits to co-ordination were for example culture/tradition and lack of mutual understanding, and unwillingness to give up authority.**

Gender and Rescue services in Crisis Management research

Research on crisis often discusses decision making in crisis and have been developed by scholars in political science like Hermann (1963) Allison (1971) George (1980) and Vertzberg (1990). This research has often focused on crisis and decision making in international politics. In Sweden there are research concerning different aspects of crisis, as crisis communication, learning after crisis, relations between public and private. During the 1990's research about crisis more broadly as a social and technological crisis have developed ('t Hart, Charles and Parker 1989, Rosenthal, Boin and Comfort 2001). In a Swedish context research on crisis management have been developed by Sundelius, Stern och Bynander (1997) och Stern och Sundelius (1997).

In the mainstream crisis management literature analyses on gender and gendered practices are not often addressed. Often, even dominating male structures in crisis management organizations, male leadership positions, and decision making groups are not discussed in relation to gendered practices. In other words *how* gender is constructed within crisis organizations is not problematized. There are one research field in the crisis management and emergency management literature that do address gender. That is in the international research field of gender and disaster studies. Within gender and disaster studies literature gender is

seen as in interaction with for example race and ethnicity and often focus are on a whole societies and complex dimensions and dynamics of the population in who get affected by a disaster and a crisis. Often the main focus is on women and on women's personal experiences of a crisis.

The research field of gender and disaster studies

Alexander David (1993) argues that the literature on disaster usually has six approaches: Geographical, development studies, technical, anthropological, sociological and disaster medicine. Disaster studies for example include studies on the crisis management of disaster, as for example the co-ordination of organizations that play critical roles in the emergency management of a disaster. (Gillespie et al 1992, Gillespie and Colignon 1993) Barton (1974) argues that disasters are a severe, relatively sudden and unexpected disruption of normal structural arrangements within a social system over which the system has no firm control. Other researchers talks about disaster as a period of "social crisis" (Qurantelli and Dynes 1977). In the anthology *Hurricane Andrew, Ethnicity, gender and the sociology of disaster*, 1997 ed. by Walter Gillis Peacock, Betty Hearn Morrow and Hugh Gladwin the authors analyze the neglect of gender in disaster work. Elaine Enarson and Morrow argue that women in general are "overlooked", particularly in relation to women's experiences of a crisis and disaster. (Enarson and Morrow 1997, Fothergill 1996). They quote Shaw (1989:13) that argues:

In any society in which elaborate gender domains are constructed, then both hazards and relief measures will be 'gendered' with different consequences for men and women.

Enarson and Morrow emphasize the importance of organizational practices and cultures and that emergency planning agencies should evaluate their routine operation to reveal gender "blindness" in for example policies on employment practices, equal opportunities, gender sensitive programs, evaluation and implementation (Enarson and Morrow 1997: 138).

The literature on gender and disaster studies often focuses on how women are affected by a disaster, for example when relief centers are established, or how to organize emergency housing, in relation to personal safety, child care, health care etc, or how

gender are connected in relation to race/ethnicity and class (Morrow and Enarson 1993: 117, Collins 1990).

In the literature women are often seen as victims of disasters (Khondker 1996) or gendered differences in crisis reactions are illuminated (Drabek 1986). One interesting difference in the crisis management literature is that in countries in the western world, gender is often seen as a demographic category rather than something that is integrated in different social structures. In literature on the developing countries they argue that gender is understood more as a social construction (Dahlgren and Lewander 2008).

In the book *The gendered terrain of disaster* (1998) a wide range of topics related to gender and disasters are discussed. Criticism towards the field of disaster studies is articulated because women's experiences and voices are not addressed. In the article "*Men must Work and Women must weep*", Maureen Fordham and Anne Michelle Ketteridge (1998) discuss gendered stereotypes and behavior in a case study on how women and men respond to a disaster. In the article, women are seen as empowering themselves through grassroots' community actions. Although the literature shows that women can gain influence through organizing themselves in the rebuilding phase it is clear that women's experiences are often situated in the private sphere, and that men's experiences are often seen as emancipating from the public sphere (Fordham and Ketteridge 1998, see also Dahlgren and Lewander 2008).

The literature brings forth problems with male-domination in the rescue services. In the article *Women in emergency management: An Australian Perspective* Doone Robertson discusses why women are under-represented in the Australian emergency- and rescue services at the senior levels, as well as the policy-making levels of government and non-governmental organizations. Other literature discussed is women's roles in emergency planning (Toscani 1998). The article *The Role of women in Health- Related Aspects of Emergency Management: A Caribbean Perspective* by Gloria E. Noel also discusses the importance of women's representation in local emergency management committees, as well as the importance of cooperation between women's organizations and National Disaster Management agencies.

Conclusion

Overall gender mainstreaming is discussed both within national and international organizations mostly as practical "hand books" of how to reach gender equality. One

conclusion is that research that study political processes, as the implementation of gender mainstreaming in relation to the rescue services is missing. Little or no research done that focuses on the development of policy practices on gender mainstreaming in the rescue services from a comparative perspective. Overall gender mainstreaming is discussed both within national and international organizations mostly as practical "hand books" of how to reach gender equality. The literature often offer plans for action especially recommendations of check-list types. Interesting areas for future research are the relation between the national policy level and the municipalities in how gender mainstreaming is implemented by different municipalities and their rescue services. Do women's and men's opportunities differ and how does that effect their situations and needs during a crisis? Catastrophes, crisis and accidents, can have different consequences for women and men. Future research could also investigate co-operation and co-ordination between and within regions and municipalities in how gender is constructed on the local, national and regional level in co- ordination activities. Other interesting areas and questions that are under researched are studies on how gender is constructed on the local, national and regional level in co-ordination activities. Perhaps could there be clashes between gender orders at different levels in the organisation. For example that the national level of the organisation wants one thing but the local levels another. One important question is what sort of norms and rules about gender that are produced in the discussions and policies within an organisation? Political processes can be understood as they intervene with process of institutionalisations and also how gendered processes them self can be viewed as processes of institutionalizations.

The overall impression from the literature on gender and disaster is that it covers predominately disasters in the developing countries, but there is some literature on disasters in Canada and USA. The literature draws on case studies with qualitative approaches and methods like interviews with people that experienced floods or other types of disasters, or people engaged in community activities as rebuilding and reconstruction the local community. The literature on gender and disaster studies does not discuss crisis management in the Scandinavian countries. Literature on the Scandinavian as well as the Nordic countries, concerning men's and women's experiences of a crisis, as well as a gendered analysis of different disasters is missing. There are some studies done, for example by The Swedish Emergency Management agency about the Tsunami in 2004. Problems that are discussed in the research are the need for increased representation of women in the emergency management professions, and the importance that the training activities in emergency

management prioritize the implementation of gender sensitive policies and programs. Elaine Enarson and Betty Morrow (1998) set up an agenda where they address the **following themes: women's vulnerability to disasters; the gendered effects on disaster and women's capacities and resources on responding to disaster. The literature is focused on women. What is called gender is connected to women and women's experiences and not in the same extent so much men's experiences and practices. That men constitute and construct gendered practices are not discussed.** Elaine Enarson and Betty Morrow ask some questions addressed to the emergency management: "What patterns of bias (gendered, economic, and cultural) can be identified in the practices of responding agencies in the private and public sectors? How are these maintained informally? Under what conditions are they most effectively challenged?" Other questions are how gender is identified by disaster planning and response agencies in the private and public sectors?

A number of these studies on gender and disaster take into account how gender interacts with ethnicity, race, and class in crisis response and preparedness. Future research could therefore explore intersections of gender, race/ ethnicity, class, handicap and age in emergency management professions and in relation to the development and implementation of diversity and gender equality policy.

Gender, Organisation and Rescue Services

Gender Equality as organisational transformatory work

The work of planning and implementing an organisational change process, such as transforming an organisation in line with gender equality objectives, can be described as strategic management process. For the last 30 years there has been a growing interest in organisational and management issues also from a gender perspective, however the majority of the research being done still has no gender perspective at all (Broadbridge and Hearn 2008). Although the feminist contribution to organisational theory and research has been substantial there is still little research on how to use this knowledge in order to change organisations in ways that will make them more gender equal (Meyerson and Kolb 2000).

Organisations are gendered in all aspects, sometimes open and overt and sometimes deeply hidden in organisational processes and decision that seems at first to have nothing to do with

gender. Gendered organisations can be described in terms of different gendered processes⁶ (Acker 1992). These different processes interact and are involved in other processes such as management discourses and practices. Many organisational practices, like management, rest on typical masculine discourses and are closely related to constructions of different masculinities. (Collinson and Hearn 1996) Managerial and organisational realities also construct and occasionally subvert dominant gender relations in an organisation (Broadbridge and Hearn 2008). Organisational gender patterns can however be changed even though the result may not always be the intended (Colgan and Ledwith 1996).

Gender is something that we do, rather than something that we are. Gender is continually enacted and not merely a product of socialisation processes (West and Zimmerman 1997). Gender is enacted in organisations in many different ways. One general problem to be encountered in gender equality work is the un-reflexive doing of gender in organisations. Much, in fact maybe most, of the practicing of gender⁷ in an organisation is un-intentional/un-reflexive (Martin 2006).

Public organisations are confronted with many different (and sometimes conflicting) political directives and goals. Gender equality goals by themselves can be in conflict. Organisations exist within broader societal and institutional⁸ contexts, with demands of many sorts, including political, which they will respond to in order to legitimize their existence in different ways. Gender system can themselves be seen as institutions meaning that **taken-for-granted assumptions, sometimes in the shapes of rational myths**, is being institutionalized also into organisations in connection to gendered practices but maybe also in connection to the general understanding how and why gender equality work should be done (Acker 1992, Wahl 1992). **These gendered institutions create gendered processes in organisations which means that "advantage and disadvantage, exploitation and control, meaning and**

⁶ Gendered organisations can be described in terms of four different but interrelated main processes; 1) the gender divisions of the organisation, 2) the symbols, images and forms of consciousness that explicate, justify and sometimes even oppose gender divisions, 3) the interactions between individuals of an organisation and finally 4) the internal mental work of individuals as they consciously construct their understanding of the organisation's gendered structure of work and the demand for gender-appropriate behaviours and attitudes. The final dimension includes "creating the correct gendered persona" (Acker 1992:253)

⁷ Gendering practices, according to Martin, are "the repertoire of actions or behaviour – speech, bodily and interpretive – that society makes available to its member for doing gender. They are the what to do/can be done/is done relative to a particular gender status and identity" (Martin 2006:257)

⁸ Institutions has been conceived of as "Institutions are comprised of regulative, normative and culture-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life" (Scott 2008:48).

identity, are patterned through and in terms of a distinction between male and female, masculine and feminine" (Acker 1992:251). In these processes gender is ‘done‘ continuously in the organisation or as Connell puts it “Gender is a set of (potential) actions and at the same time a system that is in action” (Connell 1987).

In Sweden there has been a growing critique of the term ”jämställdhet” (Hirdman 2001, Kvist and Tollin 2000) and the politics to promote gender equality which are sometimes even seen as counterproductive. There have been many examples of set-backs and lack of results and also studies that have focused the problematic situations of equality practitioners (Callerstig och Lundqvist 2005, Hård 2004). There has also been a debate on the need for studies on the implementation of gender equality initiatives in order also to develop gender equality work that is based on research (Mellström 2008). The following section of the report on research with a gender perspective is an attempt to map the current state of the art on research on gender equality as a transformatoy work in the rescue service.

Introduction and some general notes

In this section of the report the aim is to give an overview of research from an organisational perspective. The work that have resulted in this section is departing from the central question raised by the SRSA in the project description namely; to make an inventory of research on how the current gendered practices of the rescue service can be changed/developed. In order to do that it is important to understand what might be considered as gendered practices and processes. **One way of understanding the broad impact of gender in organisations comes from adapting Joan Acker’s description of gender as a fundamental element of organisational structure and work life, “present in [its] processes, practices, images an ideologies, and distribution of power” (Acker 1992a:567).** To proceed on the question raised by the SRSA it is than important to ask; *changed into what?* The departing point for the following section is the demands on Swedish rescue services to work with gender equality regulated by law, the overall objectives in the Gender Equality politics and the special task for the SRSA to support the local rescue services in this work as discussed in the introduction, this has been taken as the objectives for the change process. Two main research themes have been identified as important in order to realize the overall objectives for gender equality within the Swedish rescue service. The first concerns specific research on various issues in connection with the objectives and targets set for gender equality and diversity in the rescue

services. The second theme is research on the implementation of gender equality objectives within the rescue service. **Although the two parts are obviously related the argument to divide them is that they connect to different fields of research, the first focuses on the gendered practices themselves and the second on how to change them.**

In part one, research that seeks to examine different gendered patterns and practices in the rescue service is described and discussed. The research discussed in part one is mainly related to research questions with relevance to the gender equality objectives set by the SRSA. Research in connection to the specific aim to gender mainstream the organisation will be reviewed in part two and focuses mainly on models and methods to implement the gender mainstreaming objective. Gender mainstreaming relates to the core activities of an organization, the knowledge field of the work that is being performed. The area relating to gender mainstreaming in connection to the core activities of the SRSA is vast and includes several research areas and scientific fields, e.g. from applying a gender perspective on administrative routines like constructions of various documents and application forms to a gender sensitive approach in international operations. The focus on mainstreaming in part two is mainly from an implementation perspective, focusing the technical side of gender mainstreaming as a process. In part two various attempts to change the gendered practices and processes of the rescue service will also be reviewed and discussed. In the final part some suggestions for future research will be made.

The review has shown that research so far to a large extent has focused specifically on the profession of fire fighters, gender constructions in relation to the profession and individuals working as fire fighters and the possibilities of creating a more diverse work force, e.g. prerequisites for change. The combined searching on key words (both in Swedish and in English) within the organisational theory field like; “leadership”, “organisational culture”, “strategy”, “change” and “learning” together with “gender” and “rescue service”, “emergency service”, “relief service” or “fire service” produced very few results apart from studies on fire fighters and to lesser extent on the fire service.

One conclusion is therefore that there have been very few studies on the rescue services organisation from a gender perspective, besides research that directly address fire fighters or the fire service. Furthermore, the studies of the fire service as an organisation have been conducted with the fire fighter as the primary object.

Dana Britton outlines three main ways of seeing an organisation as gendered, by looking at its structure (e.g. the way organisations are defined and structured), by looking at the extent to which occupations and organisations are male or female dominated and finally by examining the way an organisation is described symbolically and ideologically and conceived in terms of discourses (Britton 2000). Based on this description one could argue that what has been conceived as a problem from a gender equality perspective in the rescue service has been very much focusing on the second perspective, the fire fighter as a male dominated profession. Also, much of the research done has focused on this situation from the third perspective, e.g. in terms of a discourse that draws on hegemonically defined masculinities (Connell 1987). Another broad distinction is to view an organization from four main categories; from a structure-, leadership-, symbolic- or change perspective (Wahl et al 2001).

The complexity of gender equality issues needs to be considered when viewing the different research studies that have served as examples in the following section; many of these studies are also interrelated. In order to, for example, recruit and retain women as fire fighters it is important to work not only at the recruitment process itself but also on issues such as work-family issues, sexual harassments, work health issues (protective gear etc) and on the management of programs and initiatives, so that they take into account the holistic approach needed.

Gender equality in the rescue services

The research conducted on issues (problems) related to the overall gender equality objectives for the Swedish rescue service has focused on a broad range of questions, mostly in connection with the fire service, the major themes being:

- **Safety and health (including reproductive safety and protective clothing)**
- **Recruitment, retention and promotion (including affirmative action)**
- **Work- family issues**
- **Fire-fighter training and pre-training programs**
- **Physical fitness and physical abilities testing**
- **Sex discrimination**
- **Sexual harassment**

- **Women and men as fire fighters (including gender and identity construction)**
- **Sexual orientation and ethnicity**
- **Technology**

All the different themes listed above are by themselves broad research areas. For example, a search in JSTOR on “sexual harassment” gave approximately 5000 search results. In this overview the focus has been on studies done within the specific settings of the rescue services, although some others examples will be given when considered relevant.

Many of the above mentioned areas have however been studied not as regular research projects but more as reports and evaluations, essays and unpublished dissertations (Kruse 2007). A lot of the research that has been done is also ethnographic and focuses on individual experience and the processes of identity construction and perceptions. This research has been done in relation to the work in the rescue services and the implications for the practical work, and also, to some extent, in relations between fire fighters and the public (ibid). Other studies are quantitative and focus on specific questions with the fire service itself as the intended audience. The Swedish research that has been done is often initiated by the SRSA (Kruse 2007). Research within the above mentioned themes will be discussed in the following section.

In the regulation letter for the SRSA in 1997 the agency received a specific task to investigate what activities were considered necessary in order to recruit more women to the local rescue services. To work with this mission a project called ”Kvinnor i kommunal räddningstjänst” in was started. The project resulted in the report “Brandman – och kvinna?”. The report consists of a list of suggestions as well as an overview of the legal demands. The report also covers a literature study on feminine and masculine characteristics and their relations to different types of professions conducted by Hanna Westberg, Arbetslivsinstitutet. (Westberg 1997). The “Brandman – och Kvinna?” report also consists of a study done by Ulrika Lorentzi, Svenska Kommunförbundet (Swedish Association of Local Authorities), in which Lorentzi summarizes experiences from recruitment of women into local rescue services. Lorentzi gives examples from research on the difficulties but also the advantages of hiring women in male dominated organisations. There is also a separate complementary literature listing on studies on the police and the military on experiences from recruiting women (Lorentzi 1997). Thirdly, a separate study conducted by Ann Johansson at the Swedish

National Defence College is included in the report. The results showed that there were great differences between different local rescue services, and between part time and fulltime fire services, mainly regarding the use of different tests and different demands on “the same test” (Johansson 1997).

In the fourth part of “Brandman – och kvinna?” an interview study done by Anette Eriksson is reported. The main results of the study are based on the individual experiences of women working as fire fighters and some suggestions on how to improve the situation for women fire fighters in general, as well as recommendations to improve recruitment (Eriksson 1997). A similar study focusing on women working as fire fighters was conducted in the US as part of the project and the project group also made study visits to several fire services in the US. Furthermore, a separate literature overview and a separate study on physical fitness and physical abilities testing was done by Ulf Danielsson and Ulf Berg, avdelningen för Humanvetenskap, FOA (Danielsson and Berg 1997)

The report “Brandman och man” is the result of a project conducted by Mathias Ericson at the gender department of Gothenburg university in 2003 on the initiative of the SRSA. The overall purpose of the study is to contribute to a more in depth view, problematising equality work within the rescue service; **The central question of the study is: *how is the profession understood and how does different notions on gender affect the construction of norms surrounding the work of a fire fighter?*** The study is based on interviews and participatory observations. Ericson concludes that the drive for increased gender equality has created strong emotions in the public debate, with a lot of the debate focusing on demands for physical strength in the work. The fire fighters in Ericson’s study gave a more complex and less polarized understanding of the debate. Sometimes their own understanding of the profession supported the idea of superior physical strength and sometimes opinions were critical of this perspective. **Ericson’s conclusion was that the fire fighters on a personal level found gender equality less difficult than what it seemed on a more general level.** At the general level the “macho image” was actively being used by the fire fighters to put forward different arguments. The problem with the work to promote gender equality seems to be more about the *notions* of gender in connection with the profession than perceived everyday practical problems among the fire fighters. Another result from the study is that the work to recruit more women as fire fighters has made visible already existing problems within the rescue service

concerning the various demands in the recruitment process and various relations and relational powers within the organisation. Mathias Ericson also concludes that the work to promote gender equality is also connected to other areas, e g class, age, sexuality, bodily constructions, regional, and finally organisational and structural prerequisites. These areas are also suggested as possible for future studies (Ericson 2003). The report is partly building on experiences from another study done by Mathias Ericson together with Malin Rutström (Ericson and Rutström 2000). Mathias Ericson is also currently in process of finalizing his dissertation at Gothenburg University which problematises the constructions of masculinity within the Swedish local rescue services in depth using an ethnographic approach (Ericson forthcoming 2008).

In 2007 Corinna Kruse, from Linköping University, did a study on fire fighters as a profession after an initiative from the Swedish Emergency Management Agency (Krisberedskapsmyndigheten). The purpose was to review research done on work performed by fire fighters with special emphasis on their understanding and handling of risk perception and risk management methods. The study consists of an overview on research done in this area complemented with interviews. As part of the study, the TV-documentary programme series “Livräddarna” was used. Kruse concludes that a lot of the research that have already been done is ethnographic and focuses on individual understandings of the profession. A lot of the studies also focus on fire fighters working full time and less on the part time fire fighters. Kruse also concludes that a lot of the studies are done by fire fighters with other fire fighters as the attended target group. **Kruse discusses the notion and management of risk by the fire fighters discussing the current trends that are affecting the profession itself, with more focus on the prevention work. The importance of training is discussed as well as the possibilities of future “cultural clashes” between fire fighters with the “old perceptions” of the profession and a potential new orientation among the new recruits (Kruse 2007).**

Several studies focus on fire fighters from an individual perspective often in relation to identity and masculinity constructions. **David Baigent’s dissertation “One More Last Working Class Hero: A Cultural Audit of the UK Fire Service” (2001) focuses on the construction of masculinity within the rescue service in the UK. The central question is why the fire fighters are so eager to enter buildings on fire even though this is so clearly connected with mortal danger (Baigent 2001). The main results connect the fire fighters’**

understanding of their work and their behaviours as part of a masculinity construction process (ibid). David Baigent has also done other studies on the work to promote equal opportunities and the situation of women in the UK fire services (1996) and also worked as a consultant on issues in relation to his research. A variety of papers and presentations on several projects are available at www.fitting-in.com. A historic perspective, on the same theme, is given in the article “The Fireman: Immaculate Manhood” where Robyn Cooper focuses on the question of why the fireman has been so celebrated historically. In this article Cooper analyses the fireman “in relation to the object of his endeavours, fire, and to the interconnecting qualities of ideal manhood to which he was assimilated: manliness/masculinity, chivalry and heroism” (Cooper :141).

Several studies focuses on the opinion of fire fighters as to what is considered as the important work within the rescue services, clearly dividing the work tasks into important and not so important work (Kruse 2007). The opinion of the fire fighters themselves as well as that of fire chiefs being that the important work is done in the real life rescue operations and connected with the dangers that fire fighters face (Kruse 2007). The relations between fire fighters have also been a focus in some studies. **Baigent (2001) problematises the relationship between different ranks of command within the rescue services and different opinions on what to do in specific situations, suggesting this is affected by gendered understandings of the profession.** Ericson (2003) also shows how the resistance against the work to promote gender equality can be a way to oppose also power relations between the fire fighters and their superiors. There has also been a student essay studying the fire chiefs views of women fire fighter in the fire district of Göteborg Mölndal (Andersson 1996).

Several studies also focus on individual women’s experiences as fire fighters and the possibilities and hindrances in the profession. The method here is often qualitative and based on individual interviews or quantitative based on survey studies, A study that evaluated the recruitment, training and practical work at the fire-department of Stockholm was done in a research study conducted by Arbetslivsinstitutet involving a large team of researchers. Eight women were recruited for a project lasting one year⁹, they were during this time interviewed and tested several times while they were at the same time given training. After one year all

⁹ The project called ”Kvinnor i utryckningsstyrka” is described in the report with the same name produced by Stockholms Brandförsvär and is also documented in a film with the same name.

were considered suitable for work as fire fighters and all but one were considered to have sufficient muscle strength at the end of the year. The conclusion was that more public information on the recruitment of women was needed; the training of fire fighters needs to be more sensitive of particular needs and prerequisites for training women as fire fighters. **The fire brigades also need to be better prepared to introduce women into the work. The report also concludes that the recruitment tests need to be developed based on measurements and evaluation of demands at fire fighting.** Work to develop better equipment and alternative work techniques is urgently needed (Gavhed et al 1998). Two student essays examine the individual experiences of women: from a sociological perspective in Kerstin Appelqvists work (2003) and within a psychological theoretical framework in Linda Olsons study (2005).

The prerequisites for women being fire fighters were also examined in the large scale quantitative study that was done in the US with a research team that included social scientists Marc Bendick, and Francine Moccio of Cornell University; and civil-rights lawyers Denise M. Huiett and Sheila Y Thomas. The team gathered questionnaires from 675 male and female fire fighters in 48 states, surveying 114 departments and interviewing 175 female fire fighters. The team also conducted several case studies. The researchers developed a benchmark for expected female representation using data from the 2000 U.S. Census. They calculated the percent of women of typical fire fighter age and educational background in 184 occupations resembling fire fighting in required strength, stamina and dexterity, or involving outdoor, dirty or dangerous work. The proportion of women in these 184 occupations was 17% and they were also targeted as likely to be qualified and potentially interested in the fire fighter profession. Two sets of issues concerned the female fire fighters most in the survey. **The first were incidents in the workplace (discrimination, harassment or exclusion combined with lack of response by supervisors). The second were fairness in employment practices and the experiences of the women that they were not treated equally to men in hiring, assignments and promotions. The conclusion in the study is that the workplace culture in most departments continues to resist female fire fighters and, consciously or unconsciously, intends to exclude them. The need for strategies to work with this was stressed and also that these strategies must address the specific issues from physical-ability tests to dormitory privacy. However, they must also address the underlying exclusionary culture of which these issues by the research team were considered as**

symptoms. The full study can be found at www.firechief.com (Bendick et al 2008 also see Hulett et al 2008).

There seems to be less research done with a multi-dimensional or intersectional approach to the gender structures and practices within the rescue service. One study that focuses on the ethnic dimension in relation to gender in minority positions in the rescue service is Janice D. Yoders and Patricia Aniakudos study from 1997, "Outsider within the firehouse. Subordination and Difference in the Social Interactions of African American Women Fire fighters". In the study the situation of African American women fire fighter is studied and being compared to the situation of white women fire fighter and black men fire fighter. The study was conducted through interviews with 22 black women fire fighters across the US. The results of the study were persistent and pervasive patterns of subordination though the exclusion of black women, reflected in insufficient instructions, co-worker hostility, silence, close supervision, lack of support, and stereotyping. The study also indicates that perceived differences of black women from white and Black men as well as white women created strained relations, especially when Black men and white women gained some acceptance by virtue of their gender and race, respectively, and thus reportedly distanced themselves from black women. The conclusion was that the experience of African American women fire fighters highlight the omnirelevance and intertwining of race and gender. (Yoder and Aniakudo 1997). In what is regarded to be an important contribution to the understanding of processes related to both gender and ethnicity (Lapointe 1998, Williams 1998, Epstein 1999) in the book "Real heat. Gender and Race in the Urban Fire Service" the sociologist and professor of public policy at Harvard University, Carol Chetkovich, follows the men and women of the Oakland Fire department Class 1-91 in their training and eighteen-month probation. Chetkovich explores the question of how successful affirmative action has been in traditional blue collar work using ethnographic and interview data. One of the reasons to choose the Oakland Fire department was because of their intense work with affirmative action. **One of Chetkovich's conclusions is that the ethnic integration has been more successful than the gender integration. In the predominantly male culture, men regardless of ethnic background face fewer problems than women. The entry of women represents a threat to self and group definitions concerning gender identity and male superiority. The "real heat" for the women began after they had demonstrated physical prowess, and they had to prove themselves in the male culture of the fire service. Two**

chapters of the book specifically focus on organisational and social policy implications (Chetkovich 1997).

In Sweden there has been little research done with a similar approach. There has been one student essay by Manuel Missner that focuses constructions of masculinity within the Swedish municipal fire service by studying the ideas about women fire fighters and fire fighters with other ethnic background than Swedish (Missner 2007).

Regarding gender, organisation and sexuality there have been some studies mainly focusing the individual perspective. Tessa Wight has done a study that compares heterosexual and lesbian women's experiences from working in the fire services. The results indicates that lesbian women that did not fit with the general notion of femininity sometimes were more accepted provided they were not to open with their sexuality (Wright 2005). Another study is the work done by James Ward and Diana Winstantley, which is a study on sexual minorities in the work place and focuses on the impact of organisational cultures. The study was conducted at the (is this the correct name of the fire service – 'shire' is the generic word for a local area, rather than a specific place) Shire Fire Service in the UK, the background being that the thematic review of the UK fire Service had in 1999 described homosexuality as an absolute taboo. In the study a double narrative approach is being used, taking individual stories and experiences from sexual minorities to focus groups for discussion in the organisations. In the article different dimensions that have an impact on sexual minorities are highlighted, these are work environment, discourse, ways of working, rules, association, signs and symbols. (Ward and Winstanley 2006). In Sarah J Tracy and Clifton Scott's work the construction of masculinity and sexuality is focused in a comparative study of the work of fire fighters and correctional officers, both engaged in taint management, meaning different strategies to manage "dirty work". The study was conducted as two ethnographic projects at four different organisational settings. The study problematises theoretical understanding of identity constructions, dirty work, taint management, and organisational performances of masculinity and sexuality (Tracy and Scott 2008).

Most research has been found in the UK and US, some results from other international studies seem however to support the findings of the British and American studies. As an example Tam Tai-keungs study (a student essay) on the recruitment and selection of female fire fighters in the Hong Kong Special Administrative Region where women were prohibited from

applying for fire fighter positions until 1993, shows similar findings, as for example the large scale quantitative study conducted by Bendick et al. In the study Tai-keung compares the recruitment policies and practices of the Honkong fire service with six other metropolitan fire services, London, Los Angeles, New York, Queensland, Melbourne and Tokyo (Tai-keung 2003).

The gendered structures of the volunteer rescue services have also been noted in many reports although there have been few research studies done with an explicit gender perspective. One study with an explicit gender perspective is the preliminary research study on Australia's volunteer fire services by Jim Beatsson and Jim McLennam. The study shows a situation in which a decline in their predominantly male and aging population is problematic for many rural fire service brigades across the country. Recruitment and retention of women volunteers would be advantageous to fire services to meet with these problems. The research overview shows that very little research addressing the under-representation of women in Australian fire services has been undertaken (Beatsson and McLennam 2005).

Several studies focus harassment of different kinds from a gender perspective. In Sweden a study was initiated by the SRSA and conducted by the Swedish National Defence College by Anders W. Berggren, Armano X. Estrada and Sophia Ivarsson in 2007. The study is based on a postal survey to the employees of the SRSA and also students at the four different fire training colleges run by the SRSA at this time. In the report some comparison with the police and the military is done as a referential framework to the study, and some previous research on the subject is given as well as an analytical model for the analysis. The result of the study shows that 24% of female employees and 7,5 % of male employees answered that they had been submitted to sexual harassment in the work- place. Among the students 34,6 % of female student and 4,6 % of male students answered that they had been submitted to sexual harassment in relation to their training (Berggren, Estrada and Ivarsson 2007). Numerous international studies of the prevalence of sexual harassment within the rescue services have been done, many on the initiative of rescue services and not however as academic research, as an example, the International association of women in fire and emergency services lists approximately 30 studies on their web site (www.i-women.org).

Work-environmental perspectives have been an issue in many of the studies focusing recruitment and retention of women to the fire services, as shown by many studies conducted

by the fire services themselves or by national institutes. The International association of women in fire and emergency services lists several studies on their web site (www.i-women.org). The studies have been conducted within a broad range of scientific disciplines and cover topics such as reproductive safety, protective gear and clothing and fire station facilities. The conditions on work-family issues have been noted in many reports as problematic but besides being a part of a wider focus the only separate treatment on the issues that has been found is in news articles.

Barriers for women to advance within the rescue services have been acknowledged in a lot of the studies done both international and in the Swedish context, mostly with the fire fighter as a focus. The SRSA it self has however been the focus of one essay in sociology at Karlstad university. In the study the central question of why young women academics were leaving the SRSA more often than other employees was studied by a postal survey at the head quarters in Karlstad. The results of the study showed that many women felt that they were not given the same opportunities for advancement and that the prevailing norm at the agency connected to the fire engineer and predominant male because of the organisation's historical connection to the military (Andersson and Sundqvist 2002).

The work to promote gender equality and diversity in the rescue services

As noted in the introduction, the issues in the previous section are clearly interrelated to the research done on the implementation of different equality and diversity initiatives. Carol Chetkovic's study is a clear example of this and the project can also be seen as an example of a specific study on the implementation of affirmative action in the US. In the following section some other examples of research and also two practical handbooks based on experiences from different studies will be discussed. There have however been very few research studies done on the implementation of equality and diversity initiatives both nationally and internationally. Furthermore, when it comes to specific actions to gender mainstream the rescue service the results are scarce.

In 1999 The Fire Service Inspectorate in the UK released a report on the status of equal opportunity issues in the British fire service. It was based on a study that lasted several months including questionnaires, interviews, and visits by inspection teams to ten fire brigades. The conclusion was that the fire service continued to win public support for its external activity but that its lack of ability to change and modernize internally was found

troubling by the Inspectorate. **There was a "wealth of good intention" (p.56) as regards equality and fairness issues, particularly at top levels of the fire service, but there was also a pervasive lack of leadership in pushing these issues. Sometimes the commitment itself was also lacking: management skills as well as training on equality issues was recommended. The Inspectorate also warned of the dangers of depending too much on specialists to advise and train management and the workforce on equality issues. Instead, the conclusion was that there was a need "to transfer proper responsibility for, and real ownership of, equality and fairness to those who have supervisory responsibilities at all levels within the service" (p.63) and also to provide training for this to become reality (at all levels from elected officials on fire boards to recruit fire fighters). The report includes a checklist on issues in the areas of strategy and policy, monitoring, leadership, service delivery, recruitment, promotion and selection, help and support, resources, task groups, and training (Equality and Fairness in The Fire Service 1999).**

In 2003 the two year project "Fire works: For Equality in the Fire Service" started. It was a project set up to assist the Fire Service in the UK in its attempts to meet with the target that by 2009 15% of fire fighters are women and 7% of the total Fire and Rescue Service is from minority ethnic groups. A large research team with Zoe Allchorn as the Project manager and Jaki Lilly as the Research Director was formed with the base at Anglia Ruskin University. The project was jointly funded by Anglia Ruskin University and the European Social Fund, the final report was delivered in December 2005. The overall research aim was "To identify and address the barriers to the employment, retention and promotion of women and minority ethnic groups (W/ME) within the FRS" (p.3).

The FireWorks research team early on found that liaising with equal opportunity (EO) personnel was fundamental in identifying key areas of change in the Fire Service. Working alongside EO practitioners and other members of the Fire Service community, the researchers strived to identify areas that required immediate attention and suggest strategies for improving the recruitment, retention and promotion of minority groups and women in the Service. The research team was also from the start of the project aware that "practical help in achieving the Government targets was – in many ways- as important to the FRS (Fire and Rescue Services) as further knowledge of the issues" (p.3). The project begun the work with the equality issues and diversity identified in the Independent Review of the Fire and Rescue Services by Bain et

al (2002). The aims of the project included 1) the provision of an arena, throughout the project, for the discussion and promotion of equality and diversity issues and exchange of good practice, 2) a contribution to the development of policy within the FRS Modernisation Agenda, e.g. informed comment on FRS diversity targets and 3) practical tools for understanding local communities and evaluating the impact of FRS diversity initiatives including diversity training, and initiatives involving local communities. The research was done through a multi-method approach, including literature reviews, accessing key academic texts and policy documents and the use of structured observations, case studies, guided focus group techniques and open and semi-structured interviews. The project findings resulted in several publications (Lilly et al 2005).

In the final report a conclusion was that there had been an increase in the work on equality and diversity over the last years, with a widespread commitment to address equality and diversity issues that had resulted in many initiatives, and also an increased level of financing within the services. However there remained a broad perception that the FRSs were not managing to address equality and diversity and move forward on the issues. The research findings were that there was evidence of a lack of organisational alignment in terms of embedding of the equality and diversity issues within the services. Many of the initiatives that had been undertaken also lacked an “adequate supporting theory of change or a compelling body of evidence” (p.4). There was also some confusion about the terminology, e g diversity vs. inclusion, equality vs. fairness, positive action vs. positive discrimination, community fire safety vs. community outreach, black and ethnic minority vs. minority ethnic. A lack of understanding about these terms was also problematic since it “lies at the heart of much of the resistance” (ibid.). There was also a lack of understanding of the demographic settings in the local area. Lack of understanding of the central targets in combination with the opinion that they cannot be reached lead to a lot of activities with the main purpose being seen to be doing something more than real commitments to change. In some cases policies were not translated into action plans and some action plans did not contain clear objectives and the ownership and responsibility for the implementation and evaluation of action plans was often unclear. Initiatives were often undertaken as though the needs of different under-represented groups were the same and/or based on untested assumptions about minority groups. There were overall problems with systematic and holistic organisational approach towards addressing equality and diversity. This was also noted in regards to

the training. There was a widespread lack of understanding of evaluation in general. There was also no common understanding of the roles of the equality practitioners, including responsibility and authority. The role was “commonly situated with in the human resource function which may limit the holders ability to inform effective service delivery” (p.5). The researchers conclude that; “further study is needed in this area to discover what issues and solutions are to maintaining the knowledge base and moving on the agenda via qualified and motivated equality practitioners”(ibid). The results include a list of 27 recommendations. (Lilly et al 2005).

Since the “Fire works” study there has also been another research project at **the Institute of Local Government Studies (INLOGOV) at the University of Birmingham in the UK conducted by Alistair Clark and Pam Fox, funded by the Office of the Deputy Prime Minister. The main purpose of the study was twofold; firstly, to provide information on progress being made by the Fire and Rescue Service (FRS) in developing and implementing plans and taking action to promote equality and diversity in the workforce to comply with current equality and diversity legislation and secondly to identify examples of good practice on a variety of specified themes, to provide encouragement and support for those fire and rescue services in the early stages of complying with the requirements of current legislation. The study was conducted through a quantitative survey of the 47 FRSs in England and Wales, followed by qualitative case studies on a selection of FRSs perceived to be undertaking best practice. The conclusion was that all FRSs have made some progress in promoting equality / diversity, but only a handful of Services are making progress across the board. The conclusion was that there is a long way to go. There has also been a shift in the way that FRSs address the equality and diversity agenda. Some now realise that it is not enough just to respond to legislative requirements, and that equality and diversity initiatives must be locally owned. The conclusion is also that initiatives to improve equality and diversity need to be accompanied by changes in organisational culture and leadership. The recommendation from the study was that equality and diversity should be seen as an integral part of how the Service relates to the whole community, not just as internal recruitment and employment issues (Clark and Fox 2006).**

Four minor research projects of interest have been done that deserve to be mentioned. The first being the ongoing Ethos project. The project lead by Dave Baigent was initially based

around a cohort of 16 fire fighters who joined the Merseyside Fire and Rescue Service during 2006 and sought to answer the question “Why is it that the values and attitudes held by new fire fighters almost seem predisposed to change from the day that they commence training?” (p.5). One of the aims of the project is to develop methods to work with organisational cultural prerequisites using techniques of micro-management based on the results of the initial studies (Baigent and O’Conner 2007ab).

When it comes to work environment an action research study in the US National Fire Academy has been done as part of a student assignment. The problem with provision and use of bunkroom and restroom facilities by fire fighters of different genders was studied with the specific aim to change the existing conditions. The project included inspections and a survey of women fire fighter was conducted. As a result a new policy was created which also includes guidelines for future fire station renovations or new construction (McElroy 2001). In another student essay student essay “Women as fire-fighters – A study of equality at Gästrikke Räddningstjänst”, Katarina Blom and Jenni Björk have studied the work to recruit more women to the rescue service in Gästrikland.. In the results the authors stress **the importance of communication and continuous evaluation during the implementation (Blom and Björk 2008).**

The last study is an example of a relatively old research project from 1985. Jane M. Crag and Rick R. Jacobs from the department of psychology, Pennsylvania State University in the US conducted a postal survey with a total number of respondents of 857 men and 30 women in the rescue services completing a questionnaire including Spence’s Attitude Toward Woman Scale and 55 questions measuring attitudes toward female fire fighter and their impressions of their work unit. The study presents the hypothesis that attitudes toward female fire fighter will become more positive the longer they have been member of a platoon. Comparisons were also made with research results from the military and the police. The results indicate that general attitudes toward women become less traditional over time, whereas beliefs became harsher concerning preferential treatment for women (Craig and Jacobs 1985). This result should however be put in the light of **more recent studies, showing the problem of assuming that changes within a profession automatically coexists with transformation of other gendered processes in an organisation (Britton 2000).**

Two practical handbooks, should be mentioned, the first being a recent publication in the US. In Herbert Z. Wong and Aaron T. Olson's 2008 publication "Multicultural and diversity strategy for the fire services" the aim is to provide a comprehensive textbook for the US fire service agencies and academies, colleges and universities on different strategies to work with multicultural and diversity strategies. The book covers issues in relation to different ethnic groups, women, gays and lesbians in the fire service. The "brotherhood", meaning the traditionally white male and stereotypical macho image of the fire fighters is problematised and different strategies suggested on how to meet with these problems within the fire service itself and in relations with public as well as in the work with security and disaster preparedness in the local community. The textbook includes chapters on recruitment, retention and promotion, multicultural awareness training in fire departments, communication, a public safety approach to specific cultures, fire fighters image and cultural sensitivity, leadership and professionalism. Several suggestions of methods are given on how to practical work with the issues, as well as facts and figure and information on knowledge resources (Wong and Olson 2008).

The second example of a handbook is the Swedish booklet "Bära slang som en man? En bok för aktivt jämställdhetsarbete i räddningstjänsten", published by the SRSA and written by Hanna Glans and Bettina Rother. The book is focused on the work to promote gender equality in the rescue service, it is written as a handbook for the practical work. The booklet holds examples from the postal survey and interviews conducted by the authors (Glans and Rother 2007). The two authors of the booklet have also previously conducted an evaluation of the project "Kvinnlig brandman" at the Malmö Fire department resulting in a student essay in 2005 at Lund University. By studying the implementation of the project Glans and Rother studied how equality work brings to the fore issues concerning equality and sex within the organisation. (Glans and Rother 2007). There has been no research studies found within a Swedish context on the implementation process.

There has been little research on the processes to gender mainstream rescue services, examples of work that have been done can be found in as an example Clark and Fox's study (Clark and Fox 2006). As for research of gender mainstreaming more in general in public organisations there have been some examples both in Sweden and internationally. One research project with the ambition to map the development from the beginning of the 1990s

and that draws on concrete example of innovative practice of gender mainstreaming at various government levels in Europe and beyond was reported in 2003. The research project was concerned with the overall question on how mainstreaming equal opportunities can be instigated and sustained in the work of government and public bodies by drawing on lessons from elsewhere. The research was conducted by Fiona Mackay and Kate Bilton at the University of Edinburgh. The review sets out to develop an understanding of mainstreaming, identify gaps in knowledge and highlight the strategies, structures and tools needed for successful mainstreaming. One conclusion is that further systematic research is needed to draw lessons from the experiences of policy leaders and from UK local government. (Mackay and Bilton 2003:1) The final report of the project also consist of a list of conclusions on what is needed for successful implementation (Mackay and Bilton 2003:10p).

Conclusion

The research overview shows that there has been relatively little research done on issues in relation to gendered practices and processes in the rescue services and even less on the implementation of gender equality objectives. The research is limited both internationally and in Sweden. Most of the studies that have been done specifically focus fire fighters and the fire service. A lot of the studies that do exist result from smaller research projects done by university students or by the rescue services themselves with the rescue service also as the primary audience. The research that has been done to a large extent problematises an individual perspective, with many studies being qualitative. There seems to be less comparative, less quantitative and less inter active research methods (like action research). Content wise, studies focusing different aspects of the organisation (besides fire fighters) and also studies that focus the implementation processes have been those were there seem to be less research done on a total. In Sweden there has been no clear focus on the implementation process, some research have been found in the UK and USA. Also studies in a national context with a multidimensional or intersectional perspective could be a possible missing area. Comparative international studies are also scarce. Regarding gender mainstreaming specifically there is a clear need for more research.

The area possible for research from a gendered organization perspective is vast, focusing on for example structural, leadership, symbolic or change aspects of the rescue service, using the broad categories used by Wahl et al (2001). It is of course possible to study all these areas from a fire fighter perspective but the possibilities to reach new

knowledge that can assist in the future work to change gendered patterns and practices will probably increase if research from other perspectives will be conducted. Besides fire fighters there are other professions and parts of the organisation that can be studied and possibly contribute to new insights.

This part of the research overview report mainly focuses on the local rescue services and only indirectly on the SRSA in their role in supporting the local rescue services in their work on these issues. The demands on the different organisations when it comes to gender equality are however basically the same even though the organisational settings and prerequisites are somewhat different. One important difference is the role of the SRSA to support the local rescue services in their work to promote gender equality. Changes in the gendered structures and practices of the local rescue services have been modest the last decade and the SRSA as an organisation itself has had considerable problems in areas where support to the local rescue services should be given, e.g. **the research results report on sexual harassment and problematic leadership structures within the SRSA itself and also the problems at the SRSA colleges were the future employees of the local rescue services currently are being trained.** The local services need support in their work and in order for the SRSA to become a more effective support with clear and visible results, research that focuses the strategic management and implementation processes seem to be of interest. Research also with focus on how to become a more effective support and conduct this work in a holistic approach that includes the SRSAs (and later, Myndigheten för Samhällsskydd och Beredskap) own internal work with gender and diversity is of interest.

Some research has been done connected to the different gender equality objectives outlined for public organisations but less research seems to have focused on the work to implement the objectives from an organisational perspective. The results from many of the research projects that have been outlined above also clearly indicate that further research on the implementation process, also with the ambition to build on practical experiences in order to develop the work, is needed.

Several studies also point to the need to develop better techniques and facilities but also better routines in connection with the work to increase gender equality and diversity.

There is no clear and predictable way that organisations or occupations are gendered. This means that gendered processes at one level do not immediately follow from or determine the way in which occupations or organisations are gendered at another level. (Britton 2000). The processes themselves are also complex and need to be put in context. **There is research clearly showing that merely increasing the numbers of the minority sex in an occupation will not automatically change the gendered perceptions of that profession or the deeply gendered nature of the workplace (ibid.).** A restructuring of the workplace itself needs to be undertaken in order for example to change the way value is placed on masculine and feminine characteristics. (ibid). Occupations such as the fire fighter are deeply imbedded in the organisation but also in the gendered institutions of the organisational environment, as well as being from one perspective an individual process of identity. It is important that the level of analysis is clearly defined and that implicit assumptions of the gendered processes are avoided, since assuming a priori in what way the organisation is gendered, may limit the potential to detect the potential for change (Britton 2000). The above review of research results shows that research have been done primary within one level of analysis and also focusing on one profession in the organisation, there seems therefore to be much to gain from research that will contribute to a broader picture of the organisation and possibly by bridging the gap between different level of analysis.

Results from the Fireworks research project clearly indicate that an inter active or action based research approach, meaning that it has an specific aim to solve problems defined in the environment that is being studied, is likely to generate results that can be used in the practical work (Lilly et al 2005). The later Clark and Fox study at INLOGOV also highlights the need for more comprehensive and large scale studies in terms of time and resources and also multi-methods and multi-dimensional approaches (Clark and Fox 2006). The process of change takes time and research projects should take that into consideration, especially when the aim is to study and/or actively contribute to organisational change. The INLOGOV study also pin points the need to direct transformatory processes to the internal processes and at the same time to the external relations and “outputs” of the organisation. The two processes clearly interact. Future research initiated by the SRSA should take in to consideration the research results from the UK FireWorks project and the INLOGOV project.

Technique management and development

Very different technologies are brought into very different social settings for very different reasons, often with completely opposite effects and thus complex theories that recognize the emergent and socially constructed nature of technology are needed. (Liker *et al* 1999)

As the preceding sections of this report make clear, the Swedish Rescue Services Agency (SRSA) is a complex organisation with a number of collaborative relationships and responsibility for a wide variety of activities. Consequently, there exists a huge variety of 'techniques' employed by staff at municipal, national and international levels of the organisation. For example, at municipal level this includes the equipment used by the fire service, while at international level this includes the ways in which disaster relief is coordinated and provided.

Inspired by the broad definitions of 'technology' developed within the field of Science and Technology Studies (STS), this part of the research overview therefore uses a broad understanding of 'technique' as starting point for its enquiry into technique management and development. 'Technique' is here understood as both tools and practices, allowing this overview to take into account the uniforms, vehicles and technologies as well as the processes and guidelines utilised by the SRSA and other equivalent organisations. Considering 'technique' in this way positions it very much as a human behaviour or practice which emerges in dialogue with gendered behaviours.

Inevitably, questions of gender and technique operate differently in the case of the municipal fire service as compared with, for example, coordination of international disaster relief. This is due to not only the different kinds of technique employed, but also the different organisational structures within which these interactions take place. Techniques can range from fire trucks, to software used for disaster planning, to sharing of processes across different groups. While it is relatively easy to examine the more 'obvious' techniques employed for disaster planning or fire prevention, considerations of technique should also include the everyday use of office software, including databases and information sharing programmes, for, as Michel Callon writes: **'The importance of management tools becomes even more obvious as organizations and their environments evolve.'** (2002, p.91) These

kinds of techniques, which may appear not directly related to the work of rescue provision, nevertheless play a key role in organisational development, information dispersal, categorising, planning and coordinating in ways which are inevitably influenced by gender dynamics.

A gender perspective on techniques includes both those carrying out the technique as well as those for whose benefit the technique is employed. A similar consideration is at play when considering not only those techniques used ‘externally’ by the SRSA, that is to say in society, in the city, but also those used ‘internally’, i.e. those workplace techniques, infrastructures, and processes used, designed and implemented by the SRSA staff. These techniques have not evolved in isolation but in dialogue with many different power dynamics, which include, but are not limited to, gender, race, class, sexuality.

This section of the report offers a review of the existing literature concerning technique and gender in the SRSA and equivalent rescue organisations in other countries. It also suggests some areas where there has been less research to date and which would benefit from more investigation. It opens, however, with a few notes on methodological reflections specific to this section.

Methodology

This discussion of methodology addresses three aspects: the theoretical frameworks which shape the understandings of ‘technique’ used here, the predominance of materials from the US or UK and some practical reflections on the search terms used when preparing the inventory.

A variety of difference approaches have been used to study technology (from an economic history perspective, to sociology, to gender studies). This section, however, draws predominantly on two frameworks which have already been extensively used in the analysis of gender and technology. It draws on feminist STS which analyses how social, political or cultural views affect the development of technology, with particular concern for the role of women (Harding 1986, Longino 1993, Haraway 1997). It also draws on Actor-Network Theory (ANT), a sociology-based method which maps relationships between objects, ideas and people, showing how all three combine to form distinct networks (Latour 1987, Law & Mol 2002). These approaches are particularly useful because they highlight how technologies

or facts emerge as part of an ongoing dialogue between different groups. By making visible the range of interests involved in any tool, fact or technology, these frameworks open up apparently objective discourses and practices to critical investigation, including a focus on gender. As Jenny Wolmark neatly summarised in her overview of feminist approaches to technology: ‘by viewing technoscience as a cultural practice, its seeming isolation from other cultural practices is undermined and, crucially, it allows analysis of the gendered nature of those practices to be undertaken’ (Wolmark 2003).

The theoretical frameworks offered by feminist STS have already been successfully employed to produce feminist readings of reproductive technologies (Treichler *et al* 1998) and of the defence industry (Cohn 2001), both of which provide useful examples of how this framework might be applied to the rescue services. In particular, this approach encompasses the discourse of science and technology, looking critically at how the carefully objective style of much scientific writing depersonalises the research and reinforces the authority of the conclusions presented. This style often fails to include mention of gender perspectives. Feminist STS is also interested in examining the challenges to existing gender roles apparently posed by new technologies, and to trace how cultural anxieties about gender are addressed in the adoption and use of the technologies (Happe 2003). This approach stresses the need to include a gender perspective on who designs the technique, who uses it and how the technique is discussed/presented to others.

Any emergency event can be seen as a complex interaction between different ‘actors’ (which include organisations, people, tools, processes, animals and weather conditions) in which a range of dynamics comes into play – gender, race, age, ethnicity, ability, for example. ANT offers a model to follow these different ‘actors’ through an event, revealing the network of factors which are involved in any event. This approach is also useful for examining development of techniques, as John Law’s reading of the development of the P.17A military aircraft aptly demonstrates. In ‘Hidden Heterogeneities: Complexity, Formalism, and Aircraft Design’, Law narrates the development of this plane from the perspectives of national defence, the aircraft manufacturers and the pilots. Placing these very different perspectives next to one another reveals the complex web of dynamics involved in development of this plane and contrasting interests. In Law’s reading, the plane is revealed to be not a simple, self-contained, neutral object, but rather part of a much wider network of many groups’ hopes and desires.

The SRSA is a very distinctive organisation involved in a range of rescue service provisions. Organisation of rescue services in other countries can be quite different to that of Sweden. For example, in other national contexts much of the responsibility for humanitarian relief may lie with non-governmental organisations, or the fire service is part of the group termed ‘emergency services’ which comprises police, ambulance and fire and rescue. Search terms were carefully selected to ensure that research on organisations using equivalent or similar techniques to the SRSA was identified.

Given the broad definition of ‘technique’ used here, searches were conducted on a variety of terms including ‘technology’, ‘equipment’ and ‘process’. The remit covered by the Swedish rescue services is often separated into distinct agencies in other countries, which come under the headings of ‘emergency services’ or ‘disaster relief’ or ‘crisis planning’ and so these specific tasks were used as search terms, rather than the broader ‘rescue services’.

Due to the dominance of English within academic research, searches on major databases such as JSTOR produce results predominantly in English. Searches were also conducted in the British press (focusing on a daily, national newspaper - the *Guardian*), the online newspaper *The Local*, which provides Swedish news in English, and materials available from the SRSA website. These materials were supplemented by discussion with a contact at the SRSA.

Research overview

This section of the report opens with a review of the research available on techniques within rescue services. This is followed by a review of the work on gender, organisations and technology, before turning to some specific comments on the SRSA. An initial search reveals research on the rescue services (by which is understood fire services, emergency services, disaster relief) from a wide range of disciplines including law, sociology, organisation management, geography, medicine, risk management, development, and political science.

Techniques and rescue services

The research available demonstrates not only the wide range of techniques used in rescue services worldwide, but also the different disciplinary perspectives on the particular study of technology in the rescue services. Given the broad remit of the SRSA (encompassing, as it does, a variety of activities on municipal, national and international levels), much of the

material available is relevant and useful. The material available can be loosely grouped into three categories: research on information technologies (e.g. location-finding software, information sharing, simulation modelling), equipment (e.g. emergency batteries, communications equipment) and processes (e.g. distribution of responsibility between local and national agencies, communication with population). The following is a sample from the wealth of material available on techniques in rescue services, starting with information technologies, then moving on to equipment and processes.

Simulation software is increasingly being used to help predict and plan for emergency situations. For example, in a 2001 article from *The Journal of the Operational Research Society*, 'Assessing systems for offshore emergency evacuation' (Mould), simulation software was used to enhance understanding of the particular challenges posed by rescuing staff from offshore oil rigs. The article stresses the usefulness of these simulations which supplement practice emergency drills that normally take place in good weather. The simulation software adds weather data to reveal difficulties which might emerge in the bad weather conditions normally occurring when such an emergency evacuation would normally take place. Use of tracking and positioning technology is also increasingly the subject of much research, as the 2003 article 'Location-Based Services: the State of the Art' suggests (Barnes). In this, location-based services such as accurate position of mobile telecoms users is cited as a valuable addition to emergency services who can use this facility to improve their response time. Research on information technologies tends to stress the usefulness of this software in terms of practising emergency situations or improved response time or information sharing.

Discussions of the equipment often appear in scientific or engineering journals and focus on the equipment itself rather than how it is used. The tone of these articles is often very scientific and depersonalised. 'Military applications of reserve batteries' by Ritchie and Bagshaw (1996) is an ideal example of this, providing a solely scientific discussion of the advantages and disadvantages of various long-term storage batteries.

Processes used by the rescue services can include emergency planning but also the ways in which new techniques or skills are developed and shared. Central to this aspect is often the relationship between different areas of an organisation, or different groups in society, and consequently research has been conducted on rescue services processes from a range of disciplines. A legal perspective on rescue services and technology, for example, is offered by

Hilliard in 'Local Government, Civil Defence and Emergency Planning: Heading for Disaster?' (1986). In this article, the relationship between national emergency provisions and the responsibilities of local (or municipal) government are highlighted in terms of planning for wartime emergency. There have also been a number of recent articles produced concerning Hurricane Katrina, examining the planning that took place and the subsequent events (Wetmore 2007, Sims 2007). In 'Distributing Risks and Responsibilities: Flood Hazard Mitigation in New Orleans' Wetmore examines the 'large socio-technical systems' which tried to address the flooding of New Orleans caused by Hurricane Katrina, while Sims' article 'The Day After the Hurricane': Infrastructure, Order and the New Orleans' Police Department's Response to Hurricane Katrina' focuses on the flaws in infrastructure revealed by this crisis, and particularly on the role of the police.

It is notable that questions about gender do not appear in any of the articles about rescue services discussed above (whether concerned with information technologies, equipment, or processes), and this is representative of the field as a whole. Research on rescue services and their techniques focuses primarily on the efficacy of the technique in saving lives or resolving the crisis. In the midst of this there is no consideration of how gender dynamics might affect the performance of rescue services staff or the wellbeing of the people being rescued. This, however, is not the case in research which focuses on the impact of technology on organisational structures, an approach which has useful connections to the preceding section concerning organisational change.

Gender, organisations and technology

Journals such as *Organization Science* or *Gender, Work and Organization* provide useful discussions about the impact of new technologies on organisations, and how this intersects with gender roles. These articles often stress how technologies cause gender roles in the workplace to be renegotiated, and implicitly reinforce associations between masculinity and technology. A simple search on 'technology, gender and organization' on one major database (JSTOR) produced over 19000 results alone. Narrowing this down to 'organizational change', reduced this number to just over 7500 results, with articles coming from journals as varied as *Management Information Systems Quarterly*, *Annual review of Sociology*, *Organization Science*, *Political Psychology* and *Anthropological Quarterly*, and with a correspondingly varied range of approaches. Overall, a shift from the simple to the complex can be mapped amongst approaches to this field, as the following examples demonstrate.

An article titled 'Why Don't Men Ever Stop to Ask for Directions? Gender, Social Influence, and Their Role in Technology Acceptance and Usage Behavior' (Venkatesh and Morris 2000) in *Management Information Systems Quarterly* looks at how gender may influence the adoption of new technologies. In this article the authors offer a statistics-based approach to assessing adoption of new data retrieval software, involving studying several hundred people over a period of 5 months to gain data on ease of use and perceived usefulness. However, while the authors' conclude that 'gender plays a vital role in shaping initial and sustained technology adoption decisions by today's knowledge workers', the article's overall usefulness is perhaps limited by its simplistic gender framework, and conceptualisation of the relationship between technology and user. In outlining their study, authors refer uncritically to 'masculine' traits such as objectivity and 'feminine' traits such as tenderness, suggesting a very particular idea of gender roles. They conceptualise the technology as a self-contained, neutral entity, rather than something which had been developed in a particular context, the effects of which might conceivably affect the ease of adoption.

In contrast with research from a management perspective like the study described above, studies from a sociological perspective tend to produce a more complicated picture of technology adoption and implementation. For example, the 1999 review article which appeared in *Annual Review of Sociology*, titled 'Perspectives on Technology and Work Organization', suggests four variables are involved in this process: many types of technology, many social contexts for technology adoption, many approaches to selecting and implementing technology, and many different perspectives on whether the technology is good or bad. The article provides a useful review of different approaches to this field, although its consideration of gender perspectives is limited to a few brief sentences, acknowledging that: 'the way technology is viewed and applied is shaped by the dominant male role in society' (p.584).

A more careful, nuanced consideration of the interaction between gender, organisation and technology is provided by Elisabeth Sundin's 1998 paper on the Swedish National Survey. In this article, Sundin examines the effects of the introduction of new computer-aided design (CAD) technology. In this particular case, women became the primary users of the new CAD technology due to a strong gender divide between indoor and outdoor survey work, which saw men claiming that the outdoor surveying was not appropriate work for women as it required

greater physical fitness and extended periods of time travelling. As Sundin makes clear, however, this perception existed in tension with an association between men and technology, which would normally have seen men become the primary users of the new technology. Sundin's article clearly shows how a number of different factors are at play when considering technology and organisational structure.

Technology as part of a complex web of different factors within an organisation is also very much the theme of an article by Zauchner *et al*, 'Gender-Related Effects of Information Technology Implementation' (2000), which suggests that responses to technologies are to a great extent determined by the pre-existing context into which the technology is introduced. The authors conclude that developing technologies in dialogue with existing conditions would therefore potentially facilitate adoption and use of them.

In the field of gender, organisation and technology, technology is commonly framed as the new factor which provokes change, or is implicated in broader organisational changes. It is often emphasised that technology *causes* changes in an organisation, including shifts in gender roles. This leads to technology becoming responsible for organisational shifts whose roots may be more complex than introduction of a new technique. As ANT and STS frameworks suggest, development and use of a technique is not a simple, causal relationship, but rather intricately bound up with the people and processes, simultaneously producing and produced by changing gender relations, amongst other power dynamics.

Applications for the SRSA

As the above demonstrates, significant work has already been carried out in the field of gender, organisations and technology. However, given the distinctive responsibilities of the SRSA, the relevance of the existing research may be limited. The SRSA is distinctive in the nature of its responsibilities, which range from national and international planning and research to support and inspection at municipal level. Functioning as a kind of 'umbrella' organisation which links together other agencies and facilitates information sharing, the SRSA also has particular challenges when implementing gender perspectives, as many of the agencies which it supports remain autonomous. An additional challenge when integrating a gender perspective is the male-dominated status of certain sections of the organisation. For

example, women make up only 1.17% of all fulltime firefighters in the municipal fire service (data kindly provided by Anders Axelsson of the SRSA, October 2008).

When considering gender, organisation and technology in relation to the SRSA, it is important to ask how ideas about gender roles are sustained by associations between masculinity and technique. For, as Berner and Mellstrom write, 'technology in our society is constituted as a male domain. Technical competence is something that men, but not women, possess; masculinity is strongly identified with mastery of technical things' (1997). In the case of the fire service, the prevailing image of the firefighter as a 'strong man' or 'hero' is sustained through the physical strength/technique required to carry out that role, a physical strength which is necessary not only in order to be able to drag a body from a burning building, but also to handle much of the equipment (for example, fire hoses). Men are considered as the 'norm' in this part of the rescue service operation, as demonstrated by both the prevailing image of the firefighter, but also through more practical issues such as a standard uniform for all firefighters based on the male body (in contrast with national wartime uniforms which are provided in different sizes and tailoring for men and women). Hierarchies in the municipal fire service are further reinforced by connotations of power and status associated with physical ability, which it has been suggested leads to women who enter the service integrating into the existing gender framework, rather than challenging it.

Questions of power and status have also been addressed by Susanne Andersson in her study of the Community Police Force in Sweden, where she identified a distinct homosocial group made up of older, male police officers which formed the implicit 'we' of the community (Andersson 2003). She contrasted this with a similar study of an urban police force, in which men and women were present in equal numbers and where no similar 'we' had emerged. Andersson's study thus suggests that the presence of equal numbers of men and women did change the homosocial framework present in organisations which traditionally have had very masculine associations, a conclusion with clear relevance to the SRSA also.

Existing initiatives by the SRSA, such as Gender Force, clearly take into account gendered behaviours and include mentoring and learning techniques which facilitate good communication and practices amongst men and women. However, just as the above review reveals areas where less research has been done, inclusion of gender perspectives within the SRSA has also been more thorough in some areas than others. The SRSA brochure, *Research*

for a safer society, for example, only discusses gender in relation to technology in an international setting, and then very briefly and with no guidance on how this might be practically applied: ‘the SRSA requires more knowledge about how methods, materiel, and technology –for example, for sanitation and accommodation – can be adapted for the varying cultural and gender issues in different countries.’ (p.29)

Areas for future research

Resources such as these described above are helpful when asking questions about the relationship between gender and technique in the SRSA. However, there remain areas where further research would be beneficial.

Many resources reflect US or UK contexts, although Sweden is sometimes offered as an example of good practice in rescue service. Thus, there remains plenty of scope for research looking specifically at the experience of the Swedish context, which is distinctive in terms of the structure of the rescue services. Furthermore, Sweden represents a particularly interesting example as it is a country widely perceived to be amongst the most ‘gender equal’ in the world. The male-dominated municipal fire service does not neatly correlate with this impression. Future research which focuses on the way in which tensions between gender equality and the more male-dominated sections of the organisation are negotiated in the arena of technique management and development would be a valuable addition to the existing literature.

As noted, there is very little work available concerning gender and techniques specifically used by the rescue services. Future research in this field should consider by whom and how techniques are designed and who uses them. Feminist STS work highlights the exclusion of women from many aspects of technoscience, and is relevant also to consideration of rescue services technique development and management. Areas where a gender perspective can be usefully applied include production/design of techniques, the use of techniques, differing experiences of the patients/clients who are treated with/rescued by using these techniques, and the cultural identifications between particular aspects of techniques and masculinity.

There is also scope for future work to develop more complex understandings of the relationship between technique and gender within the rescue services. Frameworks such as ANT and STS stress the co-constitutive nature of techniques and users. Rather than thinking

about techniques in isolation, approaches should be used which recognise that techniques emerge from existing dynamics, and simultaneously reinforce or challenge these dynamics in their uses, reflecting local contexts (not just in terms of climate or terrain, but also gender) and playing a central role in daily negotiations of all aspects of identity (including gender). This could, perhaps, be most effectively achieved through detailed case studies. Referring to the use of case studies, Elisabeth Sundin in her article about the Swedish National Survey says:

Through them we can better understand the complex reality and the complexity of different power systems working side-by-side. Case studies can make the pessimistic person more optimistic; structure always gives room for some action; and the optimistic can learn that structure is always there, even though there is always some space or place for action. (1998)

This model could also be used very productively to study the transmission of techniques. The SRSA plays an important role as an ‘umbrella’ organisation that facilitates sharing of techniques developed by individual agencies. The relative autonomy of municipal fire services, for example, sees them controlling the design of tools and processes, allowing often very innovative solutions to emerge, but not necessarily ones which specifically take into account gender perspectives. This is potentially in opposition to commitment by the SRSA at national and international levels to work on gender perspectives. An interesting and useful case study would perhaps map the development and sharing of a particular technique from one group, through the SRSA to other groups, examining how it evolves, and noting interactions with other dynamics such as gender.

Finally, one of the most notable absences in the literature is any mention of intersectional work looking at the important relationships between gender, technique and other dynamics such as race, class or sexuality. Feminist research on intersectional perspectives (Crenshaw 1991) provides a useful template for integrating this perspective into future research on the rescue services. Intersectional perspectives examine how dynamics such as gender and race work together to create complex power structures . Some interesting intersectional perspectives have already been used on research concerning the fire service (Chetkovich 1997) and this should be extended throughout research on the rescue services.

Conclusion

Despite the variety of research available concerning gender and technology, there is an absence of work specifically focused on gender in relation to the techniques developed and used by the rescue services. Rescue services employ a wide range of techniques, and some areas within the service remain male-dominated and/or have a very 'macho' reputation.

By using a broad definition of 'technique' which encompasses information technologies, equipment and processes, this review encompasses a range of the activities performed by the SRSA. This understanding of technique implicitly includes human behaviours and considers gender and techniques to be mutually co-constitutive, that is to say techniques such as the ones discussed above come into being as part of a broader context, which includes gender. Simultaneously, interaction with techniques shapes ideas about gender roles, with important effects on organisational structure. The review demonstrates that significant work has already been done on some of this, but that important absences remain. Areas for future research have been highlighted and the relative merits of frameworks such as STS and ANT outlined. Future work should emphasise the 'situated' nature of these techniques, and use approaches which engage more critically with the association between masculinity and technology within the very distinctive environment of the rescue services, and particularly the municipal fire service.

Conclusion

The agency is facing great changes in the near future as its activities will be taken over by the new MSB-agency by 1 January 2009. This change can be viewed as an institutional crisis. This means that the organisation will be destabilised and more open for changes to its institutional processes. However, at the same time that institutional crisis can facilitate change, there is also the risk that processes that are not considered as part of the core activities will not be prioritised (Ceo and Creed 2002). The future changes can, in line with this argument, be considered as a potential crisis for the equality work, in which the work can either be institutionalised or will face the risk of being decoupled from the core activities of the organisation. In this concluding section, a brief summary of the findings of this report is given, together with recommendations for future work.

Literature summary

The section on research on political processes and crisis management in relation to gender and gendered practices shows that not so much research have been done on gender in relation to the rescue services. In crisis management research there is an absence on analysis where gender is considered. Often gender equalizes “women” and men’s practices are not discussed concerning for example decision-making groups and crisis organization. Research that discusses political processes, as implementation of gender mainstreaming in the rescue services is under-researched. Gender Mainstreaming in the rescue services is most discussed in terms of recommendations and checklists, and not so much in relation to the processes and problems of implementation or relationship between national and municipal levels.

In part two of the report an overview of research from an organisational perspective is given. The work that have resulted in this section is departing from the central question raised by the SRSA; to make an inventory of research on how the current gendered practices of the rescue service can be changed/developed. In order to answer this question a new question was posed; *changed into what?* The departing point for the review as well as what has been considered as the objectives for the change process has been the legal and political demands to promote gender equality within the rescue service on Swedish rescue services to work with gender equality regulated by law, the overall objectives in the Gender Equality politics and the special task for the SRSA to support the local rescue services in this work as, this has been taken as the objectives for the change process. **Two main research themes have been identified as important and discussed in the report. The first concerns specific research on various issues in connection with the objectives and targets set for gender equality and diversity in the rescue services. The second theme is research on the implementation of gender equality objectives within the rescue service. Although the two parts are related they connect to somewhat different fields of research, the first focuses on the gendered practices and processes themselves and the second on how to change them.**

The main results from the research inventory are:

- There has been relatively little research done on issues in relation to gendered practices and processes in the rescue services and even less on the implementation of gender equality objectives.
- The research is limited both internationally and in Sweden.

- A lot of the studies that do exist result from smaller research projects done by university students or by the rescue services themselves with the rescue service also as the primary audience.
- Most of the studies that have been done specifically focus fire fighters and the fire service.
- In Sweden there has been no clear focus on the implementation process, some research have been found in the UK and USA.
- Studies in a national context with a multidimensional or intersectional perspective is scarce
- Studies that focus gender mainstreaming are missing on a total.
- There has been no research specifically on the SRSA's work to support the local rescue service and no research generally on gender equality work within the SRSA itself.

In part three of the report, the focus turns to literature concerning technique management and development within rescue services. Focusing on two main areas – gender and technique, and gender, technology and organisations – patterns within the existing research have been mapped. Both areas encompass research from a wide range of disciplines and perspectives. Within the area of gender and rescue service techniques, it is notable that the research can be broadly grouped into three categories: information technologies, equipment and processes. In all three areas, there is a notable absence of gender perspectives in the existing research. In the area of gender, technology and organisations, research ranges from statistical analyses of the ways in which men and women interact with particular technologies, to more complex case studies which follow these interactions over a longer period of time. Although some mention of gender perspectives on technique appears in documents produced by the SRSA, this is generally limited to international activities.

Future work

For clarity, this report has been divided into three themes: political process, organisation and technique. However, these themes do not exist independently of one another, but rather connect and overlap. Therefore, the recommendation for future research focuses on the idea of relationships. This idea is intended to create productive bridges between the different themes of this report, but is also inspired by the importance of relationships within the SRSA itself. For example, future work inspired by the focus on relationships includes taking into

consideration relationships between the different groups which make up the SRSA, as well as the different levels on which the organisation works. Relationships can also include interactions between individual staff, and between staff and the techniques that they use. The following paragraphs outline in more detail how a focus on relationships might be productively used to structure future research.

Questions which might be posed in this future research include: what are the roles of local and national government in co-ordinating between rescue services, agencies and private and public actors in terms of organization, roles and division of labor? How is gender and gendered practices “done” in relation to agency interaction and co-ordination? Other important future work includes examining how guidelines on gender equality, diversity and mainstreaming are communicated and implemented between different layers of the organization. Future work should look closely at gendered practices in relation to co-ordination and relationship activities, and also implementation processes.

Therefore, recommendations for future work from a political processes perspective include looking more at the different levels of implementation between municipalities and the national level, and how policies of gender mainstreaming are integrated. Other research questions could be concerned with how gendered practices are done in, for example, crisis management organisations? Are there differences or similarities between different municipalities? Can local gender regimes affect gender equality work in the local rescue services?

Turning to the organisational perspective, the above review of research results shows that research have been done primarily within one level of analysis and also focusing on one profession in the organisation, there seems therefore to be much to gain from research that will contribute to a broader picture of the organisation and possibly by bridging the gap between different level of analysis.

The demands for gender equality work n the local rescue services and at the SRSA are basically the same even though the organisational settings and prerequisites are some what different. One difference is the role of the SRSA to support the local rescue services in their work to promote gender equality. Changes in the gendered structures and practices of the local rescue services have been modest the last decade and the SRSA as an organisation itself

has had considerable problems in areas where support to the local rescue services should be given. In order for the SRSA to become a more effective support (serving also as an example of good practice) with clear and visible results, research that focuses the strategic management and implementation processes seem to be of interest. Future research should have a holistic approach and include the SRSAs (and later MSB) own internal work with gender and diversity. Future research should also build on practical experiences and possibly have a transformatory approach. Results from research that have been done clearly indicate that an interactive or action based research approach, meaning that it has a specific aim to solve problems defined in the environment that is being studied, is likely to generate results that can be used in the practical work.

In terms of techniques, a focus on relationships highlights the context within which techniques (be they processes or tools) are designed and put to use, and more particularly how gender dynamics shape these interactions. Intersectional perspectives which look at the relationship between different dynamics such as gender, race, class or sexuality in the field of technique would further strengthen the commitment to diversity work within the organisation.

The forthcoming changes to the Swedish Rescue Service Agency offer a unique opportunity for research and also for change, an opportunity which could significantly affect gender perspectives on and within the organisation.

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Useful websites:

Equal opportunities act and the legal obligation, see www.jamombud.se

Gender equality politics, see <http://www.sweden.gov.se/sb/d/4096>

Integrating Gender into Emergency Responses" Bridge Briefings 4
<http://www.ids.ac.uk/bridge//dgb4.html>

Gender and disaster sourcebook <http://www.gdnonline.org/sourcebook.htm>